

Report to Broken Arrow Municipal Authority
on the work of the

2017 Citizens Recycle Committee

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Kate Vasquez

GBB Senior Consultant

Project Manager



15 years of solid waste experience, specializing in recycling and waste diversion

- Excellent communicator with valuable experience as a consultant and in public sector employment
- Knowledgeable about increasing diversion, expanding participation, improving collection, and solid waste planning
- Experienced in implementing non-residential and multi-family recycling programs and regulations

“The best-designed solid waste management systems still rely on people participating in order to be successful.”



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Citizens Recycling Committee



Committee Recommendations

1: Discontinue distribution of "free" bags

2: Provide curbside collection of garbage & recyclables on the same day, once weekly (discontinue twice weekly collection)

3: Initialize collection of recyclables using a rolling cart



Committee Recommendations

4: Conduct a pilot project to evaluate two possible methods of collecting recyclables at the curb

- There would be two pilot areas: one with a 2-cart system and one with a system that utilizes bags for garbage and a cart for recyclables
- Garbage and recyclables would be collected once weekly on the same day
- Residents in the pilot project could use any City-provided bags they have or their own bags

Potential Pilot Project Cost Impacts

(Considered estimates provided by GBB August 1, 2017)

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Cost Center	Estimated Impact for both Pilots (Scenarios 1 & 2)	Estimated Impact for 2-cart Pilot <i>only</i> (Scenario 1)	500 houses, 2-cart pilot <i>only</i> (Scenario 3)
Purchase of 2,200 carts	\$198,000	\$132,000	\$60,000
Retrofit of collection trucks	\$70,000	\$30,000	\$20,000
Outreach and Public Relations	\$27,000	\$20,000	\$10,000
Consulting Services	\$80,000	\$70,000	\$45,000
Survey Services	\$40,000	\$25,000	\$10,000
Total Professional Services and Additional Expenses	\$415,000	\$277,000	\$145,000.00
Additional temporary labor	\$10,400	\$5,200	\$2,583
Additional overtime	\$15,000	\$7,500	\$2,500
Estimated Additional City Internal Expenses	\$25,400	\$12,700	\$5,083
	\$440,400	\$289,700	\$150,083
POTENTIAL COST IMPACT FOR PILOT PROGRAMS	\$445,400	\$290,000	\$150,000

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Special Assignment: Pilot Costs

- After August 2 BAMA meeting, City requested that GBB prepare a more detailed cost estimate for the following possibilities:
 - A dual pilot of both Scenario 1 and Scenario 2, as recommended by the Committee;
 - A single pilot of Scenario 1; and,
 - A scaled-down single pilot of Scenario 1, henceforth referred to as “Scenario 3.”

Detailed and Specific Costs

Great sensitivity

- Detailed preparation of GBB's level of effort
- Detailed pricing on survey work from Shapard Research
- Appropriate project management and budget controls

Little/no sensitivity

- Specific pricing on routing work from C2Logix
- Informed estimates from local PR firms
- Quoted pricing for recyclables processing from American Waste Control



Assumptions

Input	Value
Rolling Carts	\$60.00 per cart FOB
2016 MSW	39,500 tons
2016 Customer Count	33,400 households
2016 Garbage	3,921.67 Tons per Month
2016 Garbage	197.11 Pounds per Month
Possible Recycling (20%)	39.42 Pounds per month
Possible Recycling Per Customer	0.0197 Tons per month
Processing Cost	\$3.42 Per Ton
Avoided Disposal Cost	(\$12.81 Per Ton)
Net Processing Cost Savings	\$9.39 Per Ton



Assumptions

- Recyclables processing saves \$9.39 per ton
 - The processing cost is \$59.05 per ton; however, with 80% revenue sharing, the realized cost is \$3.42 per ton.
 - Subtracting avoided disposal cost of \$12.81 per ton results in net savings of \$9.39 per ton for recyclables
 - This value was multiplied by a projected 39.42 pounds per month of recyclables, which assumes pilot project participants would divert 20% of their waste.
- Truck retrofits cost \$10,000 per truck
 - Number of trucks needed was previously determined by the Resource Allocator.
- Cart count includes a 2.5% oversupply
 - Actual number purchased could vary, as cart purchases are often rounded-off to the “truckload.”



Notes

- The dollar amounts provided are based on best estimates of the work, in the absence of a confirmed scope of work.
- While they are offered with all sincerity, they do not constitute binding proposals.
- All values have been rounded to the nearest \$5,000, with the exception of values <\$5,000
- Capital remains a major driver of the costs associated with the pilot project(s)



Dual Pilot of Scenarios 1 & 2

- Most expensive because it requires the most planning, the most survey work, and the greatest capital expenditures.
- PR is also slightly higher due to needing 2 different messages.

Consulting & Professional Services	Recyclables Processing Net Cost	Truck Retrofits	Cart Purchase	10% Planning Contingency	Calculated Total External Costs
\$160,000	(\$1,481)	\$70,000	\$185,000	\$40,000	\$455,000

Single Pilot of Scenario 1

- Requires less planning, half as much survey work, much less in capital expenditures, and slightly less PR work using just one message.

Consulting & Professional Services	Recyclables Processing Net Cost	Truck Retrofits	Cart Purchase	10% Planning Contingency	Calculated Total External Costs
\$135,000	(\$740)	\$30,000	\$125,000	\$25,000	\$315,000



Scaled-down Pilot, “Scenario 3”

- Requires significantly less in capital expenditures, slightly less planning and survey work; PR work same as single pilot.

Consulting & Professional Services	Recyclables Processing Net Cost	Truck Retrofits	Cart Purchase	10% Planning Contingency	Calculated Total External Costs
\$130,000	(\$370)	\$20,000	\$60,000	\$15,000	\$230,000



Additional Internal Costs

- Implementation of outreach: printing, mailing, and labor from City PIO
- Operational costs: OT, temporary labor, fuel
- Future budget to continue pilot service
 - In the experience of GBB, municipalities continue to provide pilot project service to the participants, even after the pilot period ends



Recommendations

1. A single pilot of Scenario 1 is the best practice choice.
 - Standard nationwide across a broad range of customer population sizes.
 - The cart for recyclables encourages comprehensive participation while the cart for garbage discourages contamination of the recyclables and prevents vectors.
2. The scaled-down “Scenario 3” pilot is our secondary recommendation.
 - A scaled-down pilot would still bring great value to the City in terms of learning how residents will respond to curbside recyclables collection and the other attendant service changes.
 - It will also provide insight on how completion of recycling routes and once-weekly garbage routes would compare to current operations.

Next Steps

- Choose pilot
- Select PR partner
- Finalize scope
- Kickoff!



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**Shapard
Research**



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Questions?

Thank you!!

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