

# Louisville Metro Government 10-Year Solid Waste Management Study and Recommendations



Recommendations for improving recycling,  
increasing reuse, and reducing waste in  
Louisville/Jefferson County

# Study Focus

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Waste  
Characterization  
Study

Current System  
Evaluation

Study  
Recommendations



# Community Engagement

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## Stakeholder Outreach Initiatives:

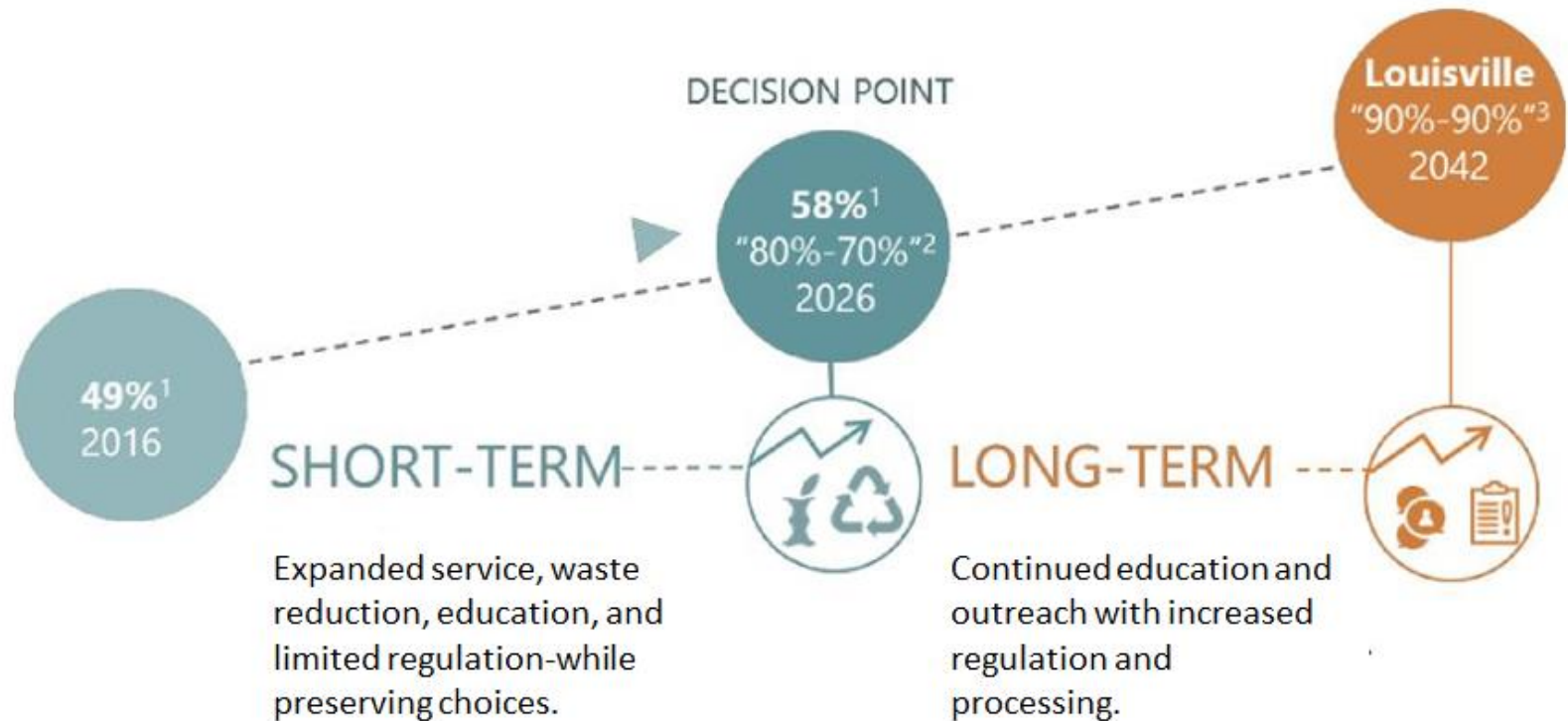
- Press
- Incorporated City Outreach
- Residential Surveys
- Stakeholder Workshops
- Meetings

# Guiding Principles

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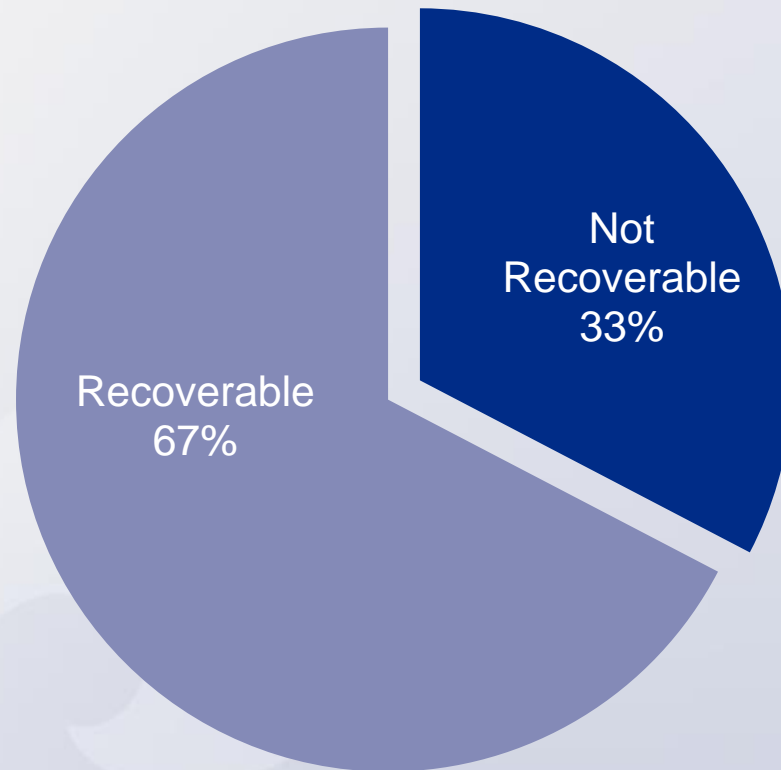
- Stakeholder input
- Foundation for advancement toward goal
- Preserves choice for cities
- Assures essential services
- High level of consistent quality education and outreach
- Strives to eliminate financial and other barriers
- Designed to be affordable and cost effective

# Study Summary

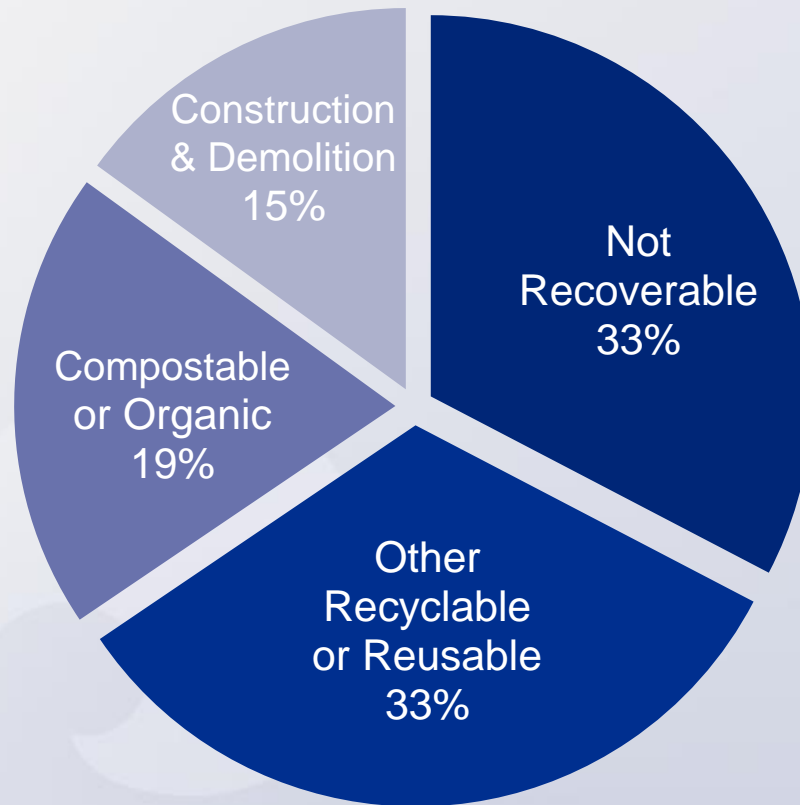


1. Diversion rate
2. 80% participation and 70% diversion of recoverable materials.
3. 90% participation rate and 90% diversion of recoverable materials.

# Current Landfill Waste Stream

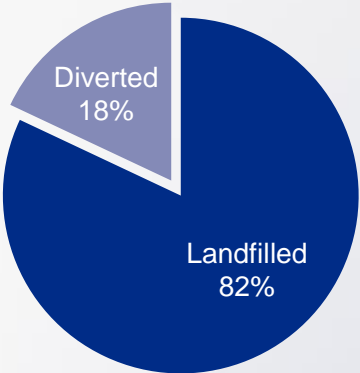


# Current Landfill Waste Stream Category

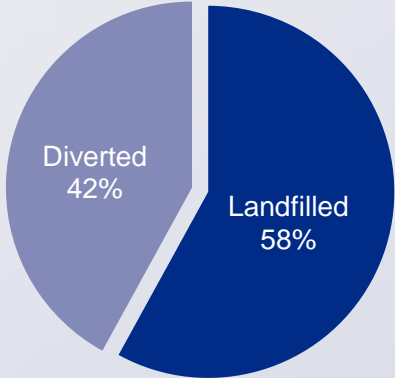


# Current Diversion vs. Landfill

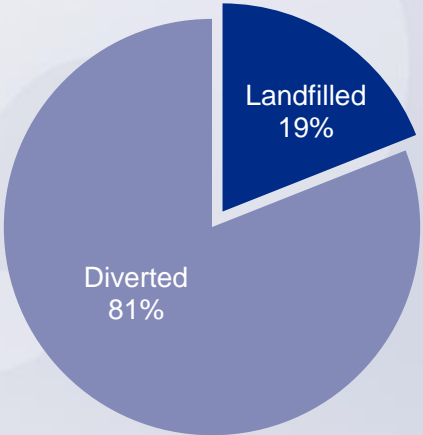
**Residential**  
66,000 Tons Diverted



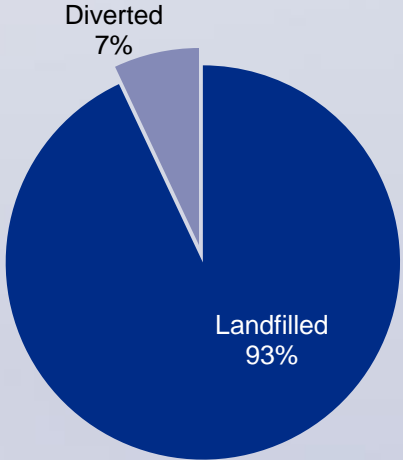
**Industrial-Commercial-Institutional**  
243,000 Tons Diverted



**Construction & Demolition**  
515,000 Tons Diverted



**Self-haul**  
8,000 Tons Diverted





# Current Collection and Diversion System

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## Limitations and Challenges

- Solid waste management is dramatically more complicated than peer cities
- Many education programs exist only at limited scale
- Some best management practices not used

# Current Collection and Diversion System

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## Opportunities for Improvement

- Increase efficiency & reducing cost (unincorporated)
- Expand educational programs
- Recycling services for all residents
- Incentives
- Address large quantity waste

# Study Recommendations

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## Three Key Program Types

- Service level standards
- Ordinances & contracts
- Education and marketing campaigns

# Study Recommendations

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## County-wide Service Level Standards for Single-family Recycling

- Carts provided for customers throughout county
- Standardized signage and labels
- Recycling fees included in garbage collection

# Study Recommendations

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## County-wide Services Level Standards for Self Haul

- Disposal facilities must have recycling and yard waste composting available
- Self haul customers must separate materials for recycling

# Study Recommendations

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## Ordinances and Contracts

- Enforce yard waste disposal ban in non-residential sectors
- Sort and recover materials from bulky waste and junk collection
- Construction & Demolition ordinance requiring processing materials

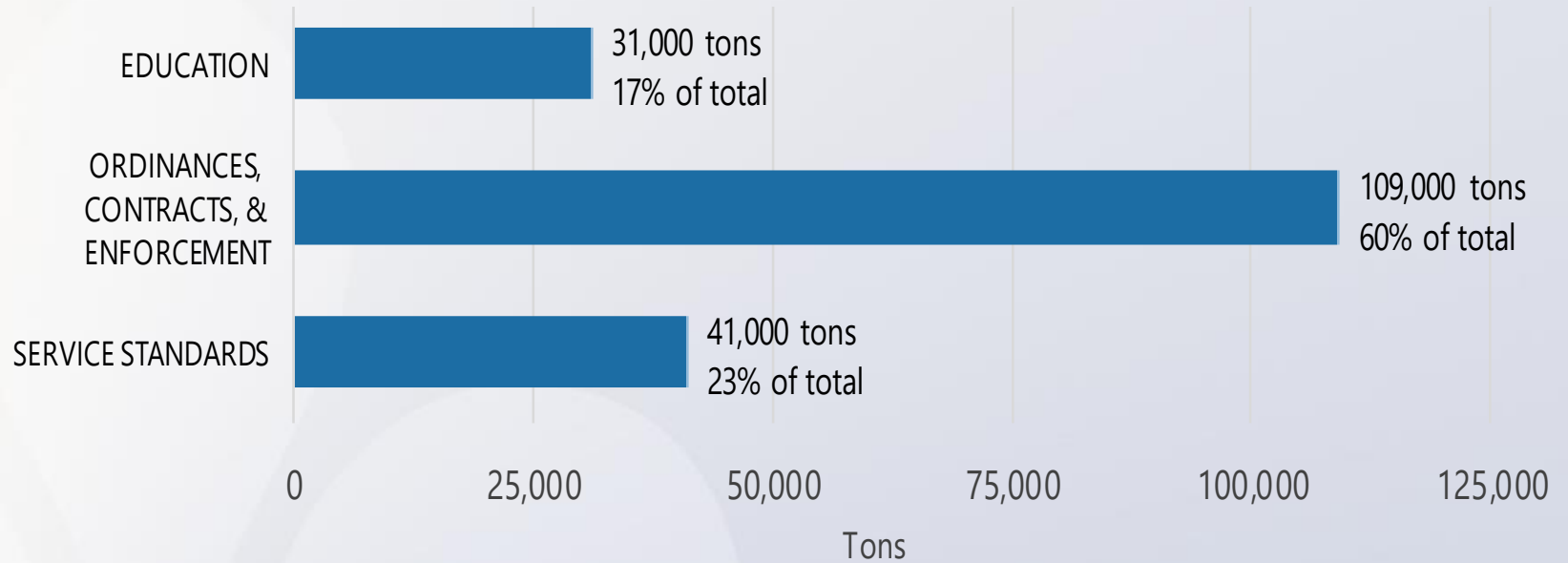
# Study Recommendations

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## Education and Marketing Campaigns

- Waste reduction and reuse education
- Partnerships with local reuse retailers
- Expanded marketing programs
- Technical assistance
- Promotion of reuse of materials in road construction

# Source of Additional Tons Diverted by Program Type





# Cumulative Cost 2016-2026 by Program

Program Type	Cost (2016 dollars)	Cost Per Ton
Service Standards	\$346,000	\$1
Ordinances, Contracts, & Enforcement	\$1,258,000	\$1
Education	\$5,847,000	\$33
<b>Overall</b>	<b>\$7,451,000</b>	<b>\$6</b>

Cost estimates do not include any labor offsets from repurposing existing staff

# Cumulative Cost 2016-2026 by Program

Sector	Cost (2016 dollars)	Cost Per Ton
Residential	\$2,137,000	\$5
ICI	\$3,583,000	\$22
Self-haul	\$939,000	\$3
C&D	\$792,000	\$2
<b>Overall</b>	<b>\$7,451,000</b>	<b>\$6</b>

Cost estimates do not include any labor offsets from repurposing existing staff

# Other Cost

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Costs to unincorporated residents could be entirely offset if the County moved to a more efficient collection system with exclusive, competitive contracts in unincorporated areas

# Moving Forward

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## Community Stakeholders

- Support
- Collaboration

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The slides after this point  
are not part of the  
presentation but are here to  
assist in answering potential  
questions.

# Current Collection and Diversion System

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## Strengths

- Education programs
- Collection services availability
- Some standardized messaging
- Partnerships

# Cost

Year	Total Scenario Costs			
	Capital Expenditures	Labor Expenditures	Operational Expenditures	Total (2016 \$)
<b>2017</b>	\$ 15,771	\$ 630,349	\$ 338,099	\$ 984,219
<b>2018</b>	\$ 145,878	\$ 577,227	\$ 472,273	\$ 1,195,378
<b>2019</b>	\$ 33,616	\$ 483,906	\$ 374,450	\$ 891,972
<b>2020</b>	\$ -	\$ 411,276	\$ 263,109	\$ 674,385
<b>2021</b>	\$ -	\$ 412,514	\$ 227,623	\$ 640,137
<b>2022</b>	\$ -	\$ 408,891	\$ 226,540	\$ 635,431
<b>2023</b>	\$ -	\$ 401,671	\$ 212,759	\$ 614,430
<b>2024</b>	\$ -	\$ 395,044	\$ 212,209	\$ 607,253
<b>2025</b>	\$ -	\$ 393,088	\$ 211,860	\$ 604,949
<b>2026</b>	\$ -	\$ 391,501	\$ 211,584	\$ 603,085
<b>Total</b>	<b>\$ 195,266</b>	<b>\$ 4,505,467</b>	<b>\$ 2,750,505</b>	<b>\$ 7,451,238</b>

# Labor Workforce

Year	Total Full-time Equivalent Employees (labor costs included in scenario costs)							Total FTE
	Solid Waste Manager	Education/ Outreach Manager	Enforcement Supervisor	Education/ Outreach Coordinator	Education Professional	Outreach Specialist	Enforcement Officer	
<b>2017</b>	0.3	0.2	0.1	1.5	4.3	3.4	1.3	11.1
<b>2018</b>	0.9	0.2	0.6	1.2	2.4	2.2	2.0	9.6
<b>2019</b>	0.1	0.2	0.1	1.1	2.2	2.2	2.7	8.7
<b>2020</b>	0.0	0.2	0.1	0.9	2.1	2.2	2.0	7.6
<b>2021</b>	0.0	0.2	0.1	0.9	2.2	2.3	2.0	7.7
<b>2022</b>	0.0	0.2	0.1	0.9	2.2	2.3	2.0	7.7
<b>2023</b>	0.0	0.2	0.1	0.9	2.1	2.3	2.0	7.6
<b>2024</b>	0.0	0.2	0.1	0.9	2.1	2.2	2.0	7.5
<b>2025</b>	0.0	0.2	0.1	0.9	2.1	2.2	2.0	7.5
<b>2026</b>	0.0	0.2	0.1	0.9	2.1	2.3	2.0	7.6
<b>Total</b>	<b>1.3</b>	<b>1.9</b>	<b>1.4</b>	<b>9.9</b>	<b>24.1</b>	<b>23.7</b>	<b>20.2</b>	<b>82.5</b>
<b>2016 salary</b>	\$93,520	\$81,200	\$74,200	\$63,700	\$56,000	\$53,200	\$57,400	



# Workforce Cost

Year	Estimated Labor Costs (not adjusted for inflation)							Total Cost (YOE)	Net Present Value
	Solid Waste Manager	Education/ Outreach Manager	Enforcement Supervisor	Education/ Outreach Coordinator	Education Professional	Outreach Specialist	Enforcement Officer		
<b>2017</b>	\$ 24,498	\$ 15,953	\$ 8,639	\$ 95,195	\$ 246,511	\$ 186,811	\$ 78,523	\$ 656,131	\$ 630,349
<b>2018</b>	\$ 93,091	\$ 18,022	\$ 46,578	\$ 77,460	\$ 144,193	\$ 125,099	\$ 120,965	\$ 625,409	\$ 577,227
<b>2019</b>	\$ 12,932	\$ 16,843	\$ 9,291	\$ 76,224	\$ 134,093	\$ 128,970	\$ 167,390	\$ 545,743	\$ 483,906
<b>2020</b>	\$ -	\$ 17,331	\$ 7,215	\$ 62,580	\$ 132,996	\$ 133,088	\$ 129,592	\$ 482,802	\$ 411,276
<b>2021</b>	\$ -	\$ 17,851	\$ 7,431	\$ 65,048	\$ 142,792	\$ 137,461	\$ 133,479	\$ 504,062	\$ 412,514
<b>2022</b>	\$ -	\$ 18,404	\$ 7,661	\$ 66,710	\$ 147,564	\$ 142,114	\$ 137,617	\$ 520,070	\$ 408,891
<b>2023</b>	\$ -	\$ 18,993	\$ 7,907	\$ 68,975	\$ 146,820	\$ 147,065	\$ 142,021	\$ 531,782	\$ 401,671
<b>2024</b>	\$ -	\$ 18,312	\$ 8,168	\$ 70,360	\$ 150,229	\$ 150,622	\$ 146,708	\$ 544,399	\$ 395,044
<b>2025</b>	\$ -	\$ 18,935	\$ 8,445	\$ 72,893	\$ 155,716	\$ 156,175	\$ 151,696	\$ 563,860	\$ 393,088
<b>2026</b>	\$ -	\$ 19,597	\$ 8,741	\$ 75,584	\$ 161,557	\$ 162,068	\$ 157,005	\$ 584,552	\$ 391,501
<b>Total</b>	\$ 124,163	\$ 153,934	\$ 106,511	\$ 629,893	\$ 1,347,500	\$ 1,258,539	\$ 1,159,724	\$ 4,780,265	\$ 4,505,467

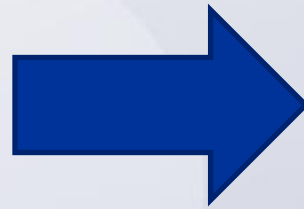
# Study Recommendations

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## County-wide Service Level Standards for Signage and Adequate Infrastructure for Multi-family and Industrial/Commercial/Institutional Sectors

- Outreach to assist property managers
- Consistency for businesses

Easier  
recycling  
and  
composting



Increased  
participation  
and recovery

# Study Impacts

2016

- 876,000 tons
- 49% Diversion

2026

- > 1 million tons
- 58% diversion

Additional cost to Metro Government over 10 years:  
**\$7.5 million**