

Solid Waste Study

Resolution 230161 -

10/12/2023

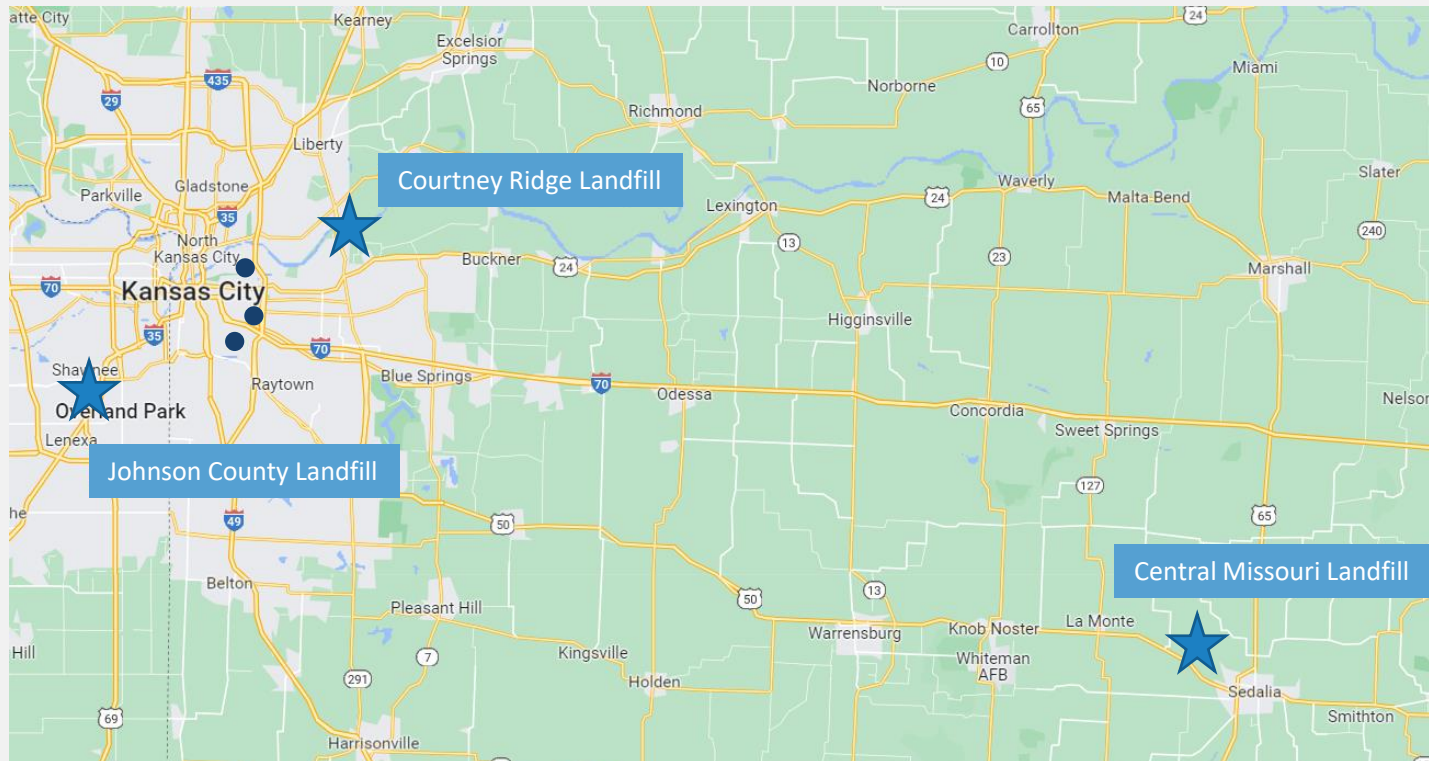
Prepared for

City Council Business Session



The Kansas City region primarily has access to Johnson County, Courtney Ridge, and Central Missouri landfills

● *Transfer Stations* ★ *Landfills*

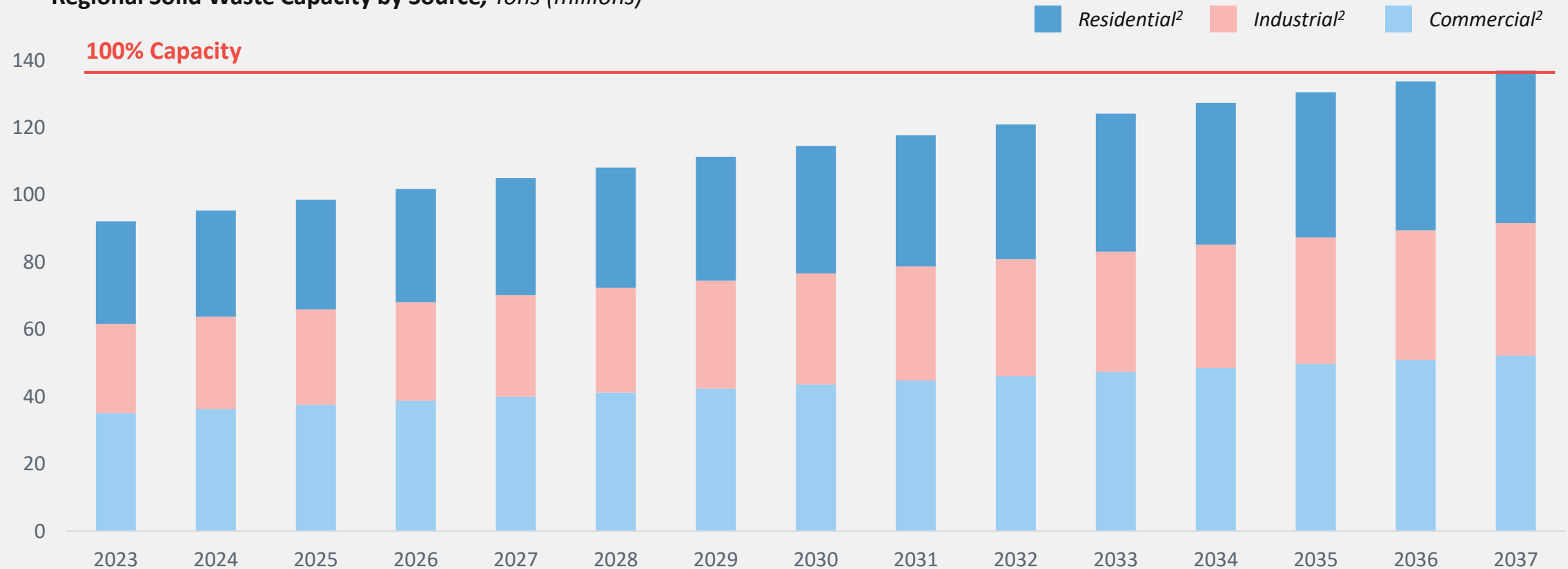


Overview:

- Courtney Ridge is managed by Republic Services
- Johnson County is managed by Waste Management, Inc.
- Central Missouri is managed by GFL Environmental
 - St. Joseph, Hamm, and Show-Me Landfills are not generally utilized but within an hour transport
- 3 Transfer Stations are utilized in the region:
 - Mark II, WCA, and Material Recovery & Transfer

Regional landfills¹ are currently at 67% of capacity and projected to be at 100% in 2037

Regional Solid Waste Capacity by Source, Tons (millions)



1. Courtney Ridge, Johnson County, and Central Missouri Landfills, 2. Solid waste source composition extrapolated from statewide data.

Sources: Limited Regional Needs Assessment SCS Engineers, Missouri Waste Composition Study 2016-2017

Landfills create environmental, social, and public health concerns in nearby communities

Environmental

- 82% of landfills leak chemicals and gasses that can contaminate water
- Air pollution in surrounding communities are up to 62% more likely to be serious
- Adverse affects to surrounding biodiversity causing the loss of 30 - 300 species and attracting pests

Social

- Landfills decrease the adjacent land value by 12.9% on average
- Landfills have a disproportional impact on low-income neighborhoods and communities of color
- Pollution by pests, stigmas, lack of business, and constricted social interaction are all statistically significant social impacts

Health

- Symptoms of landfill exposure include coughing, irritation of eyes, nose, and throat, headache, nausea, and breathing difficulties
- 12% increased risk of congenital malformations in children born to families within a mile of landfills
- Up to a 28% increase in frequency of affiliated symptoms

Note: Case survey data on appendix page 9 - 11.

Sources: Zero Waste America, National Library of Medicine; Health and Environmental risks of Residents Living Close to a Landfill, UC Boulder; The Hidden Damages of Landfills,

Other cities have found success in managing solid waste disposal by reducing and diverting waste

Case A: San Francisco

Action Summary:

1. Industrial waste requirements and regulation
2. Residential Mandatory Recycling & Composting Ordinance
3. City provided trash, recycling, and composting bins

Diversion rate: 80%+

Success drivers: Political support, educational continuity, incentives

Case B: Austin

Action Summary:

1. Regulated single use materials
2. Mandated recycling services in multi-family, office, and institutions
3. Development of more than 5000 sq. ft. required 50% diversion

Diversion rate: 40%+

Success drivers: Public/private partnership, phased implementation

Case C: Seattle

Action Summary:

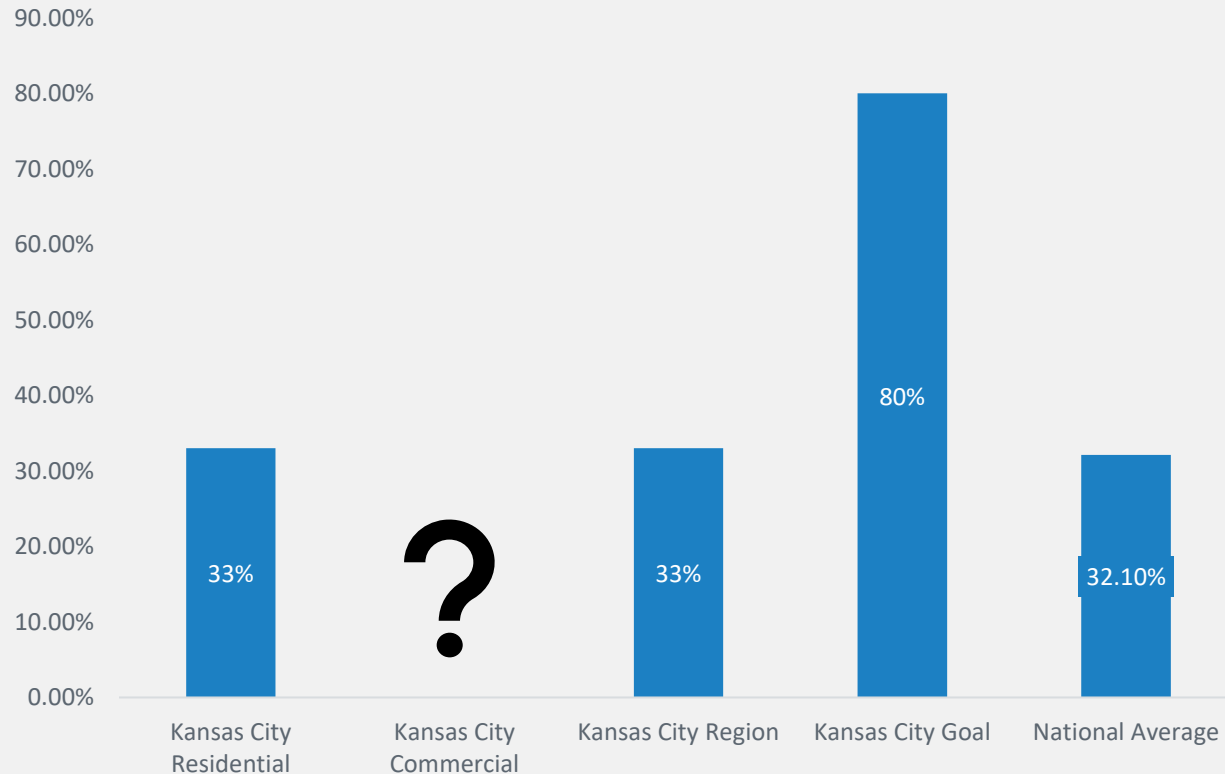
1. Mandatory Recycling Ordinance
2. Reduced waste generation practices
3. Mature strategic plan and process in place for waste management

Diversion rate: 60%+

Success drivers: Waste management processes, waste generation reduction, incentives

Currently Kansas City is at ~40% of our 2009 diversion goal

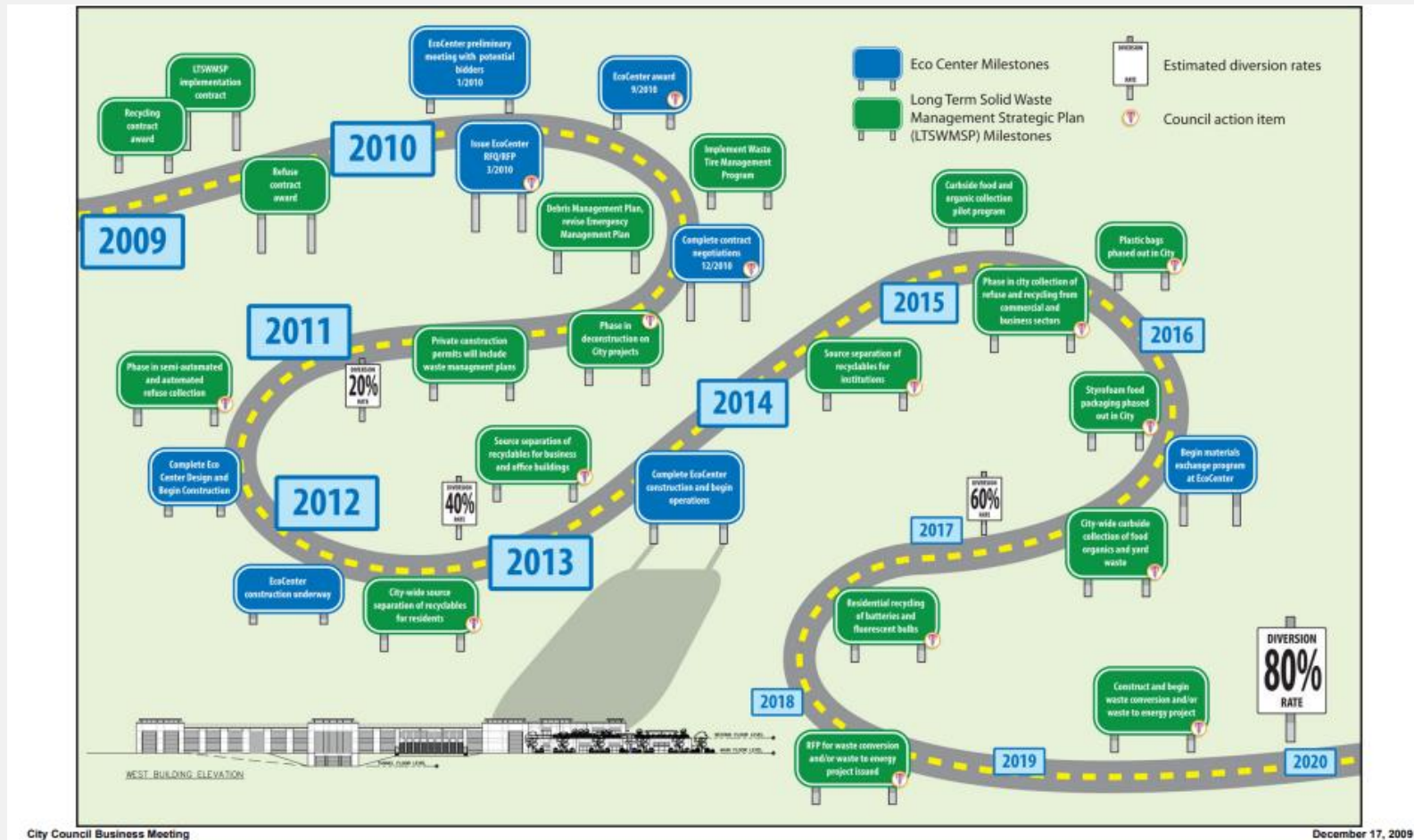
Regional Solid Waste Diversion, % of waste diverted from landfill



Primary Challenges

- 1 Kansas City Residential recycling has high contamination rates that can be reduced for more efficient diversion
- 2 Commercial/industrial waste process is private and not regulated or supported by public entities
- 3 Infrastructure to increase the ease of alternative waste methods is not fully built out in Kansas City

Kansas City has been discussing strategies for waste reduction for ~15 years, now is the time to act

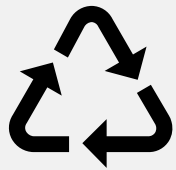


Sources: 2009 City Council Business Session.

Action for waste reduction and diversion looks like:

- 1. Facilitate infrastructure improvements and equipment accessibility to reduce barriers to waste diversion**
 - Action Step: Issue an RFI for a waste sorting facility ('eco-center') to improve diversion quantity and quality and increase capacity for trash management in Kansas City
- 2. Engage public / private partnerships and incentives to reduce commercial and industrial waste generation and disposal**
 - Action Step: Create a biproduct synergies group funded by commercial hauling permit fees to enable an efficient and environmentally responsible, local supply chain
- 3. Invest in recurring public education to rally culture of environmental awareness**
 - Action Step: Support education and volunteer programs hosted in local schools, colleges, and communities and drive engagement from marketing programs funded by implementing host fees at local Kansas City transfer stations

Building on KC's existing initiatives will reduce waste generation and increase diversion



Household Recycling

Kansas City offers curb-side recycling pickup for residents once a week along with periodic events such as shredding services, tire and electronics recycling, and reuse campaigns. The City has delivered 162,000 dedicated recycling bins.



Green Waste Recycling

Kansas City has robust yard-waste programs enabling green waste recycling. Composting programs are in early stages with kitchen scrap drop-off sites. Kansas City also works with private non-profits to provide education and 12 composting drop-off sites.



Glass Recycling

Kansas City works with Ripple Glass to offer glass recycling bins around town that accept glass recycling for free. Kansas City dedicated recycling drop-off centers also accept glass recycling at 3 locations.

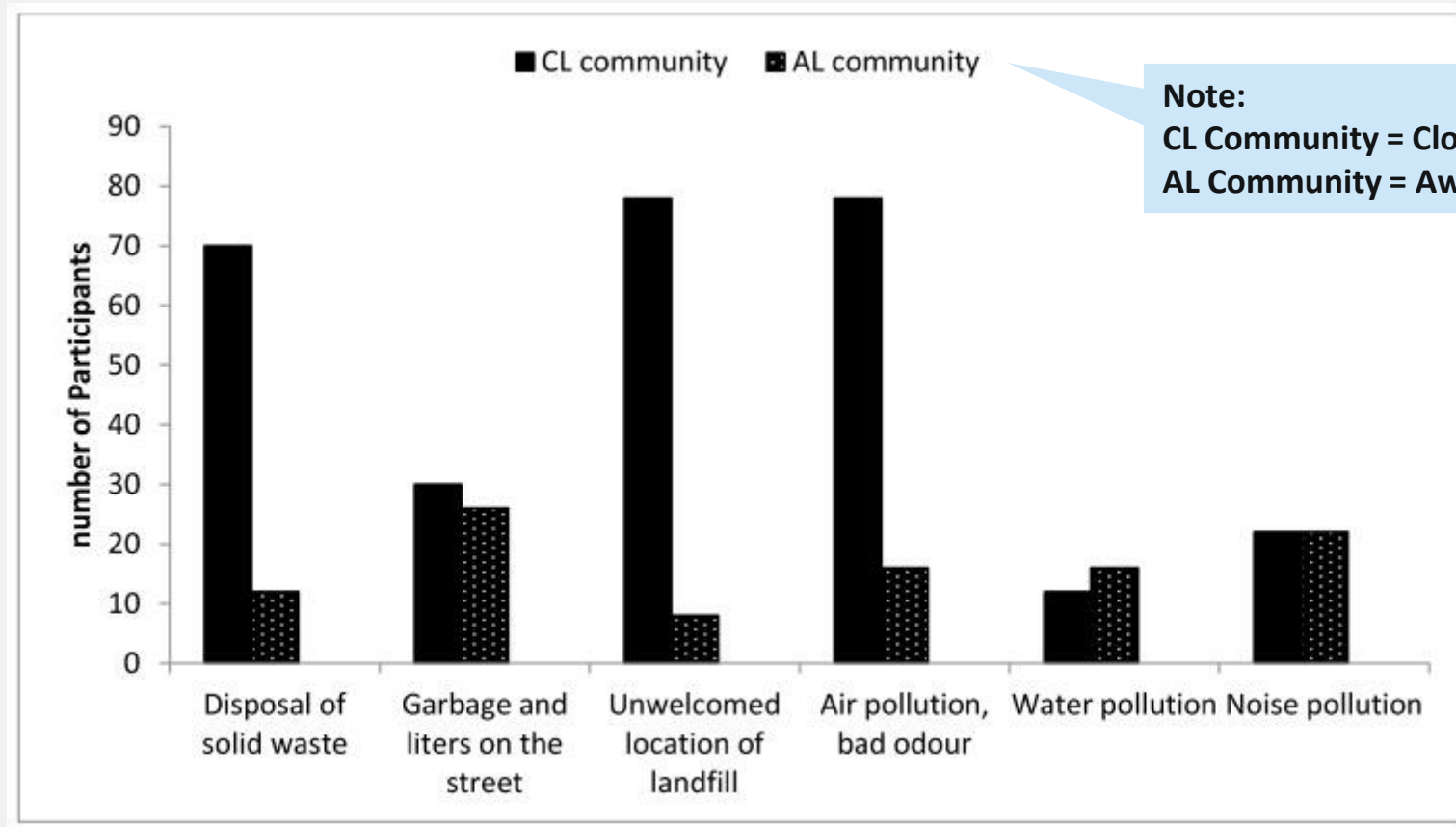
A regional study is in progress and projected to be completed January 2024.

The purpose of this study will be to validate projections and strategize mitigation approaches – not to determine a site for a new landfill.

Appendix

NLM Case Study on landfills and their impact on neighboring communities

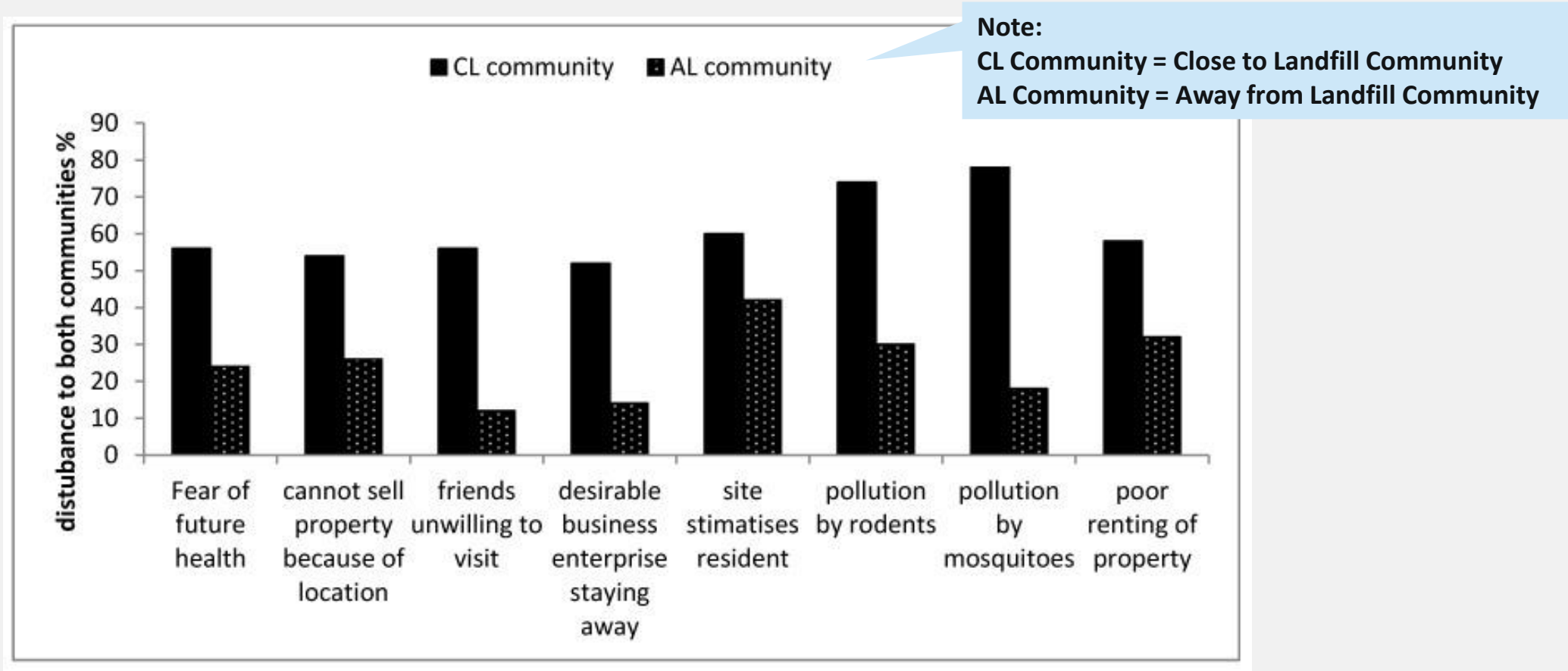
Environmental



Note:
CL Community = Close to Landfill Community
AL Community = Away from Landfill Community

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Social



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