COLORADO CIRCULAR COMMUNITIES

South Metro Waste Diversion Plan

Final Plan

June 30, 2025

STEPS
Strategic Technical Expertise
For the Public Sector

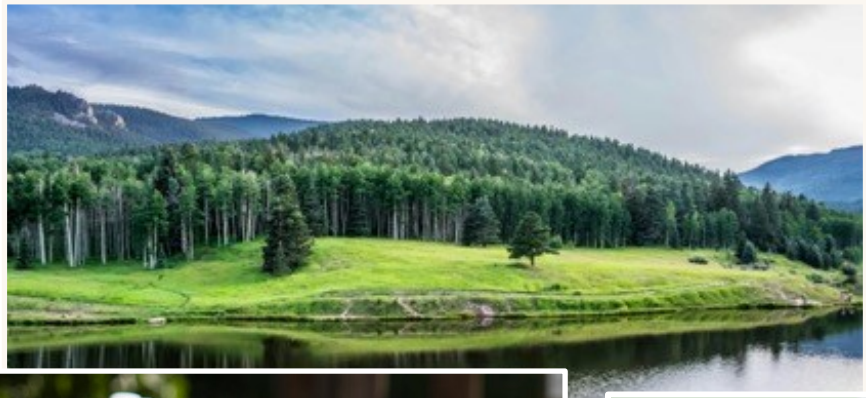
Centennial COLORADO | City of Englewood | Littleton Colorado | City of Sheridan






About

The Colorado Circular Communities (C3) Enterprise is a statewide program dedicated to supporting Colorado's communities, businesses, nonprofits, schools, institutions of higher learning, and tribes to advance the state's transition to a circular economy. The Enterprise provides financial and technical assistance to enhance circularity across the state, and helps organizations achieve their waste aversion and diversion goals. The Strategic Technical Expertise for the Public Sector (STEPS) program is the primary mechanism for communities in Colorado to access C3-funded technical assistance for circularity planning. STEPS assists local governments, tribes, and public K-12 school districts with efforts to enhance circularity, including averting and diverting waste, by implementing sustainable, long-term solutions that meet the unique needs of each community. The STEPS program offers a range of support from resources and workshops to multi-month direct consulting support. Technical assistance provided to communities across Colorado is aligned with the C3 Enterprise's mission of supporting Colorado's path to circularity. Technical support is provided by the C3 Outreach and Technical Assistance staff and a team of contracted subject matter experts led by Resource Recycling Systems (RRS). The STEPS program has replaced the Front Range Waste Diversion (FRWD) Technical Assistance Service Provider (TASP) program.



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Acknowledgements

The South Metro Waste Diversion Plan was made possible through the valuable contributions of residents, city agency representatives, industry stakeholders across the value chain, local businesses, trusted community organizations and committees, and a wide range of external partners.

Public participation was gathered through the resident survey, waste champion training, and virtual comments.

Industry participation was provided by haulers, recyclers and composters, and landfill/transfer station operators.

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Acronyms and Abbreviations

C&D – Construction and Demolition (Debris)
CAA – Circular Action Alliance
CDPHE – Colorado Department of Public Health and Environment
CEDC – Colorado Circular Economy Development Center
C3 – Colorado Circular Communities
EPR – Extended Producer Responsibility
EPA – Environmental Protection Agency
E-Waste – Electronic Waste
FTE – Full-Time Employee
HHW – Household Hazardous Waste
HOA – Homeowners Association
HTR – Hard-to-Recycle
MRF – Materials Recovery Facility
MSW – Municipal Solid Waste
PAYT – Pay-As-You-Throw
RTD – Regional Transportation District
SEMSWA – Southeast Metro Stormwater Authority
SMWDP – South Metro Waste Diversion Plan
STS South – STS South Denver transfer station
STEPS – Strategic Technical Expertise for the Public Sector

Executive Summary

The South Metro Region, including the cities of Centennial, Englewood, Littleton, and Sheridan of Colorado, has set an ambitious goal of **progressing to a system favoring equitable waste reduction and waste diversion strategies driven by data and best practices**.

It is estimated that by 2035, the South Metro region will generate approximately 260,000 tons of waste. Maintaining the status quo of all policies, programs, and strategies, South Metro is projected to send 221,000 tons to landfills for disposal by 2035. This underscores the need for a comprehensive waste diversion and reduction plan to mitigate future landfill dependency.

Through a first-of-its-kind regional collaboration, these cities have come together to develop the **South Metro Waste Diversion Plan**, a ten-year data-driven roadmap to transform how waste is managed across the region. This project serves businesses, residents, and local governments in the South Metro region by developing a clear set of actionable strategies to reduce the amount of waste sent to landfills.

Serving more than 190,000 residents and local businesses, this initiative aims to create a fair, inclusive, and effective system of waste reduction and diversion tailored to the distinct needs of each community. This plan was developed by the **Strategic Technical Expertise for the Public Sector (STEPS)** project team and is funded by the **Colorado Circular Communities (C3) Enterprise.**[1] The plan is grounded in best practices and a comprehensive understanding of current conditions. It includes a regional assessment of existing waste services, policies, infrastructure, and the types of materials being disposed.

Key components of the plan include:

- A baseline analysis of the regional and city-specific solid waste system
- Stakeholder and public engagement

[1] This project was initiated under the Font Range Waste Diversion (FRWD) Technical Assistance Service Provider (TASP) program, which STEPS has replaced.

- A two-season waste composition study and projected waste generation through 2035
- A robust analysis of gaps and opportunities
- Three high-impact regional actionable strategies
- Seven high-impact actionable strategies for each participating city
- Implementation timeline
- Infrastructure evaluations to identify future opportunities for Colorado Circular Communities (C3) Enterprise investment

Community engagement has been central to this effort, with over 43,500 community interactions across stakeholder meetings, resident surveys, social media engagements, focus groups, and a waste summit. This extensive outreach ensured that diverse voices shaped the plan's direction, including those from multi-family housing, businesses, and historically underserved populations.

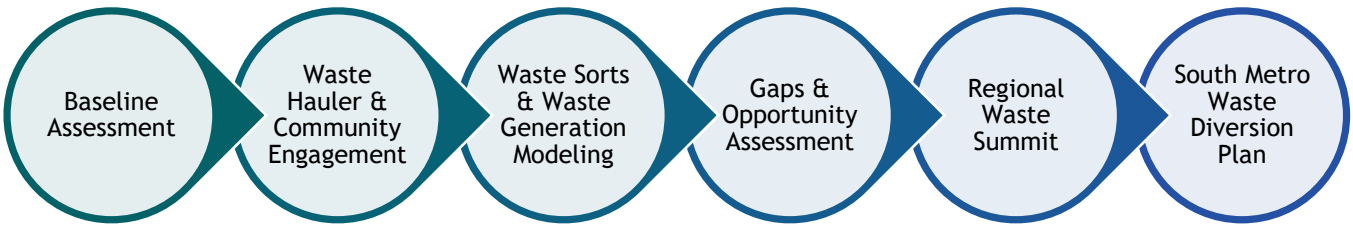


Figure 1: South Metro Waste Diversion Plan Development Process

The South Metro Waste Diversion Plan is more than just a policy document—it is a call to action. It reflects the region's commitment to sustainability, collaboration, and a circular economy that values resources, reduces waste, and uplifts communities. Together, these cities are setting a powerful example of how local governments can collaboratively lead with purpose and unity to create a plan that supports a sustainable future.

1.0 South Metro Baseline and Background

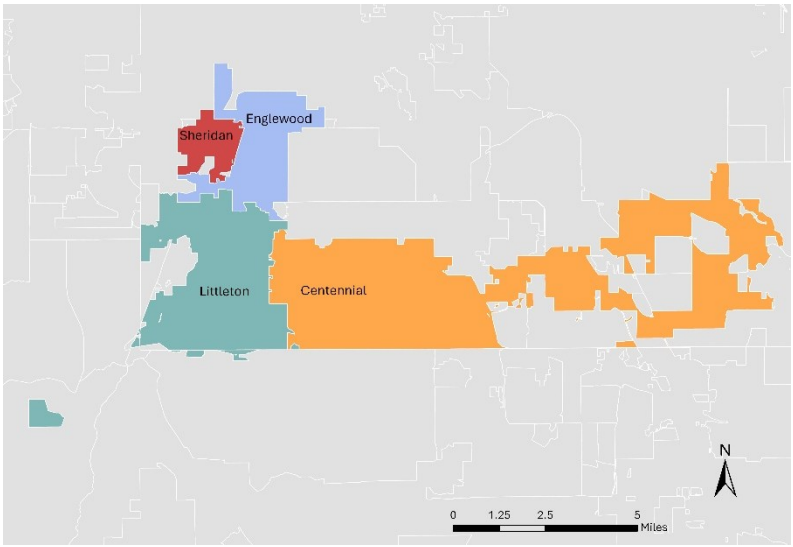


Figure 2: Map of South Metro

The Cities of Centennial, Englewood, Sheridan, and Littleton are situated in the Southern Denver metropolitan area beside the E-470 beltway. Together, these South Metro cities are home to approximately 190,000 residents and are known for their rich history and diverse character.

Of the four cities, Centennial is the largest by both area and population, representing 54% of the combined area and 56% of the overall population.

The makeup of single-family and multi-family housing varies significantly across the cities. Sheridan has the highest proportion of residents living in multi-family units[2] with five or more dwellings at 54%, while Centennial has the lowest at 13%. Despite these differences, the multi-family housing population is growing steadily in all four cities. Sheridan also has the highest share of Hispanic or Latinx residents and individuals who speak a language other than English at home, at 41.7% and 31.7%, respectively. Additional key demographic characteristics for each individual city are provided in Table 1.

Table 1: South Metro Demographics

Description	Centennial	Englewood	Littleton	Sheridan
Area (square miles)	26.9	6.7	13.8	2.3
Population	105,865	33,642	44,755	5,970
Households	40,952	15,686	20,484	2,442
Median Household Income	$124,617	$79,375	$90,273	$53,707
Persons Below Poverty Level	3.1%	8.3%	7.6%	11.9%
Bachelor's Degree or Higher	61.3%	44.3%	56.0%	19.0%
Language other than English spoken at Home	12.4%	12.2%	9.7%	31.7%
Hispanic or Latinx (of any race)	9.0%	18.5%	12.2%	41.7%
Multi-family Units*[2]	16.8%	36.6%	38.4%	40.1%
Total Employer Firms (2017)	3,633	1,475	1,825	423

Source: US Census V2022, 2020 5-year ACS and Root Policy Research, American Community Survey 2018-2022 Estimates, CP04 Comparative Housing Characteristics

[2] There are variations in the definition of 'multi-family' across jurisdictions within city codes, reports and/or contracts. For the purposes of this plan, 'multi-family' is defined as housing structures with five or more units, based on the 2018-2022 Estimate of the American Community Survey from the U.S Census Bureau. Mobile Homes, or Boats, RV, van, etc. are included in this definition. 'Single-Family' is defined as one-unit detached or attached and four or fewer housing units.

1.1 Plan Development Process

The development of the South Metro Waste Diversion Plan involved a comprehensive evaluation of the current waste management system. This included a waste characterization study to identify the types of waste generated in the region and waste modeling to project future tonnage. A robust stakeholder engagement process was also implemented to gather critical feedback on diversion strategies. This included focus groups, a residential survey completed by more than 1,300 residents, and interviews with waste haulers serving the region. These baseline findings helped identify initial gaps and opportunities to improve waste diversion. Representatives from each city also provided input on these elements during a Regional Waste Summit. Together, these efforts informed the recommended strategies and formed the foundation of the final plan. The plan development process is presented in Figure 3.

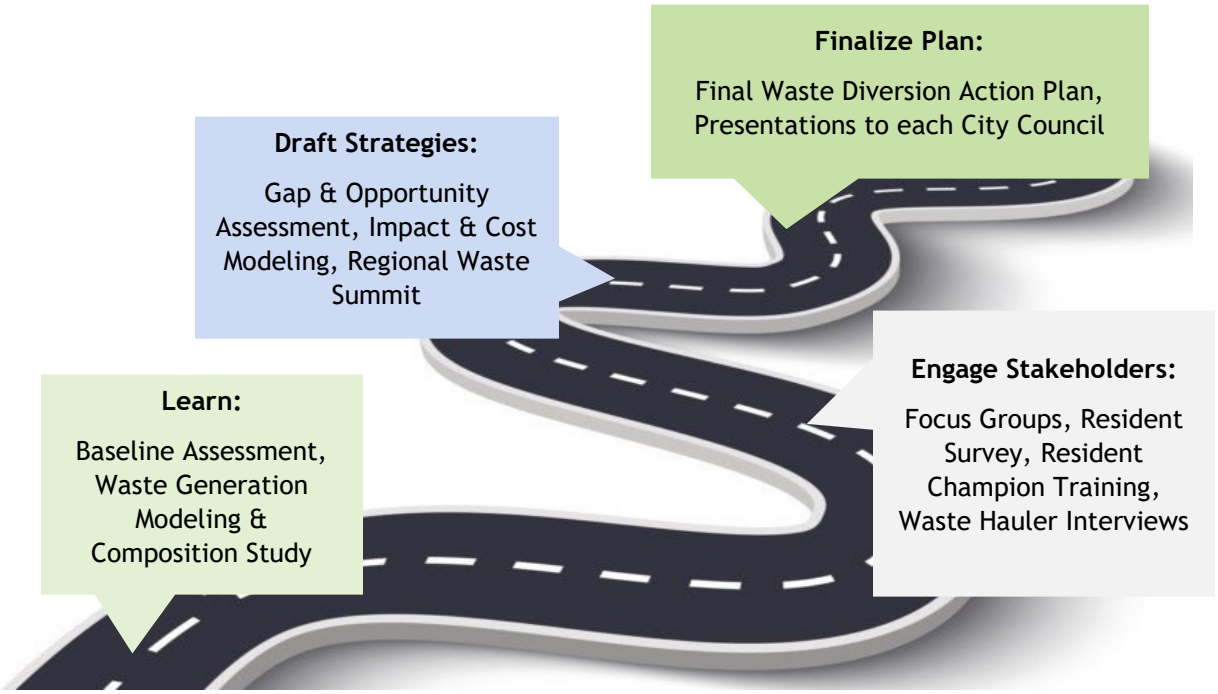


Figure 3: Plan Development Roadmap

1.2 Baseline Assessment

A baseline assessment was conducted to develop an inventory of South Metro's regional solid waste system and determine if the current systems are supportive of their future goals. The assessment included an analysis of waste collection options, material processing infrastructure, existing policies, and past studies, as well as community engagement activities and interviews with staff at each community.

Table 2 summarizes key findings from South Metro's baseline assessment for the mentioned sections. For more information, please reference the South Metro Waste Diversion Activity 3 Baseline Assessment report.

Table 2: South Metro Baseline Highlights

Description	Centennial	Englewood	Littleton	Sheridan
Area (square miles)	26.9	6.7	13.8	2.3
Population	105,865	33,642	44,755	5,970
Population % of South Metro	56%	18%	24%	3%
Multi-Family Units*	16.8%	36.6%	38.4%	40.1%
Collections Structure	Open Market	Open Market	Open Market	City Contract for Residential Collection
Opt-in or Universal Curbside Recycling	Opt-In	Opt-In	Opt-In	Universal
Pay Structure for Curbside Collections	Open-Market	Open-Market	Open-Market	Pay-As-You-Throw (PAYT)
Hauler Licensing	No	Yes	No	Yes
Universal Recycling**	No	Yes, Opt-In	No	Yes, Opt-In
Sustainability Plans	No	Yes	Yes	Yes
City Waste Goals	No	Yes	Yes	Yes
Recycling Website	Yes	Yes	Yes	Yes
Citizen Action Groups	Yes	Yes	Yes	Yes

*Multi-Family Units: Housing structures with five or more units, including mobile homes or boat, RV, van, etc. 2018-2022 American Community Survey, U.S. Census Bureau

**Universal recycling refers to a policy or system where all residents and/or businesses within a jurisdiction are required to have access to recycling services, typically alongside trash service. The goal is to make recycling as standard, consistent, and widely available as trash collection.

1.2.1 Collections

All collections in the South Metro region are provided by the private sector. Approximately 97% of residents in the Cities of Centennial, Englewood, and Littleton receive trash and recycling curbside services through the open market by subscribing directly with private haulers. Residents in these cities must opt in for recycling curbside services, generally for an additional fee. The City of Sheridan, which accounts for the remaining 3% of residents in the South Metro Region, contracts with Republic Services for single-family households with a pay-as-you-throw (PAYT) system for trash services, where residents pay based on cart size and the amount of waste generated. Sheridan residents receiving the city's contracted service also have recycling collections included as part of the program.

Trash and recycling collections for commercial and multi-family properties in the four cities are served through the open market, where property managers and owners subscribe directly with private haulers for services. None of the cities in the region provide or require recycling services for multi-family or commercial customers.

1.2.2 Infrastructure

South Metro is supported by various solid waste infrastructure in the region including Materials Recovery Facilities (MRFs) that handle single-stream recycling, recycling drop-offs, organics processing facilities and drop-offs, municipal solid waste (MSW) infrastructure composed of landfills and transfer stations, and miscellaneous recycling infrastructure. The following section provides an overview of the disposal infrastructure systems in the South Metro region.

Similar to collections, all materials processing and disposal facilities are fully owned and operated by the private sector. None of the cities in the region own, manage, or operate processing infrastructure.

1.2.2.1 Recyclable Material Processing Infrastructure

The South Metro region is served by two privately owned and operated MRFs that process single-stream recycling (Republic Services and Waste Management), shown on the map below. There are no public recycling drop-off centers in the South Metro boundary. The two closest recycling drop-off centers are located in Arvada and Aurora and owned and operated by private facilities (SustainAbility and Recycling Convenience Center at the Denver Arapahoe Disposal Site Landfill operated by Waste Management).

Waste Management is currently building a new $100M recycling facility in Denver East, estimated to be completed by mid-2026. AMP and Waste Connections, an artificial intelligence-powered recycling facility, is expected to be built and operated in Commerce City and is projected to open in early 2026.

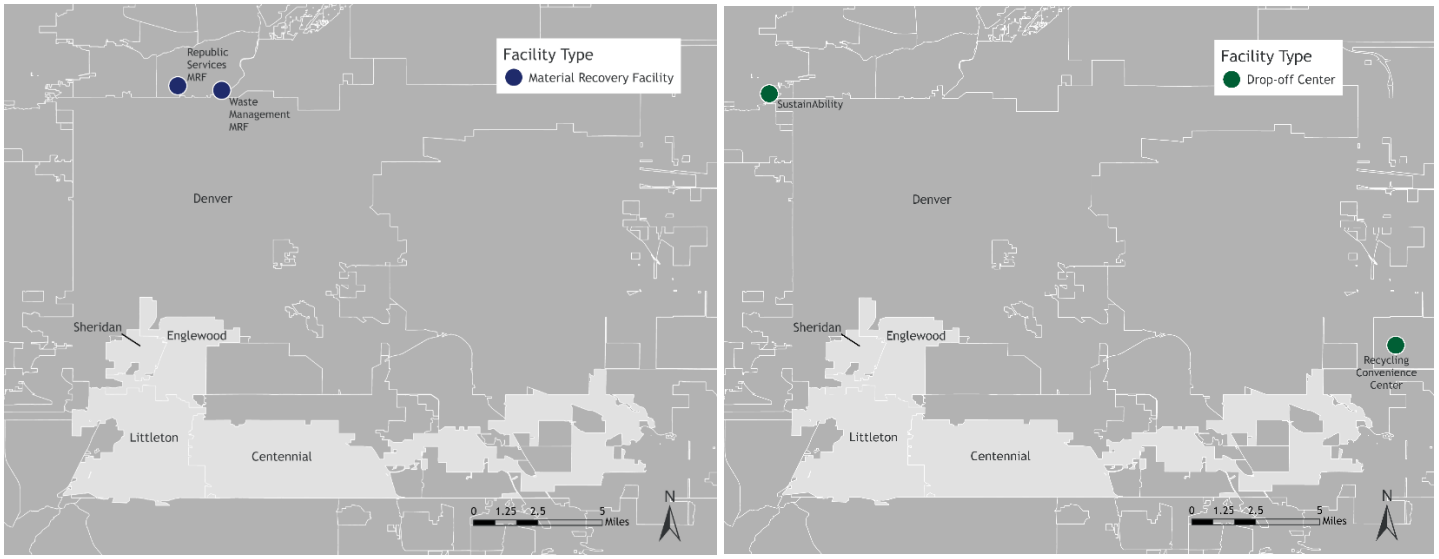


Figure 4: Maps of MRF and Drop-Off Infrastructure Surrounding South Metro

Table 3: Details of MRFs and Drop-Off Infrastructure Surrounding South Metro Region

Facility Name & Link	Infrastructure Type	Materials Accepted	Physical Address
Republic MRF	Materials Recovery Facility	Single-Stream Recycling	645 W 53rd Pl, Denver, CO 80216
Waste Management MRF	Materials Recovery Facility	Single-Stream Recycling	5395 Franklin St, Denver, CO 80216
SustainAbility	Drop-off Center	Hard-to-Recycle Items	6240 W. 54th Ave, Arvada, CO 80002
Recycling Convenience Center at DADS Landfill	Drop-off Center	Municipal Solid Waste	3500 South Gun Club Rd, Aurora, CO 80018

1.2.2.1 Organics Processing Infrastructure

A1 Organics in Sheridan does limited processing of yard debris (i.e., mulching and grinding) and accepts food scraps to be transferred to A1 Organics in Eaton or Keenesburg for composting. There are 11 organics drop-off sites accessible to residents that are operated by either SustainAbility, Compost Colorado, Scraps, or Wompost through subscription.

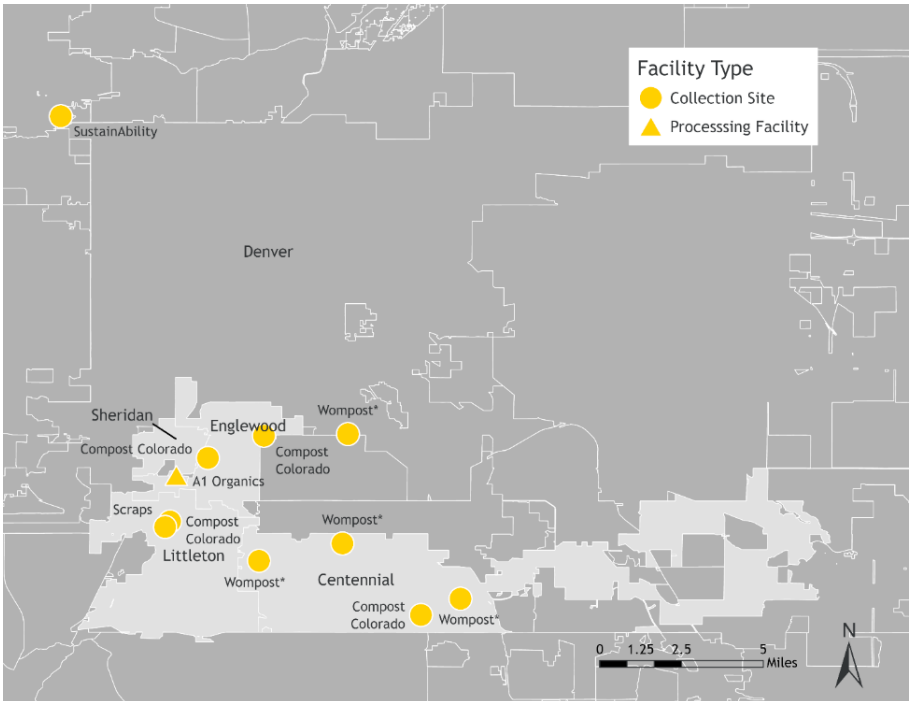


Figure 5: Map of Organics Infrastructure in South Metro

Table 4: Organics Infrastructure in South Metro

Facility Name & Link	Materials Accepted	Operating Hours	Physical Address
A1 Organics	Yard debris	Mon - Fri: 7:00am - 4:00pm Sat: Spring only	2300 W Radcliff Ave, Englewood, CO 80110
Compost Colorado	Food scraps and Other Compostables	24hrs for subscribers only	1155 W Oxford Ave, Englewood CO 80110
Compost Colorado	Food scraps and Other Compostables	24hrs for subscribers only	900 E Hampden Ave, Englewood, CO 80113
Compost Colorado	Food scraps and Other Compostables	24hrs for subscribers only	5610 S Curtice St, Littleton, CO 80120
Compost Colorado	Food scraps and Other Compostables	24hrs for subscribers only	7070 E Mineral Ave, Englewood, CO 80112
Scraps	Food scraps and Other Compostables	24hrs for subscribers only	5767 S Rapp St, Littleton, CO 80120
Wompost	Food scraps and Other Compostables	24hrs for subscribers only	Precise location available upon subscription Denver, CO 80222
Wompost	Food scraps and Other Compostables	24hrs for subscribers only	Precise location available upon subscription Centennial, CO 80121
Wompost	Food scraps and Other Compostables	24hrs for subscribers only	Precise location available upon subscription Centennial, CO 80121
Wompost	Food scraps and Other Compostables	24hrs for subscribers only	Precise location available upon subscription Centennial, CO 80112
SustainAbility	Food scraps and Other Compostables	Mon - Thurs: 9:00am - 4:00pm Fri - Sat: 9:00am - 3:00pm	6240 W. 54th Ave, Arvada, CO 80002

1.2.2.3 Municipal Solid Waste Infrastructure

Three privately operated landfills (owned by Waste Management and Republic Services) along with four transfer stations (owned by Waste Connections, Waste Management, and Republic Services) manage the municipal solid waste (MSW) generated in the region.

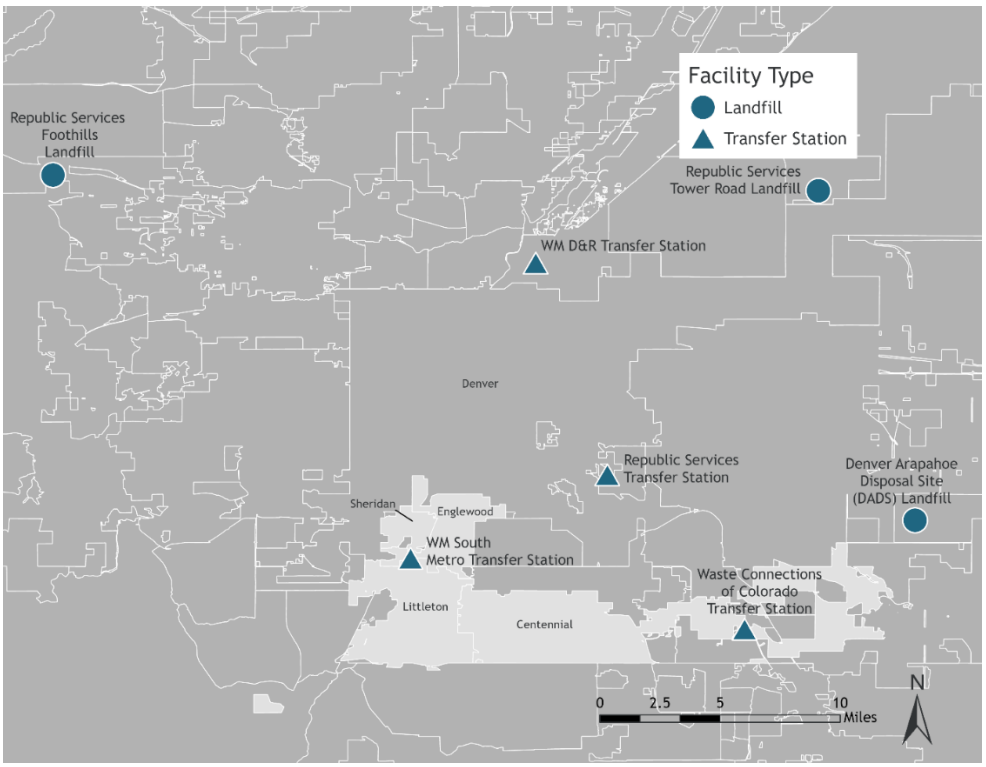


Figure 6: Landfills and Transfer Stations Surrounding South Metro

Table 5: Municipal Solid Waste Landfills and Transfer Stations in South Metro

Facility Name & Link	Infrastructure Type	Materials Accepted	Physical Address
Denver Arapahoe Disposal Site (DADS) Landfill	MSW - Landfill	Municipal Solid Waste	3500 South Gun Club Rd, Aurora, CO 80018
Republic Services Tower Road Landfill	MSW - Landfill	Municipal Solid Waste	8480 Tower Rd, Commerce City, CO 80022
Republic Services Foothills Landfill	MSW - Landfill	Municipal Solid Waste	8900 CO-93, Golden, CO 80403
Waste Connections of Colorado Transfer Station	MSW - Transfer Station	Municipal Solid Waste	7120 S. Jordan Rd, Centennial, CO 80112
Waste Management South Metro Transfer Station	MSW - Transfer Station	Municipal Solid Waste	2400 W Union Ave, Englewood CO 80110
Republic Services Transfer Station	MSW - Transfer Station	Municipal Solid Waste	7750 Cherry Creek S Dr, Denver, CO 80231
Waste Management D&R Transfer Station	MSW - Transfer Station	Municipal Solid Waste	6091 Brighton Blvd, Commerce City, CO 80022

1.2.2.4 Miscellaneous Infrastructure

Residents may divert electronics, construction & demolition (C&D) debris, and scrap metal through various permanent, designated drop-off sites in the South Metro region. These sites are complementary to several municipal events, private drop-off locations, and specialized pick-up services (e.g., Ridwell and Terracycle) that exist to increase material recovery. The locations of the miscellaneous recycling infrastructure in South Metro are shown in Figure 7.

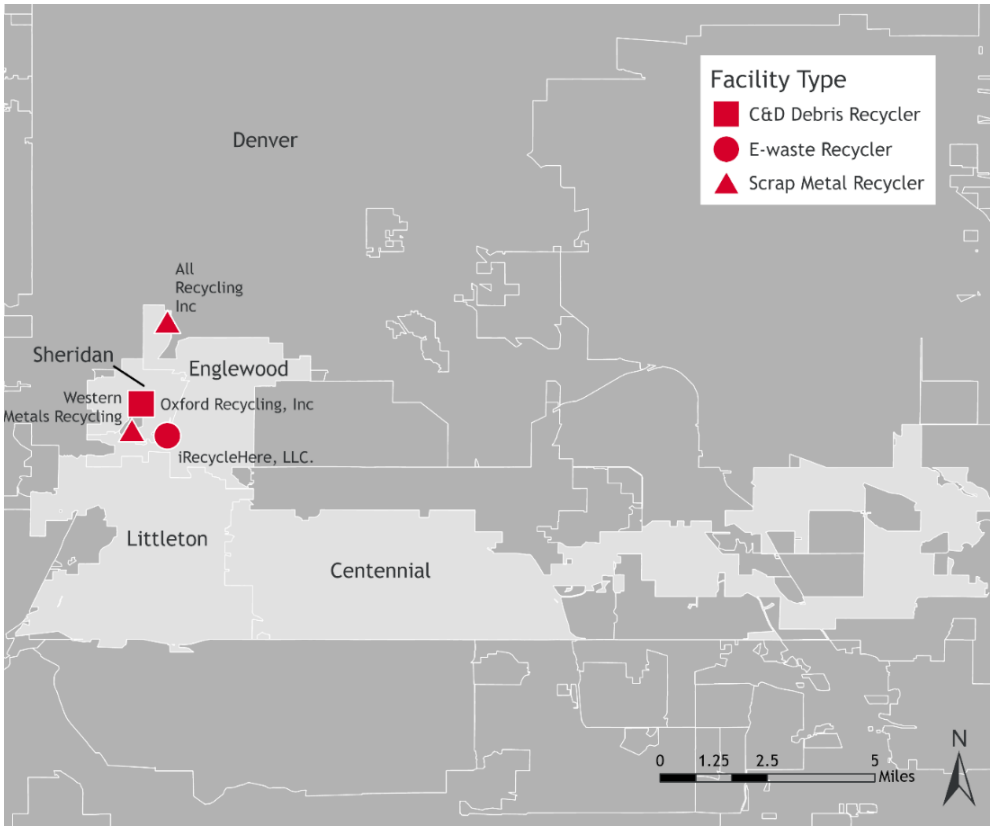


Figure 7: Map of Miscellaneous Recycling Infrastructure

Table 6: Miscellaneous Recycling Infrastructure

Facility Name & Link	Infrastructure Type	Materials Accepted	Physical Address
iRecycleHere, LLC.	Misc. Recycling	Electronic Waste	1865 W Union Ave Ste Q, Sheridan, CO 80110
Oxford Recycling, Inc	Misc. Recycling	C&D Debris	2400 W Oxford Ave, Englewood, CO 80110
All Recycling Inc	Misc. Recycling	Scrap Metal	1775 W Wesley Ave, Englewood, CO 80110
Western Metals Recycling	Misc. Recycling	Scrap Metal	2100 W Oxford Ave, Englewood, CO 80110

1.2.3 Policy

In general, the cities in the region have taken a hands-off approach to managing materials. None of the cities require recycling or composting for residential or commercial properties. Additionally, ordinances and regulations that drive recycling related behaviors (such as equal space for recycling, C&D requirements, or pay-as-you-throw ordinances) are not present in the region.

Englewood and Sheridan, representing 20% of the total population of South Metro, are the only cities that require licensed waste haulers. Both cities require licensed waste haulers to offer recycling services to residents, as specified in their respective city codes. There is an opportunity to strengthen hauler licensing ordinances in both cities by requiring haulers to report tonnages and bundle recycling services with trash service, rather than simply offering them as an optional add-on to customers.

Unlike the other South Metro communities, the City of Sheridan adopted a single-hauler system in 2014 through a contract with Republic Services that includes pay-as-you-throw pricing. Through the contract, Sheridan offers resident-funded trash and recycling collection to single-family homes and buildings with seven or fewer units. Although recycling collection is free, it is not automatically bundled with trash collection services, requiring residents to actively sign up for it. The contracted service includes a volume-based pricing structure for trash collection. While Sheridan has a hauler licensing ordinance, it does not require haulers to report data beyond what is outlined in the residential collection contract.

While Englewood and Sheridan have limited recycling-specific policies to date, both cities have incorporated waste-related goals within their respective sustainability plans. Additionally, the City of Littleton's Environmental Stewardship Board has prepared an Environmental Stewardship Action Plan that includes targeted goals for waste reduction and recycling.

1.2.4 Community Engagement

All four South Metro cities maintain dedicated webpages for trash and recycling services. Translation services are available on the websites for the Cities of Centennial, Littleton, and Sheridan, enhancing accessibility for non-English speaking residents.

Each city also hosts a variety of impactful recycling events, addressing materials such as Christmas trees, electronics, fall leaves, cooking oil, and household hazardous waste (HHW). Citizen action groups are active in all four cities, reflecting a range of perspectives on waste management practices. Through these action groups and recycling events, cities have reported growing interest in composting, reflecting a stronger desire among residents for more sustainable waste disposal options.

Figure 8: Earth Day Celebration 2025 in the City of Englewood

1.3 Waste Hauler Engagement

To better understand the existing waste management services including the barriers and opportunities for increasing waste diversion in the South Metro region, the STEPS project team conducted in-depth interviews with eight haulers operating in the region. These haulers included solid waste, recycling, and organic waste haulers that provide services to single-family households, multi-family households, and commercial properties. High-level findings and a summary of interviews are presented in Figure 9.

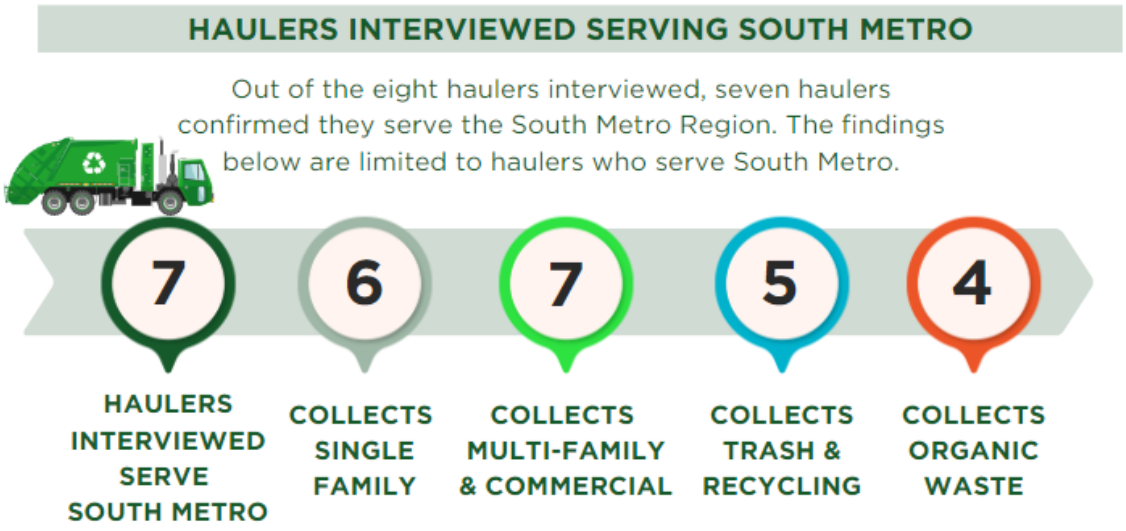


Figure 9: Summary of Hauler Services in South Metro

1.3.1 Perceived Barriers for Recycling & Composting

The top reasons cited by haulers for why they believe individuals opt out of recycling or composting include cost constraints, education and awareness, lack of convenience (for commercial and multi-family), and a lack of trust that recyclables are truly processed and recycled as claimed.

WHAT SHOULD SOUTH METRO DO TO SUPPORT RECYCLING?

"Improve education around recycling - this could be done with haulers in the area."

"Diversion will increase if there are more contracts in place. Contracts help establish clarity for customers about who and how their materials are being collected."

"Combat the distrust of the recycling industry."

"Would love to partner with municipalities."

1.3.2 City-Led Initiatives to Improve Residential Recycling & Composting

Haulers providing organic waste collection services frequently noted that expanding free, public access to drop-off sites throughout the region, along with free or subsidized services, would increase residential and commercial composting participation. This recommendation is supported by communities who have transitioned to providing subsidized or free organics services across the state and country.

Multiple haulers emphasized the need to expand educational programs to increase recycling and composting participation. A significant portion of the public lacks awareness of proper recycling and composting practices, questions the effectiveness of these efforts, or does not see value in these services, particularly when they involve additional costs.

It is important to note that, beginning in 2026, Colorado's Extended Producer Responsibility (EPR) legislation will require producers of packaging and paper products to fund a statewide system to recycle covered materials, resulting in 'no-cost' recycling services for covered generators.

1.3.3 Contamination

Haulers reported that some homeowners associations (HOAs) and multi-family communities opt out of recycling services due to contamination fees, which are often incurred when residents do not recycle properly. Haulers charge contamination fees to cover the costs of managing and disposing of contaminants in the recycling stream. Many multi-family communities and HOAs have decided that they would prefer to suspend recycling services instead of providing education to residents.

Service providers specializing solely in compost collection have robust educational and feedback programs in place that help reduce contamination. They either provide proactive education by training residents and commercial building staff on best practices, or reactive feedback by providing real-time guidance on contaminants found in individual bins. While many of these organic waste haulers operate on a relatively small scale, they believe these methods could be effective on a large scale to maintain clean organic waste streams.

1.4 Community Engagement

Community engagement is an integral process of the South Metro Waste Diversion Plan. Engaging the community ensures that the plan is not only aligned with the needs and priorities of stakeholders, but also fosters a sense of ownership, trust, and collaboration. Therefore, community engagement is embedded throughout many of the project activities. To ensure community needs and desires were thoughtfully captured and integrated into South Metro's future actions, a robust community engagement strategy was implemented including a website, survey, engagement collateral, focus groups, and Resident Champion training.

1.4.1 Website Development

The cities expressed a desire to create a website to communicate progress on the South Metro Waste Diversion Plan with both the public and elected officials. In response, the South Metro Waste Diversion website was developed. During the stakeholder engagement phase, it served as a landing page for the South Metro Residential Survey and hosted the registration for focus groups.

Today, the website continues to serve as a central hub for information about the waste diversion plan. It provides access to reports and memorandums created from this project and offers opportunities for stakeholders to provide feedback that informs plan development. The website also includes the Resident Champion Training videos and toolkit, developed as part of the broader stakeholder engagement strategy discussed later in this section.

Since the launch of the South Metro Waste Diversion website, there have been approximately 3,300 unique visitors as of June 2024. The majority of the website visitors have accessed the site directly, either by scanning the QR code from the survey mailer or by entering the SouthMetroWasteDiversion.com website directly into their browser.

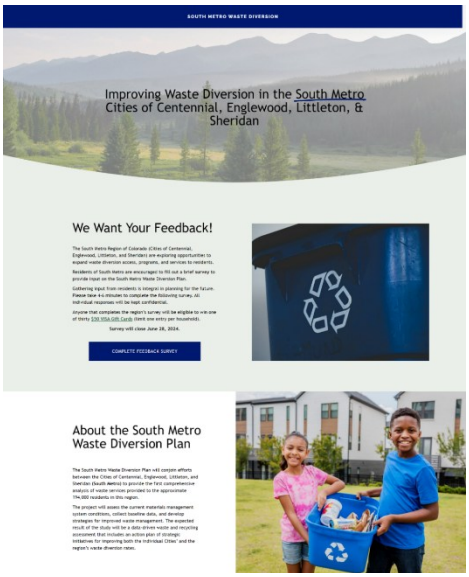


Figure 10: South Metro Waste Diversion Website Screenshot

1.4.2 Survey

To better understand the factors that motivate or hinder residential participation in South Metro's solid waste management systems, an online survey was developed in English and Spanish to gather input directly from residents. Questions were tailored to gather data on municipal solid waste disposal methods, current and potential waste diversion practices, and residents' perspectives on implementation of various waste diversion methods. The survey was conducted with a random sample of residents in June 2024 and yielded results with a ±5% margin of error at a 99% confidence level.

Survey results revealed that at least 87% of residents in Centennial, Englewood, and Littleton reported that their trash hauler offers recycling. In Sheridan, 18.2% of respondents reported that their trash hauler does not offer recycling services. This lack of service was most commonly reported among residents of trailers/mobile homes, duplexes & multiplexes, and apartment buildings. Recycling habits were found to be prevalent, with 85% of South Metro residents having a recycling bin and actively recycling, while 13% reported lacking a recycling bin and not recycling at all (Figure 11).

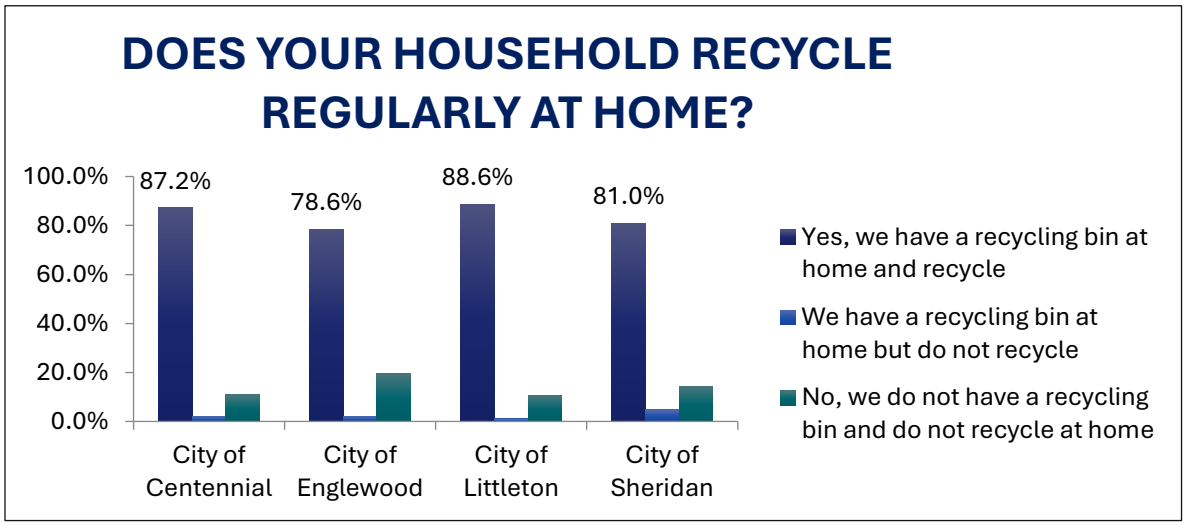


Figure 11: Survey Results on Whether Households Recycle Regularly at Home

Across the South Metro region, respondents strongly agreed that they support efforts to increase access to composting and recycling in their communities and that recycling helps to conserve natural resources to preserve the environment for the future. Additionally, 58% of respondents shared they would be willing to compost both yard and food scraps, and over 50% of the respondents somewhat agreed or strongly agreed that households in their communities have access to convenient recycling services and believe that most of their neighbors recycle today.

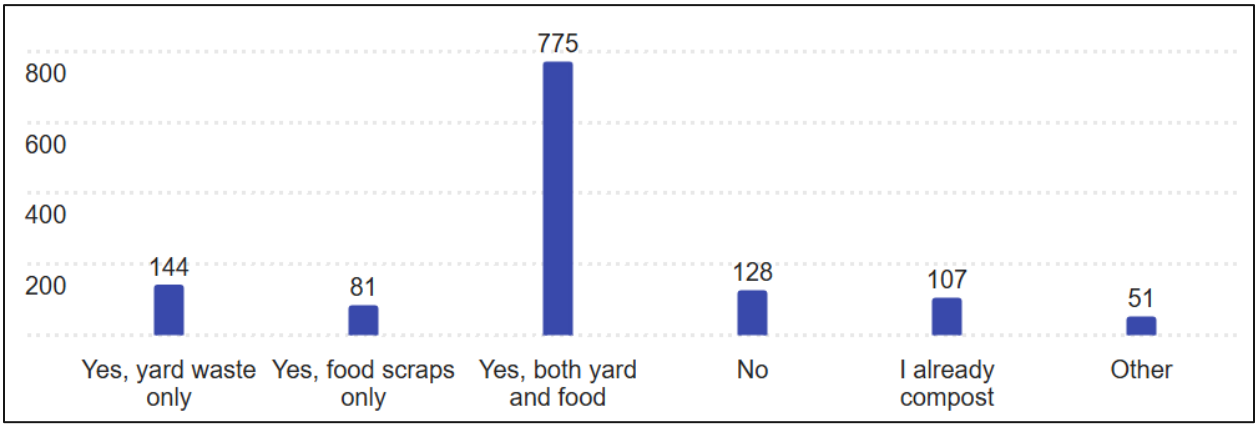


Figure 12: South Metro Willingness to Compost Food or Yard Debris

Despite general enthusiasm for expanded recycling and composting services, challenges remain. Residents in Centennial, Englewood, and Littleton identified low trust as the greatest barrier, while Sheridan residents cited confusion about what can be recycled as their primary challenge. Furthermore, respondents identified the need for additional recycling drop-off locations.

With regards to costs, 17% of the survey respondents were unsure how much they pay per month for trash services, with 20% reporting they pay between $21-$30/month. Residents in the City of Sheridan, the only city in South Metro that has organized hauling services through Republic Services, most reported paying in the $11-$20 a month range, while other cities most reported paying in the $21-$30 a month range.

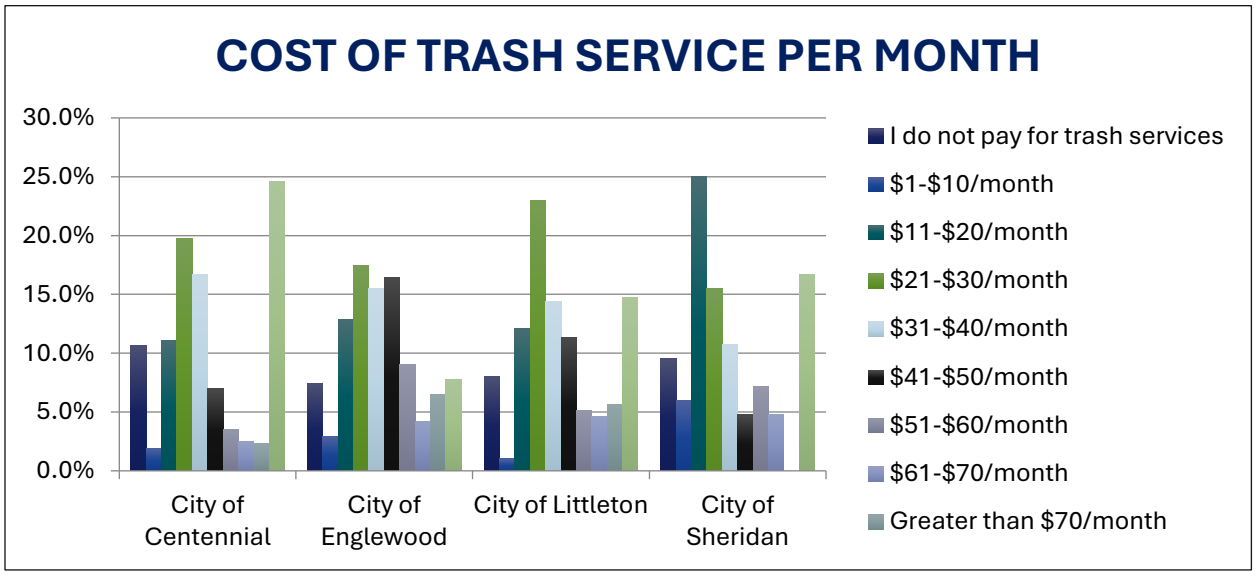


Figure 13: Cost of Trash Service per Month

1.4.3 Mailer

To facilitate broader survey participation, a bilingual mailer was developed with information on accessing the South Metro survey and to inform residents of the South Metro Waste Diversion project. A 5"x7" postcard mailer was designed and made available in English and Spanish given that Spanish is the second most spoken language in the region. The mailer utilized the font and color family consistent with the branding of the website. Each of the respective city logos were utilized to communicate that this was a regional project. The mailer provided a QR code that directed residents to the South Metro Waste Diversion website. A visual of the mailer is shown in Figure 14.

Figure 14: Mailer Screenshot

The mailers were sent to a sample of 14,875 randomly selected households in the region, consisting of a representative proportion of both single-family and multi-family homes across all four cities. The QR code on the mailer was accessed 1,891 times from the time of receipt until the end of the survey response period.

Figure 15: Social Media Graphic Promoting Focus Groups

1.4.4 Focus Groups

Three virtual focus groups were conducted to gather insights from stakeholders on existing waste management patterns, barriers, and opportunities. The three groups identified and formed were multi-family residents, businesses, and disadvantaged communities.

Participants were engaged through various community-facing channels and sources, including trusted community groups, committees, chambers, and social media. Focus group participants were recruited from all four cities to ensure diverse and representative input across the three target groups. Following established best practices for qualitative research, the first ten eligible respondents were invited to participate in each session. Participants received a $50 Visa online gift card in recognition of their time and contributions. The focus groups were conducted virtually and held separately, beginning with an overview of the project and review of ground rules, followed by a facilitated conversation guided by a set of pre-developed questions.

All focus group participants reported having access to trash services, however, fewer than half had curbside recycling, and only one business had contracted composting services. Several common barriers to recycling were identified, including lack of access, insufficient space and dumpster capacity in multi-family complexes, limited involvement in waste management decisions for businesses, and the high cost of services for disadvantaged communities. Participants also cited a lack of reliable educational resources and recycling services. Across all three focus groups, concerns were raised about the high number of waste haulers operating in the community, with specific worries about child safety, property damage, and road deterioration. Additionally, there was a shared desire to expand access to services for hard-to-recycle materials as well as recycling drop-off centers.

1.4.5 Resident Champion Training

A virtual Resident Champion training session was conducted for South Metro residents, focused on the benefits and logistics of recycling and waste diversion, as well as strategies for effectively sharing this information within their communities. As the cities move toward exploring and implementing specific policy measures, Resident Champions are expected to play a vital role in providing informed community input, supporting public engagement, and assisting with on-the-ground implementation. Although the primary goal of the training was to raise awareness of the South Metro Waste Diversion Plan, no specific waste-related policies were discussed.

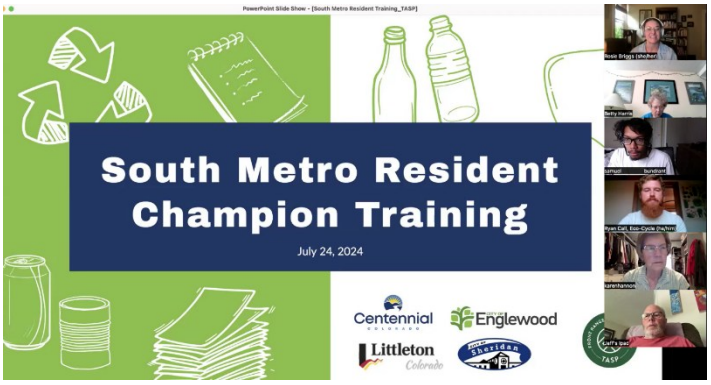


Figure 16: Screenshot of Virtual Training of the Resident Champion Training

All attendees received a copy of the training recording, slide deck, and a Resident Champion toolkit, which includes guidance on recyclable materials, common contaminants, frequently asked questions, and the broader benefits of recycling. All materials in the toolkit were also made available in Spanish to enhance accessibility. A screenshot of the virtual training format is shown in Figure 16.

1.5 Regional Waste Summit

A Waste Summit was held to present findings to elected officials from the four South Metro cities. The presentation covered information collected to date, including the baseline infrastructure evaluation, hauler interviews, public engagement findings, the waste characterization study, and the initial gaps and opportunities analysis. At the meeting, input from elected officials was gathered to identify potential gaps in the waste system and was incorporated into further research and the development of recommended policies and strategies.

The Summit was a zero-waste event, with all materials reused, composted, recycled, or otherwise diverted. This served as both a conversation piece to explore waste reduction practices and as a way to highlight Colorado's strong end markets for metals and glass recycling.

Figure 17: South Metro Waste Summit Day 1 and Zero Waste Stations at the Event

Throughout the event, strategies were presented and discussed through both verbal dialogue and the virtual polling platform, PollEv. Elected officials were asked to identify priorities they wished to explore further, focusing on those they viewed as feasible and/or as offering a positive strategy for advancing waste diversion in the South Metro region and their individual cities.

What are the top priorities we should further explore regionally?

Regionally, yard debris and food scraps collections were the top priority identified to explore further. Organic waste comprises 48% of residential trash, which elected officials cited as being a key factor in their interest in exploring organics collection. By a slight margin, there was a preference for yard debris collection over food scraps collections. There were discussions about the various pathways to capturing yard and food scraps, with officials citing they partake in backyard composting or burying their food scraps at home. Strategies were also discussed at large, such as capturing landscaping yard debris via mulching or composting, increasing access to food scraps drop-off sites, and supporting commercial entities in using compostable service ware. Concerns were also brought up regarding odors and the possibility of attracting pests to curbside bins.

The secondary priority identified was increased commercial and multi-family unit recycling access, citing limited access in many multi-family complexes. Elected officials expressed interest in exploring ways to support this gap. Speakers discussed various options that can improve access for commercial and multi-family units including education, outreach, and technical assistance to property owners and/or tenants.

2.0 South Metro Waste Composition and Generation

The South Metro Waste Diversion Plan included a waste composition study and waste generation modeling analysis to identify current waste trends and project future waste tonnage production for the region and each individual city. These data points were critical for identifying gaps and opportunities and for guiding the development of effective waste reduction strategies, as they highlighted specific concerns around contamination, diversion rates, and total waste generation. Waste generation models were applied to estimate current and projected tonnages through 2035. These estimates include the total material generated, landfilled, and diverted, broken down by generating sector for each city within the South Metro region.

Findings from these tasks confirmed that a significant portion of the region's waste continues to be landfilled, with comparatively lower rates of diversion through recycling and composting. Projections indicate that by 2035, the South Metro region will generate approximately 260,000 tons of waste. If all strategies, policies, operations, and engagement stay the same, the South Metro region will be diverting roughly 15.2% of its waste, or approximately 39,000 tons of waste through recycling or composting.

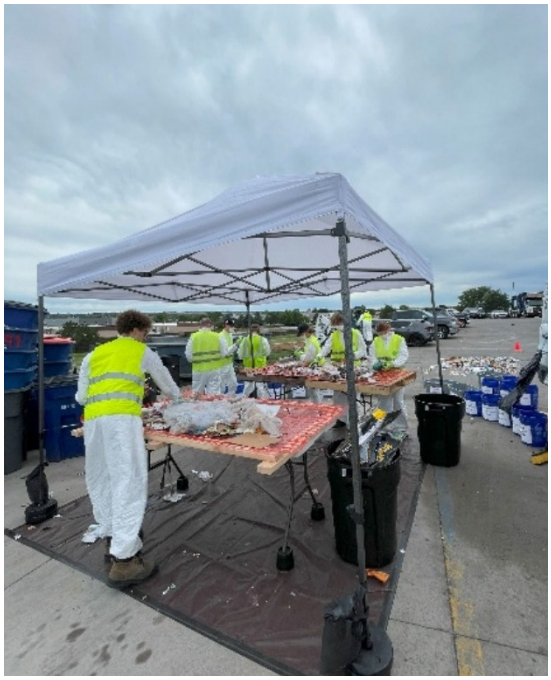


Figure 18: Waste Characterization Study

2.1 Waste Composition

The South Metro Waste Diversion Project included a two-season waste characterization study (also known as a 'waste audit' or 'waste sort'). The aim of the waste characterization study was to sort samples of trash and recycling to assess the overall composition of the region's waste streams. Approximately 10,200 pounds of trash and recycling from both residential and commercial/multi-family sectors were sorted into 32 categories. Samples from all four cities in South Metro were represented in the study.

2.1.1 Municipal Solid Waste (MSW)

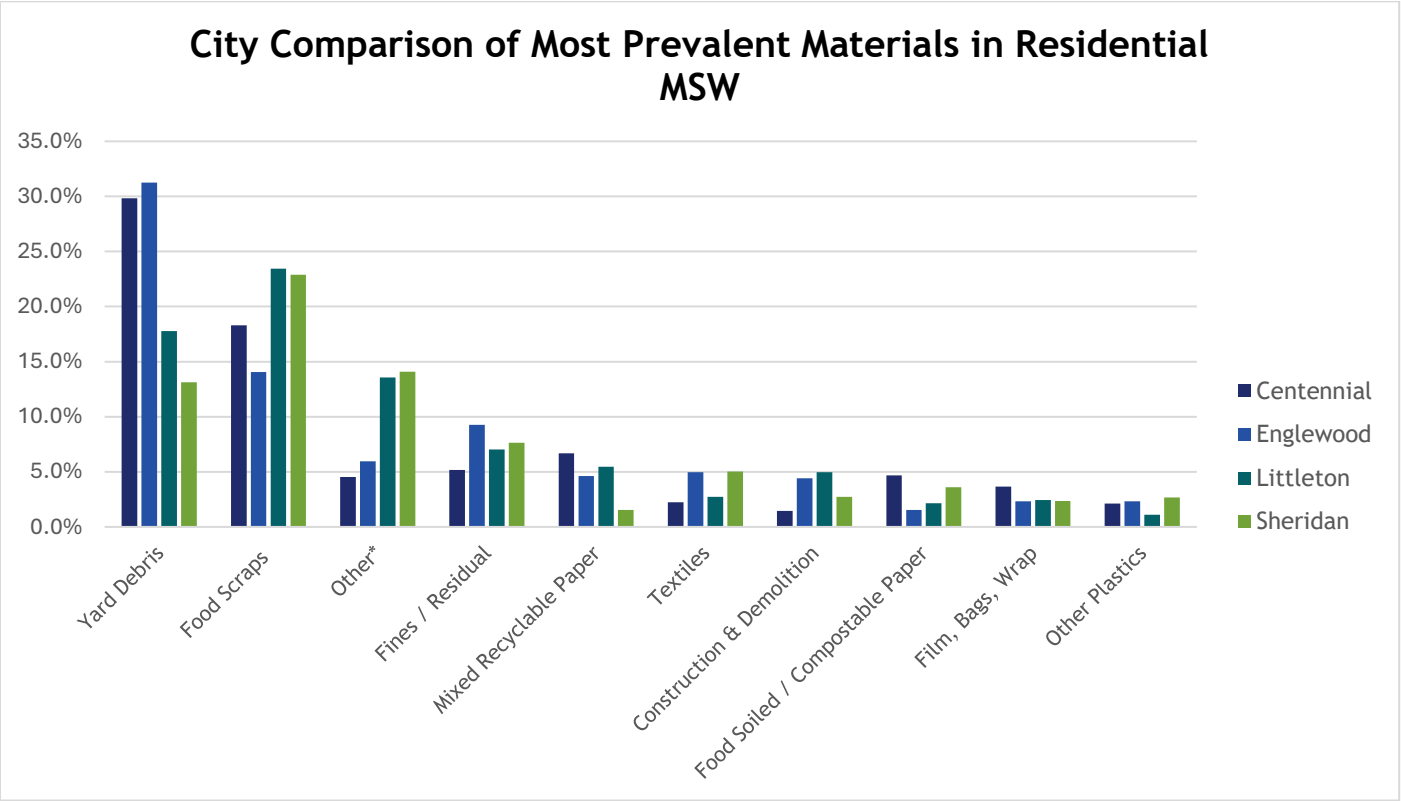
The most prevalent materials in combined residential and commercial MSW were food scraps (18.6%), followed by yard debris (17.1%), and Other[3] (9.2%).

Although seasonal variability influenced food scraps, yard debris, and construction and demolition (C&D) material categories most significantly, food scraps and yard debris emerged as the most prevalent materials in the waste stream across both sorting seasons, indicating their significance and diversion potential.

In the residential MSW, yard debris was the most prevalent material landfilled (24.0%), followed by food scraps (19.4%). Together, these materials make up 43.4% of residential MSW, representing a significant opportunity for diversion from

[3] *Other* includes materials that do not belong in any other defined category, such as rubber, tires, bulky furniture, diapers, sanitary products, pet waste, and wipes.*

South Metro's residential trash stream. This was consistent across individual cities additionally, with both food scraps and yard debris in the top three material categories for all cities. Figure 19 show the top 10 most prevalent materials in South Metro's Residential MSW.



Other includes materials that do not belong in any other defined category, such as rubber, tires, bulky furniture, diapers, sanitary products, pet waste, and wipes.*

Figure 19: City Comparison of Most Prevalent Materials in Residential MSW

2.1.2 Recyclables

A total of 27 samples of recycling were collected and sorted, including 18 residential and 9 commercial samples. Corrugated cardboard (37.0%) was the most prevalent material in combined residential and commercial recycling streams, alongside mixed recyclable paper (20.4%) and glass bottles and jars (11.3%).

For residential streams, the most prevalent materials in recycling are corrugated cardboard (27.8%), followed by mixed recyclable paper (24.8%), and glass bottles and jars (14.1%). This was consistent across individual cities, with both corrugated cardboard and mixed recyclable paper in the top two material categories for all cities. Figure 20 shows the top 10 most prevalent materials in South Metro's residential recycling stream.

Contamination in the residential recyclables stream represented 20.6% of the recyclables stream, which is above the national average contamination rate for inbound recycling at 17%. Contamination is defined as the improper disposal of materials into a waste stream, such as food scraps in the recycling stream. Individually, Centennial had a contamination rate of 13.0%, Englewood had 13.2%, Littleton had 18.8%, and Sheridan had 34.5%.

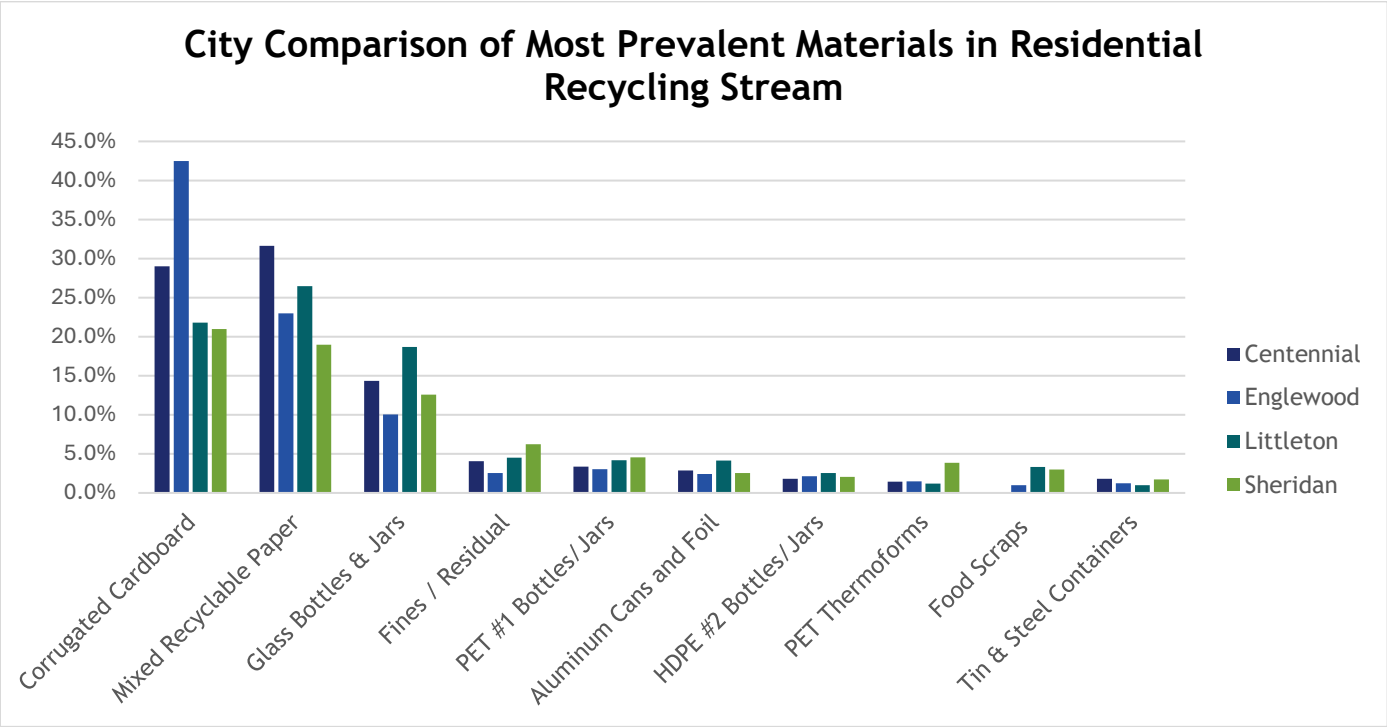
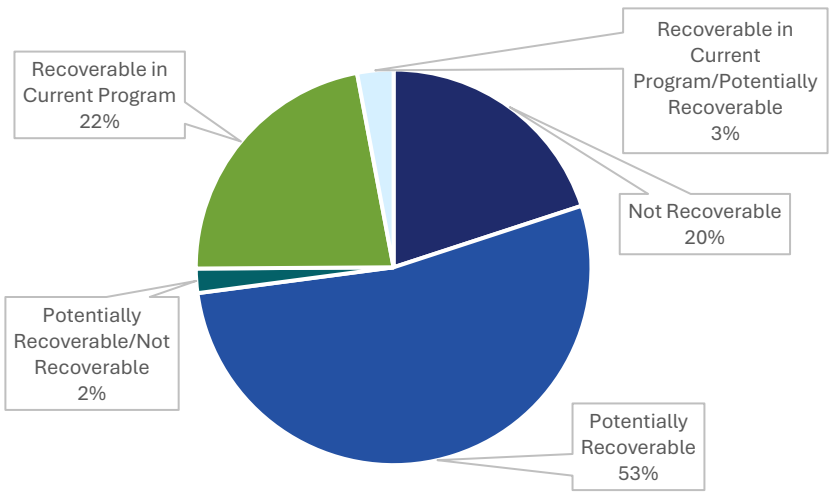


Figure 20: City Comparison of Most Prevalent Materials in Residential Recycling Stream

2.1.3 Recoverability

Up to 78% of what is disposed of in the trash across all sectors (residential, commercial, and multi-family) can either be recovered in existing programs or potentially be recovered if hard-to-recycle or other divertible materials were properly separated. Based on current programs and existing local infrastructure, 22% of materials in MSW can be recovered through existing programs. Figure 21 shows comparisons of material compositions based on recoverability for combined residential, commercial, and multi-family MSW.



Approximately

78%

of South Metro's waste is recoverable through recycling, composting, or special collections.

Figure 21: Recoverable Tons in MSW Across All Sectors

2.2 Waste Generation

Waste tonnages were modeled and projected for both the city and the South Metro Region from 2023 to 2035. Estimates include total material generated, landfilled, and diverted, and are broken down by generating sector. Of all generated waste, it is estimated that South Metro is diverting approximately 15.2% of materials from the landfill.

Findings from these tasks confirmed that a significant portion of the region's waste continues to be landfilled, with comparatively lower rates of diversion through recycling and composting. It is estimated that the South Metro region will generate approximately 255k tons of waste by 2033 and 260k tons of waste by 2035.

If all current strategies, policies, operations, and engagement stay the same, the South Metro region will be disposing 85% of its waste or sending approximately 221k tons of MSW to landfills. Population growth for South Metro from 2023 to 2035 is presented in Table 7. Total tonnage projections in South Metro from 2023 to 2035, broken down by total tons of materials generated, landfilled, diverted, and by generating sector, are presented in Table 8.

Table 7: South Metro Population Projections (2023-2035)

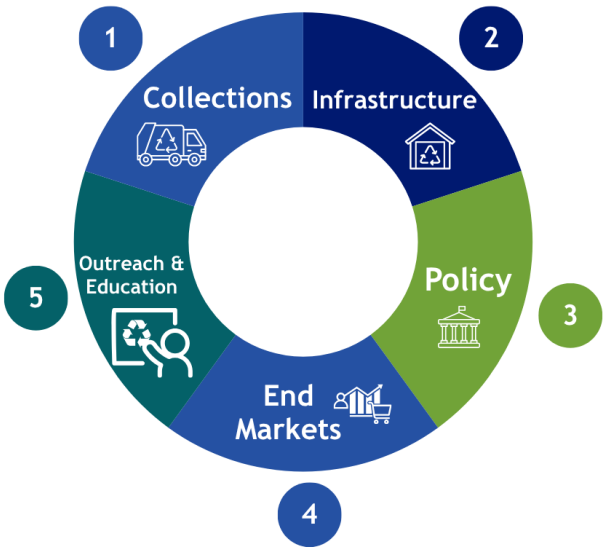
Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Centennial	106,883	107,909	108,946	110,115	111,277	112,438	113,558	114,674	115,899	117,108	118,309	119,500	120,681
Englewood	34,275	34,604	34,937	35,312	35,684	36,056	36,415	36,773	37,166	37,554	37,939	38,321	38,700
Littleton	44,451	44,867	45,285	45,755	46,227	46,698	47,153	47,605	48,100	48,588	49,072	49,551	50,025
Sheridan	5,908	5,965	6,022	6,087	6,151	6,215	6,277	6,339	6,406	6,473	6,540	6,605	6,671
South Metro	191,517	193,344	195,190	197,268	199,338	201,407	203,402	205,391	207,572	209,724	211,860	213,977	216,077

Table 8: South Metro Region Tonnage Projections (2023-2035)

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Single-Family													
Disposal	57,877	58,430	58,988	59,617	60,243	60,869	61,473	62,074	62,734	63,385	64,031	64,672	65,307
Diversion	10,335	10,434	10,534	10,646	10,758	10,869	10,977	11,085	11,202	11,319	11,434	11,549	11,662
Total Generation	68,212	68,864	69,522	70,263	71,001	71,738	72,450	73,159	73,936	74,704	75,465	76,221	76,969
Multi-Family													
Disposal	20,415	20,609	20,806	21,026	21,246	21,466	21,678	21,890	22,122	22,350	22,577	22,802	23,025
Diversion	3,646	3,680	3,715	3,755	3,794	3,833	3,871	3,909	3,950	3,991	4,032	4,072	4,112
Total Generation	24,061	24,290	24,521	24,781	25,040	25,300	25,550	25,799	26,072	26,341	26,609	26,874	27,137
Commercial													
Disposal	117,438	118,559	119,691	120,965	122,234	123,503	124,726	125,946	127,283	128,602	129,912	131,211	132,498
Diversion	20,971	21,171	21,373	21,601	21,828	22,054	22,273	22,490	22,729	22,965	23,199	23,431	23,660
Total Generation	138,409	139,730	141,064	142,566	144,062	145,557	146,999	148,436	150,012	151,567	153,111	154,641	156,158
All Sectors													
Disposal	195,730	197,598	199,484	201,608	203,724	205,838	207,877	209,910	212,139	214,337	216,520	218,685	220,830
Diversion	34,952	35,285	35,622	36,001	36,379	36,757	37,121	37,484	37,882	38,275	38,664	39,051	39,434
Total Generation	230,682	232,883	235,107	237,610	240,103	242,595	244,998	247,394	250,021	252,612	255,185	257,736	260,264

3.0 Gaps & Opportunities

Figure 22: Best Management Practices Chart



Following the baseline assessment of waste generation, policies, and infrastructure in the South Metro region, a comprehensive gap analysis was conducted to identify opportunities for system improvement. This analysis aimed to pinpoint areas where existing programs could be optimized, new initiatives could be introduced, or innovative investments could be made to support the region's waste diversion goals.

The initial gap analysis drew on baseline findings, components of the current materials management system, community engagement insights, waste generation modeling, and a comparison of South Metro's system with national best management practices. The analysis revealed specific areas for improvement that support the region's ambitious goals to improve equitable access to services, increase recovery and reuse, reduce waste, support recycling market development, and build strategic partnerships.

To structure the analysis, the project team used five best management practice areas: Collection & Access, Infrastructure, End Markets, Outreach & Education, and Supportive Policy. Effective materials management requires these components to work in concert. For example, even the most advanced recycling facilities are limited in impact without robust education and outreach or reliable end markets for recovered materials to maintain clean material streams and sustained demand for processed materials.

Each key area has several components or categories of best practices that have been identified by the project team's expertise of nearly four decades in the industry. Within each practice area, the evaluated system components are listed alphabetically. Their order is not an indication of priority. The project team utilized grades to represent relative uptake scores for each of the best practices (ranging from best (A) to worst (F) on the region's relative uptake). Additional details about each category and grades can be found in the Activity 8: Gaps and Opportunities memo.

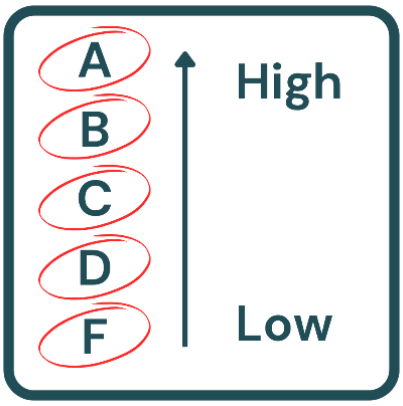


Figure 23: Relative Uptake of Best Management Practices

3.1 Collection and Access

For recycling programs to be effective, every household and business in a community must have convenient access. This can be through curbside collection, drop-offs, a reuse and sharing economy, or a combination of these options. As a first step in resource recovery, material diversion and recovery need to be as convenient as waste disposal.

South Metro's waste collection system demonstrates several strengths, including universal access to recycling for single-family, multi-family, and commercial sectors. The Cities of Englewood, Centennial, and Littleton also provide special collections through "At-Your-Door" services for hazardous waste and electronics. Additionally, organics diversion is available, though participation depends on residents and businesses subscribing to market-driven services.

Figure 24: At-Your-Door Collection Service Flyer

Opportunities to increase diversion for the region remain. Approximately 17.1% of landfilled waste consists of yard debris that could be diverted through dedicated curbside or drop-off services. Furthermore, approximately 18.6% of landfilled waste is food scraps that could be diverted by piloting food scraps drop-off sites or curbside collection. Multi-family residents face challenges accessing recycling and hazardous waste disposal, often due to insufficient infrastructure and lack of property management engagement. Additionally, gaps in drop-off locations, lack of organized single-hauler systems, and barriers to participation for commercial entities hinder optimal waste diversion. Addressing these issues through expanded services, regional recycling centers, and targeted ordinances could improve efficiency, reduce waste, and foster greater community participation in recycling and composting programs.

Table 9: South Metro Gap Analysis Grades: Waste Collection

Collection and Access		
Overall Grade	Category	Grade
C-	Carts and Dumpsters	B
	Collection Schedules	C
	Commercial Access	D
	Food Scraps	D
	Hard-to-Recycle Items	C
	Multi-Family Access	D
	Recycling Drop-Off Locations	D
	Single-family Access	B
	Yard Debris	D

3.2 Infrastructure

It is crucial for the region to have processing facilities conveniently located, technologically advanced, and with enough capacity to handle the population's current and future material streams.

As discussed in Section 1.2.2 of this Plan, there are two Materials Recovery Facilities (MRFs), three landfills, and four transfer stations that service the Denver Metro area, including South Metro. Two additional MRFs in the Denver metro-region are planned to be built by 2026. South Metro also has one organics processing facility for yard debris and clean lumber in Sheridan, along with several other organics collection sites and haulers. The infrastructure to support municipal solid waste (MSW) and single-stream recycling is strong in the region. However, infrastructure for food scraps processing is overall inadequate, and there is a lack of adequate infrastructure for processing hard-to-recycle materials.

Insufficient infrastructure can be addressed through public-private partnerships by developing an organics processing site, funding or supporting the development of a hard-to-recycle materials center, and supporting the development of a C&D recycling facility or the expansion of materials accepted at existing recycling centers. A C&D recycling ordinance could also further recycling for these materials.

Table 10: South Metro Gap Analysis Grades: Infrastructure

Infrastructure		
Overall Grade	Category	Grade
B-	Compost Facility within 30 miles	D
	Food Scraps Sites	C
	Hard-to-Recycle Items & Drop-Offs	F
	Landfill Capacity	A
	MRF/Recycling Transfer within 30 miles	A
	MRFs Process Additional Materials	B
	MRF Technology	A
	Multiple MRFs Available	A
	Tip Fees Encourage Recycling	C

3.3 Supportive Policy

Policy should be crafted to ensure responsible material recovery is the standard practice across the community, not merely a best practice. Local policy can be adopted to support all of the practice areas.

To support the development of robust recycling systems and establish regulatory consistency across their cities, South Metro communities should coordinate to adopt similar, introductory recycling policies. While some recycling policies, such as organized hauler (single-hauler) contracts, commercial recycling ordinances, and pay-as-you-throw (PAYT) ordinances (requiring residential haulers to offer

Figure 25: Volume-Based Pricing, PAYT

volume-based pricing for trash bins) have proven to boost waste diversion rates, it is more strategic to first establish and then build upon a strong base of introductory policies, such as hauler licensing and equal space ordinances.

Table 11: South Metro Gap Analysis Grades: Supportive Policy

Policy		
Overall Grade	Category	Grade
D	City Waste Goals / Sustainability Plans	C
	Commercial Recycling Ordinance	F
	C&D Recycling	F
	Equal Space Ordinance	F
	Hauler Licensing	C
	Organized Hauler (Single Hauler)	D
	Pay-As-You-Throw	D
	Universal Residential Recycling	C

3.4 End Markets

End markets for collected recyclables and finished compost leads to the success of a sustainable circular economy that ultimately allows material to be diverted from landfills. This also includes reuse and refurbishment. By increasing demand, the region creates a 'pull' for additional materials that, in turn, drives supply.

The South Metro region of Denver has several strengths in its waste diversion infrastructure, including yard debris processing through A1 Organics, sufficient single-stream recycling capacity with multiple MRFs, and access to scrap metal recycling facilities. Additionally, the region has strong local end markets for glass recycling, with outlets such as Glass to Glass and Rocky Mountain Bottling Company ensuring high-value recovery of this material. These strengths provide a solid foundation for regional waste diversion efforts.

However, opportunities remain to improve and expand end markets. Compostable products are not widely accepted due to contamination concerns, underscoring the need for statewide compostable product labeling requirements and public education. Furthermore, utilizing finished compost for government use and development projects could boost organics end markets. Leveraging existing resources like the pulverizer at the STS South Denver transfer station and exploring partnerships with innovative companies like Tereform could advance recycling for hard-to-recycle materials.

Local/in-state end market development remains limited for aluminum, paper, post-consumer plastics, and steel, suggesting that investment in infrastructure, outreach, and incentive programs could strengthen the region's recycling ecosystem. The Colorado Circular Economy Development Center's (CEDC) End Market Opportunity Assessment identified waste tires, textiles, clean wood, and colored high-density polyethylene (HDPE) as opportunity areas for end market development in Colorado.

Actions to improve end markets include fostering partnerships for emerging technologies, proactively implementing Extended Producer Responsibility (EPR) requirements, and investing in public education to drive participation and reduce contamination. Furthermore, there are opportunities to increase reuse systems by piloting reuse programs to reduce the need for single-use disposable materials and encourage the recovery of textiles.

Table 12: South Metro Gap Analysis Grades: End Markets

End Markets		
Overall Grade	Category	Grade
C+	C&D	D
	Glass	A
	Hard to Recycle Materials	C
	Local End Market Development	D
	Organics	C
	Plastics	B
	Reuse Markets	D
	Scrap Metal	A
	Textiles	D

3.5 Outreach & Education

All residents and businesses will need to know how to handle and sort materials in their homes, at work, and away. Systems continue to evolve as material composition changes and technologies change. Thus, information must be regularly communicated to residents in various ways to supply MRFs, composters, and end markets with high-quality material, while continuing to decrease the amount of waste sent to landfills. Two-way communication should also be established to provide opportunities for program participants and community members to ask questions, give feedback, and self-identify as Resident Champions.

South Metro's waste outreach and education system is built on a foundation of accessible resources and community engagement. Each city maintains webpages with recycling and waste disposal information, supported by a new regional website designed to centralize updates. Consistent language and multilingual accessibility in recycling guidelines enhance clarity and inclusivity. The system also engages community groups and trained Resident Champions to advocate proper waste management through peer-to-peer outreach, fostering a culture of sustainability. Recycling collection events offer additional opportunities for engagement while addressing hard-to-recycle materials.

Despite these strengths, there are several areas for improvement. Staffing constraints have limited consistent public engagement efforts, reducing opportunities to build trust and maintain participation. Recycling guidelines, while accessible, could be enhanced with clearer visuals, multilingual labels, and broader public availability. Training municipal staff in recycling practices would enable them to better assist residents with waste diversion. Furthermore, the lack of interactive tools and focused outreach to multi-family and commercial sectors leaves significant gaps in participation. Addressing these issues through targeted outreach, enhanced resources, and regular communication could greatly enhance South Metro's waste education and outreach impact.

Table 13: South Metro Gap Analysis Grades: Outreach and Education

Outreach & Education		
Overall Grade	Category	Grade
C-	Community Groups / Resident Champions	C
	Consistent and Translated Recycling Language	C
	Dedicated Recycling Webpage	B
	Guidelines Publicly Provided	F
	Multi-family and Commercial engagement	D
	Ongoing General Public Engagement	C
	Public Interactive Tools	D
	Recycling Collection Events	B
	Training Municipal Staff	D

4.0 Waste Diversion Actions

90%

South Metro residents agree or strongly agree with efforts to increase recycling and composting.

Approximately 90% of South Metro residents shared that they agree or strongly agree with efforts to increase access to recycling and composting in their communities, and believe recycling helps conserve natural resources to preserve the environment for the future.

The South Metro Diversion Plan proposes actions to be implemented over the next 10 years that increase the recovery of recyclables and organics, address hard-to-recycle materials, reduce consumption, and support the circular economy.

The South Metro Project Team evaluated a total of 50 strategies in the categories of Collections, Infrastructure, End-Markets, Policies & Governance, and Education & Outreach. High impact strategies were introduced and discussed with elected officials and staff representatives from each city during the Regional Waste Summit. The draft strategies were shared with city staff and leadership for a more detailed review. Each city was then asked to identify and prioritize seven high-impact strategies for local implementation and three strategies for potential regional collaboration.

Each strategy was evaluated and presented with associated attributes, including an estimated diversion impact (categorized from ♺ to ♺♺♺♺), a cost impact range (categorized from $ to $$$), an anticipated implementation timeline, and a list of affected stakeholder groups (single-family households, multi-family households, or the broader community) as shown in Table 14.

4.1 Impact Modeling

To evaluate the potential diversion and climate impacts of the priority strategies, the project team applied a scenario-based planning model tailored to the South Metro region. This model integrates projected waste generation, disposal, and diversion tonnages, population and household data from the U.S. Census, findings from the two-season waste composition study conducted in 2024, and benchmarks from high-performing waste diversion programs across Colorado and other leading U.S. jurisdictions.

Diversion impact was evaluated based on the estimated increase in diversion rate that each strategy contributed, either for the region as a whole or for each city.

The model operates under the assumption that all recommended strategies are implemented to their full intended effect and accounts for inter-dependencies among actions, recognizing that the success of one may hinge on the implementation of another. Estimated outcomes are cumulative and reflect these relationships. Detailed model outputs, including impact estimates for each strategy, are provided at the end of each city's waste diversion goals and actions section.

Table 14: Diversion and Fiscal Impact Rating Scale

Diversion Impact	
Diversion Impact on Tons Diverted	Estimated Additional Diversion Rate %
♺	< 1.5%
♺♺	1.5% – < 3.5%
♺♺♺	3.5% – < 5.5%
♺♺♺♺	≥ 5.5%

Fiscal Impact	
Fiscal Impact on Tons Diverted	Estimated Fiscal Range
$	< $10,000
$$	$10,000 – < $100,000
$$$	≥ $100,000

5.0 Regional Waste Diversion Goals and Actions

Building on the identified gaps and opportunities, as well as strategy development and collaborative discussions held during the Regional Waste Summit, the cities identified strategies they believed would best be pursued for regional implementation. While each city maintains its own solid waste management program and is at a different stage in its waste diversion efforts, they share common goals and challenges that are well-suited to be addressed through a coordinated, regional approach.

Table 15: Regional Strategies Summary

ID	Action	Fiscal Impact	Diversion Impact	Implementation Timeline		
				FY26-30	FY30-35	FY35-40
5.1	Support and/or develop a regional recycling drop-off center within South Metro	$$$	♺	X	X	
5.2	Work together regionally towards improving organic diversion access and supporting a large-scale organics processing infrastructure that accepts food scraps and other compostables	$$$	♺♺♺♺		X	X
5.3	Support efforts to increase multi-family and commercial access to recycling / compost services)	$$	♺♺	X	X	X

5.1 Regional Recycling Drop-Off Centers ♺

Drop-off centers can serve as a critical infrastructure asset to manage recyclables. In the Colorado Needs Assessment, it was identified that 80% of the Front Range population had access to both recycling curbside and drop-off options. South Metro is among the 20% of communities that do not have access to recycling through drop-off centers. The closest recycling drop-off centers are located in Aurora and Arvada.

The lack of a recycling drop-off center in the South Metro region was also one of the core recommendations that emerged from stakeholder engagement through focus groups and surveys.

A recycling drop-off center provides additional capacity and convenient access to handle surges in recyclable material, particularly during spring cleaning or move-in

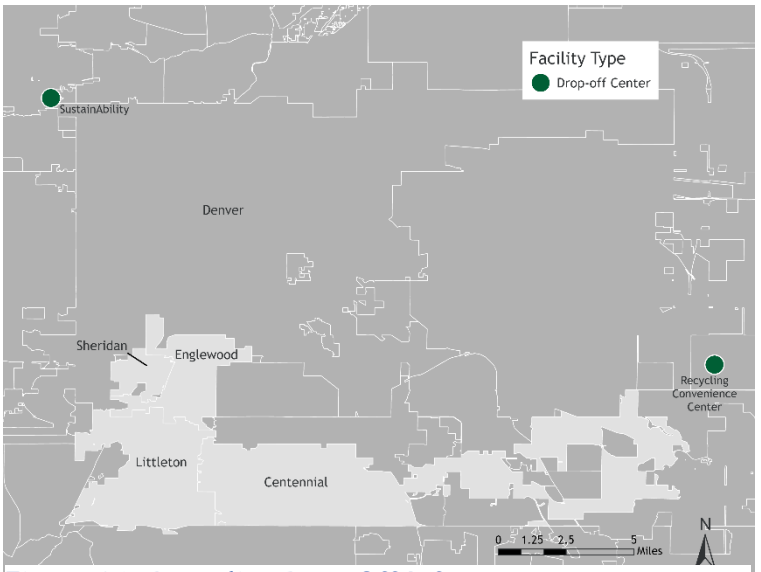


Figure 26: Recycling Drop-Off Infrastructure

and move-out periods. Drop-off centers provide an overflow option that helps prevent overfilled containers and litter. For multi-family residents where property management does not provide adequate recycling access, convenient drop-off centers can offer a place for residents to drop off materials. It is generally best practice for urban environments with populations over 100,000 to establish one drop-off center per 50,000 residents. It is recommended for South Metro to explore establishing up to four regional recycling drop-off centers, conveniently located between the four communities.

While the overall diversion impact may be lower compared to other strategies, due to its reliance on voluntary resident participation, this approach is critical from an equity standpoint, as it significantly improves recycling access for communities that currently lack convenient options.

Implementation Steps

- Identify and secure funding through municipal budgets, statewide funding, or grants.
    - Apply for Colorado Circular Communities (C3) Enterprise funding for infrastructure support or request reimbursements from Circular Action Alliance through Colorado's Extended Producer Responsibility (EPR) Law
- Site and design
- Permit as necessary
- Site development (e.g., utilities, parking, fencing, lighting, roads, pads, etc.)
- Equipment selection & procurement
- Haulers startup & training
- Education and outreach campaign to promote launch of centers
- Launch program and maintain operations

5.2 Regional Organics Facility

The cities of South Metro seek to work together regionally towards improving organic diversion access and supporting a large-scale organics processing infrastructure that accepts food scraps and other compostables.

Organic materials, including food scraps and yard debris, make up 43.4% of South Metro's residential municipal solid waste (MSW). With just under half of the residential waste stream comprised of organic materials, this presents a significant opportunity to increase diversion if capacity is expanded through the development of an organics processing facility.

Implementation Steps and Timeline

- Conduct a feasibility study to determine the capacity needed at a facility, anticipated capital and operating costs, and key considerations.
- Secure funding through municipal budgets, statewide funding, or grants.
- Secure and establish partnerships, which can include regional partnerships and a public-private partnership. This will require a Request for Proposal (RFP).
- Site, design, and permit
- Site development (e.g., aerated static piles (ASP) system, utilities, roads, pads, etc.)
- Equipment selection & procurement
- Secure organic waste feedstock through policy, contracts for collection, and increasing access.

5.3 Support Efforts to Increase Multi-Family and Commercial Access to Recycling / Compost Services

Access to recycling and compost services for multi-family and commercial buildings remains limited across the South Metro region. The four cities of South Metro are committed to supporting efforts to increase multi-family and commercial access to recycling and compost services. The four cities have selected city-specific strategies to support this effort, such as passing an equal space ordinance and leveraging the state's Extended Producer Responsibility (EPR) law, which covers support for multi-family properties.

There are various strategies the region can take to increase recycling and composting access. Below are some example actions that have been successfully employed in communities leading waste diversion programs across the country. Implementation steps, fiscal impacts, and diversion impacts may vary based on the actions South Metro adopts, and its effectiveness will depend on the cumulative impacts of other diversion strategies for multi-family and commercial properties.

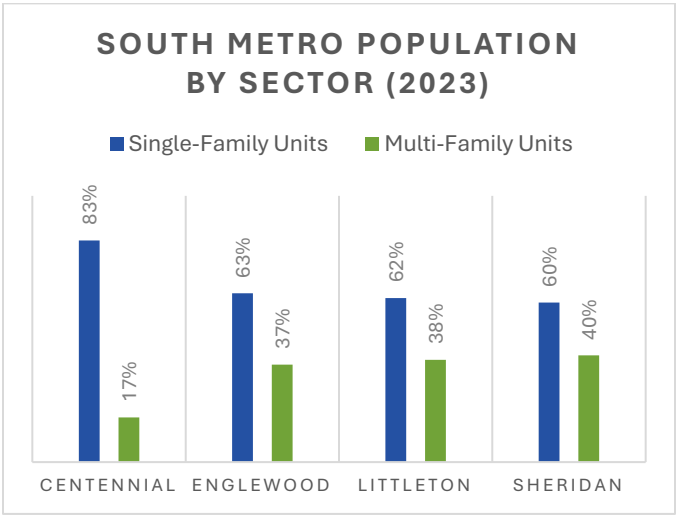


Figure 27: South Metro Population by Sector (2023)

Implementation Steps

- Encourage or require by ordinance commercial and multi-family property owners and/or managers to submit a recycling implementation plan
- Leverage or expand existing green business programs
- Offer technical assistance for property managers including:
  - Resources (e.g., Resident Champion Training toolkit) and information on the South Metro Waste Diversion website
  - Information on how multi-family properties can benefit and request reimbursement from Colorado's EPR Law
  - Downloadable recycling, composting, and trash signs in English/Spanish
  - Sample emails and letter templates to engage tenants and residents in recycling and/or composting information
  - Training and attendance logs for housekeeping or property maintenance staff
  - Flyers or booklets for move-in
  - List of licensed haulers for recycling, composting, and trash services
  - Guidance on creating a green team
  - Public recognition and spotlights of businesses and multi-family properties leading the path on waste diversion

6.0 City of Centennial Diversion Goals and Actions

The City of Centennial, located in Arapahoe County, is home to approximately 106,000 residents. The city is guided by a vision of being a connected community, where neighborhoods matter, education is embraced, businesses are valued, and innovation absolute. Centennial is one of the more densely populated areas in the region, with an average of 3,648 residents per square mile. According to the 2022 US Census, the city had 40,952 households, with an average of 2.59 residents per household. Housing in Centennial is predominantly composed of single-family homes, which account for 83% of all residential units, while multi-family units comprise the remaining 17%.

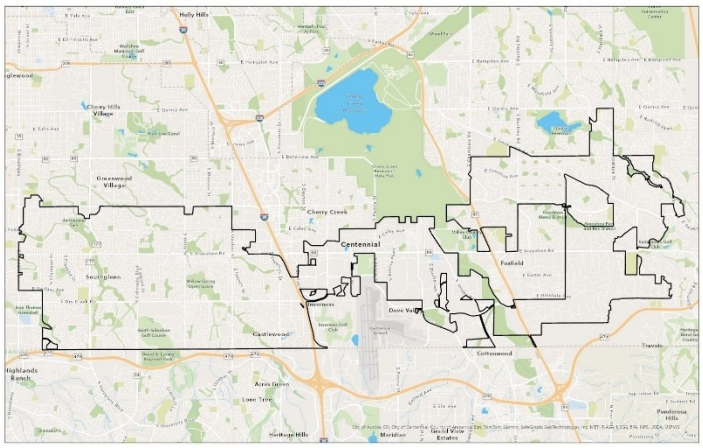


Figure 28: City of Centennial Boundary

Centennial operates under an open market (also referred to as open subscription) solid waste collection system. Under this system, residents and businesses independently contract private haulers for trash and recycling services. The city does not require hauler reporting or licensing. Although some homeowner associations (HOAs) maintain contracts with a single provider, there is limited data on the extent of such agreements within the city. Furthermore, there is insufficient information regarding recycling and composting services or participation rates for multi-family properties and commercial businesses.

The city does not have mandatory recycling requirements, and curbside recycling pricing structures are determined by individual haulers. Composting services are available on a voluntary, opt-in basis, with subscription fees determined by the private market. Residents may choose to divert food and organic waste by subscribing directly to these composting services.

Currently, the city does not have an adopted sustainability plan or defined waste diversion goals. However, city staff have expressed interest in collecting baseline data on waste collection and diversion as a foundation for potential future policy development. While there are no permit requirements for waste haulers, the city does regulate solid waste infrastructure. Furthermore, Chapter 7 Article 5 of Centennial's City Code includes regulations prohibiting dumpsters on residential and public property, with some exemptions.

Centennial provides a "Neighborhood Trash Collection Toolkit" on its city website to encourage neighborhoods (both HOA and non-HOA) to coordinate single-day trash collection. The webpage includes survey forms, tips for proposal setup, and a form for consideration of potential vendors.

In collaboration with the Southeast Metro Stormwater Authority (SEMSWA), the city offers a specialized home collection program through a partnership with Waste Management. The "At Your Door Special Collection Service" allows residents to schedule a collection appointment for household hazardous waste, including automotive products, batteries, garden and household chemicals, paint, electronics, mercury-containing items, and pool chemicals. A $20 co-pay is required per event, and bilingual promotional materials (English and Spanish) are available on SEMSWA's website.

Figure 29: Electronics Recycling in the City of Centennial

Additionally, the city organizes one-day electronics recycling events. In 2024, the city hosted a collection event in April at the Centennial Civic Center, sponsored by Jacobs, the city's contractor for Public Works, Code Compliance and Facilities, and Park and Fleet Maintenance Services.

Centennial also collaborates with the Arapahoe Park and Recreation District and the South Suburban Parks and Recreation District to offer seasonal drop-off events for tree limbs and woody plant materials. These materials are chipped and mulched, and free mulch is made available to residents at designated city locations. A similar service is offered during the winter months to recycle Christmas trees, including the collection of holiday lights at no cost.

Table 16: City of Centennial Strategies Summary

ID	Action	Fiscal Impact	Diversion Impact	Implementation Timeline		
				FY26-30	FY30-35	FY35-40
6.1	Require hauler licensing, including the requirement for haulers to track and report tonnage data	$	♺	X		
6.2	Leverage Colorado's Extended Producer Responsibility (EPR) for recycling programs	$	♺♺	X	X	X
6.3	Explore the transition to organized residential collection (single hauler)	$$	♺♺	X	X	
6.4	Pass an equal space ordinance to ensure commercial recycling access	$	♺♺♺♺	X		
6.5	Promote yard debris curbside services for composting for single-family residents	$	♺♺	X	X	X
6.6	Support the growth of community-scale composting sites for single-family residents	$$	♺	X	X	X
6.7	Support the development of a hard-to-recycle center	$$$	♺		X	
6.8	Ongoing community group engagement with universal and accessible guidelines	$$	♺♺	X	X	X

6.1 Require Hauler Licensing, Including the Requirement for Haulers to Track and Report Tonnage Data ♺

A hauler licensing ordinance is a policy that requires both residential and commercial sector waste haulers to obtain a license through the local governing body to operate within the government's jurisdiction. Licenses can include requirements such as providing proof of insurance, setting prices based on volume of trash containers (pay-as-you-throw), safety requirements, minimum service standards, enforcement mechanisms, or operating only on certain days and during a set timeframe to reduce traffic and noise.

It is considered best practice for hauler licensing policies to also require haulers to regularly report how many tons of trash, recyclables, and organic waste have been collected in their community. This helps establish baseline data for local governments to understand their waste streams and track progress.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders (haulers and/or residents) to gather insights into potential barriers
- Document feedback on challenges, service gaps, and potential ordinance impacts
- Draft and adopt a hauler licensing ordinance
- Communicate with haulers on new requirements
- Develop a reporting mechanism to receive hauler data annually

6.2 Leverage Colorado's Extended Producer Responsibility (EPR) for Recycling Programs ♺♺

Colorado's Producer Responsibility for Recycling Packaging Program (EPR) requires covered producers to join a Producer Responsibility Organization, and through it, fund and manage the end of life for packaging and paper, including collection, processing, and recycling or composting.

This EPR program will cover 100% of the net recycling service costs for all Colorado single-family and multi-family homes starting in 2026. The state's Producer Responsibility Organization, Circular Action Alliance (CAA), has indicated that it will start by covering recycling costs in communities with organized (non-open market) systems.

Communities that do not currently offer recycling for residents or that have open-market recycling collection systems pose a bigger challenge, and it will take longer to coordinate payments for recycling haulers that choose to participate.

Steps that Centennial can take to fully access the benefits of Colorado's Producer Responsibility program include adopting an equal space ordinance; implementing a hauler licensing ordinance with a requirement for providing recycling bundled into all services; introducing pay-as-you-throw pricing; and/or establishing a municipally coordinated hauling contract or contracts for residential collections.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders to share information about EPR and gather insights on potential barriers related to ordinance impacts
- Draft and adopt ordinances
- Draft and implement a communications plan to roll out new requirements
- Apply and receive reimbursements provided through Colorado's EPR law for collections

6.3 Explore the Transition to Organized Residential Collection (Single Hauler)

♺♺

Organized Residential Collection refers to a system in which a municipality manages curbside trash and recycling services on behalf of residents through a contract with one or more licensed haulers. Under this model, residents may have the option to opt out of the municipal service for a fee. Municipal contracts can mandate that recycling is included for all households and may incorporate a pay-as-you-throw (PAYT) pricing structure, where fees are based on the size of the trash cart and the volume of waste generated.

This approach can result in lower and more stable service costs for residents, expanded access to recycling, and the expansion of services such as compost collection or bulky item pickup. It also reduces the number of collection trucks on neighborhood streets, thereby minimizing traffic, emissions, and road wear. Organized collection typically covers single-family homes and smaller multi-family buildings (fewer than seven units), with optional participation or phased inclusion available for homeowners associations (HOAs).

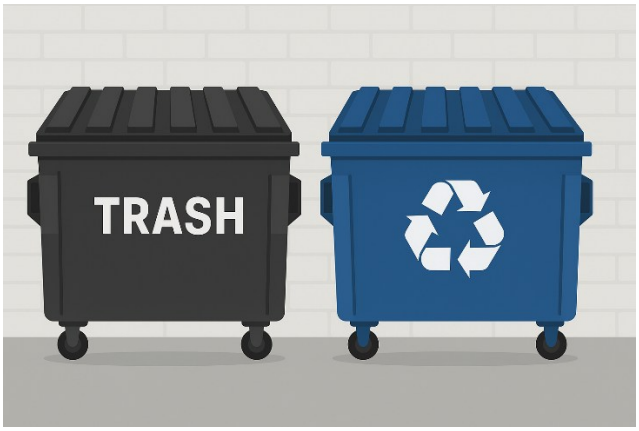
During the stakeholder engagement process for this South Metro Waste Diversion Plan, which included surveys and focus groups, residents throughout the South Metro region consistently raised concerns about the high number of waste haulers operating within the same neighborhoods. Key issues cited included child safety risks, wear and tear of roads, and increased air and noise pollution. Residents also emphasized a lack of accountability under the current open hauling system, expressing a desire for more structured oversight and coordination.

Implementation Steps:

- Engage stakeholders to communicate benefits and gather feedback on potential barriers and service needs
- Conduct a legal review to ensure compliance with state single-hauler regulations
- Coordinate regionally with neighboring jurisdictions aiming to also implement
- Outline implementation steps and timeline

6.4 Pass an Equal Space Ordinance to Ensure Commercial Recycling Access

♺♺♺♺



An **Equal Space Ordinance** requires that all newly constructed commercial buildings allocate the same amount of space for recycling collection infrastructure (such as enclosures, receptacles, chutes, staging areas, and collection rooms) as is allocated for trash.

Insufficient space for recycling is a common barrier for commercial entities. By integrating this requirement into building codes, municipalities can ensure future developments support recycling access without retrofitting existing structures.

In Centennial, approximately 17% of housing consists of multi-family units, and there are 3,633 employer firms, highlighting the importance of planning for equitable recycling infrastructure in both residential and commercial development.

Implementation Steps:

- Conduct outreach to stakeholders to gather insights on potential barriers
- Draft and adopt an equal space ordinance
- Roll out communications plan and consider providing technical support for commercial property managers
- Coordinate with the Community Development Department to align on communicating requirements for new developments and significant site redevelopments

6.5 Promote Yard Debris Curbside Services for Composting for Single-family Residents♺♺

The South Metro Waste Characterization study found that yard debris comprises 20% of the City of Centennial's single-family waste stream, yet less than 1% of the yard debris is being diverted. Promoting curbside yard debris collection for single-family residents could significantly increase the city's waste diversion rate, depending on the level of participation.

Like curbside recycling collection service, adding a third collection point for diverting organic material (yard debris and sometimes food scraps) creates an opportunity to reduce the amount of waste sent to landfills and contribute to the environmental benefits of composting. Local governments can promote the benefits of curbside yard debris collection programs and encourage residents to subscribe.

Implementation Steps:

- Develop outreach materials (e.g., webpage, mailer, social media posts, etc.) to explain the benefits of yard debris composting
- Provide information to residents on how to reach out to haulers for yard debris composting services
- Promote the benefits of composting and diverting yard debris from landfills

6.6 Support Growth of Community-Scale Composting Sites for Single-family Residents♺

Community-scale compost processing sites are much smaller than commercial composting sites and therefore require much less regulation and operational support.

South Metro has a strong network of composting sites available for subscription drop-off services for food scraps. Community compost bins are available to residents for a monthly fee.

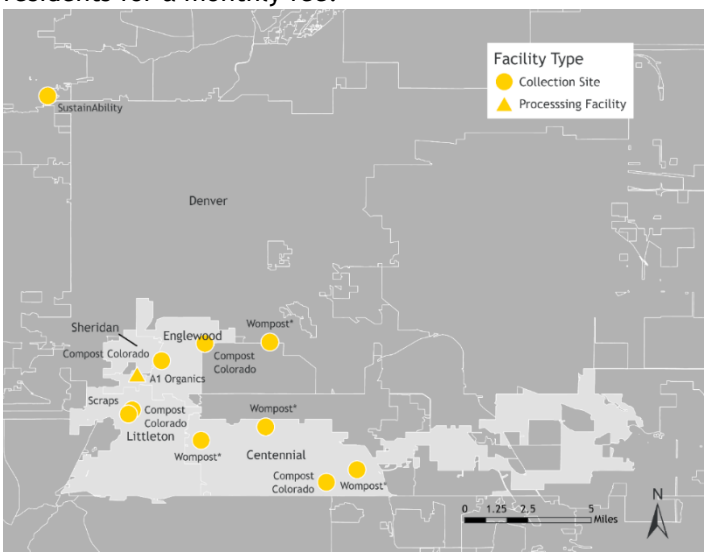


Figure 30: Composting Drop-Offs in South Metro

Additionally, communities can support the growth of local composting sites through partnerships with community garden programs. Communities can also support the growth of local composting by sharing educational resources, including hands-on workshops on how to compost.

Implementation Steps:

- Evaluate market pricing conditions of existing community composting programs in South Metro
- Consider the feasibility of a subsidized community composting program
- Promote existing community-scale composting programs in the region

6.7 Support the Development of a Hard-to-Recycle Drop-Off Center for Textiles, Foam Polystyrene, Plastic Film, etc.

Approximately 13% of the current municipal waste stream is hard-to-recycle (HTR) materials that cannot be diverted through traditional recycling programs. These materials include textiles, electronics, batteries, household hazardous waste, plastic film, other plastics.

Developing a drop-off center can support the collection of these hard-to-recycle materials and incorporate spaces to manage materials that can be reused or otherwise diverted.

Implementation Steps:

- Identify and establish a funding mechanism (e.g., Colorado Circular Communities (C3) Enterprise funding) to support the hard-to-recycle center
- Assess available end markets to consider what would be accepted for collection
- Consider joint procurement with regional cities and/or county.
- Ongoing education to encourage usage of HTR drop-off-center

6.8 Ongoing Community Group Outreach and Engagement

Community outreach and engagement includes public education, feedback collection, community collection events, and direct interaction with residents and organizations on recycling and waste issues. While the City of Centennial implements various recycling-related communication strategies, outreach must be continuous to ensure both current and new residents receive up-to-date information on how to recycle and compost effectively.

Leveraging community groups and peer networks is a powerful strategy to expand awareness and increase participation in waste diversion efforts. One proven approach is to train **Recycling Champions** (local advocates or community ambassadors) within existing groups to share recycling and composting information through their networks.

Training should emphasize local recycling guidelines, using clear and consistent wording and visuals to show what is accepted in the curbside program. To improve accessibility and understanding, materials should be available in multiple languages.

Implementation Steps:

- In partnership with haulers, develop and maintain list of recyclable materials
- Reach out to existing community groups to speak at meetings or events about waste diversion
- Host trainings for interested residents to become Recycling Champions and share knowledge with their networks
- Share information about waste diversion by tabling at public events, meetings, or community centers
- Engage Resident Champions over time with ongoing community efforts (e.g., events, webinars, new resources)
- Continue utilizing the South Metro Waste Diversion website to promote efforts and events

6.9 Tonnage Projections

Table 17: City of Centennial Tonnage Projections (2023-2035)

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Single-Family													
MSW Disposal (Landfill)	36,353	36,702	37,055	37,453	37,848	38,243	38,623	39,003	39,420	39,831	40,240	40,645	41,046
Diversion	6,492	6,554	6,617	6,688	6,759	6,829	6,897	6,965	7,039	7,113	7,186	7,258	7,330
Total Generation	42,845	43,256	43,672	44,141	44,606	45,072	45,520	45,968	46,459	46,944	47,425	47,903	48,376
Multi-Family													
MSW Disposal (Landfill)	7,341	7,411	7,482	7,563	7,642	7,722	7,799	7,876	7,960	8,043	8,125	8,207	8,288
Diversion	1,311	1,323	1,336	1,350	1,365	1,379	1,393	1,406	1,421	1,436	1,451	1,466	1,480
Total Generation	8,651	8,734	8,818	8,913	9,007	9,101	9,192	9,282	9,381	9,479	9,576	9,673	9,768
Commercial													
MSW Disposal (Landfill)	65,541	66,170	66,806	67,523	68,235	68,947	69,633	70,318	71,069	71,811	72,547	73,278	74,002
Diversion	11,704	11,816	11,930	12,058	12,185	12,312	12,435	12,557	12,691	12,823	12,955	13,085	13,215
Total Generation	77,244	77,986	78,735	79,580	80,420	81,259	82,068	82,875	83,760	84,634	85,502	86,363	87,216
All Sectors													
MSW Disposal (Landfill)	109,234	110,283	111,343	112,538	113,725	114,911	116,056	117,197	118,449	119,685	120,912	122,129	123,336
Diversion	19,506	19,693	19,883	20,096	20,308	20,520	20,724	20,928	21,152	21,372	21,591	21,809	22,024
Total Generation	128,741	129,976	131,226	132,634	134,033	135,431	136,780	138,125	139,601	141,057	142,503	143,938	145,360

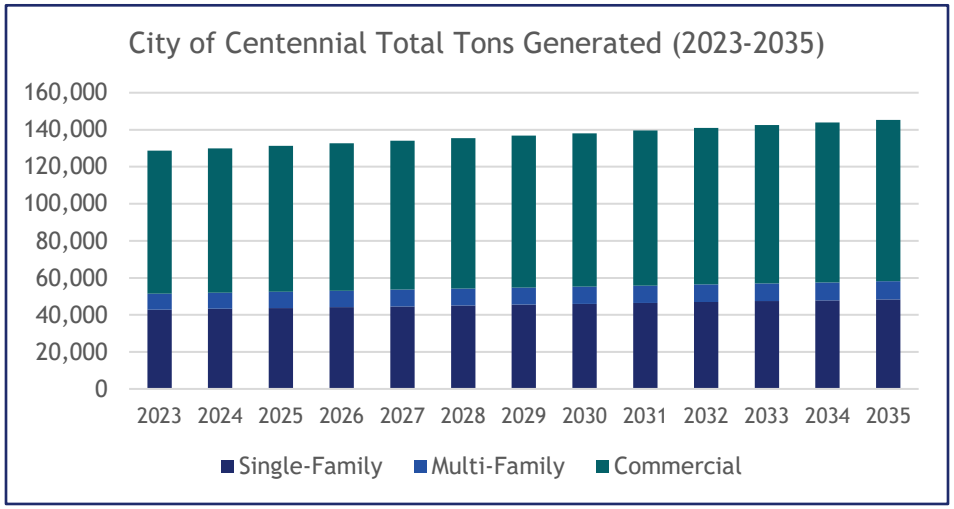


Table 18: City of Centennial Community Profile

Description	2022
Single-Family Units	83.2%
Multi-Family Units	16.8%
Total Number of Households	40,952
Household Size*	2.59
Single-Family Households	34,072
Multi-Family Households	6,880
Single-Family Population	88,927
Multi-Family Population	17,956
Total Population	106,883
Total Employer Firms	3,633

City of Centennial Demographic Snapshot, US Census Bureau 2022

Figure 31: City of Centennial Total Tons Generated (2023-2035)

6.10 Impact Analysis Results

Table 19: City of Centennial Impact Analysis Results

Aim	ID	Strategy	Additional Diversion %	Tons Low	Tons High	GHG Emissions Reduced	Fiscal Impact
Centennial	6.1	Require hauler licensing, including the requirement for haulers to track and report tonnage data	0.6%	800	800	2,368	$
Centennial	6.2	Leverage Colorado's Producer Responsibility (EPR) for recycling programs	3.2%	4,500	4,900	13,421	$
Centennial	6.3	Explore the transition to organized residential collection (single hauler)	2.1%	2,900	3,300	5,289	$$
Centennial	6.4	Pass equal space ordinances to ensure commercial recycling access	5.0%	6,600	8,000	20,847	$
Centennial	6.5	Promote yard waste curbside services for composting for single-family residents	1.4%	1,800	2,200	572	$
Centennial	6.6	Support growth of community-scale composting sites for single-family residents	1.2%	1,500	1,900	498	$$
Centennial	6.7	Develop a hard-to-recycle center for textiles, foam polystyrene, plastic film, etc.	0.6%	900	900	776	$$$
Centennial	6.8	Ongoing community group engagement (such as resident champion training) with universal and accessible guidelines	1.5%	2,100	2,300	2,709	$$
			15.6%	**21,100**	**24,300**	**46,479**	

Fiscal Impact	
Fiscal Impact on Tons Diverted	Estimated Fiscal Range
$	< $10,000
$$	$10,000 – < $100,000
$$$	≥ $100,000

7.0 City of Englewood Waste Diversion Goals and Actions

Located in the heart of the Denver metropolitan region, the City of Englewood is home to approximately 34,000 residents. The 7-square-mile city is an independent full-service community with the third highest concentration of millennials in Colorado. Englewood is connected by two light rail stops on the Denver regional passenger rail system and is accessible from US Highway 285, US Highway 85, and bus services provided by the Regional Transportation District (RTD). The Englewood Trolley is a free-fare bus option that connects Englewood light rail station to downtown Englewood, the medical district, and the civic center. Housing in Englewood is predominantly composed of single-family homes, which account for 63% of all residential units, while multi-family units comprise the remaining 37%.

Figure 32: Englewood Downtown Map

The City of Englewood operates in an open market structure for both residents and businesses. Although haulers must obtain a license through the city to operate, they are not required to report their tonnages to the city. Residents must opt in to recycling services through private haulers at open market rates.

Residents are required to store trash in containers to prevent scattering by animals or weather and to reduce offensive odors. Englewood restricts when containers can be set out in front of a property to no more than 24 hours before collections. Containers must be stored at the rear of the property and positioned so they do not obstruct alley rights-of-way. Finally, all households and businesses are required to have trash removal service at least once a week.

Private haulers performing trash hauling in the city must first obtain a license pursuant to City Code §5-26. Collections are limited to Mondays and Wednesdays, and haulers are prohibited from

Figure 33: Englewood Sustainability Staff Tabling on Earth Day

collecting between the hours of 10:00 p.m. and 7:00 a.m. Under the city's trash hauler licensing requirements, haulers must offer recycling services to Englewood residents. The list of licensed city trash haulers is posted annually on the city's code-enforcement website, with approximately six haulers licensed in 2024.

In 2021, Englewood estimated tonnage data for the city using data received from two large haulers to inform its greenhouse gas inventory. City staff estimated that approximately 9,000 tons of waste were generated by businesses and 73,000 tons of waste were generated by households in 2021.

The City of Englewood's 2022-2025 Strategic Plan includes a waste and recycling subsection as one of their eight sustainability goals listed under the sustainability priority area. The listed waste and recycling-related projects include construction and demolition waste, green building codes, hazardous and electronic collection, public education and outreach, and implementing a compost program at all city facilities. Additionally, the city's webpage lists several waste-related programs that are in various stages of completion, including goals to track tonnage, fully implement the new At-Your-Door hazardous waste pickup program, increase public outreach and education, prepare for the state's 2026 Extended Producer Responsibility program, and expand construction & demolition (C&D) debris recycling options. These stated projects help Englewood's elected officials, city staff, and residents envision improved waste systems.

Figure 34: City of Englewood's Sustainability Plan

The City of Englewood hosted multiple special collection events throughout each year for materials such as household hazardous waste, medicine, and electronic waste until 2024. In response to growing resident demand for a year-round disposal option, Englewood implemented the "At Your Door" service in 2024 through a partnership with Waste Management to collect household hazardous waste and electronics.

Table 20: City of Englewood Strategies Summary

ID	Action	Fiscal Impact	Diversion Impact	Implementation Timeline		
				FY26-30	FY30-35	FY35-40
7.1	Work with internal city departments (such as Parks, Recreation, Library, and Golf (PRLG) and/or the Public Works Department) to utilize finished compost in municipal projects and the Community Development Department to connect developers with the finished compost	$$	♺	X	X	
7.2	Establish a construction & demolition (C&D) recycling ordinance	$	♺♺♺♺	X		
7.3	Implement food scraps curbside services for composting for single-family residents	$$$	♺♺	X	X	
7.4	Leverage Colorado's Extended Producer Responsibility (EPR) for recycling programs	$	♺♺♺	X	X	X
7.5	Pass an equal space ordinance to ensure multi-family and commercial recycling access	$	♺♺♺♺	X	X	
7.6	Support the transition to organized residential collection across the city (single hauler) especially when financially and accessibility conducive for majority of residents	$$	♺♺	X	X	
7.7	Ongoing community group engagement (such as Resident Champion training) with universal recycling and accessible guidelines	$$	♺♺	X	X	X
7.8	Explore business waste diversion grants	$$	♺	X		
7.9	Repair/reuse events such as fix-it clinics	$	♺	X		

7.1 Utilize Finished Compost in Municipal Projects and Connect Developers with the Finished Compost♺

An effective strategy to improve soil health and support local composting businesses is for local governments to purchase and apply locally produced compost and mulch in public works projects.

Local governments can play a significant role in ensuring that locally manufactured compost and mulch are integrated into open space, landscaping, and public works projects.

Closing the loop on organics recycling by buying and using local compost and mulch is critical to a sustainable organics program. Communities that incorporate finished compost often see great benefits, such as improved soil health, reduced erosion, and support for local composting infrastructure. People and entities using these products, or "end markets," are essential to creating a circular economy for organic materials.

Implementation Steps:

- Identify areas where finished compost can be used for local public works, parks, or development projects
- Partner, source, and utilize local finished compost for Englewood public works, parks or development projects

7.2 Establish a Construction and Demolition (C&D) Recycling Ordinance ♺♺♺♺

Construction and Demolition (C&D) Recycling Ordinances require contractors to sort and recycle recoverable materials, such as untreated wood, metals, cardboard, and aggregates, most of which are generated during demolition activities.

These ordinances often include square footage thresholds, exempting smaller projects from compliance. Effective implementation depends on the availability of sorting infrastructure, access to end markets, and strong coordination with contractors. One common compliance mechanism is a deposit system, where contractors submit a financial deposit based on project size. The deposit is refunded upon proof of compliance with recycling requirements.

A complementary strategy is **deconstruction**, a process that involves systematically dismantling buildings to preserve materials for reuse. This approach can reduce the need for recycling infrastructure by diverting materials directly into reuse pathways.

C&D recycling ordinances are currently enforced in the cities of Lakewood, Fort Collins, and Boulder. The City and County of Denver are also in the process of developing and implementing similar policies.

Implementation Steps:

- Conduct a detailed C&D end market and recovery infrastructure assessment.
- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders (e.g., developers, haulers, residents) to gather insights into potential barriers
- Document feedback on challenges, service gaps, and potential ordinance impacts
- Draft and adopt a C&D recycling ordinance
- Communicate new requirements
- Coordinate with Planning & Zoning to engage with development and re-development projects

7.3 Implement Food Scraps Curbside Services for Composting for Single-family Residents ♺♺

It is estimated that by 2035, the City of Englewood's single-family sector will generate roughly 2,300 tons of food scraps and other compostables per year, or roughly 29% of its total waste generated.

A dedicated curbside service for food scraps can significantly divert the amount of landfill-bound material and contribute to the environmental benefits of composting. Local governments can promote the benefits of curbside food scraps collection programs.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar program
- Define program goals and scope
- Design service model
- Establish a wait list to understand residential demand
- Procure equipment or contract out services; consider a joint purchasing agreement with regional partners to achieve economies of scale
- Develop an outreach and education campaign
- Launch program
- Monitor and evaluate performance

7.4 Leverage Colorado's Extended Producer Responsibility (EPR) for Recycling Programs ♺♺♺

Colorado's Producer Responsibility (EPR) for Recycling Packaging Program requires covered producers to join a Producer Responsibility Organization (PRO), and through it, fund and manage the end of life for packaging and paper, including collection, processing, and recycling or composting.

This EPR program will cover 100% of the net recycling service costs for all Colorado single-family and multi-family homes starting in 2026. The state's PRO, Circular Action Alliance (CAA), has indicated that they will start by covering recycling costs in communities with organized (non-open market) systems.

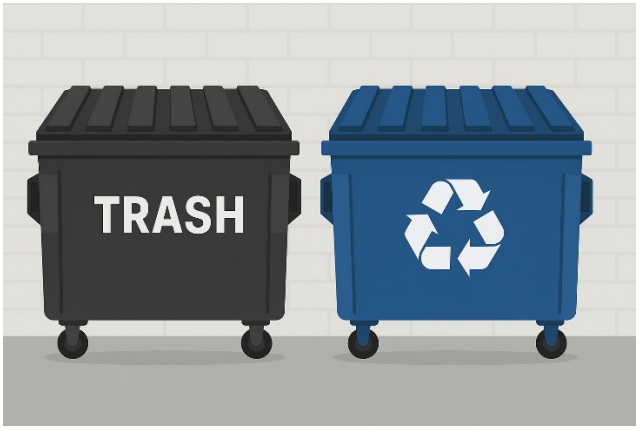
Communities that do not currently have recycling for residents or that have open market recycling collection systems pose a bigger challenge, and it will take longer to coordinate payments for recycling haulers that choose to participate.

To fully access the benefits of Colorado's Producer Responsibility program, it is recommended that the city considers adopting an equal space ordinance; implement a hauler licensing ordinance with a requirement for providing recycling bundled into all services; introduce pay-as-you-throw pricing; and establish a municipally coordinated hauling contract or contracts for residential collections.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders to share information about EPR and gather insights on potential barriers related to ordinance impacts
- Draft and adopt ordinances
- Draft and implement a communications plan to roll out new requirements
- Apply and receive reimbursements provided through Colorado's EPR law for collections

7.5 Pass an Equal Space Ordinance to Ensure Commercial and Multi-Family Recycling Access ♺♺♺♺



An **Equal Space Ordinance** requires that all newly constructed commercial buildings allocate the same amount of space for recycling collection infrastructure (such as enclosures, receptacles, chutes, staging areas, and collection rooms) as is allocated for trash.

Insufficient space for recycling is a common barrier for commercial entities, particularly in dense urban areas. By integrating this requirement into building codes, municipalities can ensure future developments support recycling access without retrofitting existing structures.

In Englewood, approximately 37% of housing consists of multi-family units, and there are 1,475 employer firms, highlighting the importance of planning for equitable recycling infrastructure in both residential and commercial development.

Implementation Steps:

- Conduct outreach to stakeholders to gather insights on potential barriers
- Draft and adopt an equal space ordinance
- Roll out a communications plan and consider providing technical support for commercial property managers
- Coordinate with the Planning & Zoning Department to align on communicating new requirements for new developments and significant site redevelopments

7.6 Support the Transition to Organized Residential Collection Across the City (Single Hauler) ♺♺

Organized Residential Collection refers to a system in which a municipality manages curbside trash and recycling services on behalf of residents through a contract with one or more licensed haulers. Under this model, residents may have the option to opt out of the municipal service for a fee. Municipal contracts can mandate that recycling is included for all households and may incorporate a pay-as-you-throw (PAYT) pricing structure, where fees are based on the size of the trash cart and the volume of waste generated.

This approach can result in lower and more stable service costs for residents, expanded access to recycling, and the expansion of services such as compost collection or bulky item pickup. It also reduces the number of collection trucks on neighborhood streets, thereby minimizing traffic, emissions, and road wear. Organized collection typically covers single-family homes and smaller multi-family buildings (fewer than seven units), with optional participation or phased inclusion available for homeowners associations (HOAs).

In 2019, the Englewood City Council began collecting public feedback to explore the concept of franchising and having a single hauler carry out collections for the city. This was paired with a robust campaign, “Talk n’ Trash,” which included a community-wide survey and in-person meetings at the Englewood City Center. In response to public feedback, the city issued a request for proposals in 2021 for waste haulers to provide collection to all residential properties and received two submissions. After an extensive engagement period, results showed that people were concerned about cost, reliability of service, and yard debris collection, along with interest in composting at an additional cost. In the spring of 2022, the City Council discussed at length the idea of converting to a single hauler organized collection system for garbage and recycling but the proposal was ultimately tabled. Survey results at this time showed that residents were divided on the issue.

Since the initial evaluation, additional survey and focus groups conducted in 2024 for this South Metro Waste

Diversion Plan revealed that residents consistently raised concerns about the high number of waste haulers operating within the same neighborhoods. Key issues cited included child safety risks, wear and tear of roads, and increased air and noise pollution. Residents also emphasized a lack of accountability under the current open hauling system, expressing a desire for more structured oversight and coordination.

Furthermore, with the state's Extended Producer Responsibility law set to take effect in 2026, which will cover net recycling service costs for all single-family and multi-family homes, and with CAA indicating they will begin supporting communities with organized collection systems, this is an opportune time for Englewood to revisit its approach. With recycling costs covered by EPR, the overall financial benefit to residents could — and likely will — be drastically increased compared to the 2022 hauler bid.

As such, the City of Englewood seeks to support the transition to organized residential collections across the city if it is **financially and accessibly conducive for a majority of the residents**.

Implementation Steps:

- Preliminary assessment, including a cost-benefit analysis to determine whether a single hauler will be more financially conducive and accessible for the majority of residents, especially considering that recycling costs will be covered under EPR
- Coordinate regionally with neighboring jurisdictions aiming to also implement a single-hauler system
- Engage stakeholders to communicate benefits and gather feedback on potential barriers and service needs
- Conduct a legal review to ensure compliance with state single-hauler regulations
- State law requires the city to give written notice to any existing service providers within six months of charging a fee for residential solid waste services. The notice must also be posted in a local newspaper of general circulation and include the impacted area, the start date of the fee, and an explanation of the option to request a chance to bid on the residential services.
- Work with the city attorney's office to ensure compliance with state law
- Outline implementation steps and timeline

7.7 Ongoing Community Group Outreach and Engagement

Community outreach and engagement includes public education, feedback collection, community collection events, and direct interaction with residents and organizations on recycling and waste issues. While the City of Englewood implements various recycling-related communication strategies, outreach must be continuous to ensure both current and new residents receive up-to-date information on how to recycle and compost effectively.

Leveraging community groups and peer networks is a powerful strategy to expand awareness and increase participation in waste diversion efforts. One proven approach is to train **Recycling Champions** (local advocates or community ambassadors) within existing groups to share recycling and composting information through their networks.

Training should emphasize local recycling guidelines, using clear and consistent wording and visuals to show what is accepted in the curbside program. To improve accessibility and understanding, materials should be available in multiple languages.

Implementation Steps:

- Reach out to existing community groups to speak at meetings or events about waste diversion
- Host trainings for interested residents to become Recycling Champions and share knowledge with their networks
- Share information about waste diversion by tabling at public events, meetings, or community centers
- Engage Resident Champions over time with ongoing community efforts (e.g., events, webinars, new resources)
- Continue utilizing the South Metro Waste Diversion website to promote efforts and events

7.7 Explore Business Waste Diversion Grants ♺

Businesses, especially restaurants that generate large volumes of food scraps, may be interested in subscribing to an organics collection service, but the cost of service can be a barrier. Local governments can create a financial incentive or grant program to encourage the private sector to sign up for organic collection services.

Businesses can be reimbursed for infrastructure, hauling, compostable food service ware, education, training, and signage. Financial incentives can also build support for a future commercial composting ordinance, as it creates local case studies of successful organics diversion programs.

Implementation Steps:

- Identify funding source for grants
- Design grant program framework
  - Define eligible applicants
  - Establish match requirements, if any
  - Outline funding amounts and funding categories
  - Develop an application, review, and selection process
- Launch and promote the grant program through a communications plan
- Award and administer grant agreements

7.8 Repair/Reuse Infrastructure such as Fix-It Clinics ♺

Repair and reuse opportunities help reduce unnecessary waste and strengthen communities by empowering individuals to fix or repurpose items instead of sending them to landfills.

Repair and Reuse Fix-It Clinics are community-driven events designed to reduce waste by helping residents repair broken items instead of discarding them. These clinics empower individuals to extend the life of everyday products, such as small appliances, electronics, bicycles, clothing, and furniture, through hands-on guidance from volunteer fixers. They promote a culture of reuse, encourage skill-building, and foster environmental stewardship by keeping valuable materials out of landfills.

Fix-it clinics also offer educational opportunities, raising awareness about product longevity and the environmental impact of a throwaway culture.

To implement a fix-it clinic, a city or organization typically partners with a local library, community center, or nonprofit to host the event. Planning includes recruiting skilled volunteers (e.g., tinkerers, mechanics, tailors), advertising the clinic to the community, and

coordinating logistics such as tools, tables, signage, and registration. Some cities also provide liability waivers and ask participants to stay and assist in the repair process to promote learning. A successful fix-it clinic relies on community engagement, accessible locations, and ongoing support to build momentum for future events and grow a local reuse movement.

Additionally, cities can promote additional reuse opportunities such as thrift stores, resale stores, repurposed buildings, local 'buy-nothing' groups, and more. Communities can support these initiatives by funding repair/fix-it clinics, creating a reuse directory, or funding the development of infrastructure to host repair clinics and reuse.

Implementation Steps:

- Identify partners such as libraries to host fix-it events
- Identify volunteers or champions to support the events
- Promote through the city and South Metro websites and social media channels
- Develop a reuse directory for community members to search for local reuse opportunities

7.9 City of Englewood Tonnage Projections

Table 21: City of Englewood Tonnage Projections (2023-2035)

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Single-Family													
MSW Disposal (Landfill)	8,883	8,969	9,055	9,152	9,249	9,345	9,438	9,531	9,633	9,733	9,833	9,932	10,030
Diversion	1,586	1,602	1,617	1,634	1,652	1,669	1,685	1,702	1,720	1,738	1,756	1,774	1,791
Total Generation	10,469	10,571	10,672	10,786	10,901	11,014	11,123	11,233	11,353	11,471	11,589	11,706	11,821
Multi-Family													
MSW Disposal (Landfill)	5,128	5,177	5,227	5,283	5,339	5,395	5,448	5,502	5,561	5,619	5,676	5,734	5,790
Diversion	916	925	933	943	953	963	973	983	993	1,003	1,014	1,024	1,034
Total Generation	6,044	6,102	6,160	6,226	6,292	6,358	6,421	6,485	6,554	6,622	6,690	6,758	6,824
Commercial													
MSW Disposal (Landfill)	21,017	21,219	21,423	21,653	21,881	22,110	22,330	22,549	22,790	23,028	23,264	23,499	23,731
Diversion	3,753	3,789	3,826	3,867	3,907	3,948	3,987	4,027	4,070	4,112	4,154	4,196	4,238
Total Generation	24,770	25,008	25,249	25,520	25,788	26,058	26,317	26,576	26,860	27,140	27,419	27,695	27,969
All Sectors													
MSW Disposal (Landfill)	35,029	35,365	35,705	36,088	36,469	36,850	37,217	37,582	37,984	38,380	38,774	39,164	39,551
Diversion	6,255	6,315	6,376	6,444	6,512	6,580	6,646	6,711	6,783	6,854	6,924	6,994	7,063
Total Generation	41,284	41,680	42,081	42,532	42,981	43,430	43,863	44,293	44,767	45,234	45,698	46,158	46,614

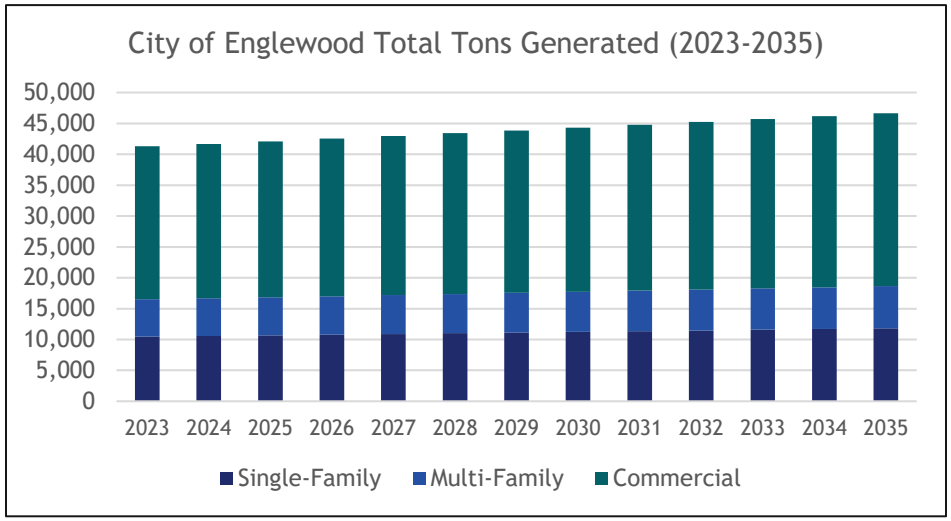


Figure 35: City of Englewood Total Tons Generated (2023-2035)

Table 22: City of Englewood Community Profile

Description	2022
Single-Family Units	63.4%
Multi-Family Units	36.6%
Total Number of Households	15,686
Household Size*	2.11
Single-Family Households	9,945
Multi-Family Households	5,741
Single-Family Population	21,730
Multi-Family Population	12,545
Total Population	34,275
Total Employer Firms	1,475

City of Englewood Demographic Snapshot, US Census Bureau 2022

7.10 Impact Analysis Results

Table 23: City of Englewood Impact Analysis Results

Aim	ID	Strategy	Additional Diversion %	Tons Low	Tons High	GHG Emissions Reduced	Fiscal Impact
Englewood	7.1	Work with parks departments to utilize finished compost in municipal projects and connect developers with the finished compost	0.0%	n/a	n/a	n/a	$$
Englewood	7.2	Establish a C&D recycling ordinance	6.2%	2,800	3,050	1,112	$
Englewood	7.3	Implement food waste curbside services for composting for single-family residents	1.9%	900	950	265	$$$
Englewood	7.4	Leverage Colorado's Extended Producer Responsibility (EPR) for recycling programs	3.9%	1,700	1,890	5,063	$
Englewood	7.5	Pass an equal space ordinance to ensure multi-family and commercial recycling access	5.6%	2,500	2,730	7,332	$
Englewood	7.6	Support the transition to organized residential collection across the city (single hauler) especially when financially and accessibility is conducive for majority of residents	1.7%	800	840	1,418	$$
Englewood	7.7	Ongoing community group engagement (such as resident champion training) with universal and accessible guidelines	2.4%	1,000	1,160	1,014	$$
Englewood	7.8	Explore business organics grants	1.1%	500	530	140	$$
Englewood	7.9	Repair/reuse infrastructure such as fix-it clinics	0.2%	100	110	37	$
			23.0%	**10,300**	**11,260**	**16,381**	

Fiscal Impact	
Fiscal Impact on Tons Diverted	Estimated Fiscal Range
$	< $10,000
$$	$10,000 - < $100,000
$$$	≥ $100,000

8.0 City of Littleton Waste Diversion Goals and Actions

The City of Littleton is a municipality spanning across three counties: Arapahoe, Douglas, and Jefferson. The 13-square-mile city is home to approximately 45,000 people and 2,000 diverse businesses and organizations. Littleton has more than 59 parks and open spaces with access to two light rail stations that provide convenient service to Downtown Denver. Littleton has experienced growth and development over the years, evolving into a dynamic urban center within the greater Denver region. According to the latest census available, 62% of Littleton's housing type consists of single-family homes and 38% are multi-family homes. The city anticipates growth in the multi-family housing pipeline over the next 5-10 years, with an additional 2,732 multi-family properties vs. 420 single-family homes.

Waste collections are carried out through an open market structure where residents and businesses subscribe directly with haulers for collection of trash and recycling services. Littleton currently does not have a hauler licensing program, resulting in limited data on which haulers operate in the city, how many tons of trash and recyclables are collected, and where those materials are processed. On the city's website, Littleton encourages residents to coordinate services for their street, block, or neighborhood. Approximately 14-17 haulers of varying services (organics, bulk, trash and recycling, medical and hazardous waste) serve the City of Littleton.

Littleton's City Code includes regulations on waste transportation, minimum services provided, dumping restrictions, waste incineration, and container requirements. The City of Littleton does not license or permit private haulers. For noise control, City Code §7-3-5 restricts garbage, trash, or compactor hauling operations between 10:00 p.m. and 7:00 a.m. within 800 feet of residential areas or within 300 feet of any hotel or motel.

The City of Littleton has contracted with a waste hauler to provide At-Your-Door pickup services for household hazardous waste and electronics. The city also hosts special events for cooking oil and prescription drugs through the Littleton Police Department's Drug Take-Back Day. The city offers a Christmas tree recycling program that turns trees into mulch for the community, as well as a leaf recycling program in the fall.

Figure 36: Christmas Tree Recycling in Littleton

The City of Littleton is committed to the environment and is making progress towards its environmental programs and initiatives. In December 2022, Littleton City Council unanimously voted to create the Environmental Stewardship Board and tasked the appointed group of residents with drafting an environmental stewardship action plan that includes recommendations to enhance the city's sustainability efforts. The draft plan included 89 recommended actions spanning categories of air quality/emissions, built environment, consumption and waste diversion, natural environment, water, and community. Two significant recommendations include the exploration of a single hauler and providing every building with recycling and composting options.

Table 24: City of Littleton Strategies Summary

ID	Action	Fiscal Impact	Diversion Impact	Implementation Timeline		
				FY26-30	FY30-35	FY35-40
8.1	Implement yard debris curbside services for composting for single-family residents	$$$	♺♺♺	X		
8.2	Implement food scraps curbside services for composting for single-family residents	$$$	♺♺	X	X	
8.3	Leverage Colorado's Extended Producer Responsibility (EPR) for recycling programs	$	♺♺♺	X	X	X
8.4	Require hauler licensing, including the requirement for haulers to track and report tonnage data	$	♺	X		
8.5	Pass an equal space ordinance to ensure commercial recycling access	$	♺♺♺	X	X	
8.6	Support the transition to organized collection (single hauler)	$$	♺♺	X	X	
8.7	Ongoing community group outreach and engagement Update websites with guidelines, events, and sorting tool	$$	♺♺♺	X	X	X
8.8	Explore adopting a universal recycling ordinance	$	♺♺		X	
8.9	Establish a construction & demolition (C&D) recycling ordinance	$	♺♺♺♺	X		

8.1 Implement Yard Debris Curbside Services for Composting for Single-family Residents

♺♺♺

The South Metro Waste Characterization study found that yard debris comprises 20% of the City of Littleton's single-family waste stream, yet less than 1% of the yard debris is being diverted. Promoting curbside yard debris collection for single-family residents could significantly increase the city's waste diversion rate, depending on the level of participation.

Like curbside recycling collection service, adding a third collection point for diverting organic material (yard debris and sometimes food scraps) creates an opportunity to reduce the amount of waste sent to landfills and contribute to the environmental benefits of composting. Local governments can promote the benefits of curbside yard debris collection programs and encourage residents to subscribe.

Implementation Steps:

- Define program goals and scope
- Design service model
- Procure equipment or contract out services; consider a joint purchasing agreement with regional partners to achieve economies of scale
- Develop an outreach and education campaign
- Launch program
- Monitor and evaluate performance

8.2 Implement Food Scraps Curbside Services for Composting for Single-family Residents

♺♺

It is estimated that by 2035, the City of Littleton's single-family sector will generate roughly 2,900 tons of food scraps and other compostables per year, or roughly 20% of its total generated waste.

A dedicated curbside service for food scraps can significantly divert the amount of landfill-bound material and contribute to the environmental benefits of composting. Local governments can promote the benefits of curbside food scraps collection programs.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar program
- Define program goals and scope
- Design service model
- Establish a wait list to understand residential demand
- Procure equipment and services; consider a joint purchasing agreement with regional partners to achieve economies of scale
- Develop an outreach and education campaign
- Launch program
- Monitor and evaluate performance

8.3 Leverage Colorado's Extended Producer Responsibility (EPR) for Recycling Programs ♺♺♺

Colorado's Producer Responsibility (EPR) for Recycling Packaging Program requires covered producers to join a Producer Responsibility Organization (PRO), and through it, fund and manage the end of life for packaging and paper, including collection, processing, and recycling or composting.

This EPR program will cover 100% of the net recycling service costs for all Colorado single-family and multi-family homes starting in 2026. The state's PRO, Circular Action Alliance (CAA), has indicated it will start by covering recycling costs in communities with organized (non-open market) systems.

Communities that do not currently offer recycling for residents or that have open market recycling collection systems pose a bigger challenge, and it will take longer to coordinate payments for recycling haulers that choose to participate.

To fully access the benefits of Colorado's Producer Responsibility program, it is recommended that the city considers adopting an equal space ordinance, a hauler licensing ordinance with a requirement for providing recycling bundled into all services, incorporate pay-as-you-throw pricing, and establish a municipally coordinated hauling contract or contracts for residential collections.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders to share information about EPR and gather insights on potential barriers related to ordinance impacts
- Draft and adopt ordinances
- Draft and implement a communications plan to roll out new requirements
- Apply and receive reimbursements provided through Colorado's EPR law for collections

8.4 Require Hauler Licensing, Including the Requirement for Haulers to Track and Report Tonnage Data ♺

A hauler licensing ordinance is a policy that requires both residential and commercial sector waste haulers to obtain a license through the local governing body to operate within the government's jurisdiction. Licenses can include requirements such as providing proof of insurance, setting prices based on volume of trash containers (pay-as-you-throw), safety requirements, minimum service standards, enforcement mechanisms, or operating only on certain days and during a set timeframe to reduce traffic and noise.

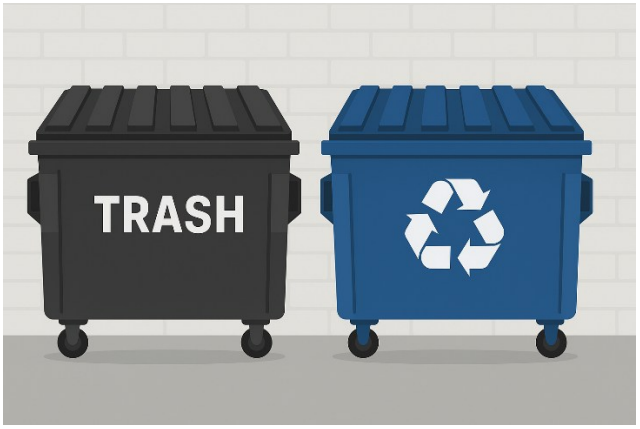
It is considered best practice for hauler licensing policies to also require haulers to regularly report how many tons of trash, recyclables, and organic waste have been collected in their community. This helps establish baseline data for local governments to understand their waste streams and track progress. This tonnage data could also provide data necessary for the greenhouse gas inventory.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders (haulers and/or residents) to gather insights into potential barriers
- Document feedback on challenges, service gaps, and potential ordinance impacts
- Draft and adopt a hauler licensing ordinance
- Communicate with haulers on new requirements
- Develop a reporting mechanism to receive hauler data annually

8.5 Pass an Equal Space Ordinance to Ensure Commercial and Multi-Family Recycling Access

♺♺♺



An **Equal Space Ordinance** requires that all newly constructed commercial buildings allocate the same amount of space for recycling collection infrastructure (such as enclosures, receptacles, chutes, staging areas, and collection rooms) as is allocated for trash.

Insufficient space for recycling is a common barrier for commercial entities, particularly in dense urban areas. By integrating this requirement into building codes, municipalities can ensure future developments support recycling access without retrofitting existing structures.

In Littleton, approximately 38% of housing consists of multi-family units, and there are 1,825 employer firms, highlighting the importance of planning for equitable recycling infrastructure in both residential and commercial development.

Implementation Steps:

- Conduct outreach to stakeholders to gather insights on potential barriers
- Draft and adopt an equal space ordinance
- Roll out a communications plan and consider providing technical support for commercial property managers
- Coordinate with the Planning & Zoning Department to align on communicating new requirements for new developments and significant site redevelopments

8.6 Support the Transition to Organized Residential Collection (Single Hauler)

♺♺

Organized Residential Collection refers to a system in which a municipality manages curbside trash and recycling services on behalf of residents through a contract with one or more licensed haulers. Under this model, residents may have the option to opt out of the municipal service for a fee. Municipal contracts can mandate that recycling is included for all households and may incorporate a pay-as-you-throw (PAYT) pricing structure, where fees are based on the size of the trash cart and the volume of waste generated.

This approach can result in lower and more stable service costs for residents, expanded access to recycling, and the addition of services such as compost collection or bulky item pickup. It also reduces the number of collection trucks on neighborhood streets, thereby minimizing traffic, emissions, safety concerns, and road wear. Organized collection typically covers single-family homes and smaller multi-family buildings (fewer than seven units), with optional participation or phased inclusion available for homeowners associations (HOAs).

During the stakeholder engagement process for this South Metro Waste Diversion Plan, which included surveys and focus groups, residents throughout the South Metro region consistently raised concerns about the high number of waste haulers operating within the same neighborhoods. Key issues cited included child safety risks, wear and tear of roads, and increased air and noise pollution. Residents also emphasized a lack of accountability under the current open hauling system, expressing a desire for more structured oversight and coordination.

Implementation Steps:

- Engage stakeholders to communicate benefits and gather feedback on potential barriers and service needs
- Conduct a legal review to ensure compliance with state single-hauler regulations
- Coordinate regionally with neighboring jurisdictions aiming to also implement
- Outline implementation steps and timeline

8.7 Ongoing Community Group Outreach and Engagement

♺♺♺

Community outreach and engagement includes public education, feedback collection, community collection events, and direct interaction with residents and organizations on recycling and waste issues. While the City of Littleton implements various recycling-related communication strategies, outreach must be continuous to ensure both current and new residents receive up-to-date information on how to recycle and compost effectively.

Leveraging community groups and peer networks is a powerful strategy to expand awareness and increase participation in waste diversion efforts. One proven approach is to train **Recycling Champions** (local advocates or community ambassadors) within existing groups to share recycling and composting information through their networks.

Training should emphasize local recycling guidelines, using clear and consistent wording and visuals to show what is accepted in the curbside program. To improve accessibility and understanding, materials should be available in multiple languages.

Implementation Steps:

- Reach out to existing community groups to speak at meetings or events about waste diversion
- Host trainings for interested residents to become Recycling Champions and share knowledge with their networks
- Share information about waste diversion by tabling at public events, meetings, or community centers
- Engage Resident Champions over time with ongoing community efforts (events, webinars, new resources)
- Continue utilizing the South Metro Waste Diversion website to promote efforts and events

8.7.1 Update Websites with Guidelines, Events and Sorting Tool

The recommended best practice is to have a comprehensive city webpage dedicated to recycling/waste diversion to give residents a central location to find accurate, up-to-date information and recycling guidelines.

A sorting tool is an interactive web component for residents to practice sorting items and materials on a website or app. With this option, a city can choose key items to feature in the virtual game to help inform residents.

Implementation Steps:

- Create recycling guidelines and post on website
- Contract with a web developer to create an interactive web component for residents to practice sorting items into recycling or trash
- Keep website updated with events and program changes
- Create and widely distribute graphic and bilingual guidelines and train municipal staffers on waste guidelines

8.7.2 Create and Widely Distribute Graphic and Bilingual Guidelines and Train Municipal Staff on Waste Guidelines

Guidelines for what can and cannot be recycled, (or composted, if available in the community), should be clear and specific, with images of materials/items alongside descriptive text in both English and Spanish.

Every time a material is referenced, it should be accompanied by an image that is shown consistently across media. Photos are preferred over drawings to ensure people recognize the objects depicted. Trainings for municipal staff should include reviewing guidelines and answering frequently asked questions about waste to dispel myths. Color coding outreach materials and containers can also support reinforcing correct sorting behaviors.

Implementation Steps:

- Create recycling guidelines that are clear and specific with images and text in English and Spanish
- Host training sessions for municipal staff on the guidelines and frequently asked questions about waste

- Table at community events and recycling events to distribute guidelines & resources and answer questions

8.7.3 Table at Community and Recycling Events to Distribute Resources and Answer Questions

Ongoing community engagement, visibility, and access to recycling resources are important to increase buy-in and participation in recycling programs. These methods can build relationships with community members, fostering trust and creating connections.

Tabling at community events (e.g., Earth Day celebrations, farmer's markets, and other events) can provide valuable resources about recycling, including recycling guidelines, FAQ handouts, local resources for hard-to-recycle materials, yard debris, and hazardous waste. These events can also feature reusables giveaways (e.g., water bottles, metal straws, bamboo utensils), as well as a physical sorting game or examples of recyclable materials and common contaminants. Tables should be staffed by trained municipal staff and/or community volunteers.

Implementation Steps:

- Schedule staff to table at upcoming community events (e.g., Earth Day, farmer's markets)
- Create a tabling kit of resources about recycling (guidelines, frequently asked questions, hard-to-recycle resources), reusable giveaways (straws or utensils), and props (sorting game or examples of common recyclables)
- Ongoing community group engagement (such as Resident Champion training) with universal and accessible guidelines

8.8 Explore Adopting a Universal Recycling Ordinance (URO)♺♺

Universal Recycling Ordinances require commercial buildings (including multi-family housing and businesses) to provide access to recycling services. Commercial recycling ordinances are typically adopted after residential recycling programs are well-established. Best practices for commercial recycling ordinances include extensive outreach to the business community, the multi-family housing sector, and waste haulers. Pilot projects and technical assistance for businesses build community buy-in and help with the transition to policy compliance.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders (haulers and/or residents) to gather insights into potential barriers
- Document feedback on challenges, service gaps, and potential ordinance impacts
- Draft and adopt a universal recycling ordinance
- Communicate with haulers on new requirements
- Develop a reporting mechanism to receive hauler data annually

8.9 Establish a Construction and Demolition (C&D) Recycling Ordinance ♺♺♺♺

Construction and Demolition (C&D) Recycling Ordinances require contractors to sort and recycle recoverable materials, such as untreated wood, metals, cardboard, and aggregates, most of which are generated during demolition activities.

These ordinances often include square footage thresholds, exempting smaller projects from compliance. Effective implementation depends on the availability of sorting infrastructure, access to end markets, and strong coordination with contractors. One common compliance mechanism is a deposit system, where contractors submit a financial deposit based on project size. The deposit is refunded upon proof of compliance with recycling requirements.

A complementary strategy is **deconstruction**, a process that involves systematically dismantling buildings to preserve materials for reuse. This approach can reduce the need for recycling infrastructure by diverting materials directly into reuse pathways.

C&D recycling ordinances are currently enforced in the cities of Boulder, Fort Collins, and Lakewood. The City and County of Denver are also in the process of developing and implementing similar policies.

Implementation Steps:

- Conduct a detailed C&D end market and recovery infrastructure assessment.
- Coordinate regionally with neighboring jurisdictions aiming to implement a similar requirement
- Conduct outreach to stakeholders (e.g., developers, haulers, residents) to gather insights into potential barriers
- Document feedback on challenges, service gaps, and potential ordinance impacts
- Draft and adopt a C&D recycling ordinance
- Communicate new requirements
  Coordinate with Planning & Zoning to communicate with development and re-development projects

8.10 Tonnage Projections

Table 25: City of Littleton Tonnage Projections (2023-2035)

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Single-Family													
MSW Disposal (Landfill)	11,194	11,298	11,404	11,522	11,641	11,760	11,874	11,988	12,113	12,235	12,357	12,478	12,597
Diversion	1,999	2,018	2,036	2,058	2,079	2,100	2,120	2,141	2,163	2,185	2,207	2,228	2,250
Total Generation	13,193	13,316	13,440	13,580	13,720	13,859	13,994	14,129	14,276	14,420	14,564	14,706	14,847
Multi-Family													
MSW Disposal (Landfill)	6,978	7,043	7,109	7,183	7,257	7,331	7,402	7,473	7,551	7,627	7,703	7,778	7,853
Diversion	1,246	1,258	1,269	1,283	1,296	1,309	1,322	1,334	1,348	1,362	1,376	1,389	1,402
Total Generation	8,224	8,301	8,378	8,465	8,552	8,640	8,724	8,808	8,899	8,989	9,079	9,167	9,255
Commercial													
MSW Disposal (Landfill)	27,257	27,512	27,769	28,057	28,346	28,635	28,914	29,192	29,495	29,794	30,091	30,384	30,675
Diversion	4,867	4,913	4,959	5,010	5,062	5,113	5,163	5,213	5,267	5,320	5,373	5,426	5,478
Total Generation	32,125	32,425	32,728	33,067	33,408	33,749	34,077	34,404	34,762	35,114	35,464	35,810	36,153
All Sectors													
MSW Disposal (Landfill)	45,429	45,854	46,282	46,762	47,244	47,725	48,190	48,653	49,158	49,657	50,151	50,641	51,125
Diversion	8,112	8,188	8,265	8,350	8,436	8,522	8,605	8,688	8,778	8,867	8,956	9,043	9,130
Total Generation	53,541	54,042	54,546	55,112	55,680	56,248	56,795	57,341	57,937	58,524	59,107	59,684	60,255

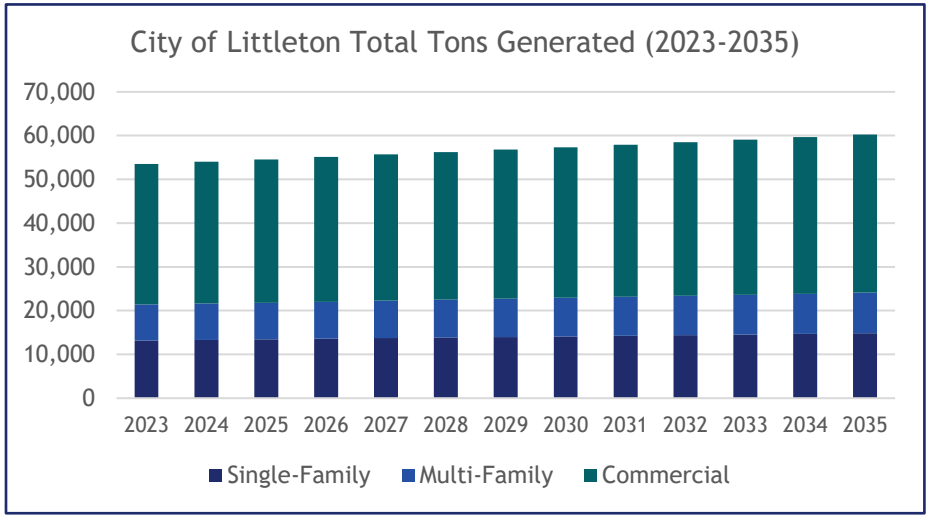


Figure 37: City of Littleton Total Tons Generated (2023-2035)

Table 26: City of Littleton Community Profile

Description	2022
Single-Family Units	61.6%
Multi-Family Units	38.4%
Total Number of Households	20,484
Household Size*	2.19
Single-Family Households	12,618
Multi-Family Households	7,866
Single-Family Population	27,382
Multi-Family Population	17,069
Total Population	44,451
Total Employer Firms	1,825

City of Littleton Demographic Snapshot, US Census Bureau 2022

8.11 Impact Analysis Results

Table 27: City of Littleton Impact Analysis Results

Aim	ID	Strategy	Additional Diversion %	Tons Low	Tons High	GHG Emissions Reduced	Fiscal Impact
Littleton	**8.1**	Implement yard waste curbside services for composting for single-family residents	3.8%	2,200	2,400	659	**$$$**
Littleton	**8.2**	Implement food waste curbside services for composting for single-family residents	1.8%	1,000	1,200	333	**$$$**
Littleton	**8.3**	Leverage Colorado's Extended Producer Responsibility for recycling programs	3.3%	1,900	2,100	1,959	**$**
Littleton	**8.4**	Require hauler licensing, including the requirement for haulers to track and report tonnage data	0.5%	300	300	982	**$**
Littleton	**8.5**	Pass an equal space ordinance to ensure commercial and multi-family recycling access	4.8%	2,800	3,000	8,360	**$**
Littleton	**8.6**	Support the transition to organized collection (single hauler)	1.7%	1,000	1,100	1,726	**$$**
Littleton	**8.7**	Ongoing community group engagement	4.5%	2,500	2,900	2,125	**$$**
Littleton	**8.8**	Adopt a universal recycling ordinance	2.7%	1,500	1,700	4,528	**$**
Littleton	**8.9**	Establish a construction & demolition recycling ordinance	3.3%	1,900	2,100	5,604	**$**
			24.6%	**14,100**	**15,600**	**26,181**	

Fiscal Impact	
Fiscal Impact on Tons Diverted	Estimated Fiscal Range
$	< $10,000
$$	$10,000 - < $100,000
$$$	≥ $100,000

9.0 City of Sheridan Waste Diversion Goals and Actions

Originally incorporated as a town in 1890 and transitioned to a statutory city in 1959, the City of Sheridan has a rich history defined by its cultural and demographic diversity. Located in Arapahoe County and bordering the cities of Denver and Englewood, Sheridan has an estimated population of approximately 5,970 residents.

The community reflects a wide range of ethnic, cultural, and socioeconomic backgrounds. According to US Census data, 31.7% of residents speak a language other than English at home, and 41.7% identify as Hispanic or Latinx. The city's median household income is just over half the state average, underscoring the need for creative funding strategies and regional partnerships to advance sustainability goals outlined in Sheridan's first Sustainability Plan, adopted in 2023.

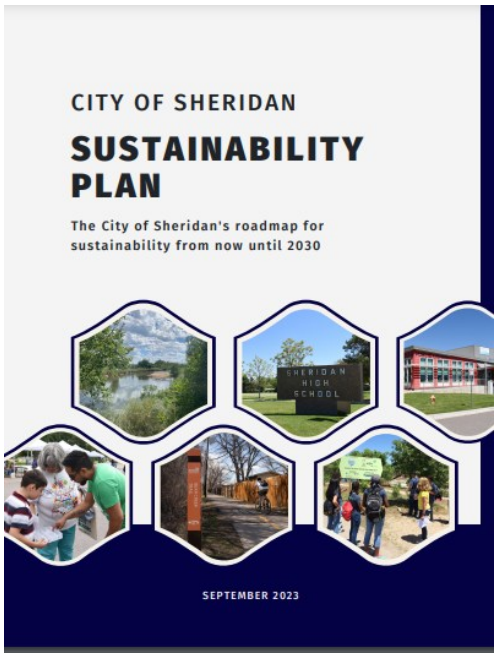


Figure 38: Sheridan Sustainability Plan

Sheridan is recognized as a Justice 40 Community by the federal government, a disproportionately impacted community by the Colorado Department of Public Health and Environment (CDPHE), and a higher emissions community by Xcel Energy. Within the South Metro region, Sheridan has the highest proportion of multi-family housing, representing 40% of the overall housing structures. Similar to the other cities, little is known about the multi-family and commercial recycling and composting participation rates in Sheridan.

Unlike the other three South Metro cities, Sheridan operates under a contract-based residential waste collection model. In 2014, the city adopted a single-hauler system through a contract with Republic Services, covering all single-family homes and multi-unit residences up to seven units. Under this model, Republic Services provides weekly trash collection and biweekly recycling services. The contract follows a pay-as-you-throw (PAYT) structure, which incentivizes waste reduction and recycling by charging residents based on their selected trash cart size (32, 64, or 96 gallons). Recycling services are automatically included in the fee structure, with recyclables collected in 96-gallon containers and no separate sign-up required.

The service contract includes provisions to support service equity. For residents with physical impairments, carry-out cart service is available at no additional cost. Additionally, the contract offers an optional, twice-yearly yard debris pickup in the spring and fall, allowing each household to dispose of up to 20 bags or bundled items such as leaves, shrubs, and tree limbs. Currently, however, that yard debris is sent to the landfill and is not being composted.

In 2024, Sheridan partnered with A1 Organics and the cities of Littleton and Englewood to host a regional leaf drop-off event in November. The Republic Services contract also includes a provision for annual holiday tree collection at no cost to residents, with the option for trees to be chipped or sent to a compost facility. Although included in the agreement, this service has not yet been exercised by the city.

City Code (§22-173–214) requires private haulers operating in Sheridan to obtain a license and submit a plan detailing their recycling and collection services. However, there is no current requirement for data reporting beyond services provided through the residential contract.

Sheridan's City Council has indicated support for waste diversion strategies and targeted policy actions that will help the city achieve its goals. In January 2023, the City of Sheridan hired a part-time sustainability program manager and adopted the city's first ever sustainability plan in September 2023. Sheridan's City Code includes requirements concerning waste container enclosures and placement. On its waste and recycling webpage, the City of Sheridan lists several waste-related goals and project status updates, including increasing community outreach and education, exploring curbside and drop-off composting options, conducting a waste characterization study, partnering with A1 Organics on a leaf collection program, promoting hazardous and electronic waste drop-off events, utilizing Plastic Pollution Reduction Act (HB21-1162) bag fee funds, and exploring multi-family recycling options. Sheridan also lists internal city goals, such as increasing water bottle fill stations, updating recycling signage, reducing paper usage, and ensuring recycling access at city-owned buildings.

Table 28: City of Sheridan Strategies Summary

ID	Action	Fiscal Impact	Diversion Impact	Implementation Timeline		
				FY26-30	FY30-35	FY35-40
9.1	Implement At-Your Door collections program for household hazardous waste and electronics	$$	♺	X		
9.2	Leverage Colorado's Extended Producer Responsibility (EPR) for recycling programs	$	♺♺♺♺	X	X	X
9.3	Implement food scraps curbside services for composting for single-family residents	$$	♺♺	X	X	
9.4	Work with the city's hauler to transition yard debris curbside services for single-family residents so the material is composted instead of landfilled	$$	♺♺♺	X		
9.5	Pass an equal space ordinance to ensure commercial recycling access	$	♺♺♺	X	X	
9.6	Ongoing community group engagement (such as Resident Champion training)	$$	♺♺	X	X	X
9.7	Explore business organics grants	$$	♺	X		

9.1 Implement At-Your Door Collections for Household Hazardous Waste and Electronics♺

The "At Your Door Special Collection" service, offered by the Southeast Metro Stormwater Authority (SEMSWA) in partnership with Waste Management, provides residents of unincorporated Arapahoe County participating cities with a convenient home collection program for household hazardous waste. All cities in South Metro except the City of Sheridan offer this service.

For a small co-pay, residents can schedule a pickup of items such as automotive products (e.g., motor oil, antifreeze), batteries, garden chemicals, paints, household cleaners, electronics, mercury-containing items, and swimming pool chemicals. To participate, residents schedule a collection through the program's website or by calling the designated phone number.

It is recommended that the City of Sheridan offer this convenient service to residents to support the safe and responsible disposal of hazardous materials, thereby protecting the environment and public health.

Implementation Steps:

- Identify funding sources (e.g., stormwater utility fees)
- Procure and partner with a provider and establish a service agreement
- Develop an outreach and education campaign to notify residents of the new service
- Launch the program

9.2 Leverage Colorado's Extended Producer Responsibility (EPR) for Recycling Programs ♺♺♺♺

Colorado's Producer Responsibility (EPR) for Recycling Packaging Program requires covered producers to join a Producer Responsibility Organization (PRO), and through it, fund and manage the end of life for packaging and paper, including collection, processing, and recycling or composting.

This EPR program will cover 100% of the net recycling service costs for all Colorado single-family and multi-family homes starting in 2026. The state's PRO, Circular Action Alliance (CAA), has indicated that they will start by covering recycling costs in communities with organized (non-open market) systems. As such, the City of Sheridan is well positioned to take early advantage of EPR funding for residents currently receiving service through the City's designated hauler.

However, the City can still further leverage the benefits of Colorado's EPR law. There are opportunities to expand recycling access and collection services for multi-family properties in Sheridan. In addition, the EPR program is slated to expand to non-residential properties including schools, state/local government buildings, public spaces, hospitality venues, and small businesses beginning 2028.

CAA has also indicated its intent to collaborate with local governments, collection service providers, and community-based organizations for enhanced education and outreach efforts.

Implementation Steps:

- Conduct outreach to stakeholders to share information about EPR
- Apply and receive reimbursements provided through Colorado's EPR law for single-family collections
- Explore additional reimbursement and collaboration opportunities provided through Colorado's EPR law

9.3 Implement Food Scraps Curbside Services for Composting for Single-Family Residents ♺♺

It is estimated that by 2035, the City of Sheridan's single-family sector will generate roughly 380 tons of food scraps and other compostables per year, or roughly 20% of its total generated waste.

A dedicated curbside service for food scraps can significantly divert the amount of landfill-bound material and contribute to the environmental benefits of composting. Local governments can promote the benefits of curbside food scraps collection programs.

With EPR covering recycling costs, the City of Sheridan will be well positioned to explore the addition of curbside composting. The city's current hauler, Republic Services, currently offers curbside composting to other Colorado communities, such as Lafayette, CO.

Implementation Steps:

- Coordinate regionally with neighboring jurisdictions aiming to implement a similar program
- Define program goals and scope
- Design service model
- Establish a wait list to understand residential demand
- Procure equipment or contract out services; consider a joint purchasing agreement with regional partners to achieve economies of scale
- Develop an outreach and education campaign
- Launch program
- Monitor and evaluate performance

9.4 Ensure Yard Debris Curbside Services for Single-family Residents is Composted instead of Sent to Landfills

♺♺♺

The South Metro Waste Characterization study found that yard debris comprises 20% of the City of Sheridan's single-family waste stream, yet less than 1% of the yard debris is being diverted.

Currently, yard debris is hauled to the landfill and is not composted. The Sheridan City Council, who attended the South Metro Waste Summit, indicated that the city should prioritize sending yard debris to composting facilities, rather than to landfills. Ensuring curbside yard debris for single-family residents is composted could significantly increase a community's waste diversion rate, depending on the level of participation.

Like curbside recycling collection service, adding a third collection point for diverting organic material (yard debris and sometimes food scraps) creates an opportunity to reduce the amount of waste sent to landfills and contribute to the environmental benefits of composting. Local governments can promote the benefits of curbside yard debris collection programs and encourage residents to subscribe.

Implementation Steps:

- Define program goals and scope
- Design service model
- Procure equipment or contract out services; consider a joint purchasing agreement with regional partners to achieve economies of scale.
- Develop an outreach and education campaign
- Launch program
- Monitor and evaluate performance

9.5 Pass an Equal Space Ordinance to Ensure Commercial and Multi-Family Recycling Access ♺♺♺

An **Equal Space Ordinance** requires that all newly constructed commercial buildings allocate the same amount of space for recycling collection infrastructure (such as enclosures, receptacles, chutes, staging areas, and collection rooms) as is allocated for trash.

Insufficient space for recycling is a common barrier for commercial entities, particularly in dense urban areas. By integrating this requirement into building codes, municipalities can ensure future developments support recycling access without retrofitting existing structures.

In Sheridan, approximately 40.1% of housing consists of multi-family units, and there are 423 employer firms, highlighting the importance of planning for equitable recycling infrastructure in both residential and commercial development.

Implementation Steps:

- Conduct outreach to stakeholders to gather insights on potential barriers
- Draft and adopt an equal space ordinance
- Roll out a communications plan and consider providing technical support for commercial property managers
- Coordinate with the Planning & Zoning Department to align on communicating new requirements for new developments and significant site redevelopments

9.6 Ongoing Community Group Engagement with Universal and Accessible Guidelines ♺♺

Community outreach and engagement includes public education, feedback collection, community collection events, and direct interaction with residents and organizations on recycling and waste issues. While the City of Sheridan implements various recycling-related communication strategies, outreach must be continuous to ensure both current and new residents receive up-to-date information on how to recycle and compost effectively.

Leveraging community groups and peer networks is a powerful strategy to expand awareness and increase participation in waste diversion efforts. One proven approach is to train **Recycling Champions** (local advocates or community ambassadors) within existing groups to share recycling and composting information through their networks. This is especially important for the City of Sheridan as the community is diverse in culture as well as languages.

Training should emphasize local recycling guidelines, using clear and consistent wording and visuals to show what is accepted in the curbside program. To improve accessibility and understanding, materials should be available in multiple languages.

Implementation Steps:

- Reach out to existing community groups to speak at meetings or events about waste diversion
- Host trainings for interested residents to become Recycling Champions and share knowledge with their networks
- Share information about waste diversion by tabling at public events, meetings, or community centers
- Engage Resident Champions over time with ongoing community efforts (events, webinars, new resources)
- Continue utilizing the South Metro Waste Diversion website to promote efforts and events

9.7 Explore Business Waste Diversion Grants ♺

Businesses, especially restaurants that generate large volumes of food scraps, may be interested in subscribing to an organics collection service, but the cost of service can be a barrier. Local governments can create a financial incentive or grant program to encourage the private sector to sign up for organic collection services.

Businesses can be reimbursed for infrastructure, hauling, compostable food service ware, education, training, and signage. Financial incentives can also build support for a future commercial composting ordinance, as it creates local case studies of successful organics diversion programs.

Implementation Steps:

- Identify funding source for grants
- Design grant program framework
  - Define eligible applicants
  - Establish match requirements, if any
  - Outline funding amounts and funding categories
  - Develop an application, review, and selection process
- Launch and promote the grant program through a communications plan
- Award and administer grant agreements

9.9 Tonnage Projections

Table 29: City of Sheridan Tonnage Projections (2023-2035)

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Single-Family													
MSW Disposal (Landfill)	1,447	1,461	1,475	1,490	1,506	1,522	1,537	1,552	1,569	1,585	1,601	1,617	1,633
Diversion	258	261	263	266	269	272	274	277	280	283	286	289	292
Total Generation	1,705	1,721	1,738	1,757	1,775	1,794	1,812	1,829	1,849	1,868	1,887	1,906	1,925
Multi-Family													
MSW Disposal (Landfill)	968	978	987	998	1,008	1,019	1,029	1,039	1,050	1,061	1,072	1,083	1,094
Diversion	173	175	176	178	180	182	184	186	188	189	191	193	195
Total Generation	1,141	1,152	1,163	1,176	1,188	1,201	1,213	1,225	1,238	1,251	1,263	1,276	1,289
Commercial													
MSW Disposal (Landfill)	3,623	3,658	3,693	3,732	3,772	3,811	3,849	3,887	3,928	3,969	4,010	4,050	4,090
Diversion	647	653	659	666	674	681	687	694	701	709	716	723	730
Total Generation	4,270	4,311	4,352	4,399	4,445	4,492	4,536	4,581	4,630	4,678	4,726	4,774	4,821
All Sectors													
MSW Disposal (Landfill)	6,038	6,096	6,155	6,221	6,286	6,352	6,415	6,478	6,547	6,616	6,683	6,751	6,817
Diversion	1,078	1,089	1,099	1,111	1,123	1,134	1,146	1,157	1,169	1,181	1,193	1,205	1,217
Total Generation	7,116	7,184	7,254	7,331	7,409	7,486	7,561	7,635	7,716	7,797	7,877	7,956	8,035

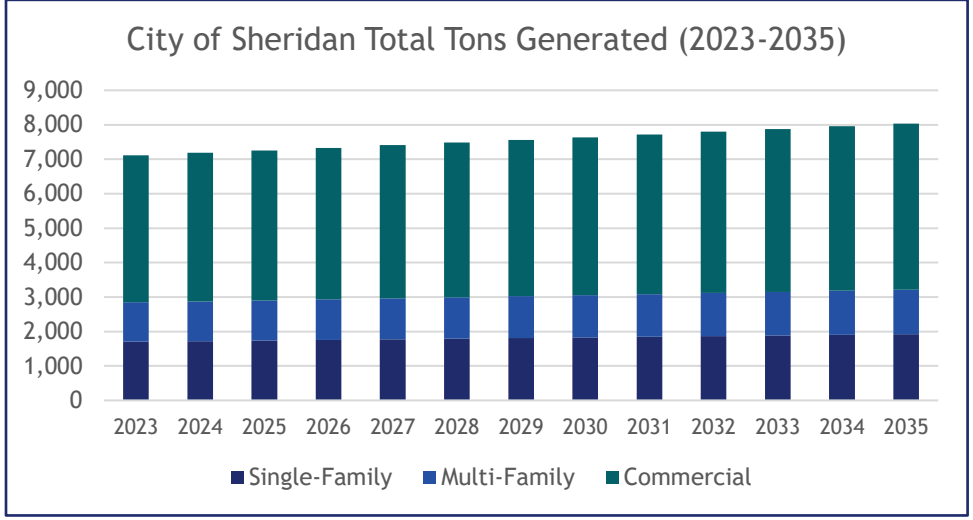


Figure 39: City of Sheridan Total Tons Generated (2023-2025)

Table 30: City of Sheridan Community Profile

Description	2022
Single-Family Units	59.9%
Multi-Family Units	40.1%
Total Number of Households	2,442
Household Size*	2.48
Single-Family Households	1,463
Multi-Family Households	979
Single-Family Population	3,539
Multi-Family Population	2,369
Total Population	5,908
Total Employer Firms	423

City of Sheridan Demographic Snapshot, US Census Bureau 2022

9.10 Impact Analysis Results

Table 31: City of Sheridan Impact Analysis Results

Aim	ID	Strategy	Additional Diversion %	Tons Low	Tons High	GHG Emissions Reduced	Fiscal Impact
Sheridan	**9.1**	Implement At-Your Door collections program for household hazardous waste and electronics	0.2%	19	21	n/a	$$
Sheridan	**9.2**	Leverage Colorado's Extended Producer Responsibility for recycling programs	6.2%	500	530	1,025	$
Sheridan	**9.3**	Implement food waste curbside services for composting for single-family residents	2.5%	200	210	65	$$
Sheridan	**9.4**	Work with hauler to ensure yard waste curbside services for single-family residents is composted instead of sent to landfill	3.7%	300	320	85	$$
Sheridan	**9.5**	Pass equal space ordinances to ensure commercial and multi-family recycling access	5.0%	400	420	1,263	$
Sheridan	**9.6**	Ongoing community group engagement	2.5%	200	210	131	$$
Sheridan	**9.7**	Explore business organics grants	1.2%	100	110	24	$$
			21%	**1,700**	**1,800**	**2,593**	

Fiscal Impact	
Fiscal Impact on Tons Diverted	Estimated Fiscal Range
$	< $10,000
$$	$10,000 – < $100,000
$$$	≥ $100,000

Appendix A – South Metro Waste Diversion Reports and Memorandums

Table 32: South Metro Waste Diversion Reports and Memorandums

Report Title	Description
Project Website	www.SouthMetroWasteDiversion.com
Baseline Assessment	The Cities of Centennial, Englewood, Sheridan, and Littleton (collectively known as South Metro) seek to transition to a system that favors equitable waste reduction and waste diversion strategies driven by data and best practices. As part of this effort, the STEPS project team interviewed cities, researched, and assessed the baseline for waste and recycling in the region.
Hauler Engagement	Waste haulers servicing the region were engaged through one-on-one interviews. A summary of these interviews was provided to the South Metro Project Team.
Residential Survey	A residential survey was conducted to collect data and analyze the South Metro region and each participating city. The results of this survey will be used to better understand the common motivating factors and barriers to residential participation in South Metro's solid waste management systems.
Focus Groups	Three focus groups were held virtually to engage multi-family residents, businesses, and disadvantaged communities. The results of the research will be used to better understand the common motivating factors and barriers to residential participation in South Metro's solid waste management systems.
Community Engagement	A community engagement strategy for the South Metro Waste Diversion Plan was developed to include a website, engagement collateral, and a Resident Champion training.
Waste Generation	Current waste tonnages were modeled by using tons generated, tons diverted, tons landfilled, tons by generating sector, tons by individual city, and tons for the South Metro region. Projections were also developed for annual tonnages through 2033, including scenarios that assumed full implementation of all recommended waste diversion strategies.
Gaps & Opportunities	Following the baseline assessment of the South Metro region's waste generation, policies, and infrastructure, the STEPS project team completed an analysis of potential gaps in the system. The gaps highlight opportunities to expand programs, optimize existing system aspects, or pursue new initiatives and investments to support the region's waste diversion goals.
Regional Waste Summit	A Waste Summit was held to present findings to elected officials from the four cities. The presentation covered information collected to date, including a baseline infrastructure evaluation, interviews with hauling companies, public engagement findings, a waste characterization study, and the initial gaps and opportunities analysis. At the meeting, input from elected officials was gathered to identify potential gaps in the waste system.
Waste Characterization Study	A two-season waste characterization study (also referred to as a 'waste audit' or 'waste sort') was conducted in 2024. The study sorted samples of trash and recycling to assess the overall composition of the region's waste streams. Samples were collected from the four South Metro cities: Centennial, Englewood, Littleton, and Sheridan.

Appendix B – Infrastructure Fiscal Impact Analysis

For the two regional infrastructure strategies identified in this plan, a fiscal analysis was conducted to estimate the capital and operational costs.

Regional Recycling Drop-Off Center

A recycling drop-off center provides additional capacity and convenient access to handle surges in recyclable material, particularly during spring cleaning or move-in and move-out periods. Drop-off centers provide an overflow option, preventing overfilled containers and litter. For multi-family residents where property management does not provide adequate recycling access, convenient drop-off centers can offer a place for residents to drop off materials. It is generally best practice for urban environments with populations over 100,000 to establish one drop-off center per 50,000 residents. It is recommended for South Metro to explore establishing up to four regional recycling drop-off centers, conveniently located between the four communities.

Table 33: Recycling Drop-Off Center Assumptions

Description	Qty
Paved Recycling Drop-Off Center Dimensions per Center	120 ft x 75 ft
Area per Center	9,000 square feet (sq ft)
Perimeter per Center	390 linear feet (lin ft)
Residents Served per Center	50,000
Number of Centers	4

Based on the available budget, South Metro may consider as a long-term goal, expanding the drop-off center to accept additional streams of materials, such as yard debris, food scraps, plastic film, textiles, household hazardous waste (HHW), electronic waste, and/or other materials in Circular Action Alliance (CAA) Colorado's "Additional Materials List (AML)."

Each center should be located in an area that is most convenient to potential users, whether it is centrally located, along a commonly traveled highway, or near popular areas of interest (e.g., parks, shopping malls, and recreation areas).

Each site should allocate, at a minimum, approximately 0.25 to 1 acre of operational space for material handling and storage, as well as traffic and parking for residential vehicles and haulers providing the collection service. Recycling drop-off centers may be set up either through larger roll-off containers (e.g., 30 or 40 yd) or through front-load dumpsters (e.g., 8 yd). Site constraints, budget, operational efficiency, and density of area may determine whether the region considers setting up the drop-off centers through roll-off or front load containers.

The design of the drop-off centers should prioritize adaptability to accommodate shifting market demands and the emergence of new material streams. This flexibility can be achieved, in part, by selecting sites with more space than is initially required. Furthermore, strategies for mitigating illegal dumping should be incorporated into the planning and operational framework.

Site preparation (leveling, grading, and paving) costs may be required based on the location identified. It is recommended that drop-off centers are fenced and/or gated, along with installation of Closed-Circuit Television (CCTV) cameras for monitoring and deterring illegal dumping. Lighting fixtures are critical, as well-lit areas can deter vandalism and illegal dumping, especially after hours. It can also provide a safer environment for residents and staff when daylight is limited.

Please note that the following table is for illustrative purposes, as the region may identify existing developed and paved sites for service provision. Fencing may also be optional based on the site. The estimated capital costs below also assume the use of front-end dumpsters vs. roll-off containers. The cost of land is also not factored into this analysis, as suitable sites may already be owned by the municipality or may be secured through a Memorandum of Understanding (MOU). Additionally, land acquisition costs can vary significantly depending on location and market conditions.

Table 34: Estimated Capital Costs

Description	Qty	Estimated Unit Cost	Extended Cost
Site leveling and grading	9,000 (sq ft)	$2/sq ft	$18,000.00
Paving (asphalt)	9,000 (sq ft)	$4/sq ft	$36,000.00
Galvanized or vinyl-coated chain link fence	390 (lin ft)	$30/lin ft	$11,700.00
Lighting fixtures	2	$3,000/ea.	$6,000.00
Striping directional arrows / parking lines	1	$1,000	$1,000.00
8 yd Front end (FE) side door dumpster	8	$1,500	$12,000.00
Signage and banners	20	$200.00	$4,000.00
		Per recycling drop-off center	$96,200.00
		(4) Recycling drop-off centers	$384,800.00

It is recommended that collections are contracted through a private hauler providing front-load dumpster service for cost efficiencies. Below are estimated operational cost for 8 yd recycling dumpsters using an “on call” recycling dumpster price rate. This is a high-level estimate; a formal solicitation could yield a more competitive rate through a scheduled, bulk-rate service.

Table 35: Estimated Annual Operational Costs

Description	Estimated Unit Cost	Frequency	Annual Cost
8 yd Recycling dumpsters	$16/yard	3x/week	$19,968
		Per recycling drop-off center per year (8 containers)	$159,744.00
		(4) Recycling drop-off centers per year	$638,976.00

Colorado’s Extended Producer Responsibility law (HB 22-1355) sets up a Producer Responsibility program (EPR) that requires companies that sell products in packaging and paper products to fund a statewide recycling system to recycle

those materials. The companies coordinate to support, fund, and manage the statewide recycling system. Colorado's EPR law, which is expected to start implementation in 2026, also sets the framework of reimbursing service providers 100% of the eligible net costs associated with recycling covered materials.

The Colorado Plan Proposal, published in February 2025 by CAA, states that "reimbursement of drop-off and curbside collection costs will cover costs such as a capital costs, base-level education and outreach, operational costs, reasonable profit margin, and eligible administrative expenses." While this draft plan proposal is currently under review, South Metro should continue to monitor and stay engaged for funding opportunities for regional recycling drop-off centers.

Regional Organics Facility

The South Metro region is projected to generate approximately 74,500 tons of organic waste in 2035 (including food scraps, food soiled / compostable paper, compostable foodservice products, yard debris, wood, and other organics). This represents nearly 29% of the total waste generated in the region. If the region does not take any additional action to support the diversion of organics, 72,700 tons of organic waste is estimated to be disposed of in the landfill in 2035 (97% of the generated organic waste).

The Colorado Statewide Organics Management Plan: A Framework for Regional Organics Opportunities published in 2022, showed that Colorado's compost facilities have the capacity to manage 127,000 to 157,000 additional tons of organic materials without significant investments or facility expansions.

In addition to the capacity that the state's Organics Management Plan modeled, there is additional yard debris and lumber organics processing capacity available through the A1 Organics Facility in Sheridan, Colorado. This facility went through an expansion with five additional acres in 2024. Given this site's proximity to South Metro, the region may consider a potential public-private-partnership to support the goal of **establishing large-scale organics processing infrastructure that accepts food scraps and other compostables.**

If existing facilities are unable to process the necessary composting capacity, developing a regional compost facility would require an evaluation of upfront capital costs, operating costs, and projected. Capital costs encompass total expenses for site procurement and development, systems, and equipment. Operating costs include ongoing labor, maintenance, and equipment maintenance expenses. Revenues are calculated based on tipping fees and the sale of finished compost.

With 75,000 tons of organic waste projected to be generated in the South Metro region by 2035, the region should consider a phased approach to diverting significant organic waste and be strategic in community engagement and buy-in. Participation will increase over time with strategic policy implementation, contracts, and capacity ramp-up. Table 36 below details the high-level financial implications and potential revenue for developing a compost facility with either a 25,000 or 50,000 tons per year processing capacity. These figures are not based specifically on data from the South Metro region. A feasibility study with cost modeling is necessary to determine the capital and operating costs, as well as potential revenue associated with developing a compost facility designed to process organic materials from South Metro.

An aerated static pile (ASP) composting facility was analyzed and is recommended as the preferred method for a regional-scale processing facility. ASP composting is a highly efficient and scalable method for processing large volumes of food scraps. It can process compostable products, such as compostable service ware and bags, and is particularly well-suited for combined municipal yard debris and food scraps collection programs. In this system, organic material is placed over perforated pipes, air ducts, or an aeration pad. Airflow, either pushed (positive aeration) or pulled (negative aeration) with fans, maintains optimal oxygen and temperature levels to accelerate decomposition. The piles are covered either with a synthetic cover or a biolayer, such as finished compost or woodchips, to retain heat and moisture while controlling odors.

Figure 40: Engineered Compost Systems (ECS) example of a 20,000 TPY ASP Curbside Food Scrap and Yard Trimming Facility

Table 36: Estimated Costs & Revenue for ASP Facilities

ASP Facility Cost & Revenue Factors	25k TPY Facility	50k TPY Facility
Feedstock Throughput (TPY)	**25,000**	**50,000**
Capital Costs		
Aerated Static Pile System ($)	$2.2 M	$4.4 M
Equipment Capital ($)	$3.2 M	$4.8 M
Site Development and Building Capital ($)	$10.9 M	$14.9 M
Total Capital Cost ($)	$16.4 M	$24.1 M
Total Annualized Capital Cost ($)	$1.5 M	$2.3 M
Total Annualized Capital Cost ($/ton)	$61.21	$45.10
Operating Costs		
Total Annual Operating Cost ($)	$1.2 M	$2.2 M
Total Operating Cost ($/ton)	$48.56	$43.24
Revenues		
Tipping Fee ($/ton)	$37	$37
Compost Sales ($/CY)	$23	$23
Total Annual Revenue ($)	$1.4 M	$2.9 M
Total Revenue ($/ton)	$57.84	$57.84
Profitability		
Total Annual Income ($/ton) *	$9.28	$14.60
Total Annual Profit ($/ton) **	($51.93)	($30.50)
Total Annual Profit ($) **	($1.3 M)	($1.5 M)

*Total Annual Income = Total Revenue – Total Operating Costs
**Total Annual Profit = Total Revenue – Total Operating Costs – Annualized Capital Costs

Note: Negative values are represented using parentheses ()

The annual profit of a 25,000 ton per year (TPY) facility is ($1.3 M), and the annual profit of a 50,000 TPY facility is ($1.5 M). With an overall estimated capital cost of $16.4 M for a 25,000 TPY facility and $24.1 M for a 50,000 TPY facility, the annual income of the facilities after tip fees and compost sales would be ($51.93) per ton of incoming material for a 25,000 TPY facility and ($30.50) per ton for a 50,000 TPY facility. It will take approximately 71 years for the 25,000 TPY facility and 33 years for the 50,000 TPY facility to reach the break-even point, calculated as capital costs divided by annual revenue minus annual operating costs. However, this timeline assumes no grant funding, upfront capital expenses, and all new equipment. Excluding capital costs, the annual income of the facility is $9.28 and $14.60 per ton processed for a 25,000 TPY and 50,000 TPY facility, respectively. Significant capital expenses may be offset by securing additional funding or identifying other cost-saving opportunities.

Appendix C - Funding Opportunities and Other Resources

1. The **Colorado Circular Communities (C3) Enterprise** has ongoing applications available for Mini Grants, Impact Grants, and Capacity Building Grants. These funding opportunities support projects that contribute to the advancement of a circular economy in Colorado. https://coloradocircularcommunities.org/

2. **Colorado's Extended Producer Responsibility law (HB 22-1355)** sets up a Producer Responsibility (EPR) program that requires companies that sell products in packaging and paper products to fund a statewide recycling system to recycle those materials. The companies coordinate, fund, and manage this statewide recycling system. Colorado's EPR law, which is expected to begin implementation in 2026, sets the framework of reimbursing service providers **100% of the eligible net costs associated with recycling covered materials.**

   The Colorado Plan Proposal, published in February 2025 by the Circular Action Alliance (CAA), states that **"reimbursement of drop-off and curbside collection costs will cover costs such as a capital costs, base-level education and outreach, operational costs, reasonable profit margin, and eligible administrative expenses."** While this draft plan proposal is currently under review, South Metro should continue to monitor and stay engaged for funding opportunities for regional recycling drop-off centers. https://cdphe.colorado.gov/hm/epr-program

3. The **Municipal Blueprint for Composting Report** by Closed Loop Partners and Eco-Cycle provides guidance to municipal leaders in zero waste, solid waste and sustainability on establishing and scaling composting infrastructure and organics management programs nationwide. The blueprint offers a clear and actionable framework, including policy and program expansion for diverting food scraps, setting up programs and infrastructure, and communication with program participants. https://www.closedlooppartners.com/research/municipal-blueprint-report/

4. The **Colorado Construction, Demolition and Deconstruction Policy Toolkit** from Recycle Colorado was developed by members of Recycle Colorado's C&D Council, a group of industry stakeholders including public, private, and nonprofit sector entities working to support construction, demolition and deconstruction (C&D) materials recovery in Colorado. The toolkit can assist local government staff and policymakers in developing diversion programs for the built environment which significantly contributes to climate and zero-waste planning efforts. The toolkit provides a step-by-step process to develop policies to manage C&D materials, from research through policy development, program implementation and ongoing management. https://www.recyclecolorado.org/c-d-policy-toolkit

5. The **Local Implementation, Mitigation, and Policy Action (Local IMPACT) Accelerator** is a grant program available to local and tribal governments. It supports the adoption of policies in the areas of buildings, land use, transportation, and waste. Funds are available for both policy advancement and project implementation. Round 2 applications for 2025 will be accepted from January 16 to February 18, 2026, with the Letter of Intent (LOI) due between October 1 and November 17, 2025. https://energyoffice.colorado.gov/local-impact-accelerator

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