

# City Operations Waste Services

Edmonton

## Organics Processing Program Path Forward

**September 3, 2024**

Utility Committee

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## Background

- In alignment with the 25-year Waste Strategy, Waste Services is expanding organic waste sorting to both residential collection services.
- Organic waste is processed at the EWMC and third-party processors.
- Since the Edmonton Cart Rollout in 2021, not one food scraps cart of organic material has been landfilled.



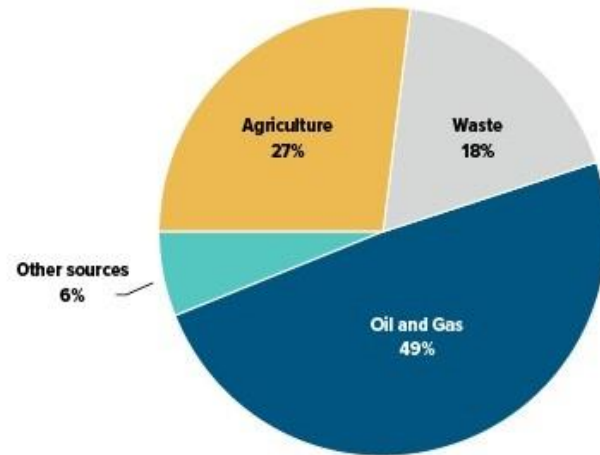
Compost Cure Site

## Climate and Greenhouse Gas Impact

- Organic waste trapped in a landfill produces methane, a very harmful greenhouse gas when released into the atmosphere.
- Diverting organic waste from landfill has a substantial positive impact on climate change efforts.

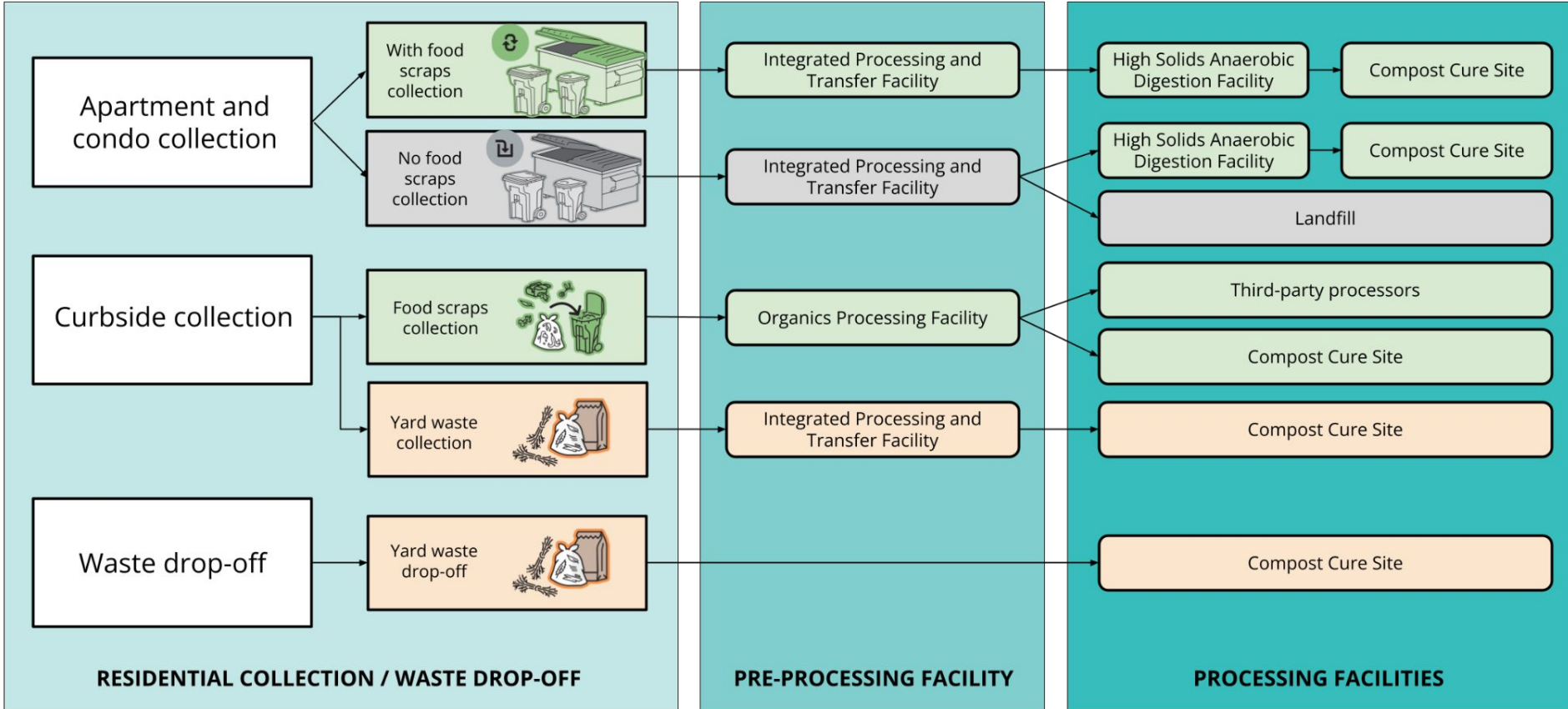


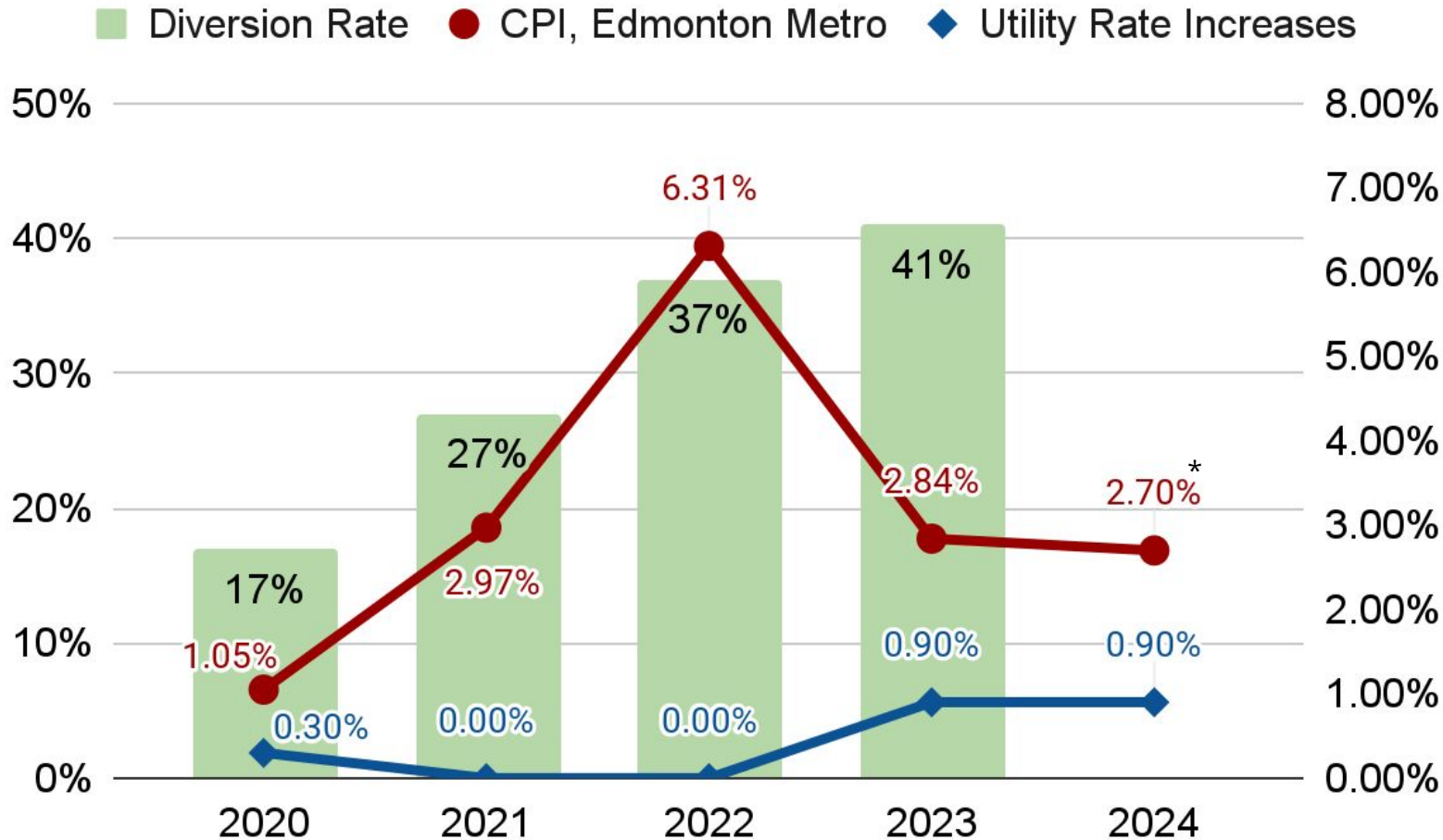
Grass clippings and mixed garbage at the Integrated Processing and Transfer Facility



Methane emissions by sector, 2022, Environment Canada

# Current Organics Processing Program



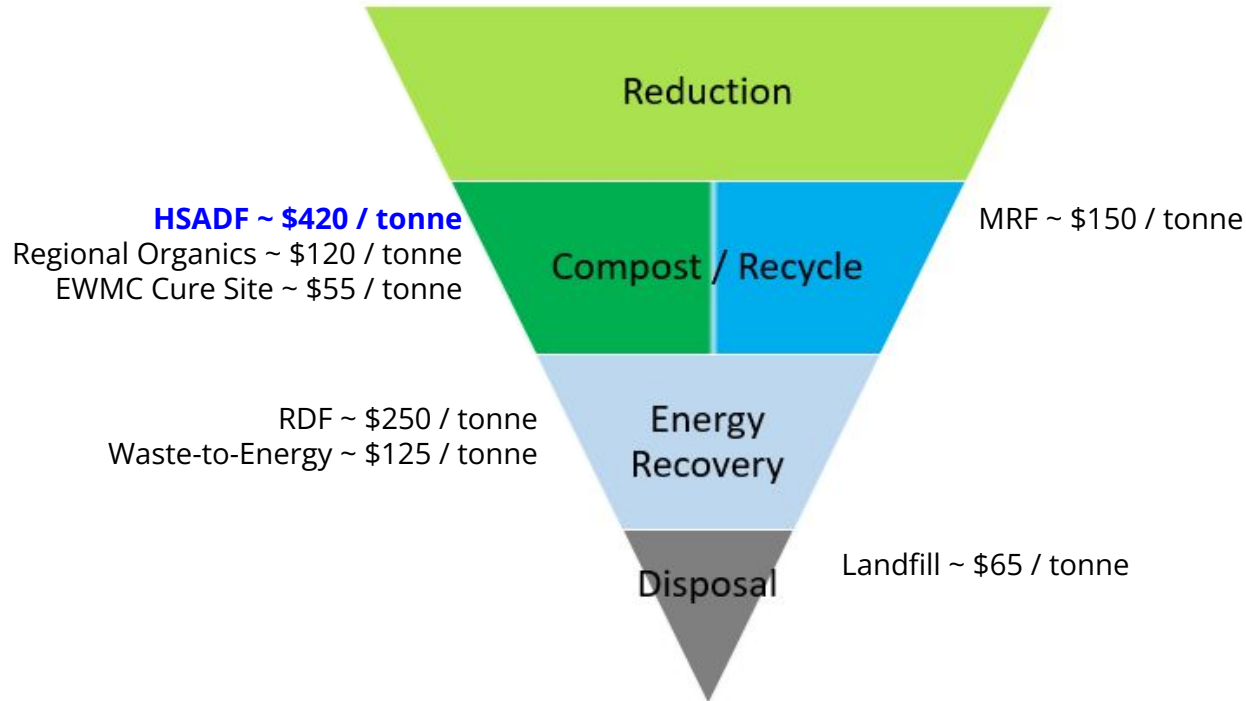


\*2024 diversion rate not available until early 2025. Spring 2024 inflation forecast retrieved in August from Corporate Economist.

## Recent Organics Processing History

- In 2018, the Edmonton Composting Facility was decommissioned, removing organics processing capacity.
  - In late 2018, the HSADF began commissioning but was not able to reliably process organic waste until 2021.
  - Most organic waste was landfilled for two and half years.
- In 2021, Council approved the shift in organics processing strategy to a distributed model that balanced processing between internal facilities and multiple third-party organics processors.
- This shift in direction, the Waste Strategy, and Edmontonians' support in properly sorting waste have helped keep rate increases below inflation.
- We are now preparing for the future; processing 121,000 tonnes by 2027.

# Current Processing Cost



\*Blended all-in costs inclusive of amortization, transportation, etc.

## High Solids Anaerobic Digestion Facility (HSADF)

- The operational costs and complexity of the facility are far greater than other options.
- More capital improvements are required to improve HSADF performance.
- Changes to operating environment, provincial regulations mean original business case expectations cannot be met.
- Strategic changes to Waste have decreased internal need for specialized processing facilities.



High Solids Anaerobic Digestion Facility

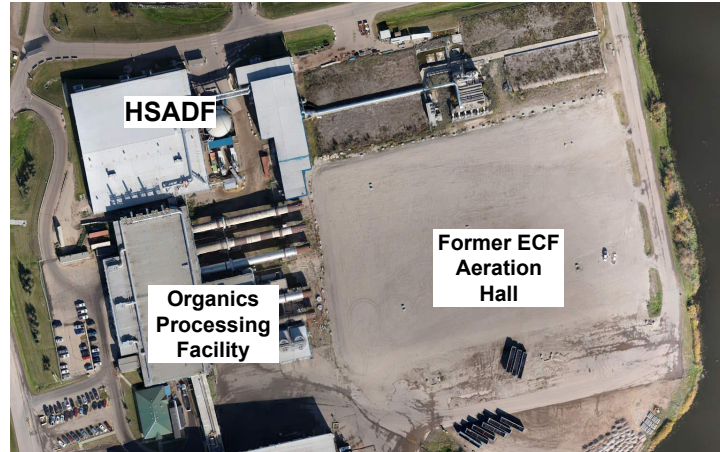


# Processing Program Path Forward: Option 1

- Build outdoor composting site at the EWMC with added third-party processing capacity to achieve 121,000 tonnes.
- Determine if there is competitive private interest in the HSADF, or pivot it to a processing facility that complements our composting needs.



Example of potential composting bunker



Edmonton Waste Management Centre (partial view)

## Options Analysis: Program Outcomes

- Alignment with corporate, branch and program goals.
- Reduces carbon impacts through less long-haul trucking of waste.
- Increased reliability and resilience vs. status quo program.
- Updated composting bunker design minimizes odour impact.



## Options Analysis: Financial Outcomes


- Option 1 reduces organic processing program costs by \$75 million over a 20 year lifecycle – a 29% reduction in program costs.
- Calculation includes: capital and operating costs, transportation, labour, contractors, revenue, and other costs (Attachment 1).

### Projected program costs (Net Present Value) over 20 years

Status quo program



Adjusted program



**29%**  
decrease in  
program  
costs

## Next Steps: Financial & Operational Prudence

- Tender competitive third-party organics processing contracts with longer duration.
  - Enables new entrants and better costing
  - Allows proposed composting site project to be assessed against ongoing third-party processing costs
- Enter into a single-source contract to process highly contaminated organics.
  - Provides sufficient time to determine HSADF transition

## Single-source Organics Processing Contract

- Apartment and condo organics are showing a higher contamination rate, deterring all but one third-party processor.
- At present, our only option for this more contaminated organic waste is processing it through our HSADF at a very high cost.
- Claystone is now able to process organic waste using a cost-effective and environmentally beneficial method.
- This single-source contract will provide the time and capacity needed to assess the future role of the HSADF.

## Recommendation

- That a single-source procurement agreement between The City of Edmonton and Claystone Waste Ltd., or an affiliate or affiliates of Claystone Waste Ltd., as outlined in Attachment 3 of the September 3, 2024, City Operations report CO02411, be approved, and that the agreement be in form and content acceptable to the City Manager.

**Thank you. Questions?**

[edmonton.ca/waste](https://edmonton.ca/waste)

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