

# Future Materials Recovery Facility Planning

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# Outline

## 1. Background

- Existing Materials Recovery Facility (MRF) contract
  - Limitations and challenges
- Connection to Rethink Waste Plan

## 2. Options

## 3. Additional considerations

## 4. Discussion and questions

## 5. Direction





# Existing MRF Contract

## Terms and Conditions

- Original agreement signed on January 16, 1997 with commercial operations starting October 1, 1998
- Norton Environmental designed, constructed and equipped the facility
- Norton agreed to process City-delivered recyclables, maintain the facility and market recovered materials
- The term of the agreement is ten (10) years and three (3) options to extend for five (5) year terms each unilaterally by Norton not by mutual agreement
- All options have been exercised for an end date of September 30, 2023



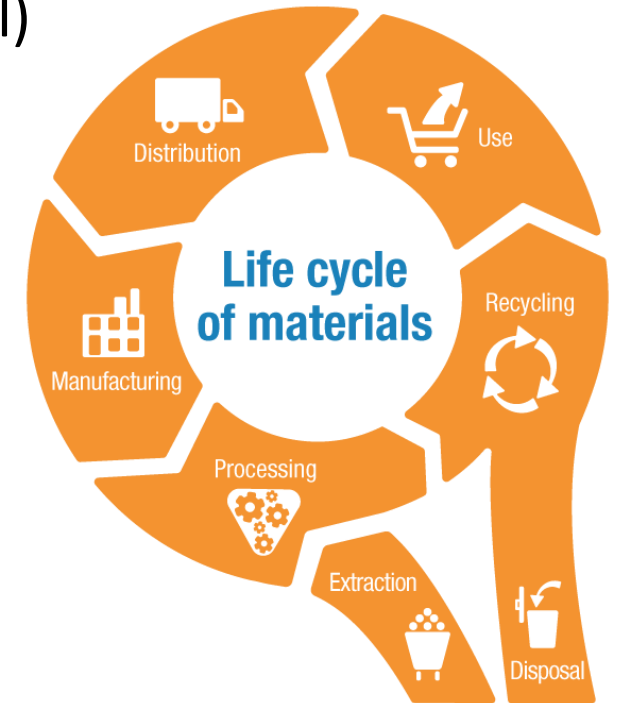
# Limitations and Challenges

- Minimum tonnage guarantee
  - On a "put or pay" basis the City is guaranteed to deliver tons of recyclables as described in the agreement. Currently, 80 tons per day is guaranteed per the agreement
  - The City will pay the minimum tonnage fee regardless of whether the material was delivered
  - The City has never met the minimum guarantee
- The MRF is allowed 25% residue rate with non-recycled material disposed of at no cost up to 25% of total
- The Facility has not been upgraded with new technology since construction (22 years)

# Connection to Rethink Waste Plan

## Recyclables processing is key to waste diversion goals

- Key goal: Divert 90% of waste from the landfill by 2050
  - Current diversion rate: 13% (single-family) and 8% (commercial)
- The recyclables processing facility determines:
  - What can and cannot be accepted for recycling
  - Quality of sorted and marketed material
- The future recyclables processing contract is just one piece of the materials management puzzle
  - Hazardous waste and “hard-to-recycle” material diversion
  - Organics collection
  - Waste prevention (i.e. household food waste reduction)
- Connected to the Climate Action and Adaptation Plan





# Future Options

## **At the close of the existing contract (2023), the City can:**

1. Develop a regional hub-and-spoke recycling model
2. Convert MRF into a transfer operation and haul to Phoenix-area MRF
3. Operate the MRF internally after facility updates and upgrades
4. Procure the operation of the MRF by a private MRF operator
5. Suspend all recycling collections and processing

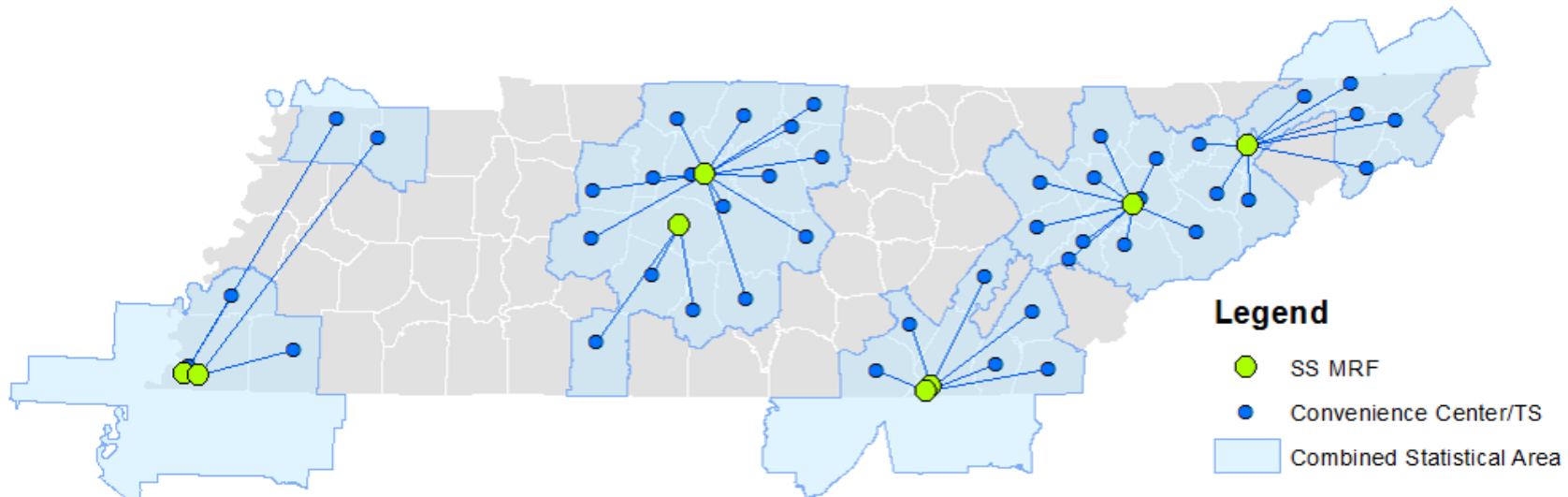


# Option 1

## Develop a regional hub-and-spoke recycling model

- Consists of a centralized processing “hub” where material is sorted baled, and sold to market
- “Spokes” are the surrounding communities that feed the recyclables they collect to the central hub

Example: Hub-and-spoke model from North Carolina





# Option 1



## Benefits

- Economies of scale
- Limit capital demands and investment
- Focus on efficiencies
- Provide a regionally consistent recycling processing program

## Challenges

- Many cities/towns are tied to their own contracts
- Many cities/towns do not control recycling volumes
- Lack of state leadership and financial support
- Survey of surrounding cities/towns did not yield a viable volume of material

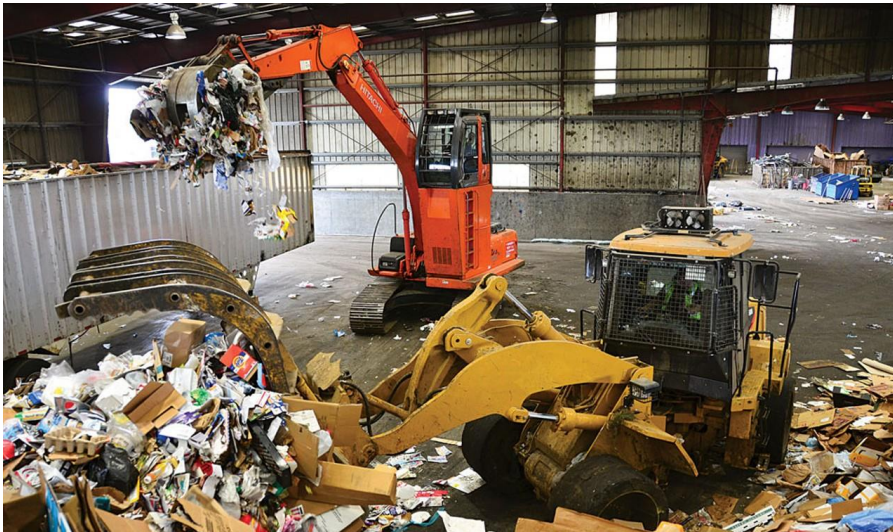


# Option 2

## Convert MRF into a transfer operation and haul to Phoenix-area MRF

- Existing facility would be used to tip, store, and load collected recyclables into long-haul trucks
- Recyclables would be delivered to a Phoenix-area MRF
  - Approximately 7 weekly trips

Example: Interior (left) and exterior (right) of transfer operations





# Option 2



## Benefits

- Multiple MRF options exist
- Creates opportunity to increase acceptable materials:
  - Glass, polypropylene, and thermoform plastic, are accepted by these larger MRFs
- Creates flexibility – no long-term contract
- Creates opportunities for innovative programs – i.e. Center for Hard-to-Recycle Materials

## Challenges

- Limited control over acceptable materials
- Lack of an educational opportunity – limited facility tours



# Option 3

## Operate the MRF internally after facility updates and upgrades

- City would need to upgrade nearly all existing equipment and building
- City would be responsible for management and staffing

Photo: Interior and equipment at existing MRF





# Option 3

## Operate the MRF internally after facility updates and upgrades

**Table: Cost comparison of transfer vs. internal operation**

<b>Outsource to a Distant MRF (Option 2)</b>	<b>Cost per Ton</b>
To the City of Phoenix MRF	\$72.14
To Waste Management's Surprise MRF	\$110.14
To Friedman's MRF in Phoenix	\$120.89
<b>Process in Flagstaff (Options 1, 3 &amp; 4)</b>	<b>Cost per Ton</b>
BHS System #1 – update the current sort line	\$127.02
BHS System #2 – upgrade to new screens / robots	\$146.09
Revolution System #1 – single rotational system	\$76.78
Revolution System #2 – dual rotation system	\$134.09



# Option 3



## Benefits

- City would control what materials can be accepted
- City would make decisions related to sorting technology

## Challenges

- Facility upgrades will be costly
- Lower-cost technology is likely to further constrain what can be accepted



# Option 4

## Procure MRF operation by a private MRF operator

- City would enter an RFP process for MRF operation
  - RFP could include necessary facility upgrades
  - Upgrades could be completed under a low-interest loan or bond funding
    - Estimates range from \$2 – \$10 million
- 6 private sector operators expressed interest
  - Ideal Operating Agreement lengths ranged from 10-15 (dependent upon whether the City pays for facility upgrades)
- RFP or Request for Qualifications need to be issued to refine actual costs from private sector to determine viability



# Option 4



## Benefits

- Separate entity responsible for operation
  - Equipment maintenance
  - Labor
  - Marketing
- Similar to current status quo

## Challenges

- Long-term contracts (10-20 years)
- Contracts are becoming expensive
  - Reduction in risk from market fluctuations
- Limited opportunity for revenue share for marketed material



# Option 5



## Suspend recycling collections and processing

- Recyclables would be collected as trash and delivered to the landfill
- Doing so would prevent the City from achieving Rethink Waste and Climate Action goals

**Table: Monthly cost of recycling collection service per customer**

Expense	Residential	Commercial
Collection	\$6.46	\$67.41
Processing	\$1.62	\$23.30
<b>Total Cost</b>	<b>\$8.07</b>	<b>\$90.70</b>



# Policy Issues and Other Considerations

## Consultant researched other opportunities

- **Flow control** – requiring that all material collected in City-limits be directed to City-sponsored facilities
  - **Solid waste reporting requirements** – improve understanding of waste landscape by requiring that private haulers report key metrics
  - **Improve access to recycling** – increase recycling services offered at multifamily and commercial properties
  - **Enhanced recycling outreach** – cart tagging, rejecting contaminated carts, direct mailers
  - **Recycling collection pricing adjustment** – adjust fees covering recycling collection to cover market changes and enhanced programs
- \*State pre-emption may limit available policy change**



# Future Options

**In summary, staff's ranking of the options are as follows:**

Options	Staff Ranking	Justification
1) Develop a regional hub-and-spoke recycling model	4	Lacking support for participation from regional jurisdictions
2) Convert existing MRF into a transfer operation and haul to a MRF out the City	1	Cost savings & efficiencies, flexibility, increased diversion potential
3) Operate the MRF internally after facility updates and upgrades	3	Higher direct capital & operating costs to the City than current costs
4) Procure the operation of the MRF by a private MRF operator	2	RFP or RFQ needs to be issued to refine costs and determine viability
5) Suspend recycling collections and processing	5	Not in alignment with CAAP or Rethink Waste Plan



# Discussion & Direction

## Seeking Council direction on recommended path

1. Develop a regional hub-and-spoke recycling model
2. Convert existing MRF into a transfer operation and hauling to a MRF outside the City
3. Operate the MRF internally after facility updates and upgrades
4. Procure the operation of the MRF by a private MRF operator
5. Suspend recycling collections and processing



# Next Steps



- Staff will refine the planning-level costs for your preferred approach
- Future updates to Council throughout this process



Thank you.  
Questions?

