

# Factors in Evaluating Glass in Curbside Collection

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# MWCOG, we have a problem

## Glass is costing MRFs \$150 million annually

Posted on April 20, 2017  
“An annual net cost of \$150 million for management of glass collected in single-stream collection systems was identified in a report released today by the nonprofit Closed Loop Foundation, which is associated with the Closed Loop Fund”.

## **Focusing on the Economics of Glass Recycling**

“The economics of glass recycling, high contamination rates and the limited outlets for recovered glass is causing recycling managers across the United States to reconsider glass in their recycling programs. **Additionally, markets for glass are limited. Remember...when there is no market, there is no recycling**”. Will Flower Oct, 2015

“One recycling facility in Georgia is not accepting glass for a number of reasons. Among them, they say the weight of glass makes it too costly to transport, and additionally that it is too difficult to separate out different types and colors of glass”.

## **Strategic closes facility due to shuttered bottle factory**

Posted on July 24, 2018  
Strategic Materials shut down its Franklin, Mass. facility last month, a development caused by the closure of a massive bottle manufacturer nearby.

GREENCASTLE -- Waste Management has announced it will stop accepting glass bottles and jars for recycling.

“Regional demand for recycled glass has collapsed over the last several months,” Joseph Reposa, executive director at the Rhode Island Resource Recovery Corporation (RIRRC), said during an April 4 Senate hearing.  
April 08, 2018

# Glass Recycling Challenges

- Recyclers Need Clean Raw Material (Glass)
  - The combination of single stream collection and the operation of the regional material recovery facilities **does not create a clean enough glass** material for use by glass beneficiation facilities, so secondary processing is required.
  - The Closed Loop Foundation report (April 2017) found that a typical MRF taking in single-stream material is seeing glass costs of **\$35 per ton**. This number accounts for costs to maintain relevant equipment, transportation to send material downstream and tip fees when glass is disposed of.
  - New **technology** can clean single-stream glass to a higher quality cullet and separate out non-glass residue
  - Using the new technology, the -\$35/ton in annual costs for a MRF can be reduced significantly, **generating savings of \$25/ton or more**. Results will vary depending on the quality of the material coming into the system, transportation costs, and the environmental conditions. (NGR), including marketable commodities.
- Glass processing capacity
  - There is no glass processing facility in the region
- End markets
  - They do exist and want the material (fiber glass insulation manufacturers), but do the economics work?

\* Remember Will Flowers “Additionally, markets for glass are limited. Remember...when there is no market, there is no recycling”.

# What can we do?

- Option 1- status quo (do nothing)
- Option 2- set up separate glass collection systems and bring material to Fairfax County or other recyclers (Please ask Fairfax about this)
- Option 3- MRFs and recyclers work together to create a system where glass is actually recycled
- Option 4- remove glass from recycling stream

- Do nothing
- We are all unique in our solid waste management situations
- Different drivers for each of us
  - Collection and processing system impacts
  - Public's concerns
  - Elected official's concerns
  - Budget situation
  - Economic impacts
  - Environmental impacts
  - Ability to effectively Educate public to achieve change
  - Contractual issues
  - Regulatory issues (25% recycling rate in the state of Virginia)



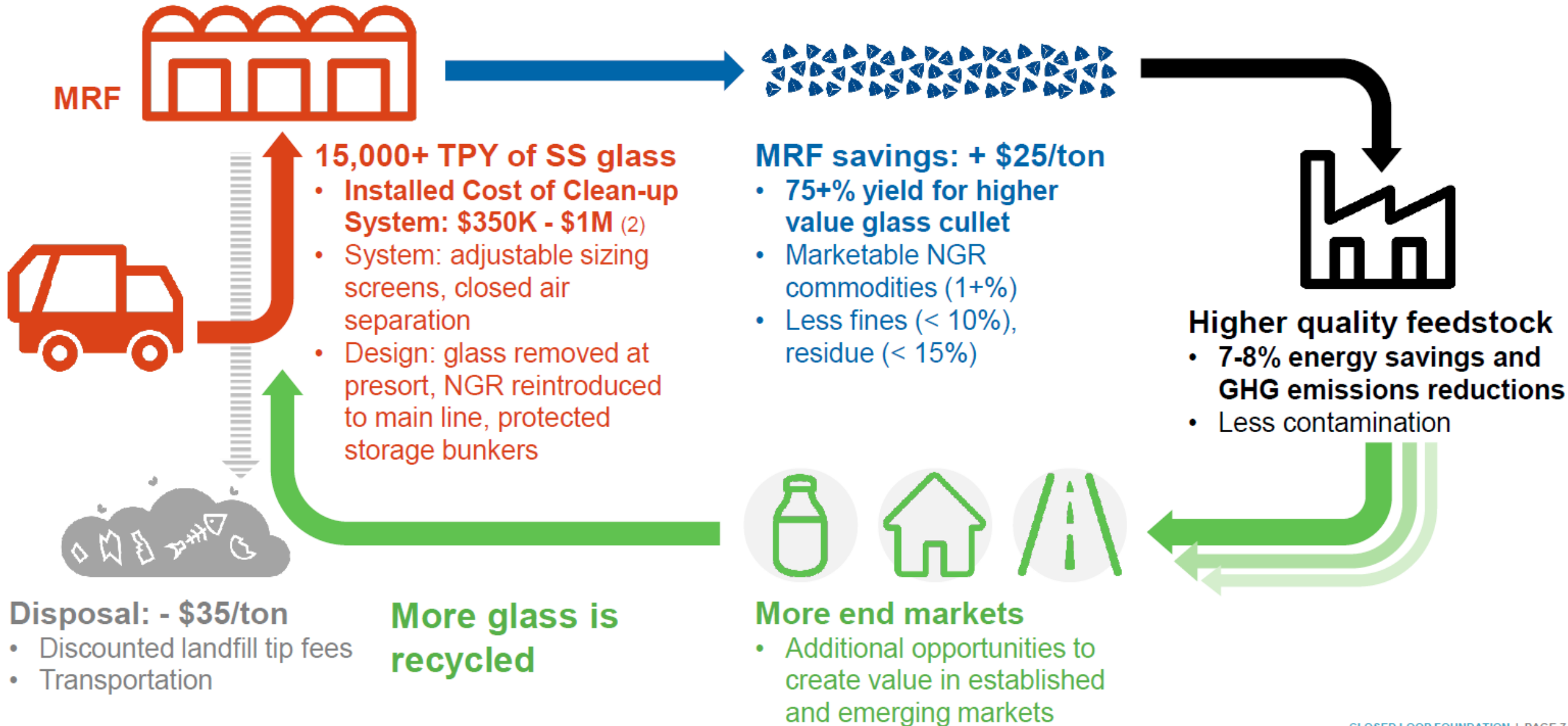
Big Blue

# Is there a productive and cost-effective way to increase the reuse of glass from material recovery facilities (MRFs)? (Option 3)

Closed Loop Foundation Study  
April, 2017

[http://www.closedlooppartners.com/wp-content/uploads/2017/04/ClosedLoopFdn\\_Report\\_Glass\\_FINAL\\_Apr20.pdf](http://www.closedlooppartners.com/wp-content/uploads/2017/04/ClosedLoopFdn_Report_Glass_FINAL_Apr20.pdf)

# The ROI on improving glass clean-up (1)



(1) Actual results will vary depending on MRF and local market. (2) Does not include cost of downtime at MRF to install new equipment



# Benefits

## For Single Stream MRFs

- Revenue from glass stream
- More volume
- Marketing advantage
- Secure markets for material
- Transportation (T&D) savings

## For Municipalities

*In addition to potential MRF benefits...*

- Sustainable home for a key commodity
- Supports zero waste goals
- Convenience for residents

## For Processors

- Lower capex, operating costs
- Increased productivity
- Lower disposal costs

## For End Markets

- Lower capex, operating cost to get/use higher quality feedstock
- More secure and sustainable supply
- Greater yield from feedstock – competes better with virgin material

- Factors that influence decisions

- **Is glass being recycled?**
  - If yes, at what cost?
  - If no, at what cost?
- **Elected Officials perception issues/reaction**
  - Education of elected officials
  - Prepared for negative reactions
    - Be prepared for residents and industry to not support decision
- **Environmental impacts of decision**
  - Emissions impacts
  - GHG impacts
- **Contractual obligations- what are you required or allowed to do?**
- **Impact on Recycling Rate**

- Factors that influence decisions

- **Regulations/Codes and impact**
  - Are you allowed to remove glass?
- **Is there a near term solution for the recycling?**
- **What is the current costs of processing and disposal?**
  - Are there alternatives to actually recycle glass and at what cost?
  - Other Options
- **Commodity value impact**
  - Recycling ton
  - Residual issue
- **Education**
  - Ability to change behavior
  - Cost of effort- can you afford it?

Decisions like this are not easy and require a lot of thought, engagement, and analysis. You must do what is in the best interest of your residents. Good Luck.

# Questions?