

# Climate, Environment, and Readiness (CLEAR) for the George Washington Region

## *Thinking Forward on Waste Management*



CLEAN & GREEN  
COMMISSION

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GWRC Meeting  
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# Overview

- ▶ What is Climate, Environment and Readiness (CLEAR)?
- ▶ CLEAR goals and achievements
- ▶ Fredericksburg City Clean and Green Commission
- ▶ CLEAR Waste Forum on October 11, 2017
- ▶ GW Region's composting programs currently underway
- ▶ Expanding waste diversion (recycling and composting) from landfills

# CLEAR's Mission and Goals



## *Mission:*

- To build environmental and economic resilience and a sustainable high quality of life for the community to adapt and thrive despite changing environmental, social, and economic conditions.

## *Goals:*

- Inform community about natural, climate-related, and man-made challenges;
- Educate community about resiliency planning;
- Creating and coordinating plans for floods and severe weather emergencies;
- Sustain the Region's resources and open spaces;
- Provide tools to engage in strategic plan development; and
- Build community resilience through prevention and planning.



# Fredericksburg City Clean and Green Commission

- ▶ Service commission that works on environmental initiatives to help make a cleaner and greener city.
- ▶ Subcommittees:
  - Clean (litter reduction)
    - Ordinance increases litter penalty in 2015
    - Annual “Butts are Litter Too” campaign
    - Street and river clean-ups
    - Doggy Waste Stations
  - Green (tree planting)
    - Nearly 6,000 trees planted in the City since 2008.
  - Sustainability (solar energy, energy efficiency, recycling and composting)
    - Solar property tax incentive passed in 2017
    - Low-income solar project
    - Composting initiative



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# Forum on Managing Waste in the 21<sup>st</sup> Century– October 11, 2017

- ▶ Over 50 stakeholders met to discuss regional collaboration around long-term solutions for solid waste management.
- ▶ Discussed technologies for managing waste beyond landfills.
- ▶ Highlighted the need for public education on alternatives to landfilling.
- ▶ Held break-out sessions on:
  - Environmental and Economic Benefits of Recycling
  - Exploring the Successes of New Technologies
  - School and Restaurant Food Waste
  - Opportunities for Composting

# Forum on Managing Waste in the 21<sup>st</sup> Century

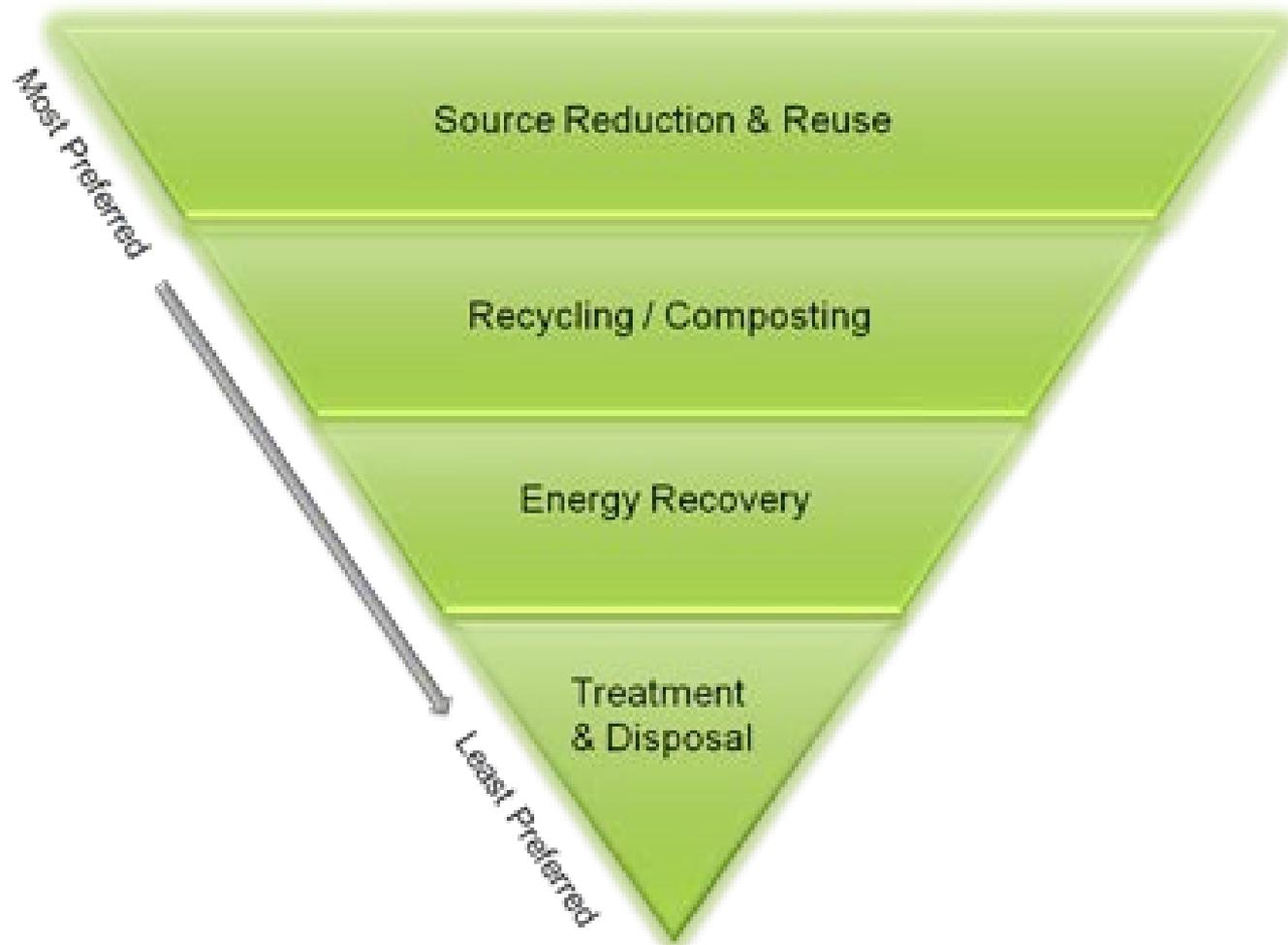
## ▶ Recycling

- Chinese restrictions on recycling imports starting Jan. 1 (due to contamination concerns) are creating challenges that will require new demand for recycled materials elsewhere.
- New state mandates and incentives can encourage market improvements.

## ▶ Composting

- A regional composting market will help further divert materials from the landfills (from pick-up to processing and sale). Composting will become more economically viable as composting programs further develop, starting with ramping up operations that already exist.

# Waste Management Hierarchy



# Why Compost?

- ▶ Composting is a natural biological process, carried out under aerobic conditions (requires oxygen) where microorganisms, including bacteria and fungi, break down organic matter into simpler organic material.
- ▶ Diverting waste through composting prolongs the life of landfill cells saving money over time
  - Stafford Regional Landfill Cost Examples
    - Closure of Cell E and F1: \$2 million by FY2022
    - Closure costs for Cell F2 is \$1.4 million
    - Construction of (Cell F3) the next cell planned for the Regional Landfill – \$4.5 million.
- ▶ Produces a beneficial product that enriches soil, helps retain moisture, suppresses plant diseases and reduces the need for chemical fertilizers.

# Municipal Composting Operation Examples in GW Region

- ▶ **Stafford Regional Landfill Composting**
  - *Rappa-Grow* product is made from composting yard waste and treated wastewater biosolids. Sold as soil amendment.
  - R-Board staff also provide backyard composting seminars.
  
- ▶ **Spotsylvania Livingston Composting Facility**
  - *Livingston Blend* product is also made from composting yard waste and other organics and treated wastewater biosolids.

# Example Food Composting Operations in VA

- ▶ Alexandria Farmers Market – drop-off program
- ▶ Arlington County– drop-off program
- ▶ Falls Church – drop-off and curbside programs
- ▶ Charlottesville Farmers Market –drop-off program
- ▶ Charlottesville Residential – curbside program
- ▶ UVA– roll-cart program
- ▶ Va Tech – roll-cart program
- ▶ JMU– roll-cart program
- ▶ Volvo Dublin plant – roll-cart program
- ▶ Manassas Freestate Farms – 88,000 ton/year composting/digestion complex – (operational late 2018)

# Addressing Waste through Recycling and Composting

- ▶ **Reduce the amount of waste flowing into regional landfills to prolong cell life:**
  - Improve recycling rates in GW Region to 50% (currently, 30–40% recycling rate).
- ▶ **Ramp-up composting operations for diversion and reuse of organic materials**
  - Start with yard waste and waste water biosolids.
  - Eventually expand to additional organics/ food waste.

# Moving Forward

GWRC and local jurisdictions' support for:

1. A follow-up workshop on waste diversion (including composting) between experts and community members in mid 2018 by helping to identify potential attendees.
2. Investigating curbside yard waste composting pilots (as is currently underway in Alexandria and Arlington) with local jurisdictions putting the topic on council/board agendas.