

Solid Waste Management Division

# GREEN INITIATIVES

update to the GLUE Committee



# Potential Board of Commissioners Solid Waste Goals





# Extend Life of Landfill

## CURRENT STRATEGIES

- Contract compaction requirements exceeded by landfill contractor
- Use of ADC to minimize soil use – potential odor impacts
- C&D separation at convenience centers



Compactor at South Wake Landfill



# Extend Life of Landfill

- Further increase compaction/density with landfill operator incentive
- New mattress recycling program
- Organic/food waste diversion
- Commercial recycling program/ordinance
  - WCPSS commingled recycling
- Eliminate out-of-county waste
- Increase tipping fees
- Waste-to-energy



# Reduce Waste and Increase Revenue

## CURRENT STRATEGIES

### Reduce Waste

- ❑ HHW Facility expansion
- ❑ Food Waste Drop-off Pilot
- ❑ Education and Outreach Section
- ❑ Convenience Center expansion
- ❑ MMRF expansion

### Increase Revenue

- ❑ LFG System expansion
- ❑ Increase Tip Fees



Food Waste Drop-off Pilot



MMRF Expansion



# Reduce Waste and Increase Revenue

## PROPOSED INITIATIVES

### Reduce Waste

- ❑ Organic waste diversion
- ❑ Municipalities move to PATY (concerns with convenience, illegal dumping & recycling contamination)
- ❑ Commercial recycling ordinance
- ❑ Recycle construction and demolition waste

### Increase Revenue

- ❑ LFG2E facility expansion and/or new ideas
- ❑ Increase tipping fees



# Reduce Cost to Low Income Resident

## UPDATE

### Current Strategies

- County removed \$20 household fee for public housing units

### Possible Initiatives

- Municipalities to consider reducing rates for low income families
- PAYT would “meter” costs with amount of waste (more equitable)



# Follow up from July 28<sup>th</sup> Meeting







# Wake Solid Waste “Econ 101”

## ECONOMICS

- City/towns collect waste/recycling at curb
- Wake provides drop off locations
- Wake provides landfill
- City/towns direct waste to landfill and benefit from annual rebate
- Wake seeks funds for recyclables, grants & LFG sale



# Other NC Counties Approach

## ECONOMICS

- Fewer and fewer counties own their own landfill
- Few counties (if any) provide as many services as Wake County, especially at \$20/household/year
- Orange County, with additional fees, provides curbside recycling pick up county-wide



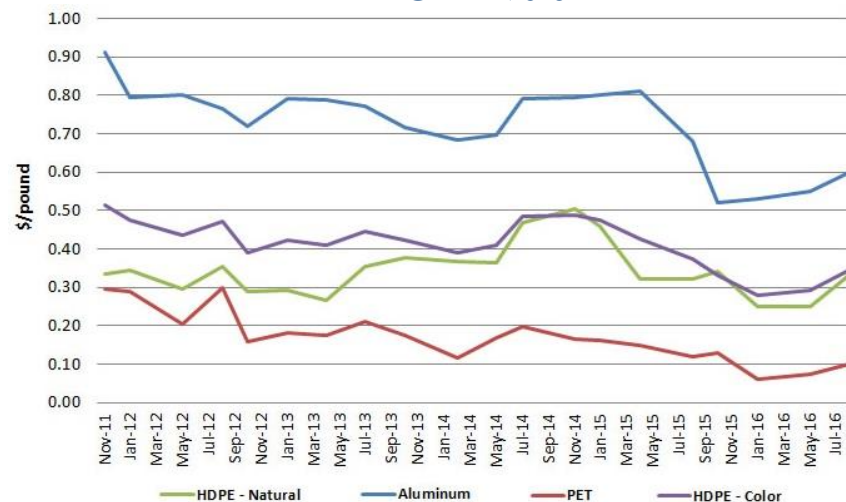
# Solid Waste Financial Concerns

## ECONOMICS

- CRT TVs recycling costs
- Fluctuating market value of recyclables
- Construction costs of expansion projects
- Out of County waste at CC's
- C&D waste abuse by contractors at CC's



CRT TVs at MMRF



Pricing Trends Across NC for Recyclable Commodities



# Textile Recycling

## UPDATE

- ❑ Convenience Centers (for profit)
- ❑ Multi-Material Recycling Facilities (non-profit)
- ❑ Drop-off Event?
- ❑ Collaborate with towns to increase textile recycling at the curbside
  - ❑ For example, Simple Recycling
  - ❑ Curbside clothing recycling
  - ❑ <http://simplerecycling.com/>



Clothing, shoes and book containers at Convenience Centers

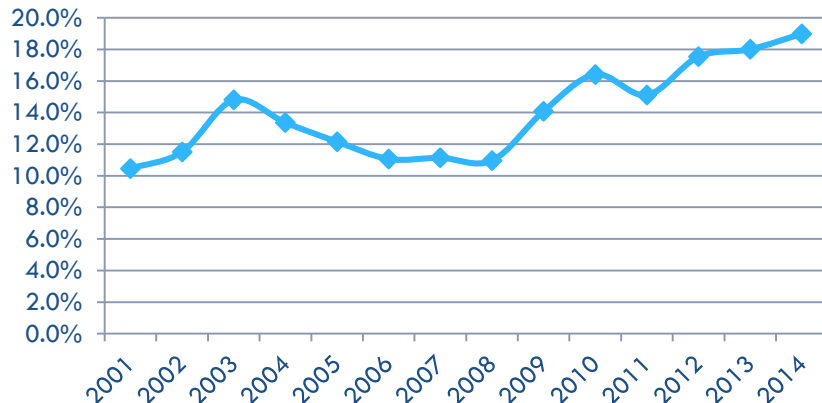


# How Do We Quantify Waste Reduction?

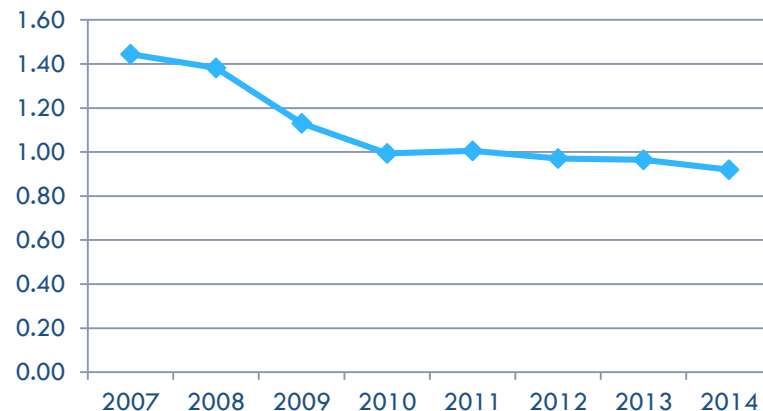
## METRICS

- “Easy” waste items already being diverted
- Real impact thru municipality ordinances/programs
- Pursue comingled recycling in public school system
- Establish effective in-house co-mingled recycling program

**Wake County Recycling Rate  
(Recycle Tons/Waste Tons)**



**Wake County Disposal Rate  
(Tons/Person)**





# How Can We Improve Waste Reduction?

## METRICS

### Waste Characterization Studies

Waste Material	2008 In-house Waste Study	2014 School Waste Study
Organics	6.3	35.3
Non-Recyclables	50.3	22.7
Paper	21.4	21.2
Plastics	14.5	15.8
Metals	2.3	1.9
C&D Debris	2.7	1.3
Textiles	-	1.2
Glass	0.8	0.3
Electronics	1.7	0.3
TOTAL	100%	100%



# Solid Waste Violations

## REGULATIONS

- ❑ Illegal dumping enforcement program
- ❑ 'Notice of Violation' process with homeowner
- ❑ Littering
- ❑ Construction and demolition franchise requirements



Photo taken of illegal dumping





# Electronics Recycling

UPDATE

- Consultant report on impact of available options:
  - Option 1: Continue recycling CRT TVs
    - High cost (\$2 M+) and transportation impact
  - Option 2: Landfill CRT TVs (only)
    - Lowest cost but potential leachate impact
  - Option 3: Process CRT TVs and landfill lead glass
    - Slightly costlier than 2 but still with potential leachate impact



# Mattress Recycling

UPDATE

- Request for Proposals is required
- Need a drop-off area to begin program
- Completion of site expansion will free-up space
- Space to process mattresses available in 2018



Mattress recycling program in Kansas

# Other Solid Waste Items





# Solid Waste Awards

UPDATE

Year	Awarding Authority	Program
2016	National Association of Counties	Christmas Tree Recycling program
2016	National Association of Counties	Public Landfill Tour program
2015	Solid Waste Association of North America	86it Anti-Litter Campaign
2014	National Association of Counties	Household Hazardous Waste program
2014	National Association of Counties	Landfill Gas-to-Energy Project
2009	American Forest and Paper Association	Feed-the-Bin School Recycling program

Goal: To research and apply for more awards in 2017

E.g. Carolina Recycling Association, City of Raleigh Sustainability awards...



# Ideas for Waste Reduction Programs

UPDATE

- ❑ **Current Innovative ideas**
  - ❑ Commercial waste reduction grants
  - ❑ Food waste drop-off program
  - ❑ America Recycles Day annual event
  - ❑ Drop-off locator app
  - ❑ Landfill tours program
  - ❑ Attend NC conferences for new ideas



# Ideas for Waste Reduction Programs

UPDATE

- Proposed Ideas
  - ▣ Explore national leaders in waste management practices
  - ▣ Research other Construction and Demolition debris recycling programs nationwide
  - ▣ Mattress recycling
  - ▣ Comingled recycling for schools
  - ▣ Improve in-house recycling
  - ▣ Franchise curbside collections for unincorporated areas
  - ▣ Discounted compost bin sales program
  - ▣ Recycle bin program for events



# “Save the Food” Campaign

## UPDATE

- Partnering with the Ad Council
  - ▣ Requested “Save the Food” commercials in our region
  - ▣ NC DEQ leading the charge to bring the campaign to NC
    - Contact: Jorge Montezuma, Organics Recycling Specialist





# Food Waste Diversion

## UPDATE

- 2017 Food Recovery Summit
  - ▣ Location: Wake County
  - ▣ Date: February 2017
  - ▣ Partners: NC DEQ, NC Farm Bureau, City of Raleigh Office of Sustainability, and Triangle J COG
  - ▣ Purpose: Connect those with excess food (i.e. grocery stores, restaurants, cafeterias) to those who can use it (i.e. food banks, composters, farmers)



# Food Waste Diversion Options

## UPDATE

- Food waste drop-off at four Convenience centers
- Plans to collaborate with municipalities on future food waste diversion projects
  - ▣ Partnering with City of Raleigh on discounted compost bin sales event
- Food waste diversion resources for businesses
- Backyard composting education for residents



Food Waste Drop-off Program

# Questions?

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