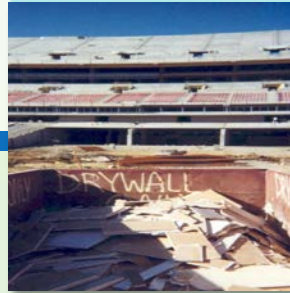


FINAL

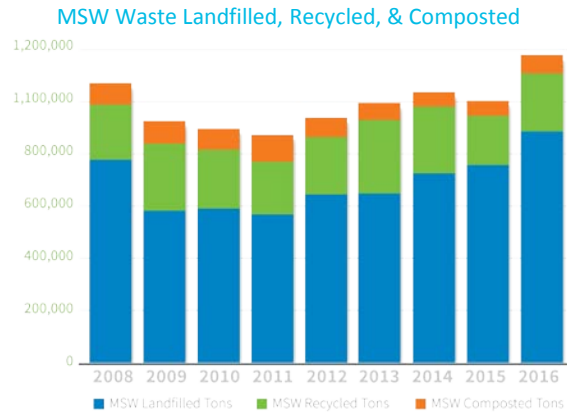
# SOLID WASTE MASTER PLAN: *Achieving Zero Waste*



**Metropolitan Nashville and Davidson County**

*Davidson County Solid Waste Region Board Meeting  
September 16, 2019*

# The State of Solid Waste Management in Metro Nashville and Davidson County



## 2016 Solid Waste Breakdown

82%

Landfilled



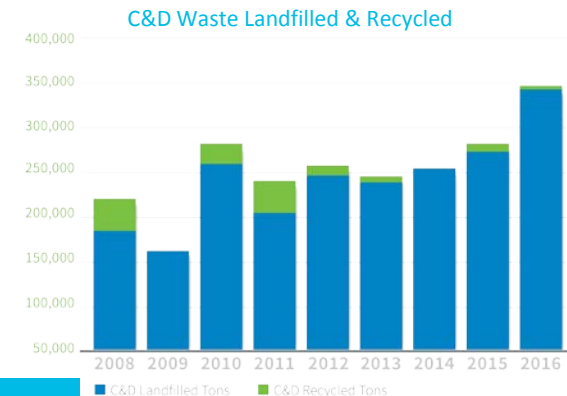
12%

Recycled



6%

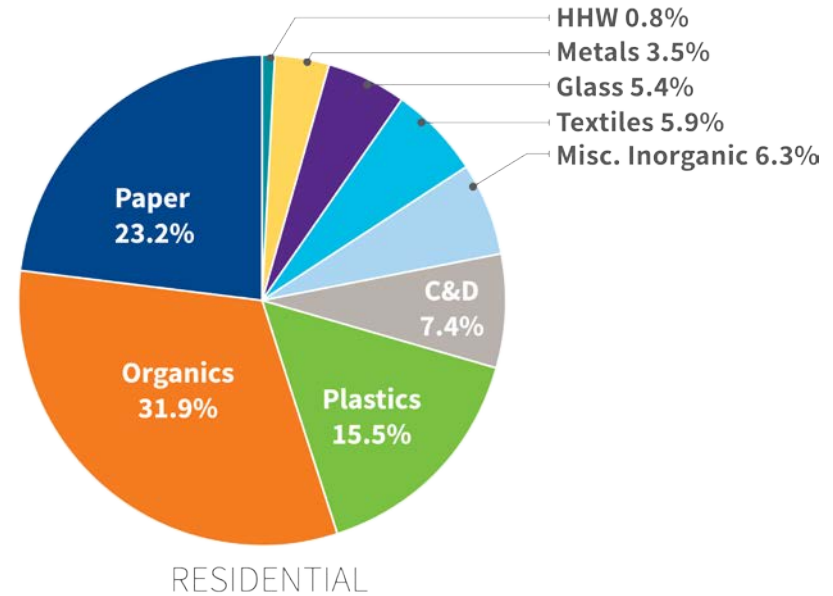
Composted



National Average: 65% Landfilled 26% Recycled and 9% Composted

# Identifying the Current Major Challenges

- Only 20% of solid waste services are under Metro management
- Insufficient funding for education and compliance
- Recycling is voluntary
- Limited options to landfilling food waste and C&D waste





# Setting Goals and Priorities



## Adopt a Zero Waste Philosophy

- Minimize waste generation
- Maximize landfill diversion (90+%)



## Priorities for meeting these goals

- Strengthen public education and outreach
- Build countywide programs for recycling and surplus food rescue
- Revive recovery programs for C&D Waste



# Transitioning from Disposal to Resource Management

Over 80% of waste materials go to landfills

The cost of landfilling is expected to increase

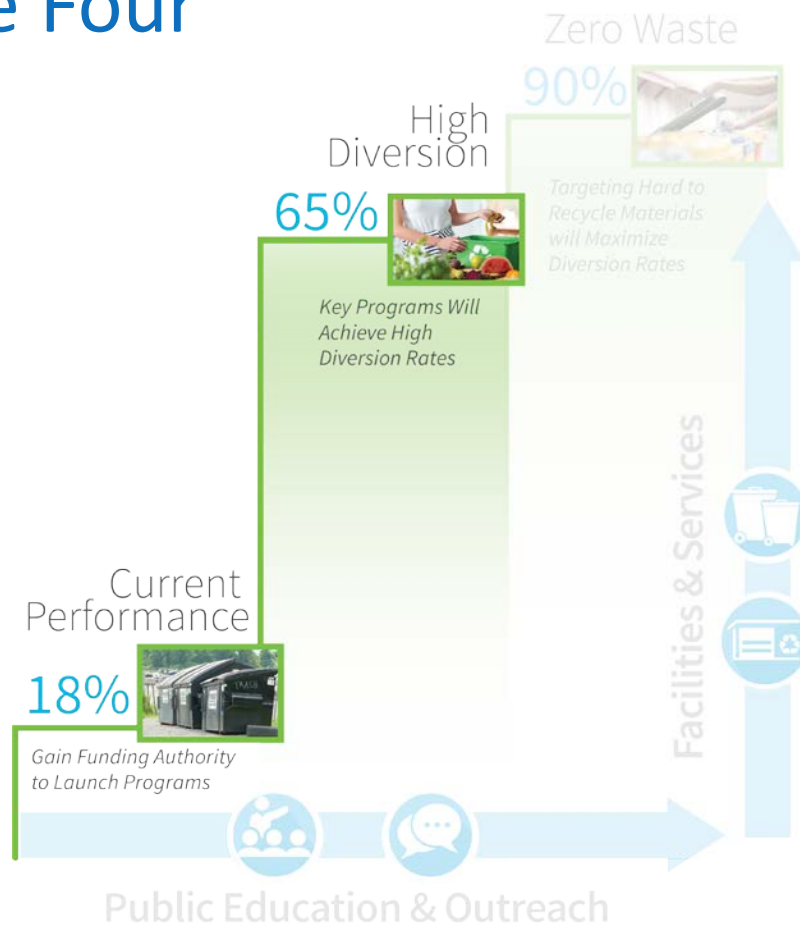
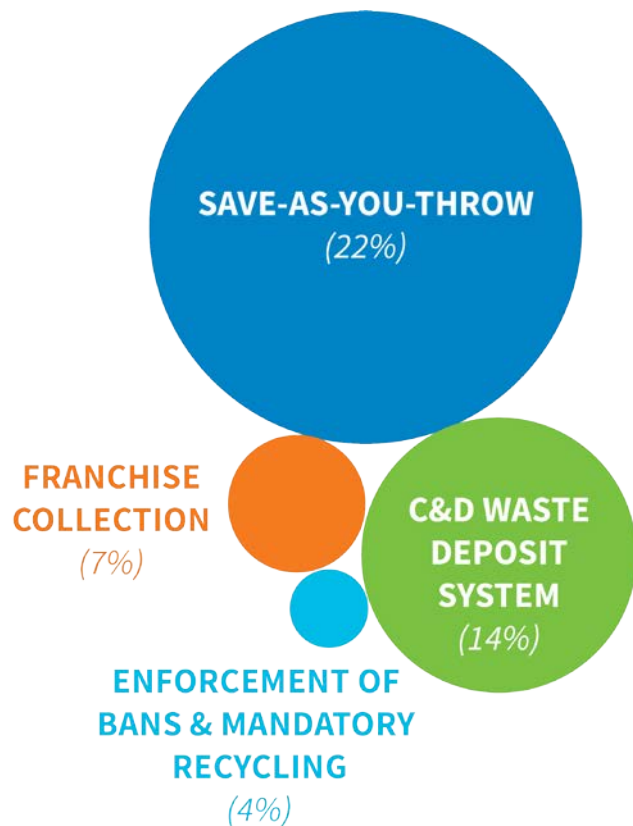


# Critical Policy and Program Recommendations



Recommendations are dependent on legislative support of policy and program funding.

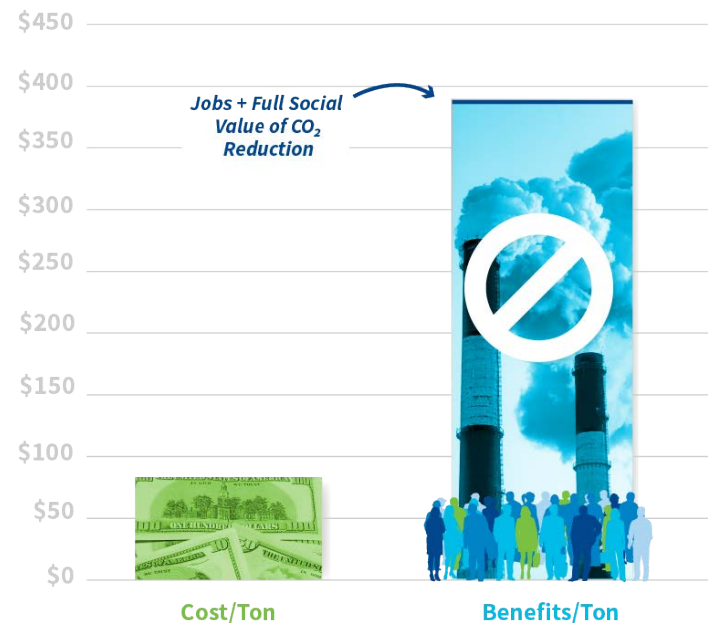
# Diversion Impacts of the Four Major Strategies



# Triple Bottom Line (TBL) – What is the Value of the Plan?

- TBL Benefits
  - Avoided carbon emissions
  - Economic activity and new jobs
- Evaluated conservative, moderate and aggressive portfolios
- Aggressive Portfolio
  - Lowest cost per ton
  - Highest total benefits per ton

## Aggressive Portfolio TBL Results





# Providing Flexibility with Plan Implementation



Given Metro's current budget constraints and the change in leadership, the Plan must be flexible



Schedule can be adjusted to account for changing priorities, funding, or preferences



Aggressive Schedule

- Five phases over 20 years

- Early adoption of policies, authority, and funding



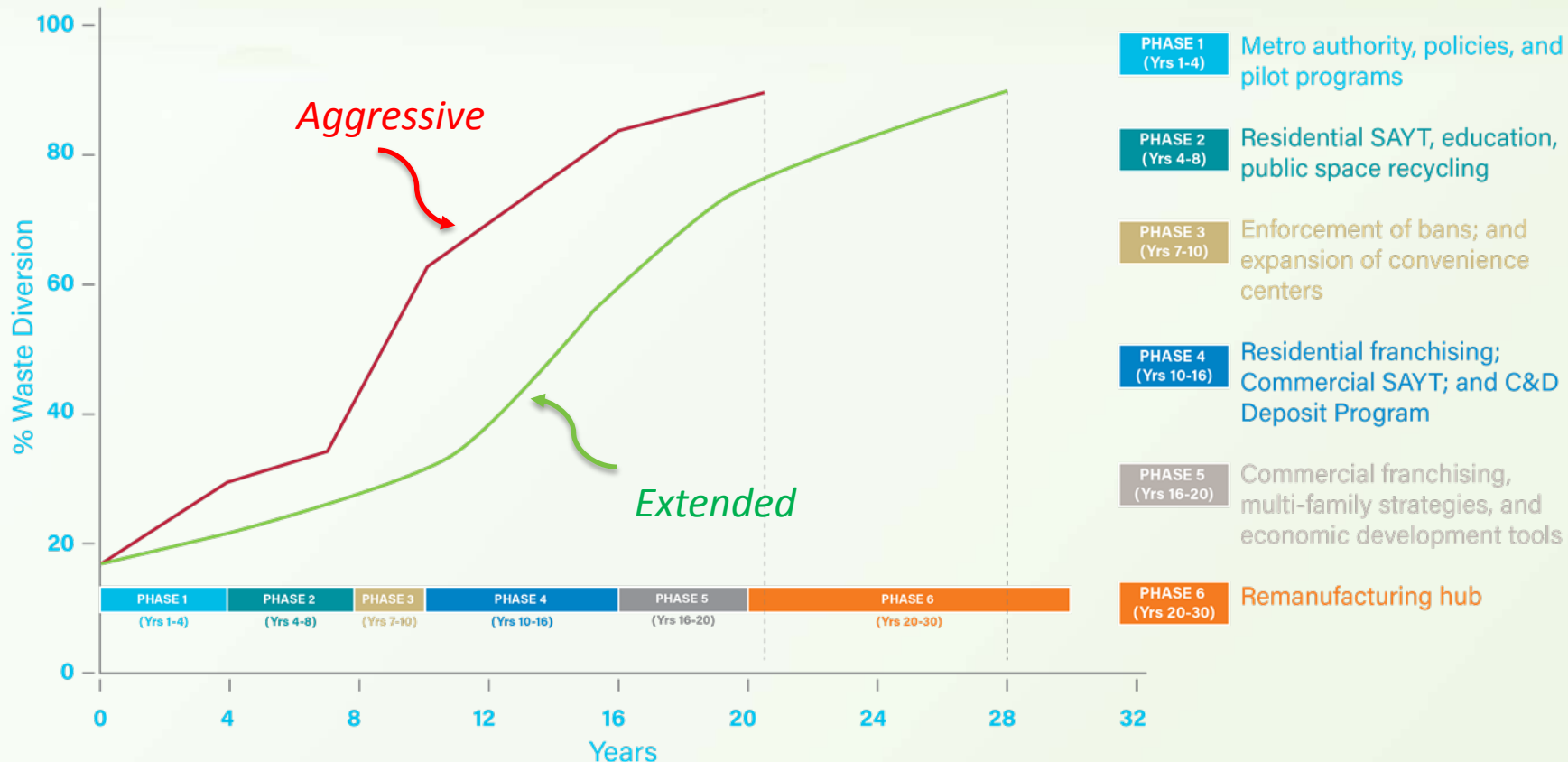
Extended Schedule

- Six phases over 30 years

- More gradual, pragmatic approach to system change

- Delayed rollout of key diversion programs

# Implementing the Strategies in Phases



# Implementing the Strategies in Phases

## Comparison of Aggressive and Extended Schedules

KEY DIVERSION STRATEGIES	AGGRESSIVE SCHEDULE (20 YEARS)	EXTENDED SCHEDULE (30 YEARS)
Metro authority, funding and policies	Phase 1	Phase 1
Residential SAYT	Phase 1	Phase 2
Public Space Recycling	Phase 1	Phase 2
Enforcement of bans and mandates	Phase 2	Phase 3
Expansion of convenience centers	Phase 2	Phase 3
Residential franchising; commercial SAYT; and C&D deposit program	Phase 3	Phase 4
Commercial franchising and multi-family strategies	Phase 4	Phase 5
Re-manufacturing hub	Phase 5	Phase 6

# Making the Plan a Reality

## *Recommendations for Getting Started*



Issue an Executive Order on Waste Reduction within Metro Government



Establish an Environmentally Preferable Purchasing Program



Launch a Residential Food Waste Pilot Program



Finalize approach for executing strategies under Metro Charter



Draft Recycling Mandates for C&D Waste



Draft Food Scraps Diversion Mandates for Large Generators

The background features a light green and yellow gradient with a pattern of small dots. In the top left corner, there are several overlapping circles in shades of green, orange, and blue, some with internal patterns. A silhouette of a city skyline is visible in the background, with a prominent skyscraper in the center. A solid blue horizontal band spans the width of the image, containing the text.

Questions?

# San Jose Wet/Dry Commercial Waste Program

- Operations started in 2012
- Targets commercial waste stream
  - 8,000 businesses
  - Collects 300,000 tons/year
- Private infrastructure system
  - Mixed waste MRF
  - Organics Processing Services
- One exclusive commercial hauler
  - Commercial franchise agreement
  - Reduced from 20 haulers



Photo Source: Biocycle April 2014 article High Solids Anaerobic Digestion + Composting In San Jose

# San Jose Wet/Dry Commercial Waste Program Advantages

- Simplifies sorting for customers
- Reduced fleet is more energy efficient
- Waste capture rate is 100%



Image 2 – Wet-Dry System Outreach Material

Photo Source: SWANA 2013 Excellence Award Application

# San Jose Wet/Dry Commercial Waste Program

## Reasons for Not Recommending

- Processing facilities (MRF and organics) are large and complex
- Contamination levels are higher for mixed waste
- China's National Sword Policy disrupted the recycling industry.
- Would San Jose have selected Wet/Dry in 2019?



Photo Source: Biocycle April 2014 article High Solids Anaerobic Digestion + Composting In San Jose