

Solid Waste Master Plan

Pinellas County Board of County Commissioners



February 6, 2020



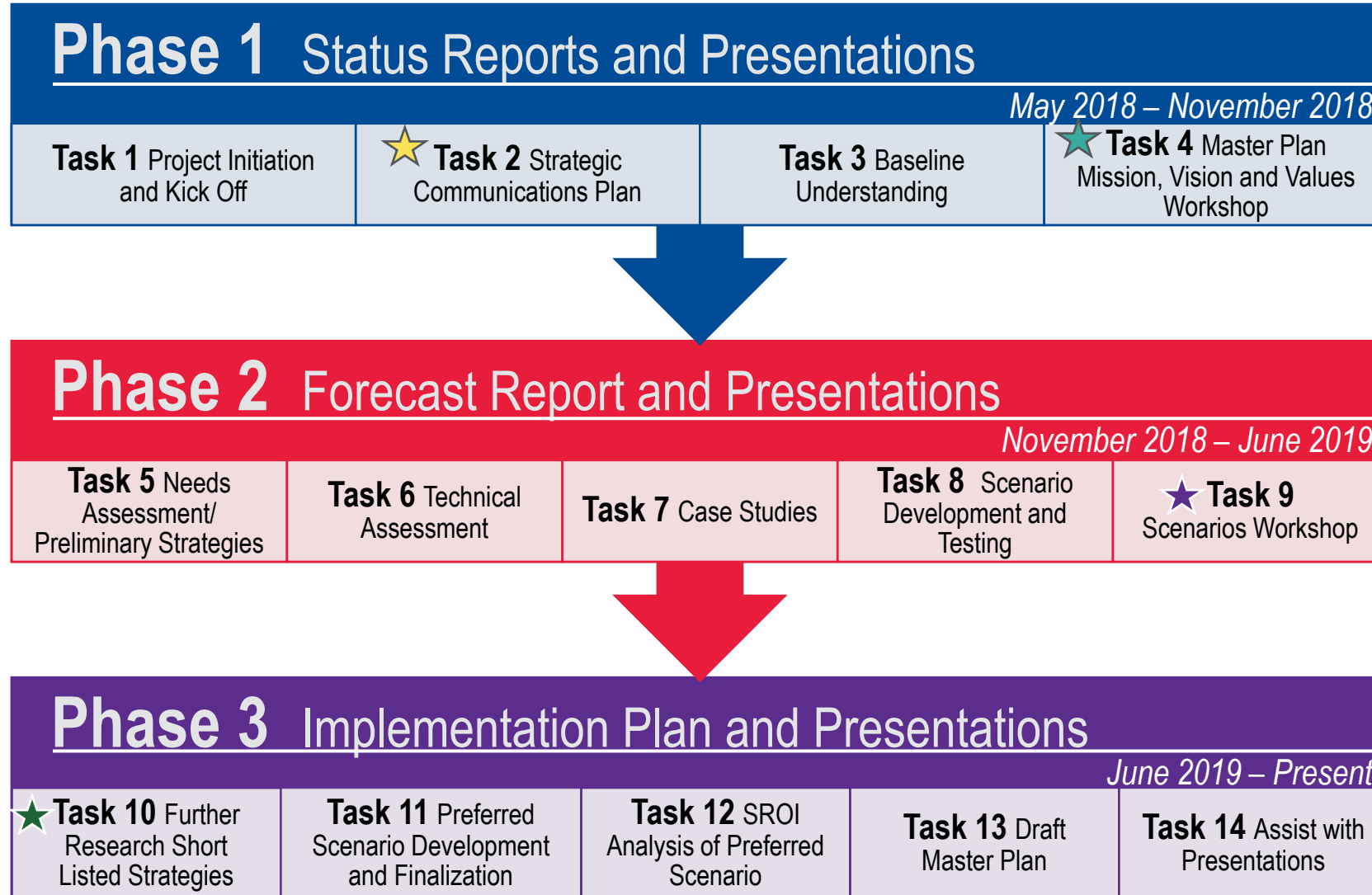
- 1 Planning Process
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The background image shows a waste management facility. A green truck is positioned next to a large, dark-colored dumpster that is overflowing with debris, including cardboard boxes and black plastic bags. The scene is viewed from under a large, dark structure, possibly a bridge or a covered area, with concrete pillars visible on the left. The ground is wet and reflective. In the background, there are green trees and a clear sky. A blue banner with white text is overlaid on the right side of the image.

Planning Process

Planning Process



KEY

- ★ Public Surveys
- ★ Regional Sub-committee Workshop
- ★ Public Workshops
- ★ Regional Roundtable

Newsletters and social media outreach throughout planning process

Stakeholder Engagement – From Start to Finish

Intra-Regional

- Public Survey – website, email (nearly 900 responses) – Jan/Feb 2018
- Regional sub-committee
 - Treasure Island, St. Petersburg, Clearwater, and Dunedin participated
- Hauler interviews— telephone discussions
- Public Workshops – 3 after initial strategy reduction

Inter-Regional – initial workshop and phone conference follow up discussion

- Hillsborough
- Manatee
- Pasco
- Sarasota
- City of Tampa





Vision, Values and Goals



Vision Statement

To provide dependable, accessible, and sustainable integrated solid waste management systems for the region in a collaborative manner, with visionary leadership to responsibly manage waste as a resource for the long term.

- Regional Sub-committee (intra-regional)

Values/Guiding Principles

Inspire
conscious
decision making
and thoughtful
consumption



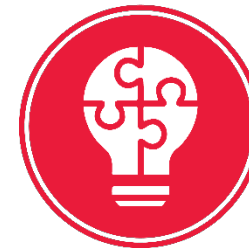
Anticipate
future needs to
stay ahead of
the curve



Balance
environmental,
economic, and
social
sustainability



Seek regional
cooperation and
collaboration



Increase
operational
capacity of the
Solid Waste
Disposal Complex





Primary Goal

**Zero Waste
to Landfill**



Communications and Outreach

Customer Survey Summary

- 63% satisfied with services (18% dissatisfied)
- Majority looking for food waste and composting opportunities and willing to pay for new programs
- Collection service issues most disliked about the system
 - Municipalities – want increased recycling and added bulky waste collection
 - Unincorporated – lack of organized collection causes congestion and lower quality service.
- Waste to energy (WTE) viewed favorably but some concerns over odor and air pollution.



Inter-regional Roundtable Summary

(Hillsborough, Manatee, Pasco, Sarasota Counties and City of Tampa)

Common challenges noted in group discussion:

- Power Plant Siting role in DEP approving beneficial use of ash
 - Processors are driving recycling programs (not local governments)
 - Need organics capabilities to drive toward zero waste
 - Asphalt shingles – nails are an issue requiring processing
 - Local ordinances impact ability to be flexible with changing processing possibilities
- Opportunity for economies of scale potential through regional cooperation:
 - Glass
 - Ash Reuse
 - Asphalt shingles processing
 - Drywall recycling
 - Recyclables Processing, but would require coordination (timing, materials)
 - Biosolids
 - Other organics – longer term regional possibilities



Hauler Interviews Summary

- Willing to work with County to find solutions, but mixed on best approach
- Only 2 haulers supported franchising
- If franchised, haulers supported multiple zones
- If franchised, haulers supported open commercial markets
- Agreed that the haulers play a role in reducing recycling contamination and other collection education



Public Workshops Summary of Results

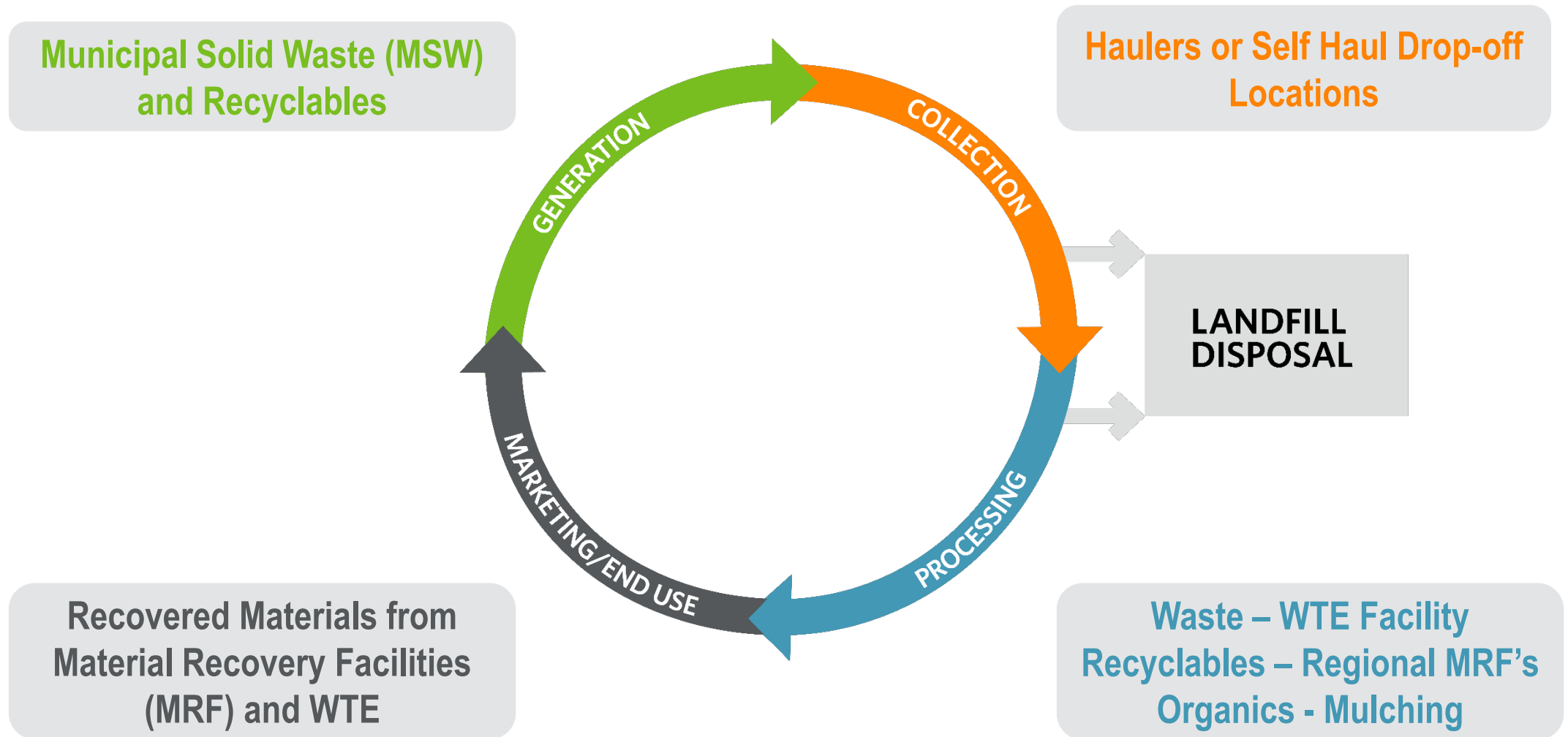
- The importance of diverting food scraps was expressed at each workshop.
- Recycling should be required for residences, schools and businesses.
- A majority supported varying collection rates based on cart sizes under a pay-as-you-throw (PAYT) system.
- Standardizing recycling would simplify and reduce contamination.
- Incentives for recycling should be considered.
- Information on recycling and the County's solid waste program should be incorporated into the school curriculum.
- A majority agreed the County should better promote the environmental benefits of the WTE.
- Researching standardizing collection in unincorporated area, depending on costs was supported by most.





Current Solid Waste System

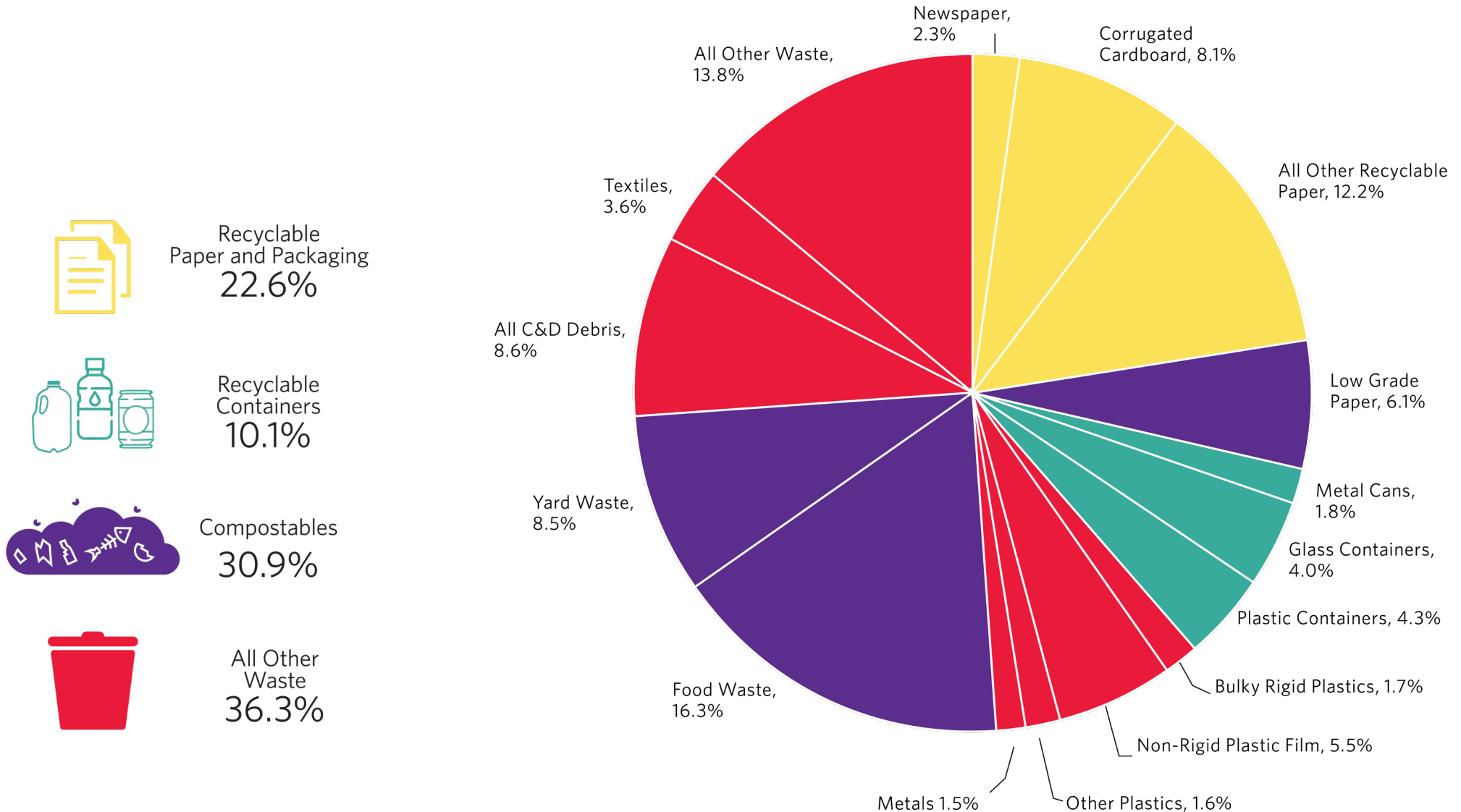
Existing Solid Waste Loop



Background - Annual System Waste Profile

- Total of 2.2 million tons County-wide (2017 data)
 - 1.2 million tons recycled (trending at 50-55% - 5 private processors))
 - 790,000 tons processed at WTE (near capacity – 2026) yields 190,000 tons ash
 - 220,000 tons landfilled – 82 years of life (2101, per 2019 report))
- At the Disposal Complex, the County manages approximately 55% of the total waste generated in the County
- Generators: Commercial 53%, Residential 30%, Multifamily 17%
- Flow control Ordinance does direct materials to a Pinellas County Solid Waste Facility
- Primary function as county-wide disposal (concurrent with Florida Statute)

Aggregate MSW Composition Deliver to the Complex (from 2014 Waste Characterization)



Capacity of Facilities



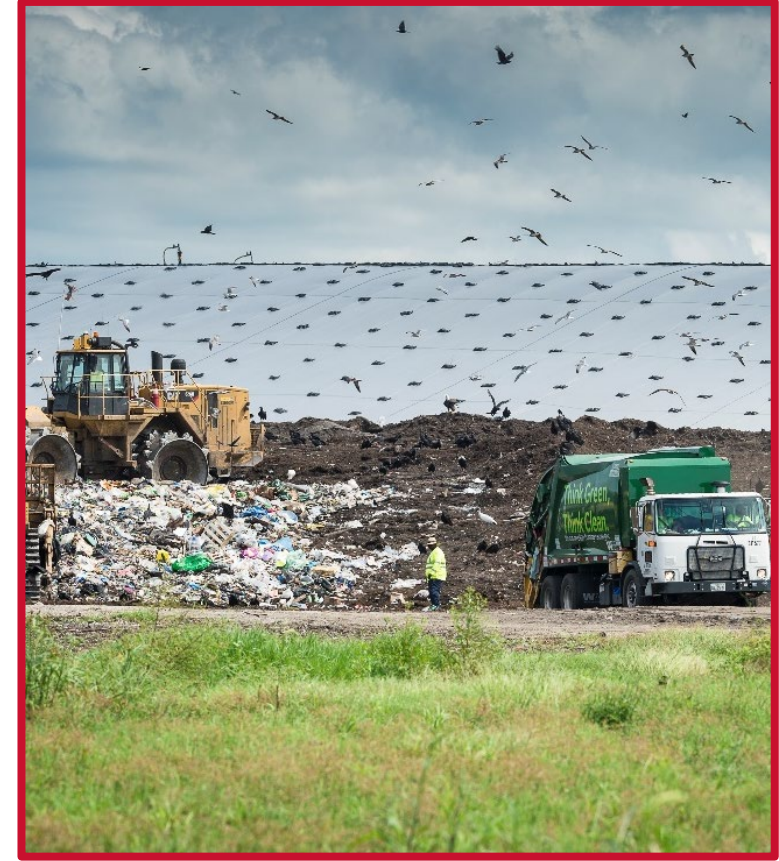
WTE

3,000 tons per day,
~1,000,000 tons per year*



Recycling

5 private MRF's for residential
material in the region



Landfill

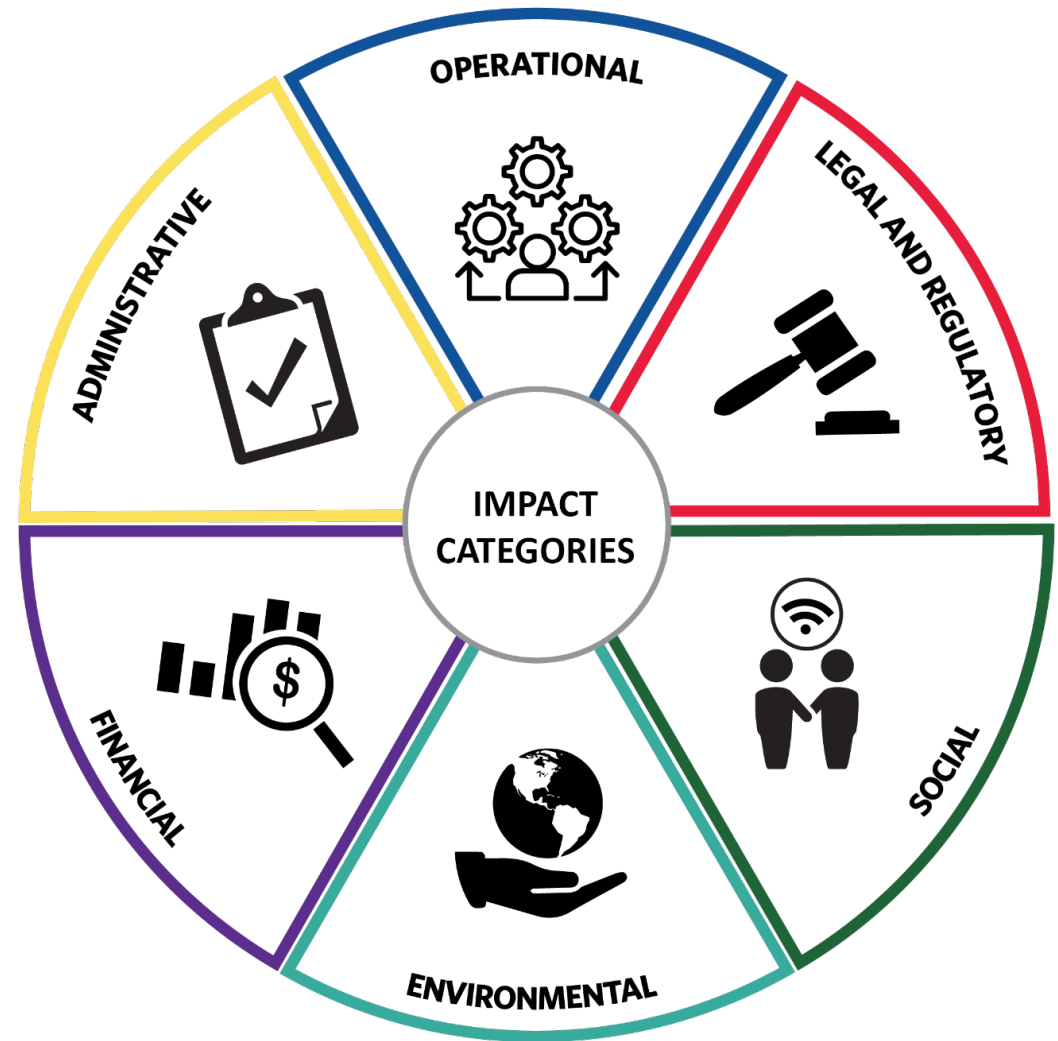
current landfill area has 82 years
of remaining life



Strategy Development and Vetting

Strategy Development

- Needs Assessment
 - Identify Gaps
 - Public Input
- Technology Assessment
 - Landfill
 - WTE
 - Recyclables
 - Organics
 - Residuals
- Case Studies
- Assessment of Impacts



Key Infrastructure Analysis

- Recycling Processing – Public/Private MRF
- Waste Transfer
 - Conditions have not changed since last North Transfer Station evaluation
 - Self sustaining by muni benefit area
- WTE Capabilities
 - Beneficial reuse of ash
 - Metal recovery
 - Facility expansion
 - Regional collaboration
- Organics Management
 - Anaerobic Digestion (AD) – Cost Prohibitive without greater input (regional)
 - Composting opportunities



Strategy Refinement



An aerial photograph showing a yellow excavator with a hydraulic breaker attachment working on a large pile of debris and rubble. The debris consists of broken concrete, wood, and other construction materials. The excavator is positioned on the right side of the pile, and its arm is extended towards the center. The background is a dark, textured surface, possibly asphalt or a large pile of earth. A blue banner with the word "Outcomes" is overlaid on the right side of the image. On the left side of the blue banner, there is a decorative pattern of white and blue circles, some of which contain a circular arrow icon.

Outcomes

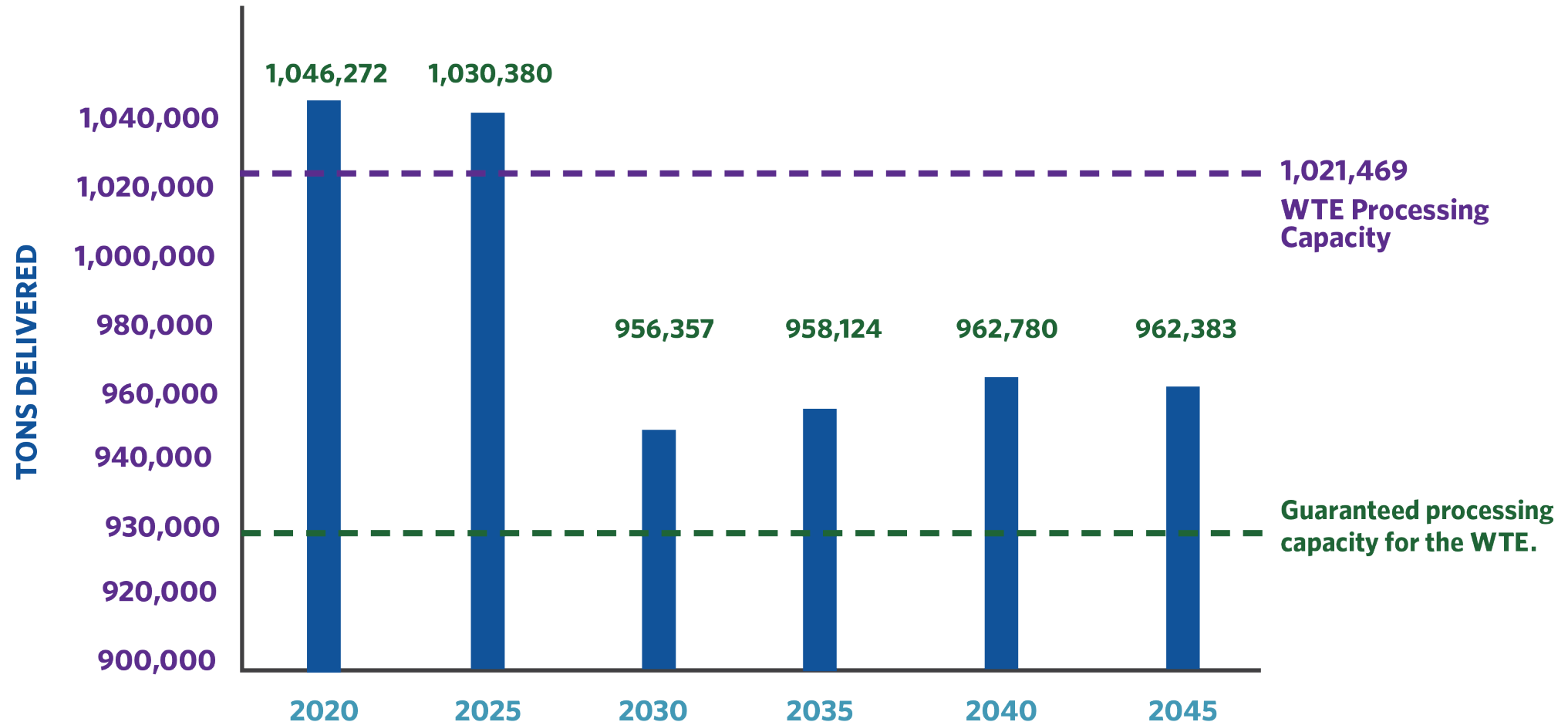
Zero Waste to Landfill

How do we get there?



Five Key Tactics

Estimated Tons Delivered to the Complex versus WTE Capacity with Plan Implementation





Recommended Strategies

2020 – 2048



Reduction
Education
(residential
and
commercial)
(w/TMC)



Capacity
evaluation and
contamination
education
(w/TMC)



Utilization of
closed Toytown
Landfill

Evaluate the
potential of
contiguous
property purchase



Regulatory
monitoring and
advocacy
(w/TMC)

2020 - 2024

2025 – 2033

2034 – 2048



Zero Waste Guide for special events (to TMC)
Environmentally Preferred Purchasing Guide (to TMC)



Phase 1 – Organizing collections in unincorporated area with universal recycling
Standardize and Expand recycling education efforts
Expand Cutting Waste at Work (to TMC)



Recyclables contamination education (w/TMC)
Develop Ash recycling methods and specifications
Increase the ability to process waste at the WTE facility
Develop Enhanced Metal Recovery Facility at the complex

2020 - 2024

2025 – 2033

2034 – 2048



- Extend landfill life through Bulky Waste Processing
- Traffic Improvements at the Complex
- Onsite Transfer Station Development and offsite MSW disposal
- Revise Flow Control Ordinance
- Expand Capacity of existing disposal area (Mechanically Stabilized Earthen [MSE] berm)

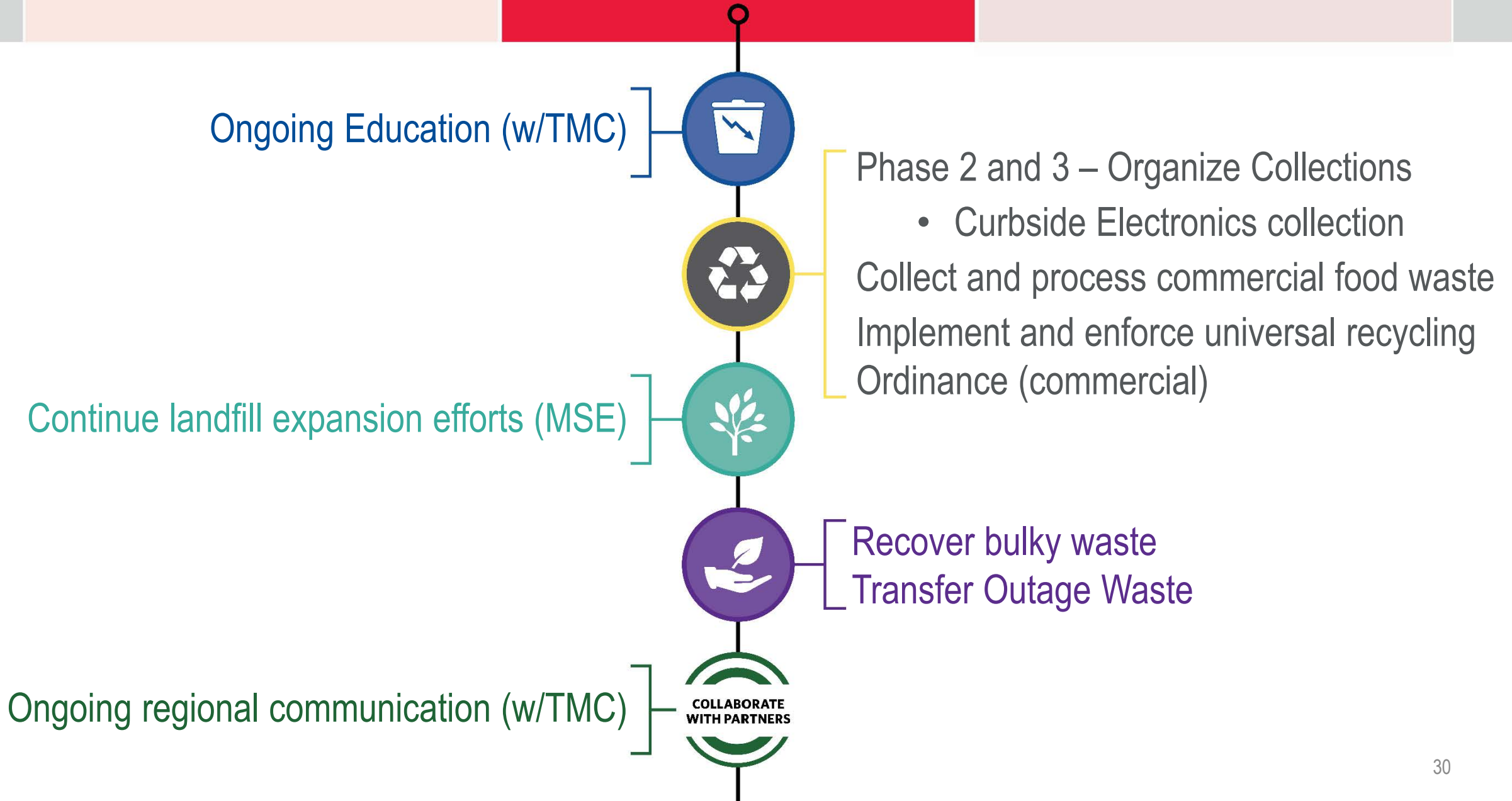


- Develop Regional Partners Committee (w/TMC)
- Develop Cooperative Agreement with Tampa Bay area WTE plants for recycling ash as construction products

2020 - 2024

2025 – 2033

2034 – 2048



2020 - 2024

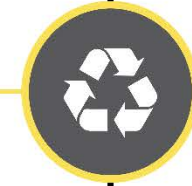
2025 – 2033

2034 – 2048

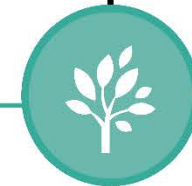
Promotion and Enforcement efforts (w/TMC)



Incorporate residential food waste in organized collections in unincorporated county (to TMC)



Monitor capital improvements





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