



SOLID WASTE AUTHORITY
OF BROWARD COUNTY

Draft Regional Solid Waste and Recycling Master Plan

June 11, 2025

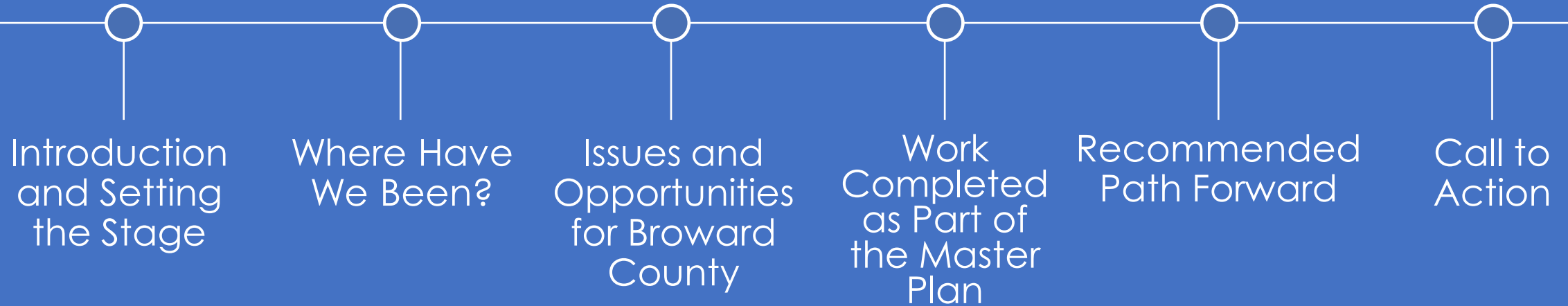


Plan smart. Recycle more. Waste less.

SCS ENGINEERS



Agenda





Introduction and Setting the Stage

Where Have We
Been?

Issues and
Opportunities for
Broward County

Work Completed
as Part of the
Master Plan

Recommended
Path Forward

Call to Action

Introductions



Daniel Dietch
Project Manager



Leah Richter, PE
Assistant Project Manager

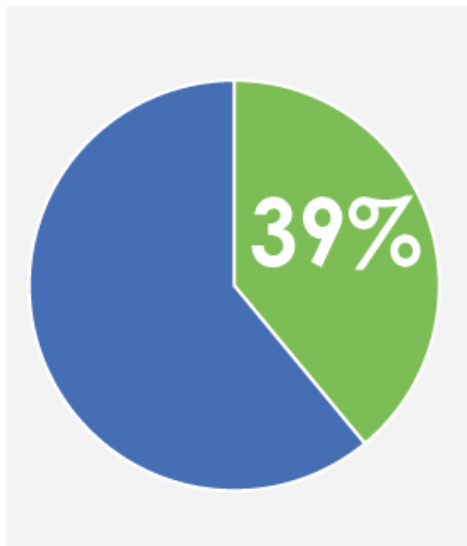


Travis Barnes, MPA, LEED AP
Senior Consultant

Executive Summary



NOW



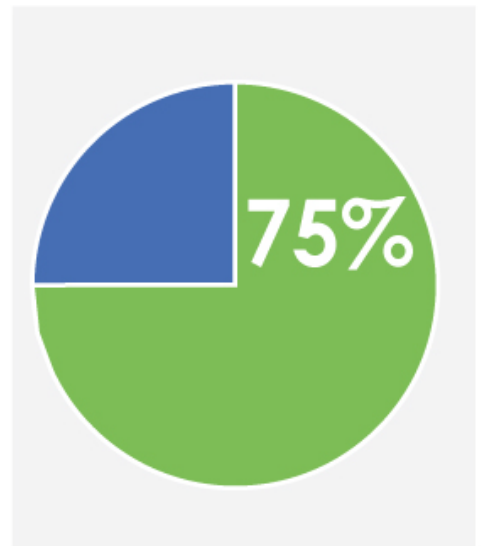
Enduring Principles

- Behavior Change
- Economies of Scale
- Harmonize Services
- Resource Stewardship
- Environmental Stewardship
- Financial Stability

**Pathways
to Reach 75% Recycling**

- Robust Education and Outreach
- Maximize Waste Minimization
- Increase Access to Recycling
- Optimize Organics Management
- Initiate Construction and Demolition Debris Management
- Enact Policies and Regulations
- Adopt Innovative Technologies
- Leverage Existing and Develop New Infrastructure or Procure Services, as needed
- Secure Long-Term Disposal Capacity

GOAL





Introduction and
Setting the Stage

Where Have We Been

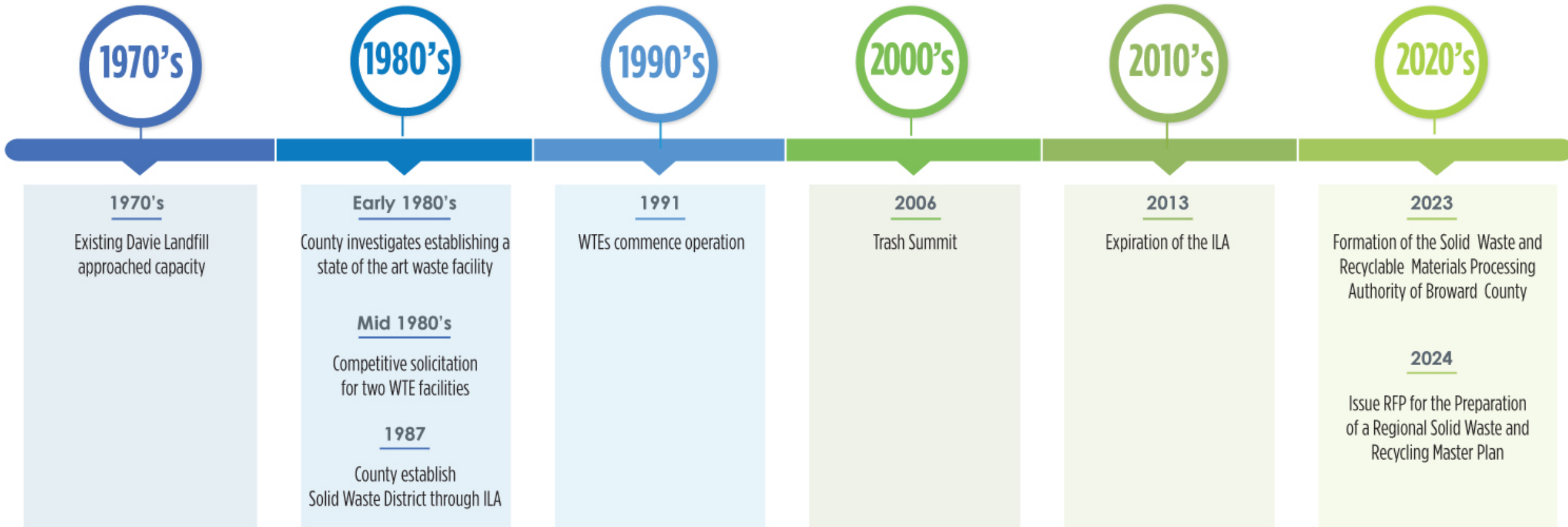
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Broward County Solid Waste History Timeline



Broward County SWA

Governance Structure Overview

29

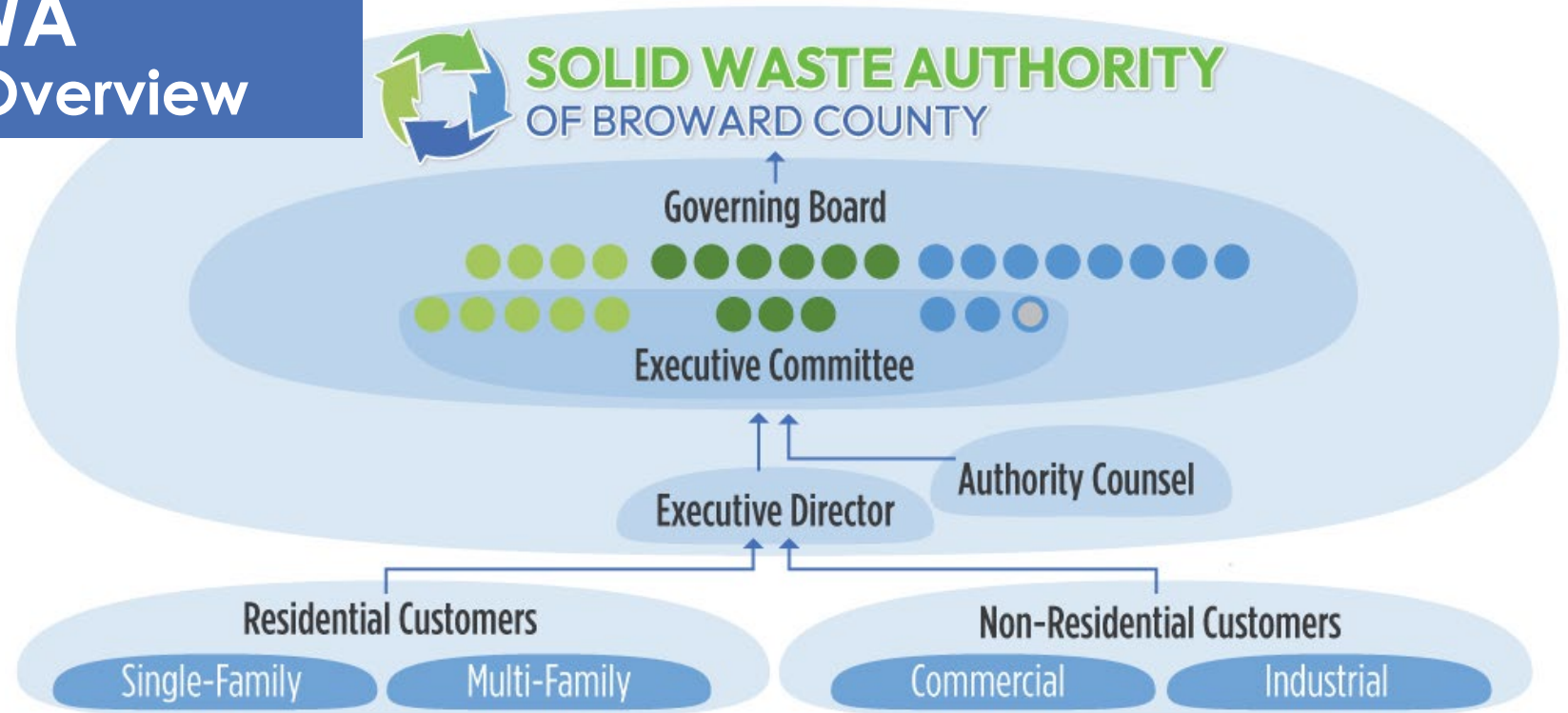
Governing Board
Representatives

11

Executive Committee
Representative
on the Governing Board

29

ILA Members



Large Members

Fort Lauderdale	182,760
Hollywood	153,067
Miramar	134,721
Coral Springs	134,394
Davie	105,691
Sunrise	97,335
Plantation	91,750
Deerfield Beach	86,859
Lauderhill	74,482

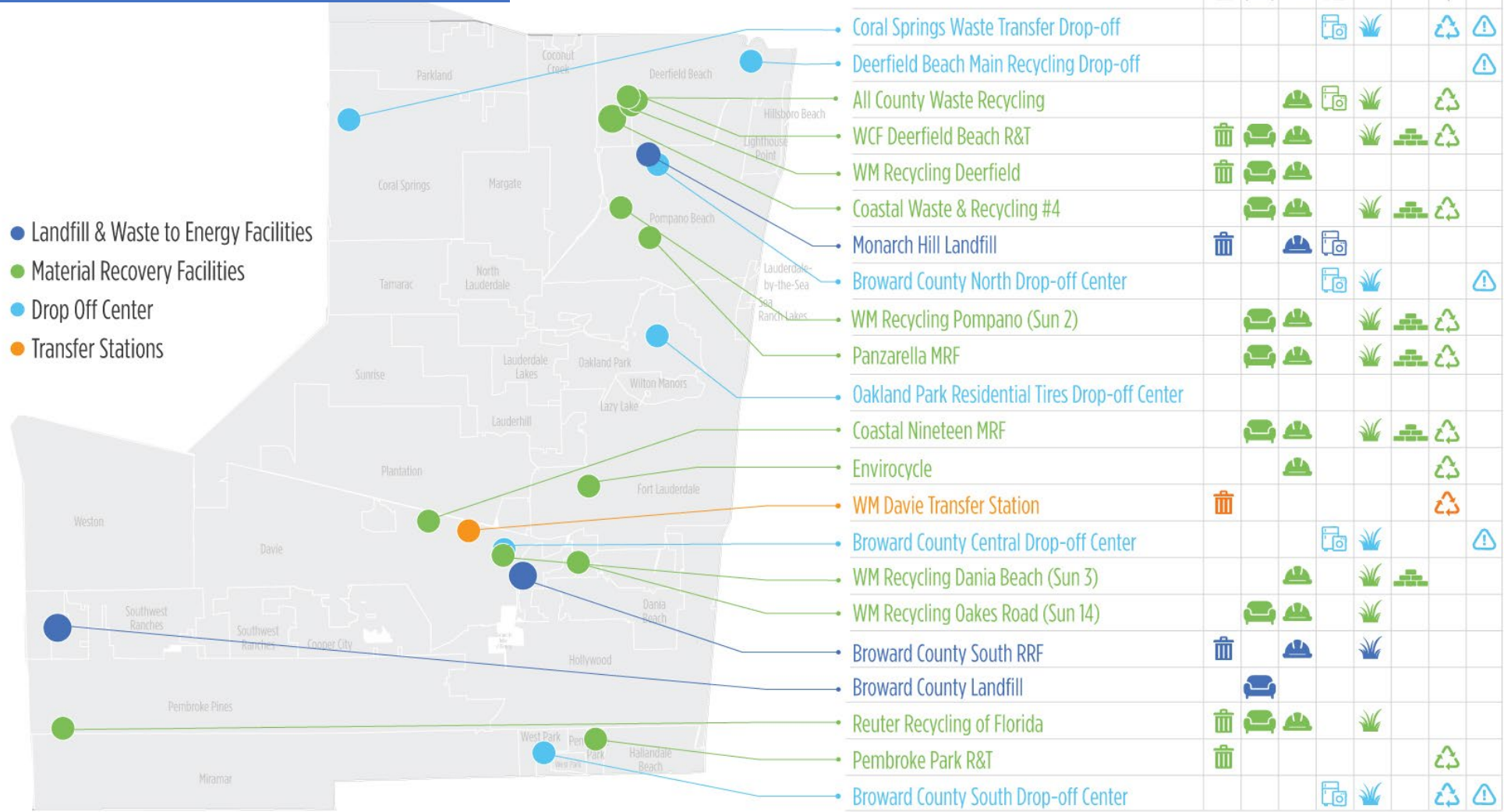
Medium Members

Tamarac	71,897
Weston	68,107
Margate	58,712
Coconut Creek	57,833
North Lauderdale	44,794
Oakland Park	44,229
Lauderdale Lakes	35,954
Parkland	34,670
Cooper City	34,401

Small Members

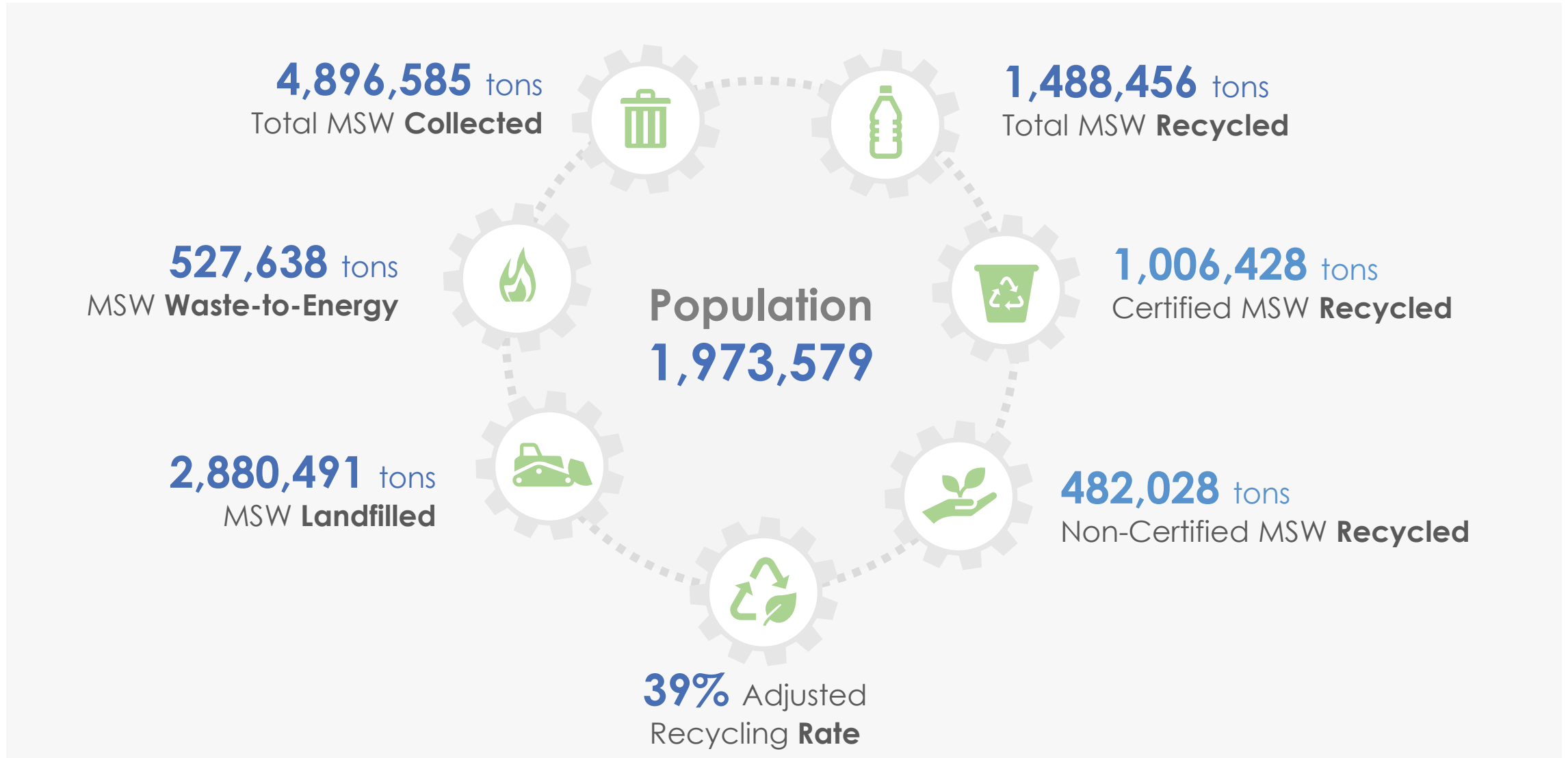
Dania Beach	31,723
Broward (Unincorporated)	15,462
West Park	15,130
Wilton Manors	11,426
Lighthouse Point	10,486
Southwest Ranches	7,607
Pembroke Park	6,260
Lauderdale-by-the-Sea	6,198
Hillsboro Beach	1,987
Sea Ranch Lakes	540
Lazy Lake	33

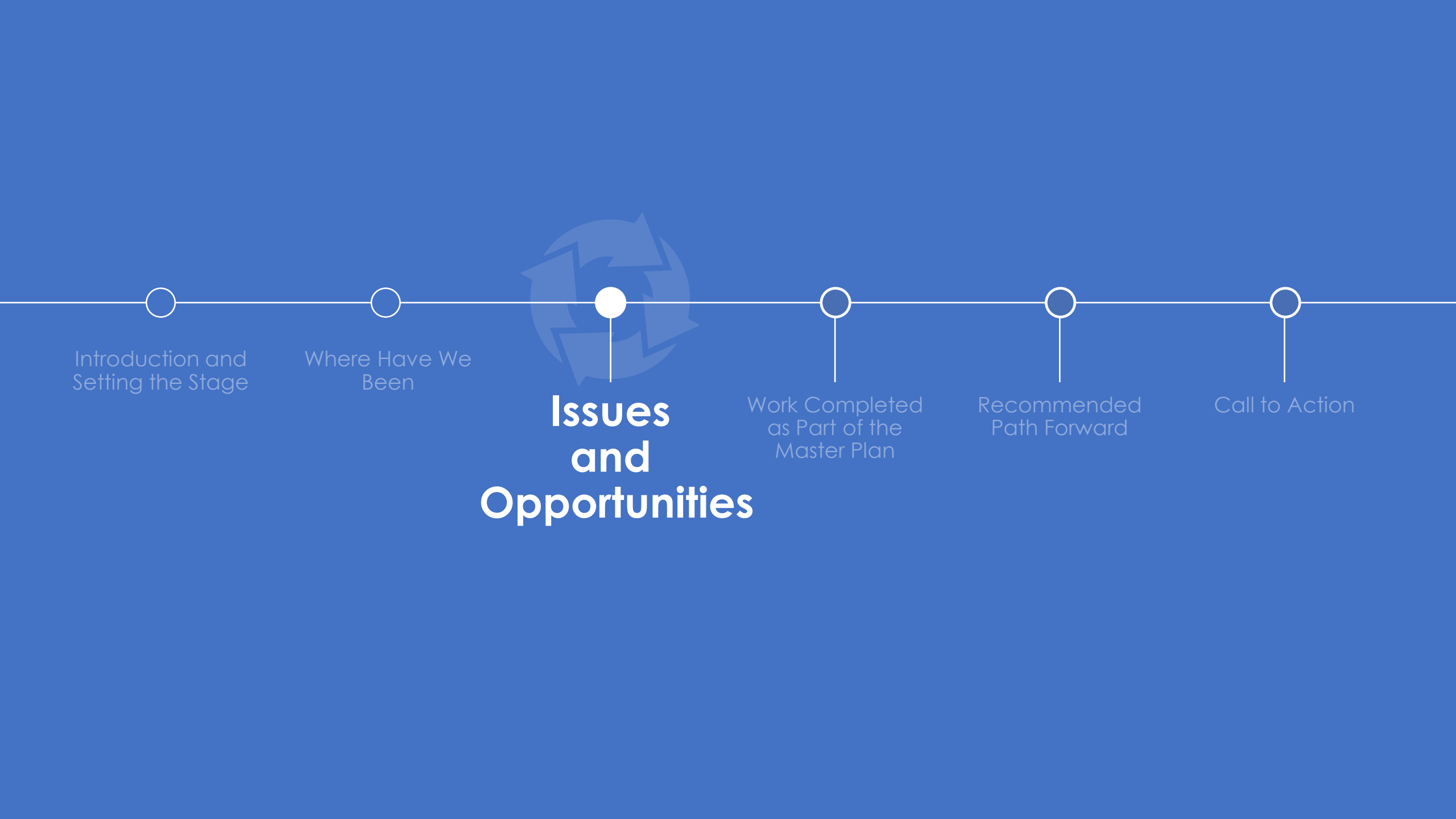
Existing Solid Waste System



- 1 Class I MSW
- 2 Class III Waste
- 3 C&D
- 4 White Goods
- 5 Yard Trash
- 6 Clean Debris
- 7 Recyclable Materials
- 8 HHW/E-Waste/Tres/Food Waste/Organics

Project Background | Final Disposition of Municipal Solid Waste (2023)





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Issues and Opportunities Facing Broward County

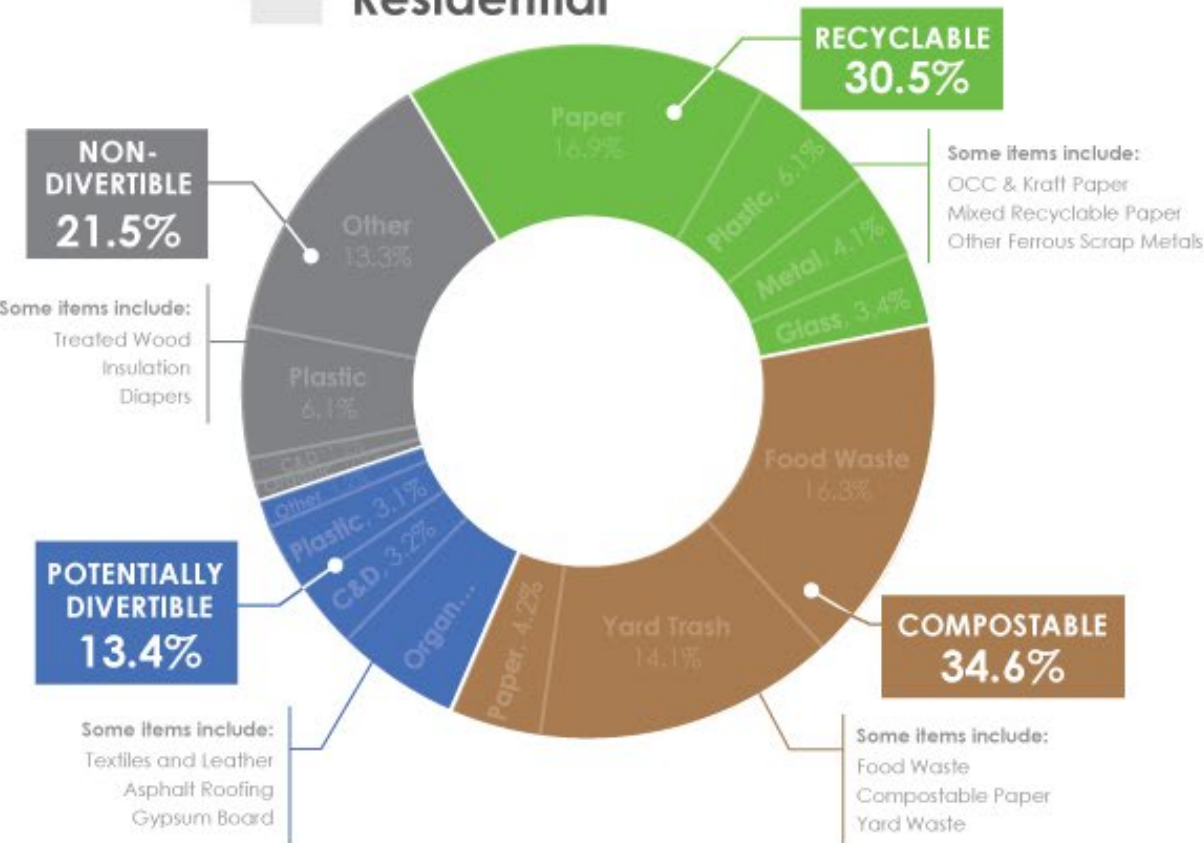
- **Statutory Requirements** (Fla. Stat. §403.706 (2021))
- **Alignment** of the Solid Waste Authority of Broward County Members
- **Fragmented Approach** to Solid Waste Management
- **Limited Public Land**
- **Cost Uncertainty**
- **Vertical Integration** of Solid Waste Service Providers Limits Competition
- **Ample existing** Solid Waste Management Infrastructure
- **Waste Composition** Analysis Highlights **Recoverable Waste Stream Components**
- It is a “Journey” to 75% Recycling

Opportunities | Diversion/Recycling

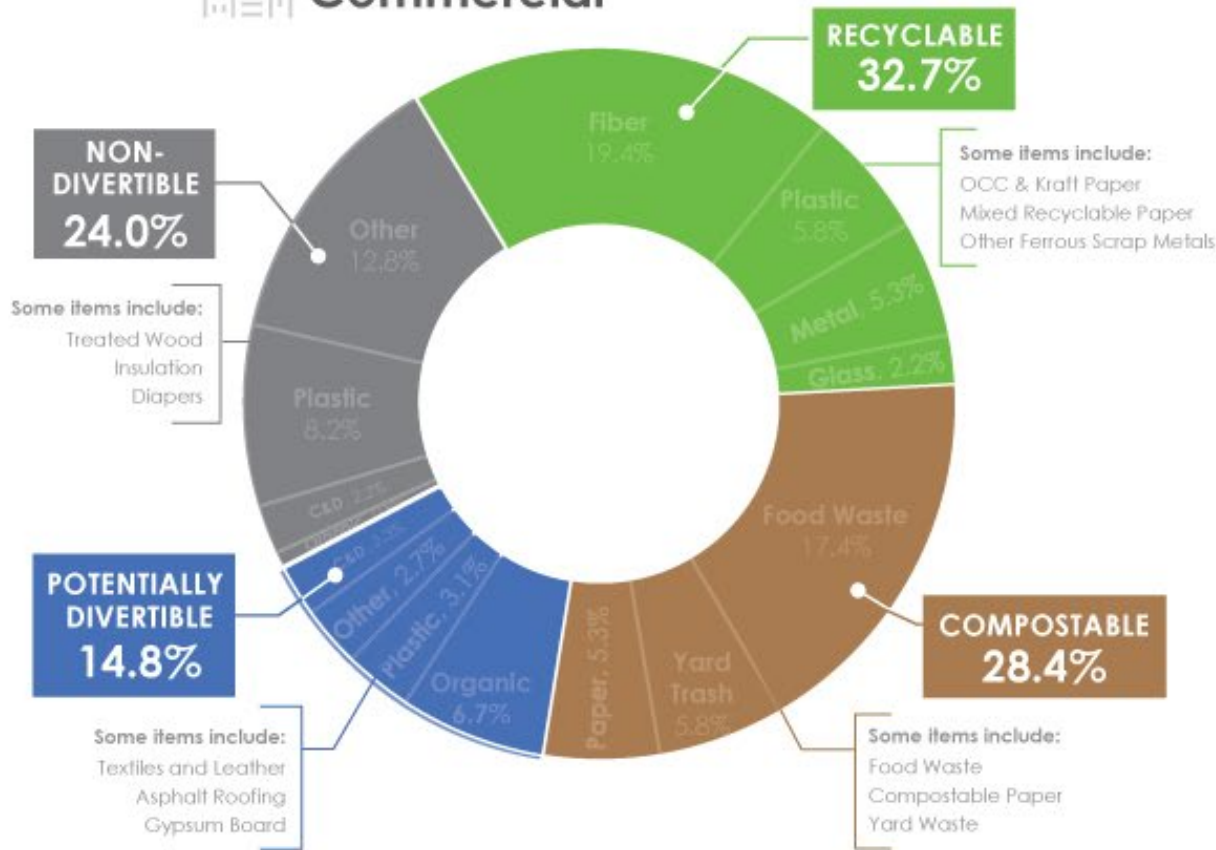
MSW Classification by Material Type (2024)



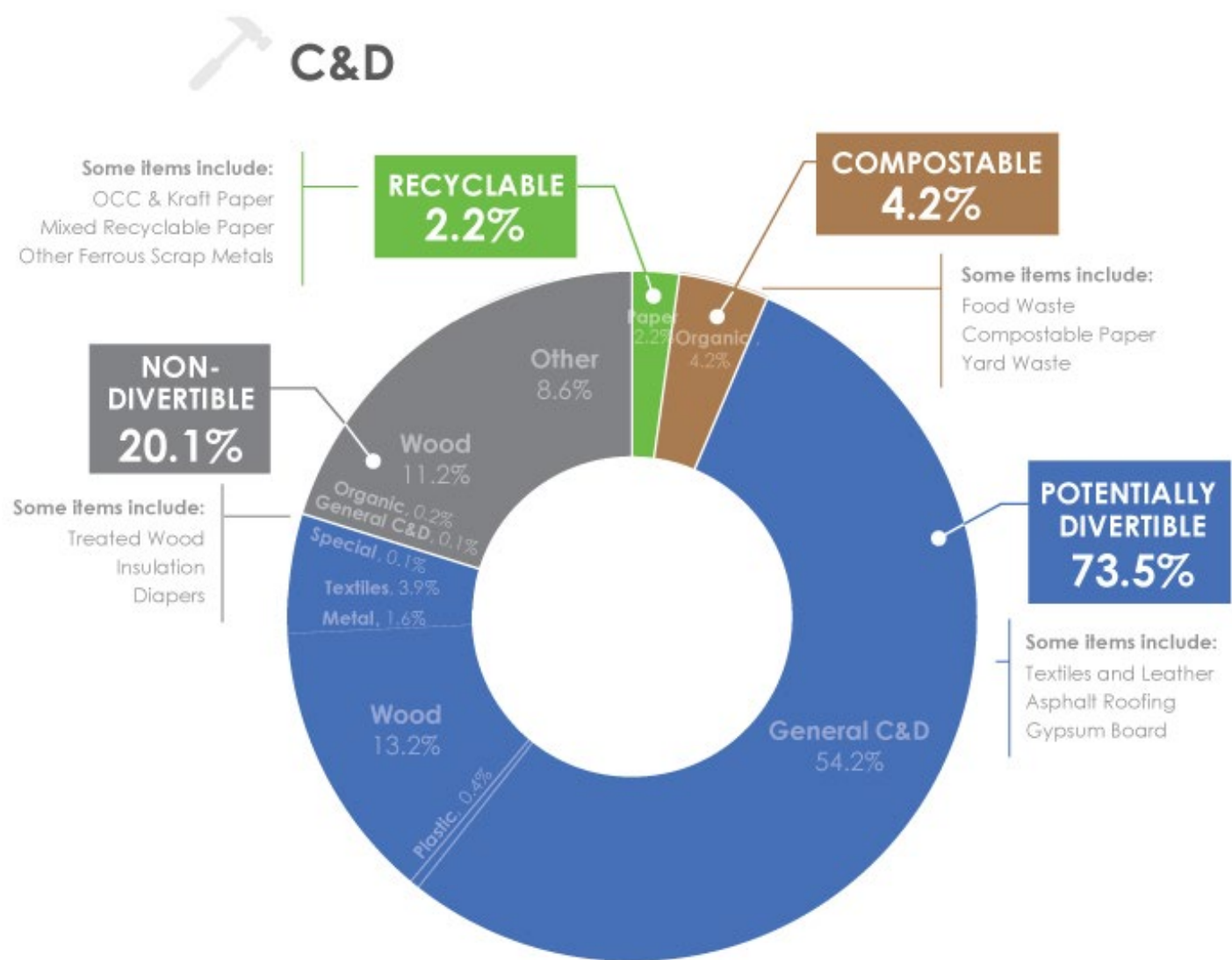
Residential

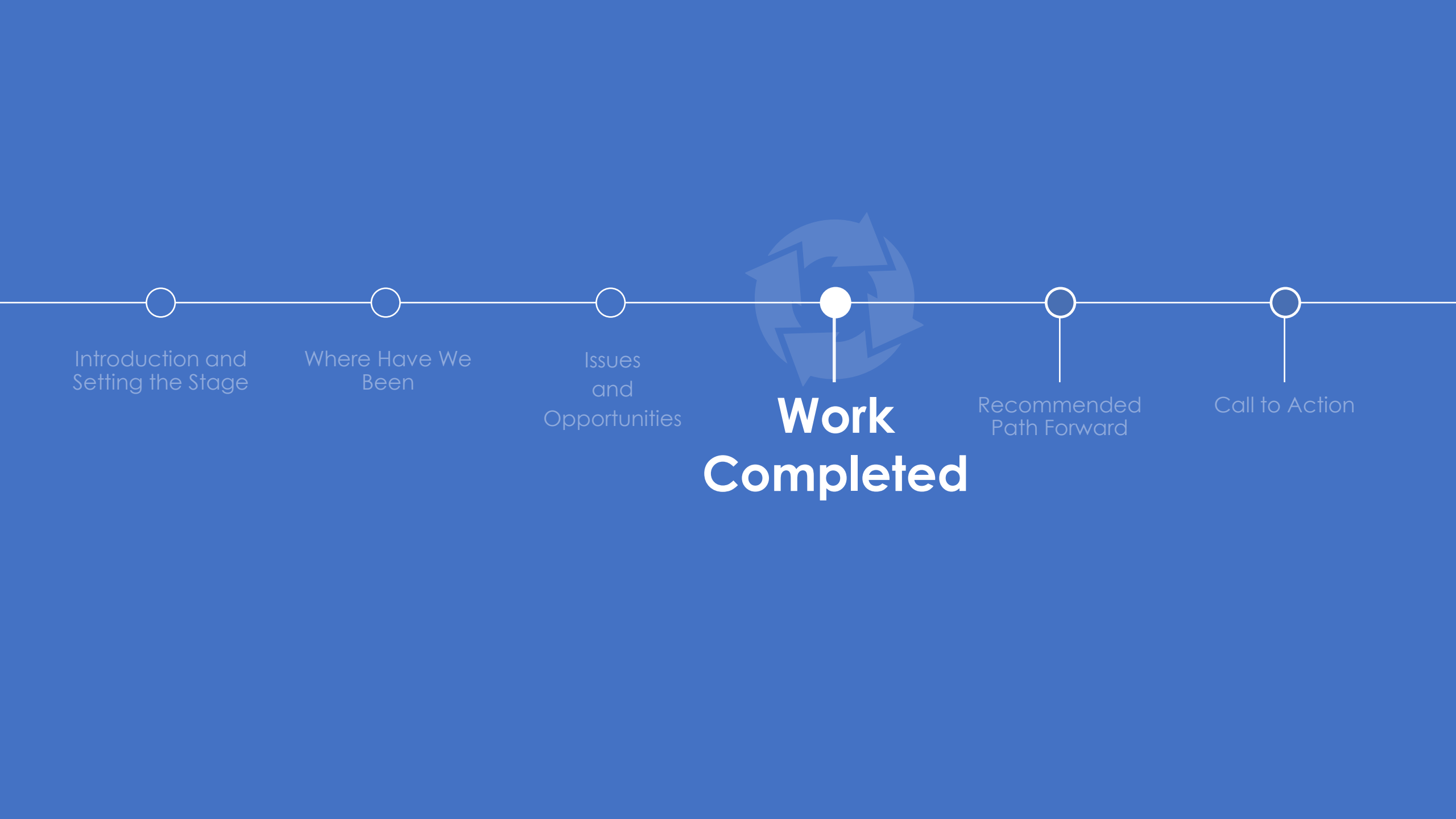


Commercial



C&D/Bulky Waste Classification by Material Type





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Guiding Principles



- 01 Control Your Solid Waste Management Destiny
- 02 Zero Waste Focus
- 03 Environmental & Growth Management Compliance
- 04 Long-term Disposal Solution
- 05 Commercially-Proven Technologies
- 06 Operational Excellence
- 07 Harmonization of Services County-wide
- 08 Best Value Service



Key Policies



refuse



reduce



reuse



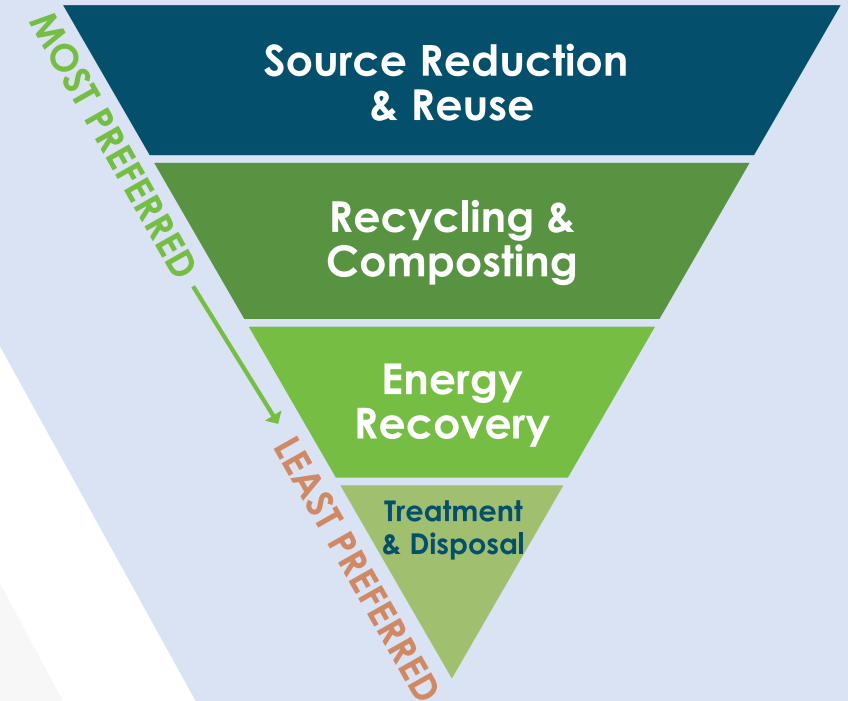
recycle



rot

- 01 40-year planning horizon
- 02 Out-of-County disposal/
intragovernmental partnerships
- 03 Maximize use of existing infrastructure
- 04 Enact annual assessment to recover
the full cost of services
- 05 Apply reasonable buffers from residential properties
- 06 Consider mandatory approaches to commercial
recyclables and C&D

USA EPA Waste Management Hierarchy



Work Completed

In-depth Research:

- **Regulatory & Policy:** Set rules to promote goal
- **Education & Outreach:** Communicate Policies
- **Future Needs Assessments:** Assess facilities and programs, how do they need to change to meet the County's Goal?
- **Innovative Future Technologies:** What is on the horizon
- **Financial Framework & Funding:** How can we stay balanced and keep moving forward

Regulatory and Policy Framework



Near Term Initiatives

- Disposal Bans
- Diversion/Zero Waste Mandates
- Public-Private Partnerships
- Contractor Performance Incentives
- Government Purchasing Programs
- Material Bans

Education and Outreach Program

Investment Success Factors:

- **Uniformity Across Programs:** Establishing consistency in program design and operations.
- **Targeted Educational Messaging:** Utilizing Community-Based Social Marketing techniques to effectively reach and influence diverse populations.
- **Enhanced Compliance Measures/Enforcement:** Strengthening policies to reduce contamination and ensure compliance.

Innovative Future Technologies

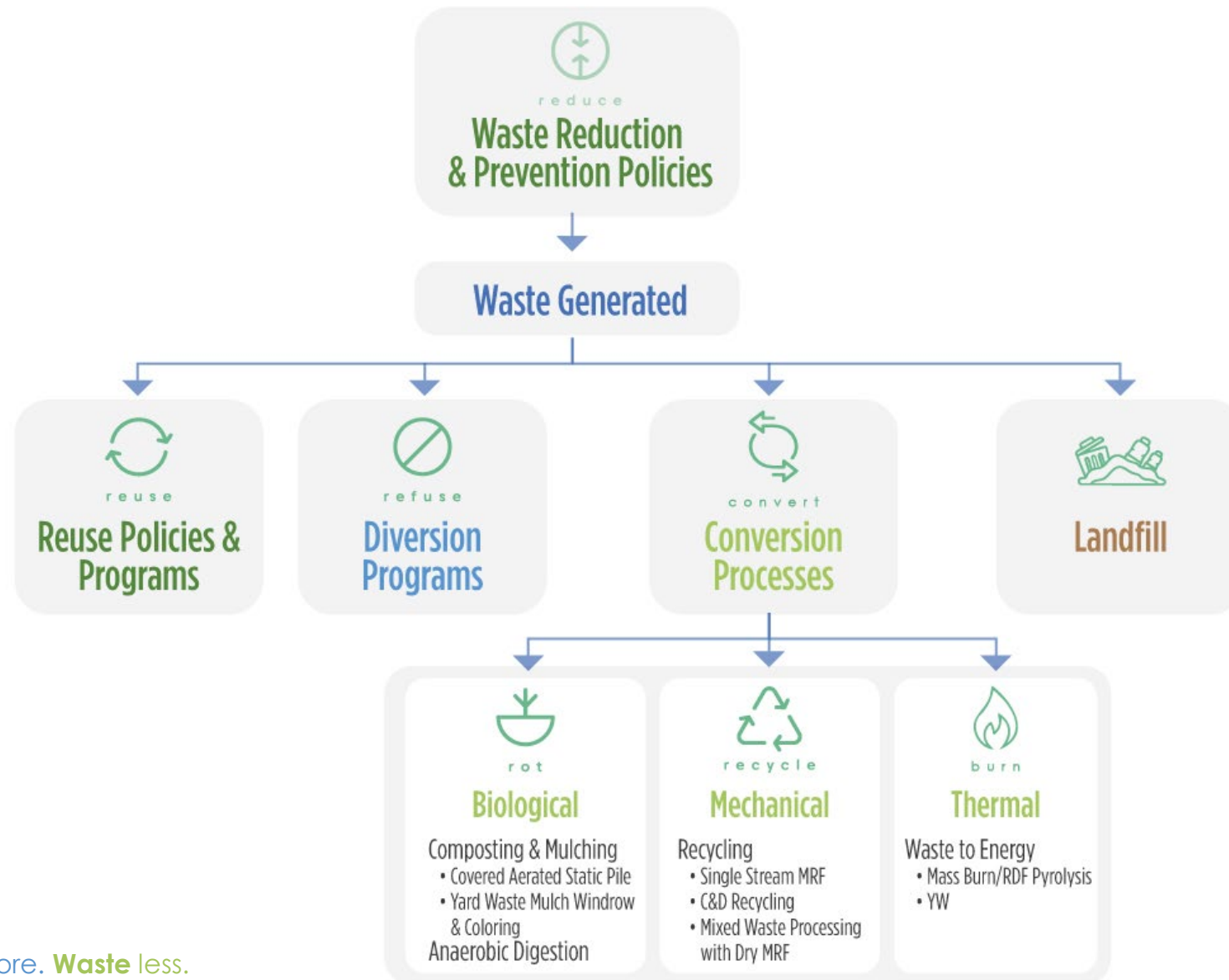
Technology Planning Framework

- **Low risk and proven to lead to high diversion rates**, for instance are best practices for waste reduction and reuse.
- **Practical, competitive, and cost effective**, which can be tailored to the Authority's unique geographic and demographic profile, including its coastal location and interconnectivity with neighboring counties.
- **Continuous Improvement-** preference for data-driven accountable metrics which automate repetitive, duplicative, and mistake-prone tasks.
- **Provide long-term and sustainable processing**, monitoring, communicating, safety enhancing methods which prioritize and promote operational efficiency and environmental stewardship.



Future Needs Assessment

Overview of Available Waste Approaches and Technologies Analyzed



Future Needs Assessment

	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E
Projected Diversion Rate	62%	79%	83%	51%	73%
Tons Left to Send to Landfill in 2045	2,700,000	1,600,000	1,300,000	3,300,000	2,100,000
Transfer Stations	3	3	3	3	3
Landfill Capacity	1	1	1	1	1
Single-Stream MRFs (Materials Recovery Facility)	2	2	2	0	2
Reuter's Recycling	1	1	1	0	1
MWPF (Mixed Waste Processing Facilities) + AD + Fiber	0	0	0	0	3
WTE (Waste to Energy)	0	1	1	0	0
AD (Anaerobic Digestion)	0	0	0	3	0
DRY MRFs	0	0	0	6	0
Organics Processing Campus	2	2	2	2	2
Mulch	2	2	2	2	2
CASP (Covered Aerated Static Piles) Zone	0	1	10	0	10
Biochar	1	1	1	1	1
Drop-Off Centers	8	8	8	8	8
C & D (Construction & Demolition) Recovery facilities	2	2	2	2	2

Future Needs Assessment

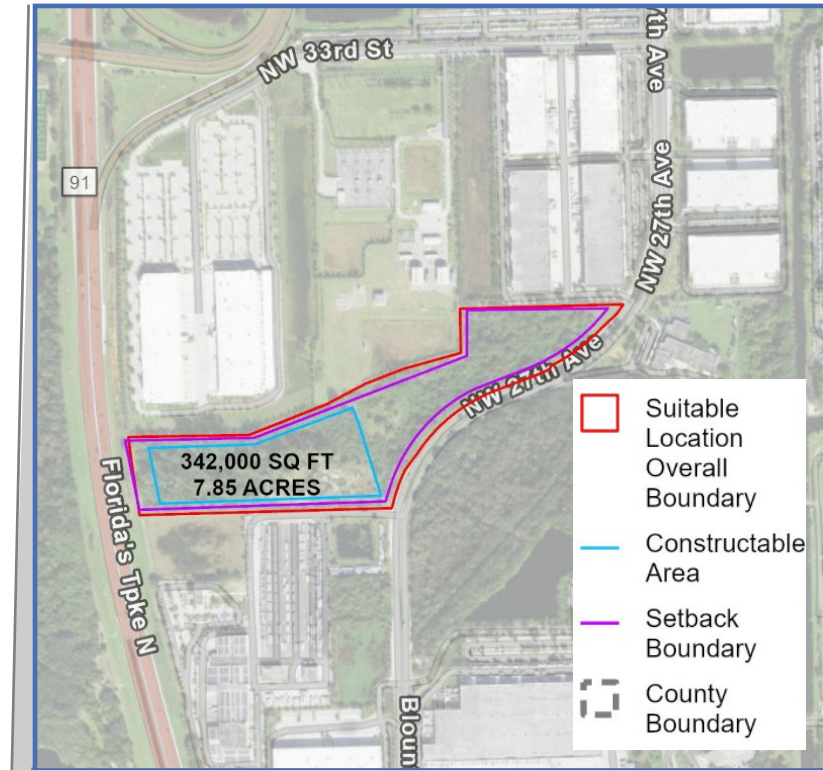
Siting Criteria Summary

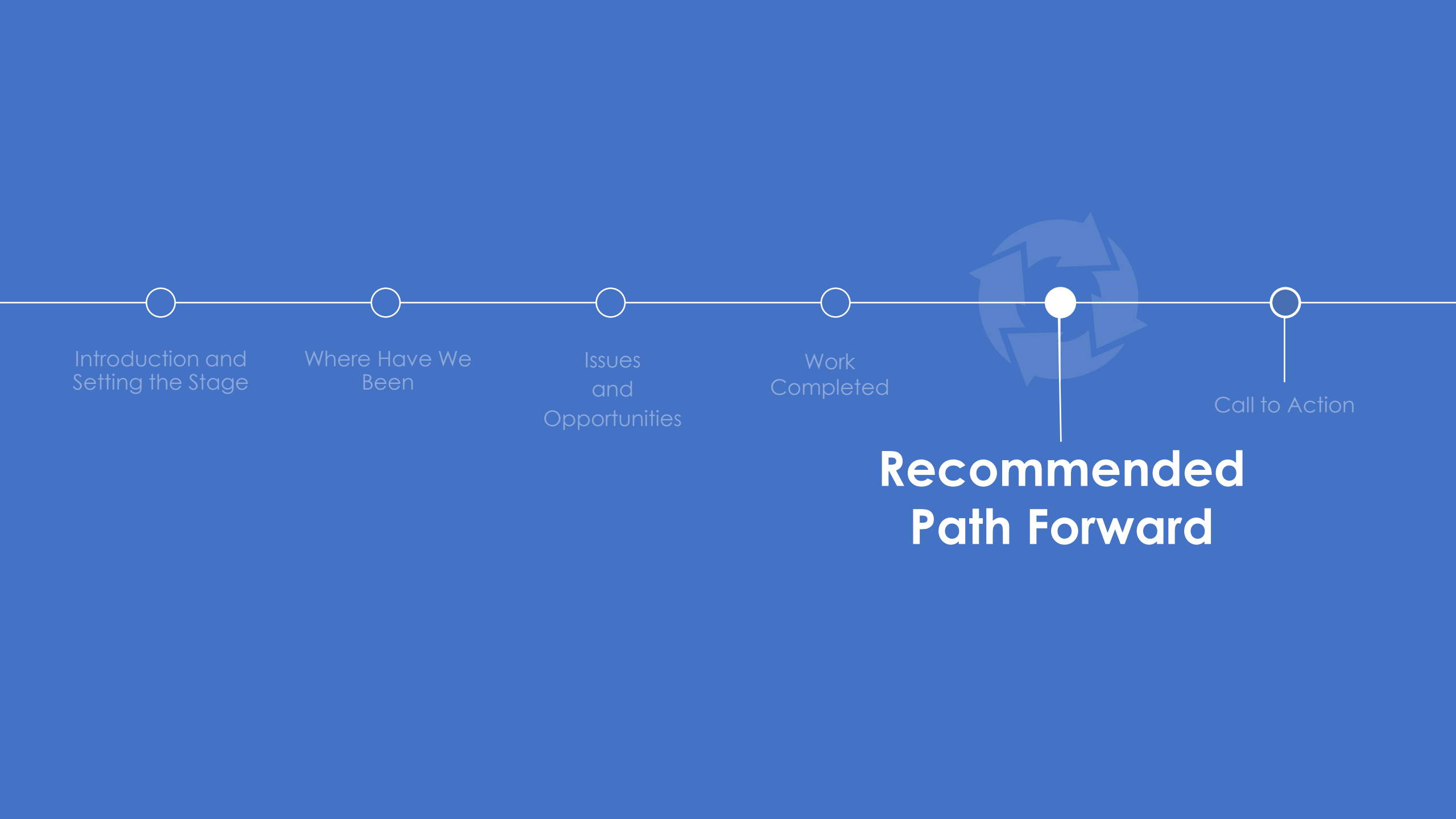
Technology	Capacity Needed Per Facility (TPY)	Minimum Site Area for Individual Facilities (AC)	Offset from Residential Zoning (Mile(s))	Parcel Ownership	Zoning	Transportation Travel Time to Major Road	Proximity to Airport
SS RMPF	250,000	20	0.25	Must be County or municipally owned	Vacant, Industrial, Commercial, and Agricultural	Exclude properties more than five miles from a Collector or Arterial Road	N/A
Mulch Facility	175,500	10	0.25				
Biochar	30,000	2	0.5				
Organics Processing Campus	380,000	10	1.0				
Aerobic Digester	160,000	7	0.25				
C&D RMPF	450,000	15	0.5				
Dry MRF	160,000	15	0.25				
MWP (Fiber Extraction, AD & MRF)	330,000	30	0.5				
Public Drop-Off Recycling Center	12,000	0.5	NA				
Transfer Station	1,240,000	15	0.25				
WTE	1,000,000	30	0.5				<4 mi.
Landfill	3,400,000	640	1.0				<4 mi.

Future Needs Assessment

North Alpha 250 Setback and Buildable Area

Facility Type	Capacity	Minimum Acreage Required Based on Based on Capacity	Available Acreage of Alpha 250 North	City of Pompano Beach Zoning Complaint	Minimum Setback to Residential Zoning	North Alpha 250 Ability to Accommodate Facilities
SS RMPF	250,000	20	7.85	No	0.25 miles	No
Mulch Facility	175,000	10	7.85	Yes	0.25 miles	No
C&D RMPF	450,000	15	7.85	Yes	0.50 miles	No
Organics Processing Campus – Scenario A (Much and Biochar Pyrolysis Facilities)	380,000	18	7.85	No	0.5 miles	No
Public Drop-Off Recycling Center	12,000	0.5	7.85	No	Not Applicable	No
Transfer Station	1,240,000	15	7.85	Yes	0.25 miles	No
Landfill	3,400,000	640	7.85	No	1-mile	No





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Work
Completed

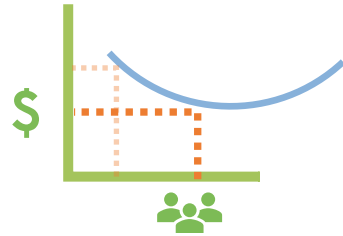
**Recommended
Path Forward**

Call to Action

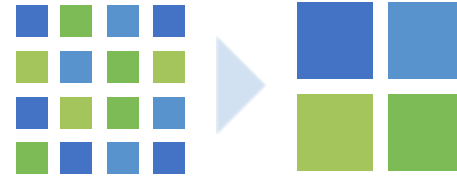
Strategic Priorities for Advancing the Master Plan



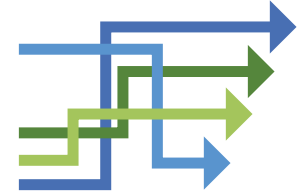
Behavior Change



Economies of Scale



Leverage Existing Infrastructure



Harmonize Services

- Develop an education and outreach plan that supports **behavior change**.
- Refine, build consensus, and execute an **effective communications strategy**.
- **Leverage economies of scale** to secure financial security.
- **Maximize the use of existing solid waste management infrastructure**.
- **Determine where and when to build new** solid waste facilities.
- **Harmonize services** across the Authority.
- **Creating consensus and alignment** amongst the ILA Members for the changes needed to meet the Master Plan goals.



Recommendations

Policies and Ordinances:

- **Harmonize minimum** curbside waste collection set-out standards.
- **Expand single-stream** recycling access.
- **Require yard waste** to be recycled.
- **Enact a mandatory C&D recycling** ordinance.
- **Enact a mandatory commercial recycling** ordinance.
- **Develop additional residential drop-off centers** for hard-to-recycle and hazardous materials.
- **Explore food waste collection** options and impacts.
- **Implement supporting policies and actions.**

Recommendations

Education, Outreach, and Communications Plan:

- **Invest in a sustained** communications and outreach program.
- **Become the trusted voice** to deliver waste and recycling-related information.
- **Partner with a wide range of stakeholders** to increase engagement with their networks.
- **Communicate with the community** in multiple ways via a combination of approaches.
- **Utilize existing and emerging technology** to better engage with residents.
- **Set clear, achievable milestones and develop uniform reporting.**
- **Leverage future authority facilities** as outreach hubs.



Recommendations



Innovative Technologies Adoption:

- **Develop overarching strategies** for new technology implementation within the Authority's control.
- **Adopt a preference for autonomous processes and continuous improvement utilizing** AI, blockchain, Web 3.0, and Internet of Things (IoT).
- **Implement a management system** that utilizes a common network of tools that maximizes cross-platform compatibility and connectivity.
- **Establish Technology Needs Committee** to research and provide recommendations on overarching strategies, technologies to pursue, and schedule of implementation.

Recommendations

Organics Management

- Deploy guidance to all ILA Members to **require clean yard trash separation requirements and** delivery to either a specified public or private processing facility for processing.
- Develop requirements and regulatory underpinnings for the **beneficial use of yard trash and eventually food waste.**
- **Work with ILA Members and Authority committees** on future separated food waste management.



Recommendations

Scenario A Overview

Programs

- Restore **Recycling Services** to 20% of Broward County
- Add **segregated Curbside Yard Waste (YW)** Collection
- Add **Food Waste (FW)** Drop-Off Events
- Add Permanent **Household Hazardous Waste (HHW)/Electronics/Recycling** Drop-Off Sites
- Add **reduction, reuse, and diversion programs and policies**
- Consider reducing **MSW** to 1x/week

Additional Facility Needs and Capacity of Each Facility- Tons Per Year (TPY)

- **2 Single- Stream Material Recovery Facilities** (250,000 TPY each)
- **2 New Organics Processing Sites** with:
 - 2 **Mulch/ Colorizing Operations** (175,000 TPY each)
 - 2 **New Biochar Pyrolysis operation** (30,000k TPY)
- **2 C&D Recovery Facilities** (450,000 TPY each)
- **8 Permanent Drop-Off Centers** (2,400 TPY each)
- **3 Transfer Stations** (North, South, Central Broward County)
- **1 Landfill**

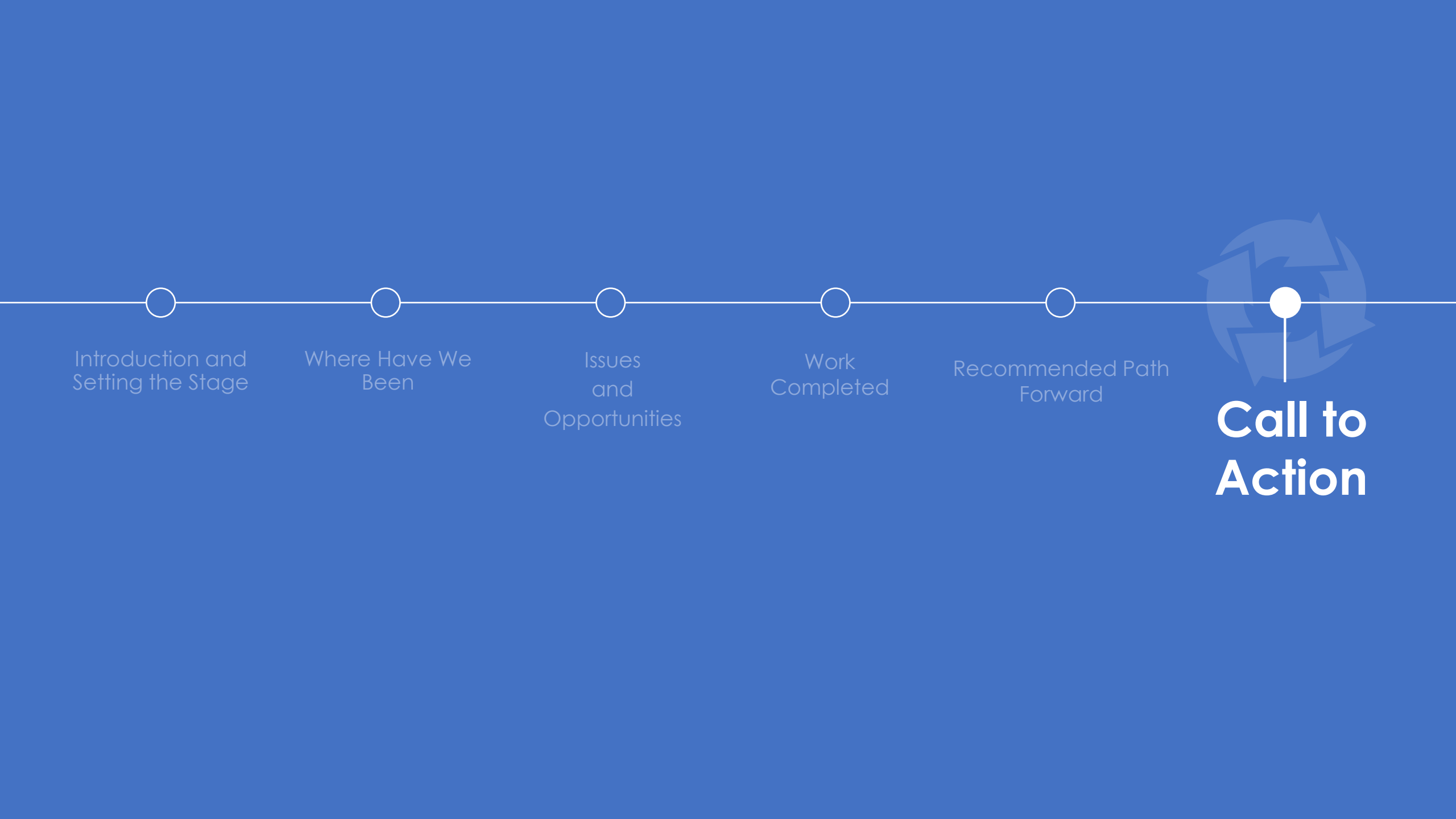
Target Diversion Rate Increase

+23 percentage points to 62%

Recommendations

Scenario A - Estimated Facility Costs (excluding land acquisition)

Description	Qty	Capacity (TPY/Facility)	CapEx/ Facility	Annual OpEx/ Facility
SS RMPF	2	250,000	\$72M	\$14M
Yard Waste Mulch Facility	2	175,000	\$5M	\$1.8M
Biochar Pyrolysis	1	30,000	\$10M	\$700k
C&D RMPFs	2	450,000	\$41M	\$19M
Public Drop-Off Centers	8	12,000	\$140k	\$1M
Transfer Stations	3	890,000	\$47M	\$31M
Landfill	1	3M	\$880M	\$229M



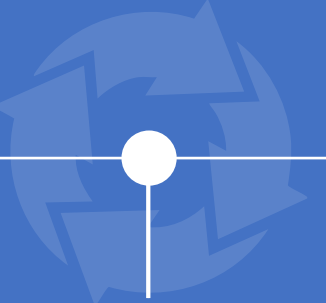
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**Call to
Action**

Implementation Plan and Timeline



Next Steps

Short Term (1 – 3 years)

- Convene public workshops
- Revise and issue the final Master Plan based on public input
- Engage ILA and non-ILA Members
- Adopt the Master Plan and transition from strategy to tactics
- Leverage existing and establish new Authority subcommittees
- Develop supporting legislation and Authority policies
- C&D management
- Yard Trash
- Flow control
- Harmonize materials management
- Create and implement a sustainable financial plan
- Deploy the Authority Communications Plan
- Prepare RFPs for recyclable materials, yard trash, C&D management, and solid waste disposal

Intermediate Term (4 – 6 years)

- Assess additional infrastructure needs

