



MIAMI-DADE COUNTY

ZERO WASTE MASTER PLAN

JULY 2026

MIAMI-DADE
COUNTY

Message from the Mayor,
Daniella Levine Cava

WELCOME TO MIAMI-DADE COUNTY'S VISION FOR A SUSTAINABLE FUTURE



Hello, Miami-Dade County residents!

As your Mayor, I am thrilled to introduce our Zero Waste Master Plan, a comprehensive roadmap designed to build a cleaner, healthier, and more resilient future our communities.

Our County produces over five million tons of waste, and we are rapidly running out of landfill space. To protect our environment and public health, we must completely rethink how we manage our resources. So, in 2022, I proposed that Miami-Dade County become a Zero Waste County and set an ambitious goal to recover and divert 90% of waste from landfill disposal by 2040. To achieve this, we must build on the traditional principles of reduce, reuse and recycle, and embrace strategies to refuse, redesign, and reimagine.

A zero waste future depends on making waste reduction practical and easy, while connecting it to a higher quality of life, stronger communities, and more meaningful experiences. County leaders can support this effort by updating policies, investing in community programs, and building smarter resource management infrastructure that balances short-term relief with long-term investments. This will ensure our communities remain affordable, resilient, and economically vibrant while becoming future-ready.

Together, let's protect paradise and build a sustainable Miami-Dade for generations to come!

Sincerely,

Daniella Levine Cava

CONTRIBUTING AUTHORS AND ACKNOWLEDGMENTS



LEADERSHIP

Daniella Levine Cava

Mayor, Miami-Dade County

Roy Coley

Deputy Mayor, Miami-Dade County

Dr. Aneisha Daniel

Director, Department of Solid Waste Management

MIAMI-DADE COUNTY STAFF

Department of Solid Waste Management

Nicholas Ciancio, Resilience Division Director

Ravi Kadambala, Interim Assistant Director

Achaya Kelapanda, Deputy Director of Operations

Robert Vargas, Chief of Public Information & Outreach

Caridad Mesa, Communications and Public Engagement Manager

Jessica Figueroa, Special Projects Administrator

Department of Environmental Resources Management

Loren Parra, Director and Chief Resilience Officer

Julie Dick, Deputy Chief Resilience Officer

Department of Regulatory and Economic Resources

Alex David, Planning Development Manager

Garett Rowe, Metropolitan Planning Division Chief

CONSULTANT TEAM

WSP USA

Catherine Prince, Project Director

Randall Russell, Project Manager

Mary Chamberlain, Lead Consultant

Alex Nadolishy, Lead Consultant

Steve Moeller, Lead Consultant

Brian Renehan, Lead Consultant

Kevin Lee, Lead Consultant

Alec Iacovelli, Lead Graphic Designer

Abbe & Associates LLC

Ruth Abbe

Amanda Waddle

Richard Ramcharitar

Catalyst Miami

Rachel Prestipino

Camilo Mejia

Maria Claudia Schubert-Fontes

Z Spicer

Kessler Consulting, Inc.

Mitch Kessler

Bethany Jewell Gray

Robin Mitchell

The **WSP Team** would like to thank Miami-Dade County’s Department of Solid Waste Management Director of Resilience, Nicholas Ciancio, for his assistance and collaboration throughout the development of the Miami-Dade County Zero Waste Master Plan. His continued support, coordination, and commitment were essential to the plan’s success.

TABLE OF CONTENTS

Foundation 1

Government Structure and Oversight 2

Miami-Dade County Solid Waste Management 11

Plan Development 17

Waste Reduction Baseline 18

Public Involvement and Stakeholder Engagement Process 23

Zero Waste Master Plan 25

Zero Waste Strategies 26

Strategy Implementation Roadmap and Timeline 52

Policy, Legislation, and Ordinance Plan 72

How Municipalities Will Implement Zero Waste 75



FOUNDATION



GOVERNMENT STRUCTURE AND OVERSIGHT



Introduction

Miami-Dade County operates within a multilayered regulatory framework that includes state legislation, administrative rules, and county ordinances. All impact the implementation of Zero Waste Strategies at the municipal level. Many of the requirements are intended to support material recovery while protecting public health and sensitive environmental resources, but some present significant barriers to reducing the creation of waste and pollution.

This section identifies and summarizes statewide policies and programs that impact zero waste initiatives.

State Level

Florida Department of Environmental Protection (DEP)

The Florida DEP is the lead state agency responsible for implementing state and federal environmental laws related to solid waste management. The department’s role is primarily regulatory, focusing on permitting, policy development, and compliance monitoring across several key areas.

The Energy, Climate Change and Economic Security Act of 2008 established a statewide weight-based recycling goal of 75% by 2020 with interim goals in the meantime (there is no provision in the statute for the goal to sunset after 2020).

INTERIM RECYCLING GOALS

2012	40%
2014	50%
2016	60%
2018	70%
2020	75%

Through the Act, Florida Legislation directed the Florida DEP to establish a reporting protocol for counties to provide annual reports of their recycling and disposal tonnages. DEP collects and analyzes annual recycling reports from counties, evaluates progress toward interim goals, and identifies strategies to improve recycling performance. These strategies include expanding organics recycling, improving construction and demolition debris recovery, supporting market development, and promoting education and outreach. Data shows the state's recycling rates have remained roughly steady around 50% for several years.¹

Division of Waste Management

The Division of Waste Management within the DEP oversees policy development and rulemaking and provides guidance for solid waste facilities and recycling initiatives across the state.

Permitting and Compliance Assistance Program (PCAP)

PCAP provides uniform regulatory operations across Florida's district offices, regulating statewide waste management infrastructure, including (but not limited to) landfills, materials recovery facilities, and waste tire management facilities. PCAP houses the Solid Waste Section and the Waste Reduction Section that directly manage facility compliance data, state recycling goals, and local government waste reduction grants and initiatives.

Solid Waste Section

The Solid Waste Section coordinates PCAP’s regulatory oversight of landfills, transfer stations, material recovery facilities, composting facilities, and other waste processing operations. The Solid Waste Section also enforces strict compliance for physical facilities and supports local governments with data analysis and specialized policy guidance to ensure safe statewide waste disposal.

¹ <https://floridadep.gov/waste/waste-reduction/content/recycling>



Waste Reduction Section

The Waste Reduction Section monitors and reports on Florida's progress toward statewide recycling goals by tracking municipal solid waste data and county recycling metrics. The section administers state grant programs, supports market development for recycled materials, and provides technical assistance to local governments. Additionally, the section promotes public outreach campaigns and champions organics management as a core strategy to divert organic material from the state's waste stream.



Regulatory Framework Affecting Zero Waste Strategies

FLORIDA RECYCLING STATUTES AND RULES

The DEP maintains a consolidated reference of Florida Statutes and administrative rules related to recycling and solid waste management. This statutory framework provides the legal foundation for Florida’s recycling and waste reduction programs and informs state-level policy development and local government implementation. These policies include provisions establishing the statewide recycling goal, defining recyclable and solid waste materials, regulating recovered materials dealers, and requiring certain public entities to report recycling activity annually.

REGULATION OF RECOVERED MATERIALS AND REPORTING REQUIREMENTS

Under Florida law, entities managing recovered materials above specified thresholds must annually certify and report material quantities, including the county of origin, to ensure accurate crediting toward recycling goals. DEP’s recovered materials program supports statewide recycling data collection and transparency and has been updated in recent years to include additional material types and processing methods.



CRITERIA FOR ORGANICS PROCESSING AND RECYCLING FACILITIES

Florida Administrative Code Rule 62-709 establishes requirements for organics processing and recycling facilities. Under this rule, some operations handling source-separated organics, such as yard debris, may simply register instead of obtaining a full solid waste permit if they comply with specific operating standards. Facilities that deal with mixed municipal solid waste or biosolids are not eligible for registration and must secure more extensive permits. For example, because food waste is classified as municipal solid waste, facilities like anaerobic digesters or composting sites must include landfill-style infrastructure, such as geosynthetic liners and leachate collection systems.

KEY STATUTES (FLORIDA PREEMPTION)

Florida Statutes § 403.7033 limits local governments’ ability to ban, restrict, regulate, or tax covered auxiliary containers, wrappings, and disposable plastic bags, reserving primary regulatory authority to the state unless the legislature authorizes local action.

It is important to note that some commonly referenced items, such as single-use plastic straws, are subject to different regulatory treatment compared to bags or other containers, necessitating careful determination and thorough review when implementing policy decisions. Under the current law, municipalities have the right to ban single-use plastic straws in their communities.

In 2024, Miami-Dade County adopted a Resolution (R-1030-24) directing that contracts with concessionaires on county property include provisions to eliminate (to the extent possible) the distribution of certain single-use plastics and polystyrene to consumers, and to eliminate distribution at county-run concessions. Local governments use this type of procurement-focused approach to advance waste reduction goals within the scope of their contracting and operational authority.

County Level

Introduction

This chapter provides a detailed overview of the political and governmental structure of Miami-Dade County, highlighting its unique metropolitan governance system, key government roles, and administrative organization.

The county is governed by a Board of County Commissioners, who are elected officials representing different districts. The commissioners set policies and approve budgets. The county mayor, also an elected official, and its office oversee the day-to-day operations of all the departments. This strong-mayor system is structured to ensure that the county runs smoothly and efficiently, addressing the diverse needs of its residents and businesses.

Structure of Government

Miami-Dade County operates under a distinctive "two-tier federation" metropolitan form of government, established by a home rule charter. This system divides governance between the county government and the 34 incorporated municipalities within its borders.

The county government (upper tier) serves all residents and is responsible for broad metropolitan services, such as transportation, airport and seaport operations, water and sewer systems,² and solid waste disposal.

The municipal governments (lower tier) provide localized services, including police patrol and zoning enforcement specific to their communities. For residents in unincorporated areas, the county government fulfills both upper and lower-tier roles, delivering all city-type services alongside countywide functions. For instance, Miami-Dade County’s Department of Solid Waste Management (DSWM) provides curbside waste and recycling collection services to more than 350,000 households in unincorporated Miami-Dade County and 10 municipalities, including Aventura, Cutler Bay, Doral, Miami Gardens, Miami Lakes, Opa-locka, Palmetto Bay, Pinecrest, Sunny Isles Beach, and Sweetwater.

The governance framework consists of an executive mayor, a legislative body, and several independently elected constitutional officers, as described in the sections ahead.

Executive Mayor

The mayor of Miami-Dade County is elected by the entire county for a four-year term and may serve up to two consecutive terms. The mayor acts as the chief executive officer of the county government, overseeing administrative departments, appointing department directors, and holding veto power over decisions made by the Board of County Commissioners, including budget approvals. The current mayor is Daniella Levine Cava, who is the primary champion and architect behind initiating and advancing Miami-Dade County's Zero Waste Master Plan after proposing that Miami-Dade County become a Zero Waste Community and setting the target to keep 90% or more of waste out of landfills.

Board of County Commissioners

The Board of County Commissioners serves as the legislative and policy-making body of the county, comprising 13 members elected from single-member districts for staggered four-year terms, with a two-term consecutive limit. With broad, regional powers the commission enacts ordinances, sets policies, and is responsible for approving certain procurement policies and deviations thereof; authorizing limited contracting authority to the county mayor (mayor) to initiate, award, renew and modify procurements; authorizing the mayor to recommend competitive actions or other appropriate action to the board; and further authorizing the mayor to delegate limited contracting authority. While the mayor has veto authority over any legislative, quasi-judicial, zoning, master plan or land-use decision of the commission, the commission can override the mayor’s veto with a two-thirds majority vote.

Constitutional Officers

In addition to the mayor and commission, several constitutional officers are independently elected as mandated by the Florida Constitution and state law. These officials operate largely independently of the county government and include the sheriff, clerk of the circuit court (who also serves as county auditor and recorder), property appraiser, supervisor of elections, tax collector, state attorney, and public defender. Notably, the state attorney and public defender are state officials. Historically, Miami-Dade County has consolidated many of these functions into subordinate county departments through home rule powers. However, a recent constitutional amendment restored some offices to independent elected status starting January 2025.

2 Water and sewer systems are provided countywide, but service delivery may involve both Miami-Dade County and individual municipalities depending on the area and utility arrangement.

Miami-Dade County Departments

Understanding the organizational structure of Miami-Dade County (the county) is crucial for implementing zero waste policies, programs, and infrastructure.

Currently, more than 25 departments and offices make up the county, offering municipal services to unincorporated areas as well as metropolitan services across the county. Of these, the following 15 departments are recognized for their potentiality to drive, implement (lead by example), or provide administrative support to zero waste programs and initiatives.

Department	Responsibilities
Aviation Department	Oversees Miami International Airport and general aviation airports, maintains airport facilities, and supports air travel for passengers and cargo.
Communications, Information and Technology	Manages digital services, public-facing platforms, county branding; ensures communication and technology infrastructure is adequate.
Community Services	Offers social services, Head Start programs for children, services for elderly, and veterans affairs; enhances well-being of residents.
Libraries	Operates the county’s public library system; provides access to educational, informational, cultural, and digital resources; delivers community programming and lifelong learning opportunities.
Finance Department	Oversees financial reporting, accounts payable, investment activities; maintains integrity of financial operations and reporting.
Management and Budget	Coordinates fiscal policies, prepares annual budget, and oversees financial planning and resource allocation.
Regulatory and Economic Resources (RER)	Oversees countywide zoning, business regulations, building permits, historic preservation, and economic development.
Environmental Resources Management (DERM) ²	Protects and restores the county's land, air, and water ecosystems to safeguard public health and wildlife by monitoring environmental quality, managing coastal and wetland resources, and enforcing compliance with local environmental codes.

Department	Responsibilities
Parks, Recreation and Open Spaces (PROS)	Oversees the county park system, provides recreational opportunities, manages events and resource rentals, and maintains green spaces.
People and Internal Operations	Provides centralized support for county facilities, fleet management, risk management, and small business programs; maintains internal operations.
PortMiami	Manages passenger and cargo ports and hubs for maritime commerce and tourism; facilitates international shipping and cruise operations.
Housing and Community Development (PHCD)	Develops and supports affordable and workforce housing programs, administers housing assistance initiatives, supports neighborhood revitalization, and partners with public and private entities to expand countywide housing availability.
Solid Waste Management (DSWM)	Handles collection and disposal of garbage and bulky waste pickup; ensures waste management meets environmental standards.
Strategic Procurement Department (SPD)	Manages procurement and contracting for goods and services, conducts competitive solicitations, and ensures compliance with procurement laws.
Transportation and Public Works (DTPW)	Operates Miami-Dade Transit system (Metrorail, Metromover, Metrobus), manages county roads and bridges, ensures safe and efficient movement of people.
Water and Sewer (WASD)	Provides drinking water and wastewater services; maintains water quality, distribution infrastructure, and wastewater treatment.

Regulatory Framework Affecting Zero Waste Strategies

SOLID WASTE REQUIREMENTS (CHAPTER 15)

Miami-Dade County’s solid waste regulations include requirements for recycling programs in certain settings and mandatory separation of recyclable materials from the solid waste stream. These provisions support consistent diversion and proper handling of recyclable materials.

Under Chapter 15 of the Miami-Dade County Code, organic materials are defined as solid waste and fall under the jurisdiction of the DSWM. Composting facilities engaged in the processing, storage, or treatment of organic waste generally require a Community Composting Facility Permit ([County Ordinance R-25-105](#)).

No composting permit may be issued without a written recommendation from the Director of DSWM confirming that the proposed facility is consistent with the county’s waste management system and planning objectives. Facilities that collect food scraps must also obtain a Compost Hauling Permit ([Resolution R-979-25](#)), ensuring that materials transported over public roads are handled by licensed operators.

ENVIRONMENTAL PROTECTION AND OPERATING PERMITS (CHAPTER 24)

Miami-Dade County’s Chapter 24 environmental code establishes operating permit requirements for all waste facilities, including recycling and composting facilities and systems. While the Department of Regulatory and Economic Resources (RER) oversees the permitting processes, the Division of Environmental Resources Management (DERM) enforces the environmental permitting and groundwater protection requirements. Given Miami-Dade County’s reliance on the Biscayne Aquifer, a shallow and highly permeable drinking water source, environmental protection considerations are a primary factor in composting regulation. Composting operations handling higher-risk materials, such as meat or manure, may be required to implement groundwater monitoring to detect potential impacts to water quality.

BOND ORDINANCE CONSIDERATIONS (SYSTEM COMPATIBILITY)

The Code of Miami-Dade County notes that certain private facilities may be reviewed for consistency with the county’s solid waste system, including considerations related to revenue impacts and system compatibility where applicable. Any proposed waste diversion facility, including (but not limited to) mulching, composting, and recycling facilities, must be evaluated on a case-by-case basis to confirm that it will not adversely affect system revenues, as determined by the DSWM.

KEY ORDINANCES AND PROGRAMS

Established ordinances and programs that reflect the objectives of the Zero Waste Master Plan are listed below.

- » **Disposable Polystyrene Procurement Review:** Directs evaluation of county procurement policies and purchases to identify safeguards and measures to eliminate, whenever possible, disposable polystyrene purchases; also directs reporting on safeguards and purchasing history. (Board Resolution R-500-16)
- » **Single-Use Plastics and Polystyrene at County Concessions:** Directs inclusion of provisions in county concessionaire contracts to preclude distribution of single-use plastics and polystyrene items to consumers and directs elimination of these items at concessions on county-owned property. (Board Resolution R-1030-24)
- » **Plastic Free 305:** A voluntary recognition program for businesses intended to reduce reliance on single-use plastics, developed in partnership with nonprofits and business organizations; also urges Florida legislative changes to allow local regulation of certain disposable plastic items, such as auxiliary containers, wrappings, or disposable plastic bags used by consumers to carry products from retail establishments. (Board Resolution R-1179-21)
- » **Green Business Certification Program:** Establishes a voluntary Green Business Certification Program, including checklist standards, application and verification steps, recognition, and tracking/reporting provisions. (Implementing Order IO-03-55)
- » **Green Procurement Preference:** Directs preparation and presentation of a “green” procurement preference program for environmentally responsible products and services. (Board Resolution R-1053-09)

- » **Parks Rules and Regulations:** Adopts Parks, Recreation and Open Spaces Department rules and regulations, including definitions and the general regulatory framework governing public use of county parks and related facilities. (Chapter 26, Section 26-1)
- » **Recycling Programs for Multi-Family Residential Establishments:** Requires multifamily residential establishments to provide a recycling program serviced by a permitted hauler or appropriate governmental agency. (Chapter 15, Section 15-2.2)
- » **Mandatory Separation of Recyclable Materials:** Requires separation of specified recyclable materials from other solid waste for residential and multifamily settings and requires commercial establishments to separate selected recyclable materials included in their recycling program; allows approved modified recycling programs in certain circumstances. (Chapter 15, Section 15-2.6)
- » **Environmental Operating Permits:** Requires operating permits for specified systems and facility categories that may reasonably be expected to be sources of air, ground, or water pollution, with permit conditions and restrictions. (Chapter 24, Section 24-18)
- » **Recommendations with Respect to Composting Operations:** Provides recommendations regarding composting operations in Miami-Dade County, including siting considerations, regulatory requirements, and near-term actions; emphasizes groundwater protection and the need for county-specific data and pilot efforts. (Directive No. 231904)
- » **Sustainable Buildings Program:** Establishes county policy to incorporate green building practices into public projects where practical; implementing Order 8-8 provides compliance direction and references recognized sustainability standards, such as Leadership in Energy and Environmental Design (LEED) or Envision. (Chapter 9, Article III and Implementing Order 8-8)

Local Level

Miami-Dade County’s 34 municipalities have already implemented various waste reduction strategies. Factors such as population, land area, housing types, estimated waste generation, collection frequency, and specific local regulations or programs that advance environmental sustainability mark a starting point for advancing waste reduction locally. These efforts also demonstrate public alignment with Miami-Dade County’s Zero Waste Master Plan, which recognizes local leadership and offers a framework to guide future zero waste planning and implementation within municipal governments.

Appendix B summarizes each municipality’s attributes, waste collection services, and key ordinances and programs supporting Miami-Dade County’s Zero Waste Master Plan.

Key Ordinance and Policies

Number of Municipalities	Policies and Programs
10	EPS ban
10	Commercial & Multifamily or Industrial recycling requirement
8	Plastic straws ban
6	Green/Sustainable building requirement
6	Advisory Committee
5	Sustainability, Vision or Comprehensive Plan
5	Single-use plastics reduction
4	C&D** materials regulation

Key: C&D: construction and demolition debris; EPS = expanded polystyrene

Municipality	Policies
Aventura	» Commercial and multifamily solid waste and recycling collection ordinance » Green building ordinance
Bal Harbor	» Single-use plastic ban » EPS ban
Bay Harbor Islands	» MSW enclosure requirements » EPS ban » Plastic straws and stirrers ban » C&D materials recycling
Coral Gables	» Private disposal service permits and licenses » Commercial and multifamily recycling requirements » Cardboard boxes disposal requirements » Environmentally preferred procurement policy » Single-use carry-out plastic bag prohibition » EPS bans » Plastic straws and stirrers ban
Cutler Bay	» C&D materials recycling » EPS ban » Plastic straws ban
Doral	» Commercial and multifamily solid waste and recycling collection franchise » Multifamily recycling requirement » EPS ban at parks
Florida City	» Tree limbs, brush, and yard waste handling requirements » Commercial solid waste collection frequency
Golden Beach	» Light load disposal fees (policy/fee schedule) » Yard debris/horticulture trash and rubbish ordinance
Hialeah	» Commercial and multifamily solid waste and recycling collection franchise » Hotel and residential recycling requirement » Commercial and multifamily collection container requirements
Hialeah Gardens	» Single-family dwelling unit recycling fee » Commercial solid waste and recycling – security deposit requirement
Homestead	» Commercial and residential solid waste collection frequency » Multifamily solid waste and recycling requirement » Commercial recycling requirement
Indian Creek Village	» Country club solid waste service level » Solid waste level of service standards

Municipality	Policies
Key Biscayne	» Plastic-Free KB
Medley	» Commercial solid waste collection, storage, and placement
Miami	» Multifamily recycling requirement » Commercial recycling requirement » Green waste/landscaper permit requirement » Donation collection bins prohibition (reusables/textiles) » Handbills (paper litter control) » Green fleets ordinance » Environmentally preferable purchasing » Florida-friendly fertilizer use ordinance
Miami Beach	» EPS ban for city contractors and special events » Green events » Miami Beach resiliency code
Miami Gardens	» Single-service utensils for temporary mobile food facilities » Parks and Recreation sanitation and recycling controls
Miami Lakes	» Solid waste collection franchise requirement » Town of Miami Lakes green building program » Storm or emergency cleanup participation
Miami Springs	» Garbage and recycling receptacles and enclosures » Multifamily residential recycling program
North Bay Village	» EPS bans » Special events recycling requirement » Plastic straws prohibition » Green building/form-based code » Florida-friendly fertilizer use ordinance » Balloon release prohibition » Construction site waste receptacle requirement » Special events ordinance
North Miami	» Garbage liquids and wrapping requirement » Garden trash/yard debris requirements » Household hazardous waste prohibition » EPS and single-use plastic straws – city contractors and special events
North Miami Beach	» Garbage liquids, wrapping, and covered containers » Yard debris separation requirements » Hazardous waste handling and approval

Municipality	Policies
Opa-locka	» Recycled materials license ordinance
Palmetto Bay	» EPS and plastic bag restrictions » Plastic straws prohibition » Sustainable building standards » C&D management
Pinecrest	» Sustainable building program
South Miami	» Commercial recycling requirement » Mandatory recycling and separation » C&D hauling license requirement » Demolition standards and recycling plan
Sunny Isles Beach	» Mandatory multifamily/condominium recycling » Mandatory commercial business recycling » Yard debris separation requirement » Balloon release prohibition » Plastic beverage straws prohibition and “Skip the Straw” program » EPS food service products prohibition » Pet waste removal requirement
Surfside	» Industrial waste removal » EPS food service articles prohibition » Plastic straws prohibition » Sustainable building and resilient development
Sweetwater	» Industrial and commercial recycling requirement
Virginia Gardens	» Solid waste recycling and collection fees
West Miami	» Solid waste recycling and collection fee » Bulky waste collection fee » Garbage and trash storage capacity requirement » Industrial and noncombustible waste disposal

Key: **C&D** = construction and demolition debris; EPS = expanded polystyrene; **MSW** = municipal solid waste

Municipal Waste and Recycling Collection Service

The table to the right details the frequency of collection across the 34 municipalities in Miami-Dade County. Under Miami-Dade County Code Chapter 15-2³, all municipalities are required to provide collection services, but no standard level of service is currently required. All municipalities already support source-separation and collection of recycling and trash; however, the service levels and frequency of collection on is uneven across the County.

RECYCLING CONTAINER COLOR-CODING:

The table below details the varying designs of recycling containers and the respective colors that are used. Approximately 465,580 households were provided with blue recycling carts (varying in size from 30-gallon, 65-gallon, or 96-gallon) or bins (14-gallons to 22-gallons) (83.0%) while an estimated 95,369 households were provided with other colored recycling carts (17.0%).

Blue Recycling Carts/Bins	Different Color Recycling Carts/Bins
DSWM Service Area (19 municipalities)	North Miami (Olive Green)
Miami	Homestead (Green w/ Yellow Lid)
Golden Beach	Hialeah (Green)
Coral Gables (22-gallon bin)	Miami Shores (Green bin)
Surfside	Biscayne Park (Dark Green)
Indian Creek Village	Hialeah Gardens (Green)
Bay Harbor Islands	
North Miami Beach	
Bal Harbour	
Key Biscayne	

3 Chapter 15.2 (Solid waste collection services, container usage, condition and location) of the [Miami-Dade County Code](#).

Percent of Municipalities with Collection Frequency	Collection Frequency
MSW	
10%	3 times per week
90%	2 times per week
Recycling	
5%	2 times per week
30%	1 time per week
65%	Every other week
Trash (Bulky Items and Yard) Debris	
15%	Yard-only 3 times per week
25%	Bulky & Yard 1 time per week
15%	Bulky-only 1 time per week
15%	Bulky-only every other week
15%	Bulky & Yard every 2-3 weeks
10%	Bulky & Yard 1 time per month
25%	Bulky & Yard 1 time per quarter
25%	Bulky & Yard by appointment
10%	Bulky-only by appointment
5%	Bulky & Yard scheduled by route

Key: **MSW** = Municipal Solid Waste, commonly referred to as “Garbage”

The Zero Waste Strategy, titled, “Universal Recycling and Compost Ordinance” aims to create a uniform system for collection services across the county and all sectors including a requirement that all recycling containers be blue.



MIAMI-DADE COUNTY SOLID WASTE MANAGEMENT

Introduction

Miami-Dade County's waste management system involves 34 municipalities managing their own residential and commercial waste collections, with the DSWM providing services in unincorporated areas and select cities, including curbside garbage and recycling collection, bulky waste pickups, and drop-off centers, supported by infrastructure such as transfer stations, landfills, and Material Recovery Facilities (MRF). The following sections provide an overview of the collection systems and waste management infrastructure as well as the waste composition used to establish baseline data for waste reduction strategies. The comprehensive Waste Stream and System Characterization Report is provided in Appendix D.

Collections

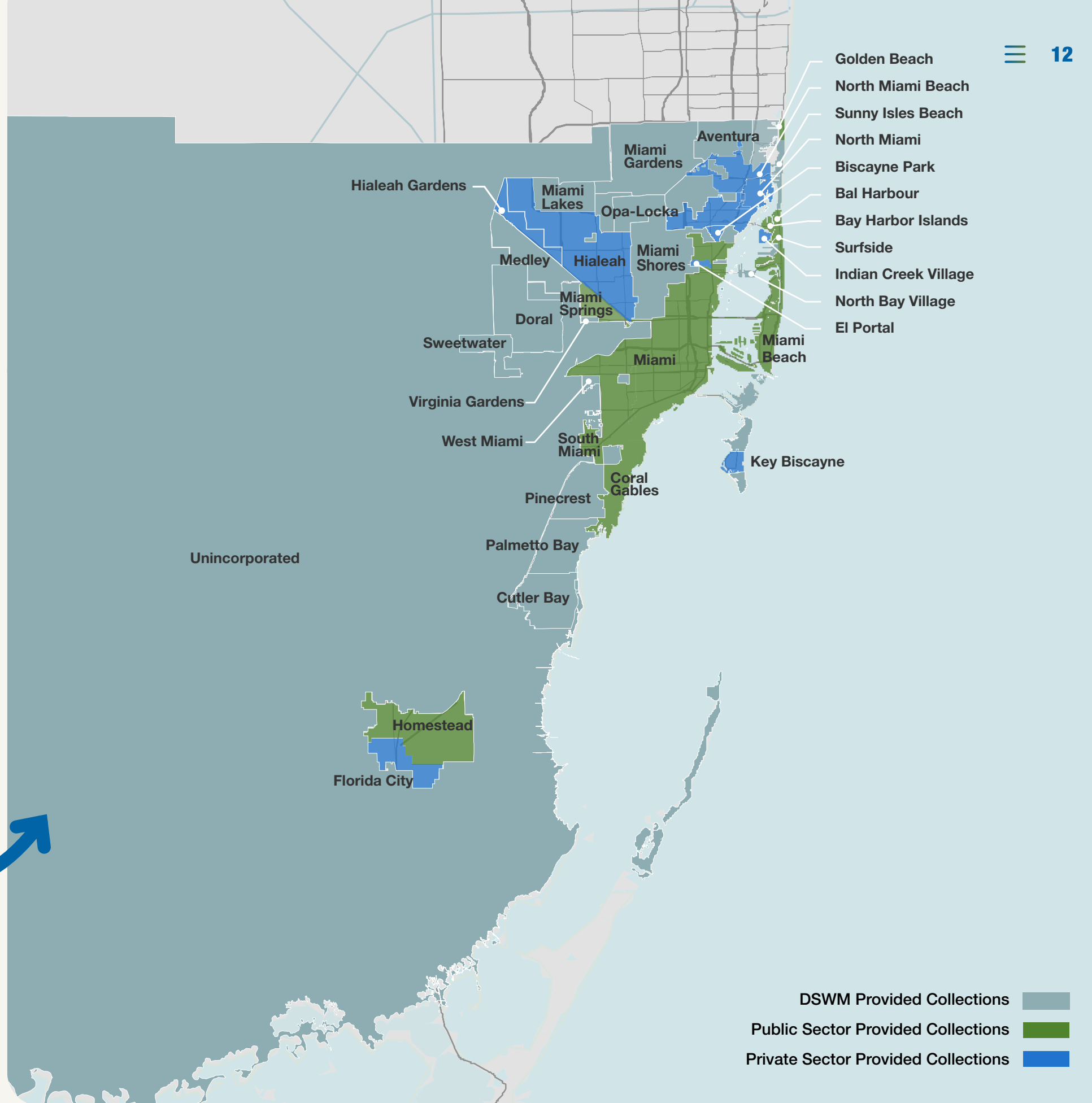
Miami-Dade County comprises 34 incorporated municipalities and the unincorporated area. All municipalities are responsible for ensuring residential and commercial collection services within their boundaries (e.g., in-house services, private sector contracts, and interlocal agreements with the county).

Residential Collections

GARBAGE:

DSWM fleet and crews provide residential garbage collection in the unincorporated areas of the county and to the cities of Aventura, Cutler Bay, Doral, Miami Gardens, Miami Lakes, Opa-Locka, Palmetto Bay, Pinecrest, Sunny Isles Beach, and Sweetwater. DSWM's service is provided to all single-family homes, duplexes, triplexes, and some cluster homes of four or less dwelling units in the Waste Collection Service Area and partner municipalities. Most residential properties receive automated pickup of garbage waste two days per week. The remaining 24 municipalities either provide garbage and trash collection services directly or contract with private hauling companies for such services. Figure 1 shows the delineation of garbage collection service areas among DSWM, municipal providers, and private haulers.

Figure 1: Garbage Collections Map

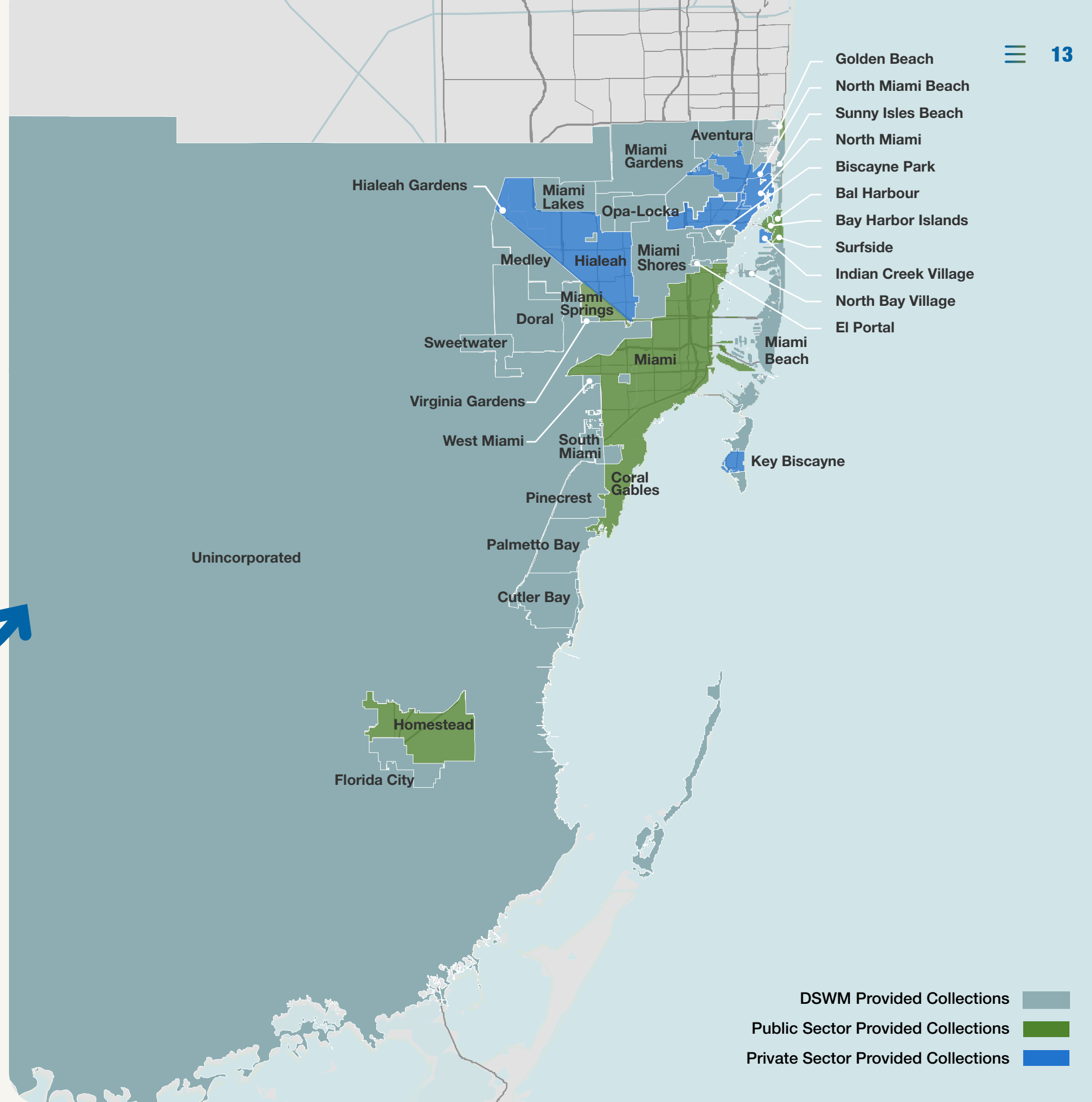


Residential Collections

RECYCLING:

DSWM provides collection of residential recyclables in the unincorporated areas and the 10 municipalities listed above, as well as through nine interlocal agreements (ILAs) with El Portal, Florida City, Medley, Miami Beach, Miami Springs, North Bay Village, South Miami, Virginia Gardens, and West Miami. DSWM currently contracts with Coastal Waste & Recycling, Waste Management, and Waste Connections to provide curbside collection of recyclables for the nine municipalities with ILAs. Recyclables are commingled in blue recycling carts and picked up every other week (apart from several municipalities that pay to receive weekly collection). Figure 2 shows the delineation of recycling collection service areas among DSWM, municipal providers, and private haulers.

Figure 2: Recycling Collections Map



Recycling collection programs and the items accepted for recycling vary based on the hauler and municipality. Across Miami-Dade County, most municipalities consistently provide residents with the opportunity to recycle similar materials. Table 1 lists the materials accepted in DSWM’s curbside recycling program.

Table 1: DSWM List of Accepted Materials for Recycling

Material	Accepted Items
Paper	Paper cups, clean and dry newspapers, magazines, catalogs, telephone books, printer paper, copier paper, mail, all other office paper without wax liners
Cardboard	Packing boxes, cereal boxes, lightly soiled pizza boxes, gift boxes, corrugated cardboard
Cans	Steel and aluminum food and beverage cans
Cartons	Aseptic poly-coated drink boxes, juice cartons, milk cartons
Plastic bottles	Plastic narrow-neck bottles
Plastic tubs and jugs	Plastic cups, plastic tubs such as butter or yogurt tubs, plastic jugs such as milk or detergent jugs
Glass	Bottles and jars

All municipalities accept aluminum cans, paperback books (excluding phone books), plastic bottles, boxboard (cereal boxes, cartons, etc.), and paper. Table 2 below identifies the municipalities not accepting specific recyclable items in their recycling programs.

Table 2: Material Types Not Accepted Across all Municipalities

Material	Municipalities Not Accepting Items
Cardboard	Golden Beach
Glass Bottles	Hialeah, Key Biscayne
Steel Cans	Miami, North Miami
Yogurt Containers	Golden Beach, Hialeah Gardens, Key Biscayne, Miami, North Miami Beach
Pizza Boxes	Biscayne Park, Golden Beach, Hialeah, North Miami Beach
Aluminum Pie Pans	All but Bay Harbor Islands, Biscayne Park, Homestead, Key Biscayne, North Miami, Surfside
Aluminum Foil	All but Bay Harbor Islands, Biscayne Park, Coral Gables, Key Biscayne, North Miami, Surfside

Household Trash (Bulky Items and Yard Debris):

In addition to regularly scheduled curbside collection of garbage, each household in DSWM’s service area is entitled to two “trash” pickups per year of up to 25 cubic yards of bulky items (including construction material) and yard debris per pickup. Residents must schedule trash pickups for their bulky items and yard debris in advance through the county call center (311) or online through DSWM’s website.

County residents who live in DSWM’s service area may also drop off household trash and up to three cubic yards of construction material (also known as construction and demolition debris [C&D]) at one of 13 Neighborhood Trash and Recycling Centers (TRCs) operated by DSWM.

Construction Materials:

Construction and demolition debris is collected exclusively by private firms and transported to either private facilities for recycling or disposal, or to county facilities for disposal.

Commercial Collections:

The commercial sector includes businesses and multifamily establishments consisting of four or more units. Business owners in the county are required to provide a recycling program for their employees and tenants using the services of a permitted hauler or private recycling hauler. Multifamily residential establishments are also required to provide a recycling program to their residents. Throughout most of the county, commercial garbage collection services are provided by private hauling companies through franchises, permits, or open market systems. (Attachment A provides a flow diagram of garbage and trash management within the county).



Infrastructure

The county’s solid waste system includes the following operations and facilities owned or established by the DSWM and operated either directly by DSWM or by the private sector under contract.

Trash and Recycling Centers (TRCs):

Certain TRCs also accept various materials for recycling, including tree and yard cuttings, cardboard, tires, white goods, electronics, and used motor oil. Various TRCs host mobile drop-off events throughout the year where residents can also drop off their household hazardous waste (HHW). Some TRCs also host paper-shredding events for residents.

Home Chemical Collection Centers:

DWSM’s Home Chemical Collection Program allows residents to safely dispose of HHW that cannot be placed in regular trash. Commercial businesses must use a private company to collect and dispose of their toxic chemicals. The West Dade Home Chemical Collection Center (8801 NW 58th St, Doral, FL 33178) and South Dade Home Chemical Collection Center (co-located with the South Date Landfill at 23707 SW 97th Ave, Gate B, Homestead, FL 33032) are open to county residents for free drop-off or they can pick up used or gently used products (like paint or sealers) for free through the county’s “Chem-Again Program,” which is an excellent example of a waste reduction strategy through reuse. The full list of accepted and prohibited items can be found on DSWM’s website.

Transfer Stations:

Garbage and trash collected by DSWM is delivered to one of the three county transfer stations. Additionally, the county has an agreement with WM (formerly Waste Management Inc. of Florida) and Waste Connections to deliver waste to one of four transfer stations that operate inside and outside of Miami-Dade County.

Landfills:

The waste generated in Miami-Dade County is hauled to one of six landfills for disposal. DSWM owns and operates two landfills (North Dade and South Dade). The county contracts with WM for disposal at the Medley Landfill in Medley, Florida, and the Okeechobee Landfill in Okeechobee, Florida. The county also contracts with Waste Connections for disposal at the JED Landfill in St. Cloud, Florida, and the Heart of Florida Landfill in Lake Panasoffkee, Florida.

Unless permitted landfill expansion, significant waste reduction, or an unexpected surge in disposal (such as disaster debris), changes current projections, the County’s North Dade and South Dade landfills are expected to reach capacity in 2030 and 2032, respectively.

Material Recovery Facilities (MRF):

The county with contracts WM to process curbside recyclables at their MRF located in Pembroke Pines, Broward County.

Figure 3 shows the existing solid waste management infrastructure through which material discards flow.

Material collected at the curbside will either go directly to a MRF, transfer station, or landfill. Each facility has a limit on the number of tons per day that it is permitted to accept and process. Table 3 details the daily processing capacity of Miami-Dade County’s infrastructure, excluding the 13 TRCs and two home chemical collection centers.

Table 3: Solid Waste Management Facility Capacity

Facility	Location	Tons Per Day
Northeast Transfer Station	18701 NE 6th Ave, Miami	1,200
Central Transfer Station	1150 NW 20th St, Miami	1,200
West Transfer Station	2900 SW 72nd Ave, Miami	1,300
North Dade Landfill	21500 NW 47th Ave, Miami	300
South Dade Landfill	23707 SW 97th Ave, Homestead	2,100
WM Medley Landfill	9350 NW 89th Avenue, Medley	3,000
WM MRF	1285 SW 208th Ave, Pembroke Pines	750
WM C&D MRF	11695 SW 328th St, Homestead	1,200
Coastal Waste & Recycling C&D	1840 NW 33rd Street, Pompano Beach	1,200

Key: C&D = Construction and Demolition Debris; MRF = Material Recovery Facility

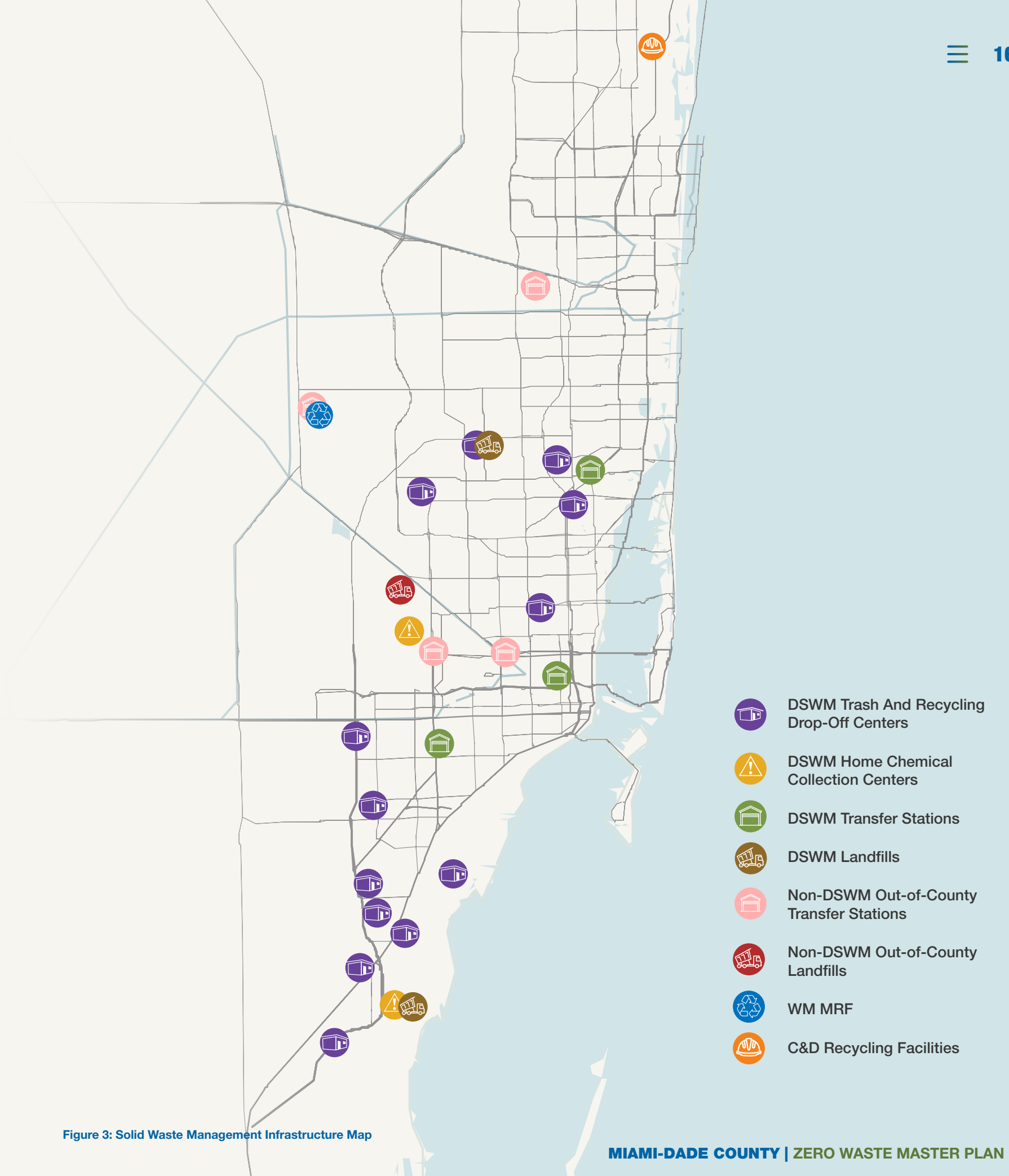


Figure 3: Solid Waste Management Infrastructure Map

PLAN DEVELOPMENT



WASTE REDUCTION BASELINE



Introduction

Zero waste is the aspirational goal of diverting 90% or more of solid waste from disposal toward reuse or beneficial use. Many consider zero waste as a new concept; however, Miami-Dade County and the DSWM have been working for years on initiatives critical to becoming a Zero Waste Community.

The primary goal of this Zero Waste Master Plan is to conserve all resources through a holistic approach that emphasizes responsible production, consumption, and reuse, building on the old waste management hierarchy of “Reduce, Reuse, Recycle” by incorporating other measures such as “Refuse,” “Redesign,” and “Reimagine” into the waste hierarchy. Miami-Dade County begins the journey toward becoming a Zero Waste Community by incorporating these zero waste measures into the existing infrastructure that has been developed over several decades.



Waste Composition Baseline (2024)

Rather than just managing waste at the end of its life, the Zero Waste Master Plan aims to rethink the entire life cycle of products to eliminate waste and pollution before they are even created. To set goals for waste reduction strategies and track progress after implementation, it is necessary to establish an initial baseline of all waste generated throughout Miami-Dade County and to identify the types and amounts of materials produced. Calendar year 2024 served as the baseline for estimating the reduction in waste (tons) achieved through the implementation of the Zero Waste Strategies proposed in the Miami-Dade County Zero Waste Master Plan (Figure 4 and Table 3).

Figures 5, 6, and 7 illustrate how the 3,290,460 tons of waste in the disposal streams are composed. Figure 5 details the curbside garbage collected from single-family homes. Figure 6 details curbside waste composition from multifamily establishments and commercial businesses. Figure 7 shows the trash composition, which indicates opportunities to reduce construction material, bulky items, and yard debris.

Figure 4: Miami-Dade County Overall Recycling Rate



Figure 5: Miami-Dade County Residential Composition of Garbage Disposal (2024)

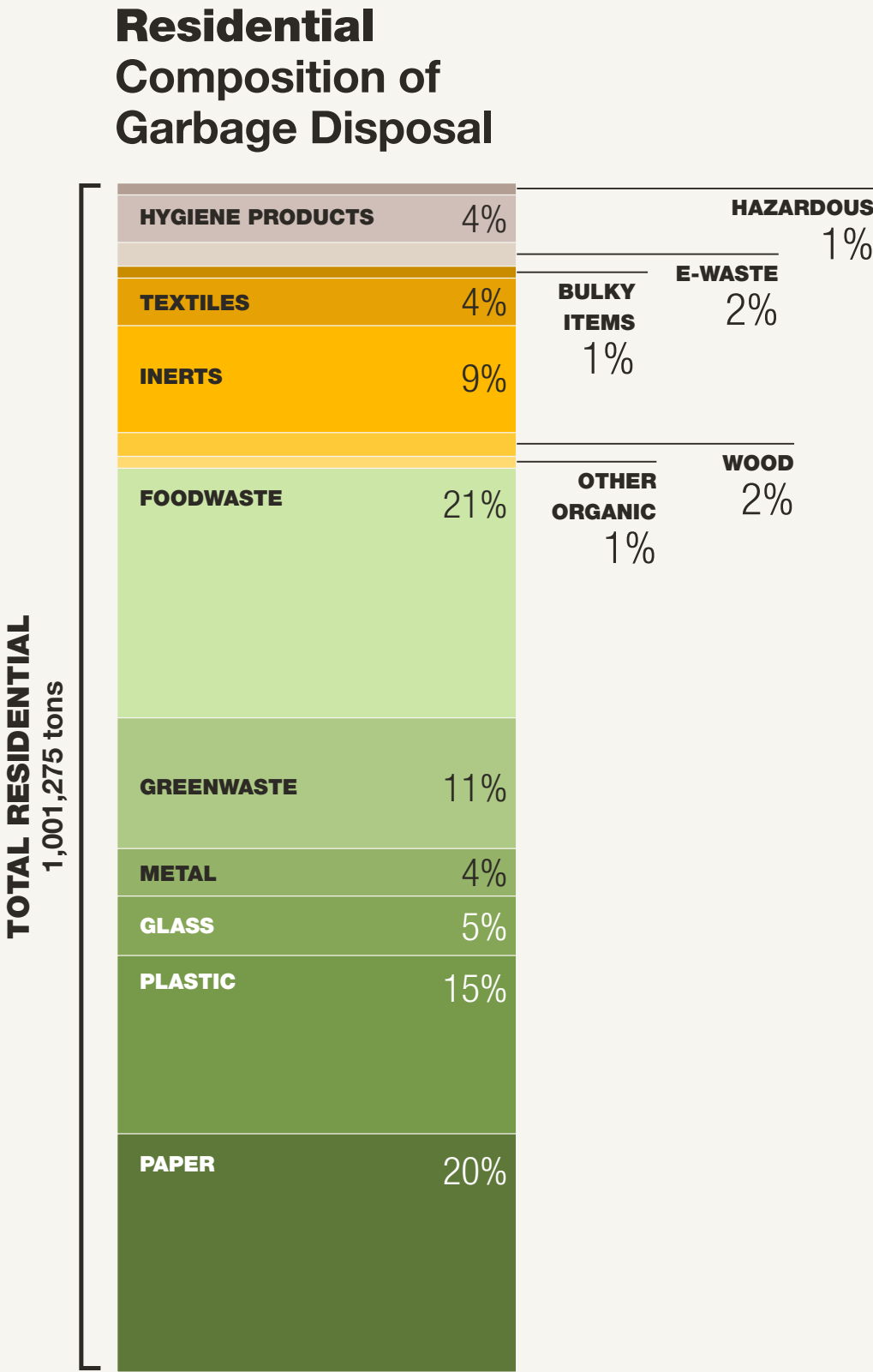


Figure 6: Miami-Dade County Commercial Composition of Garbage Disposal (2024)

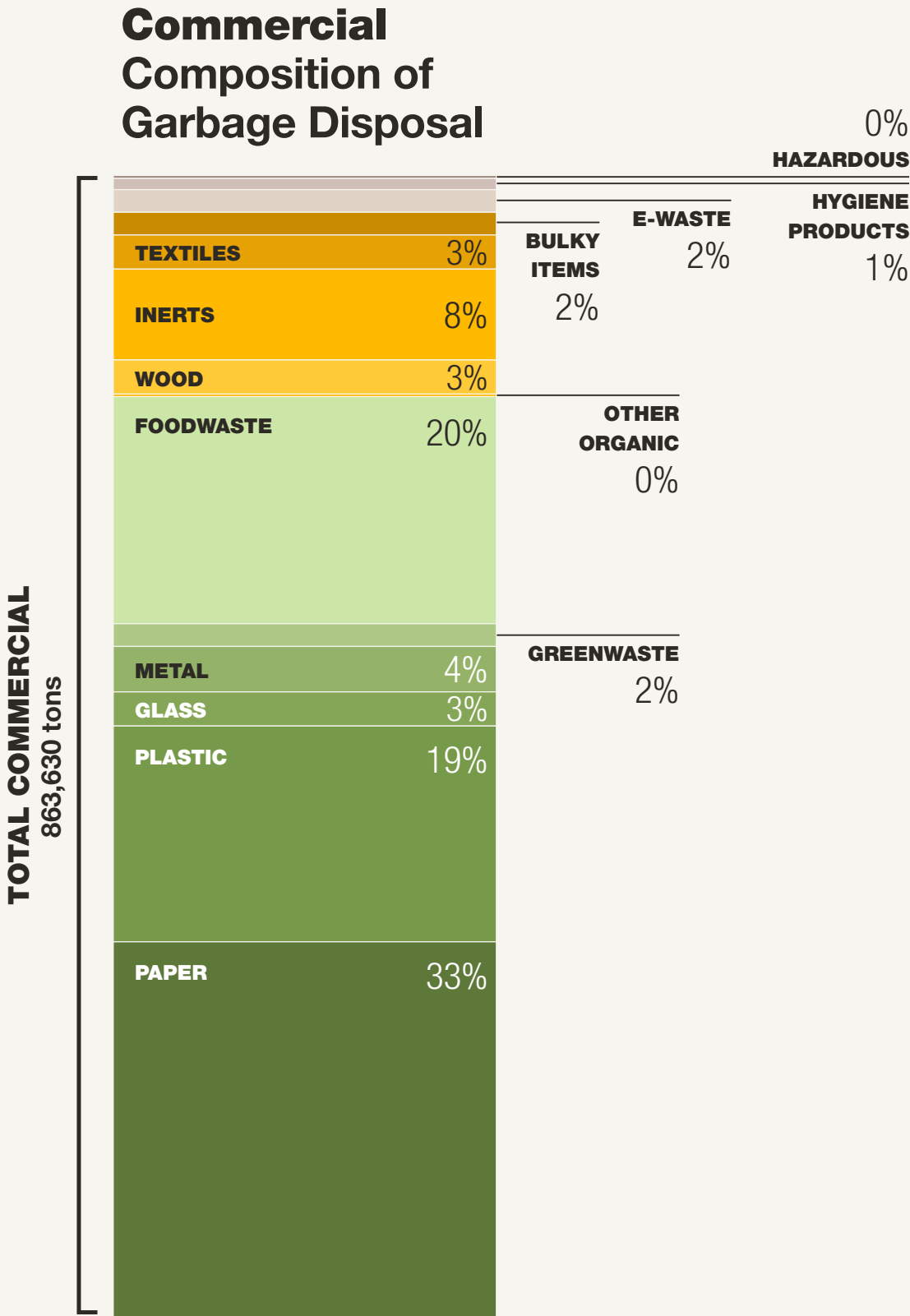
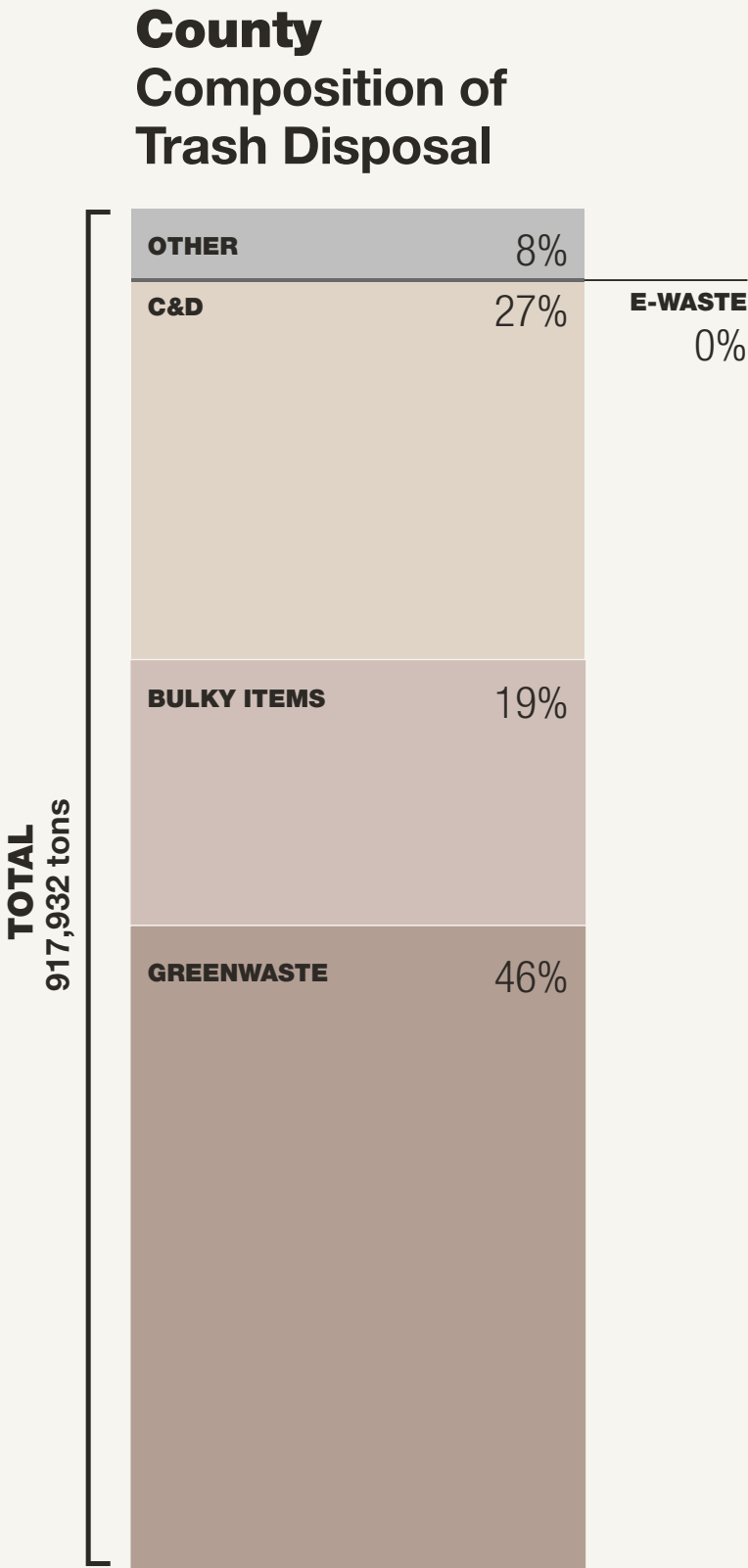


Figure 7: Miami-Dade County Composition of Trash Disposal (2024)



The anticipated waste reduction outcomes associated with the implementation of the Zero Waste Master Plan are derived from the comprehensive disposal stream composition detailed in Table 4.

Table 4: 2024 Countywide Waste Composition of Garbage and Trash Disposal

Material	Total Composition of Waste Disposed (% by Weight)	Estimated Tonnage of Waste Disposed
Newspaper	0.2%	5,006
Magazines	0.3%	9,187
Books, directories, catalogs	0.1%	4,731
Other papers	1.8%	58,951
Tissue paper and napkins	3.8%	126,263
Paper packaging	0.2%	8,186
Corrugated cardboard	6.8%	223,843
Noncorrugated cardboard	3.6%	116,976
Composite cardboard (tetrapack, etc.)	0.3%	8,323
Total Paper	17.1%	561,467
PET #1	1.2%	39,163
HDPE #2	0.8%	26,697
PVC #3, LDPE #4	0.1%	1,865
PP #5	1.2%	38,888
PS #6	0.6%	20,514
Other plastics #7 or unidentifiable	1.7%	57,196

Material	Total Composition of Waste Disposed (% by Weight)	Estimated Tonnage of Waste Disposed
Plastic bags	2.2%	73,044
Plastic film packaging	2.2%	73,633
Other plastic film	0.2%	5,595
Total Plastics	10.2%	336,594
Green glass	0.4%	13,330
Brown glass	0.4%	13,467
Clear glass	1.4%	45,721
Glass (nonrecyclable)	0.0%	1,001
Total Glass	2.2%	73,519
Ferrous food and beverage cans	0.5%	14,919
Ferrous (steel)	0.8%	27,110
Ferrous aerosol cans	0.1%	2,729
Other ferrous metals	0.8%	25,814
Aluminum cans	0.4%	13,918
Aluminum foils	0.3%	11,327
Other nonferrous metals	0.4%	14,716
Total Metals	3.4%	110,533

Material	Total Composition of Waste Disposed (% by Weight)	Estimated Tonnage of Waste Disposed
Green Waste/Garden	17.0%	557,901
Food Waste	11.5%	379,126
Animal By-Product	0.4%	11,602
Total Organics	28.8%	948,630
Furniture, Packaging Wood, Pallets, Crates	2.7%	88,096
Other Untreated Wood	1.7%	55,326
Other Painted, Stained Wood	3.4%	110,988
Total Wood	7.7%	254,410
Textiles (Clothing, Rags, Sheets, Curtains, Shoes, Bags, Belts)	2.3%	76,758
Leather (Cloth, Shoes, Bags, Belts, Other)	0.1%	2,003
Carpets	0.2%	6,676
Mattresses	0.1%	3,755
Rubber	0.5%	17,823
Diapers, Other Absorbent Hygiene Products	1.4%	46,822

Material	Total Composition of Waste Disposed (% by Weight)	Estimated Tonnage of Waste Disposed
Brick, Rubble, Masonry, Ceramic, Porcelain	2.2%	73,741
Rock, Gravel	0.4%	13,559
Other Inert Wastes	0.5%	16,501
Plasterboard, Gypsum	0.7%	22,809
Other C&D	15.4%	507,623
Electrical And Electronic Equipment	1.2%	40,219
Hazardous	0.2%	7,735
Other (Dirt, Sand, Soil, Fines, Other)	5.1%	169,282
Total Other	30.6%	1,005,307
Percentage Summation	100.0%	3,290,460

KEY:
C&D = Construction and Demolition Debris;
HDPE = High-Density Polyethylene;
LDPE = Low-Density Polyethylene;
PET = Polyethylene Terephthalate;
PP = Polypropylene;
PS = Polystyrene;
PVC = Polyvinyl Chloride

PUBLIC INVOLVEMENT AND STAKEHOLDER ENGAGEMENT PROCESS

Miami-Dade County's Zero Waste Master Plan was developed in collaboration with residents, businesses, government leaders, and key stakeholders ensuring broad consensus on the final zero waste strategies.

The Public Involvement and Stakeholder Engagement Team formulated an approach to engage with county department staff, external stakeholders, and the public through listening sessions, focus groups, public workshops, community events, municipal working groups, and a multilingual community survey.



Between August 28, 2025, and May 7, 2026, 84 engagement activities reached approximately 750 community members and stakeholders, who were invited to weigh in on the Zero Waste Master Plan’s proposed policies, programs, and infrastructure strategies.

10 Public Workshops

21 Focus Groups

19 Listening Sessions

12 Municipal Working Groups

8 County Department Meetings

14 Tabling Events

Nearly 1,500 people completed the community survey, providing input on how they manage waste at home or work, the materials they most often place in garbage and recycling containers, and related experiences that helped inform the project team’s understanding of community needs. Respondents also shared whether they would participate in a composting program, their reasons for supporting or opposing participation, or related reactions. Additionally, the survey captured preferred waste service improvements, including expanded recycling options, accurately sized carts with more frequent collection, and clearer educational materials.

Customized outreach materials and a new Miami-Dade County Zero Waste website helped raise awareness of the plan’s development and encouraged community participation in shaping the County’s Zero Waste Master Plan. Miami-Dade County’s Department of Solid Waste Management Public Information and Outreach Division and the Office of the Mayor, used social media to share information about the Zero Waste Master Plan, invite community members to attend public workshops, and encourage them to complete the community survey.

Each public workshop was a two-hour event where attendees gathered, connected with one another, learned about the proposed strategies, shared feedback, and voted. After learning about the proposed zero waste strategies, asking questions, sharing ideas, and discussing them with others, participants voted for their top three preferred strategies in each category: policies, programs, and infrastructure.

- » When selecting their preferred strategies, participants considered factors such as which policies could most effectively reduce waste, which programs could improve community quality of life, and what types of infrastructure would be most beneficial. Each participant’s top-ranked strategy received 3 points, the second-ranked strategy received 2 points, and the third-ranked strategy received 1 point. The Project Team then tallied the votes and applied a weighted average to identify the Public Favorites highlighted in the following sections.
- » All input and feedback gathered throughout the Public Involvement and Stakeholder Engagement process helped shape the final waste reduction strategies, recommendations, and implementation steps that will help bring Miami-Dade County’s Zero Waste Master Plan to fruition.



ZERO WASTE MASTER PLAN

ZERO WASTE STRATEGIES



This chapter includes information on the 31 Zero Waste Strategies (Table 5) recommended for implementation in Miami-Dade County. These strategies represent policies, programs, and infrastructure that when combined create zero waste systems aimed at reducing waste, increasing diversion, and reducing greenhouse gas emissions. These strategies were developed based on stakeholder involvement and the current situation in the county in which a large percentage of the waste stream is food. Therefore, several strategies aim to reduce, reuse, and compost food waste. Most Zero Waste Strategies are new, while some have already begun, and others are expansions or enhancements of existing strategies.

The Zero Waste Master Plan is an ambitious roadmap of strategies that will take at least 13 years to fully implement from the date of inception. Each strategy has an assigned implementation time frame, indicating when implementation will begin. The time frames were assigned based on the understanding that some strategies should be implemented before others, with strategies implemented in the Short Term (1–4 years), Medium Term (5–9 years), and Long Term (10–13 years). Over the 13-year implementation period, the county will work closely with the municipalities to guide and support compliance with the new strategy or the implementation of similar strategies developed by the municipality.

These strategies were analyzed for environmental impacts and costs, and implementation steps were outlined. The environmental impacts and planning costs are included in this chapter, and implementation details are outlined in the implementation chapter. For the county to successfully implement the 31 Zero Waste Strategies, it will need additional staff, investments, close coordination with the municipalities, time, and community support.

This chapter provides an overview of each Zero Waste Strategy, information on waste and emissions reduction, and the planning-level costs for implementation. The Zero Waste Strategies were divided into the following focus areas: Rethink and Redesign, Reduce and Reuse, Recycling and Compost, and Material Processing Infrastructure.

Analyses and Results

Analyses

The 31 Zero Waste Strategies were analyzed to estimate the environmental impacts and implementation costs after full implementation. The strategies were also categorized as policies, programs, or infrastructure. A policy strategy requires developing ordinance and administrative language. A program strategy involves an event, material development, and possibly partnerships. An infrastructure strategy involves bins, carts, or facilities. Many of the policy, program, and infrastructure strategies work together to create zero waste systems.

DIVERSION POTENTIAL ANALYSIS AND GREENHOUSE GAS EMISSIONS REDUCTION

The Diversion Potential and Greenhouse Gas Emissions analysis estimated the potential tons of materials that could be diverted annually (i.e., waste reduction) and the greenhouse gas emissions that could be reduced annually once all strategies were implemented. This analysis used county waste characterization data and estimated the tons of appropriate material types that could be diverted once the strategy was implemented. The analysis also used U.S. Environmental Protection Agency (EPA) Waste Reduction Model (WARM) data to estimate emissions reductions once the strategy was implemented. This scenario planning exercise estimated the environmental impact results at the planning level once all strategies are implemented.

COST ANALYSIS

Cost and staffing needs were estimated for each strategy as part of the Cost Analysis. The analysis included the planning-level costs and staff-time estimates (full-time equivalents [FTEs]) for implementing the policy and program strategy sections. Costs estimated include county staff labor and any contractors needed for implementation or annual tasks. Infrastructure costs associated with equipment, land, or building purchases were analyzed separately and are presented in Appendix E. The costs and staff needs were estimated as one time and annual and represent county costs. For many of the strategies, there will be private sector costs. Those costs were not included in this analysis. The one-time costs and staff needs were estimated as start-up costs to begin strategy implementation, while the annual costs and staff needs were estimated as ongoing costs.

TIME FRAME

Each strategy has an assigned implementation time frame, indicating when implementation will begin. The time frames were assigned based on the understanding that some strategies should be implemented before others. The Zero Waste Strategies include implementation in the Short Term (1–4 years), Medium Term (5–9 years), and Long Term (10–13 years).

Results

The analysis showed full implementation of the Zero Waste Strategies will result in a reduction in waste and greenhouse gas emissions. The baseline diversion rate of 36% was estimated to increase to 77% after all strategies are implemented. The analysis also showed that an estimated 1,739,561 metric tons of carbon dioxide equivalent (MTCO₂E) will be reduced after all strategies are implemented.

WASTE REDUCTION

In the county's base year of 2024, there were 3,290,460 tons of materials going to disposal, and the county had a 36% diversion rate, meaning 36% of the county's total generation, totaling 1,866,224 tons, was diverted through recycling. After full implementation of the county's 31 Zero Waste Strategies, an estimated additional 2,108,992 tons of materials could be reduced or diverted from disposal through reduction strategies, reuse programs, expanded recycling, and composting systems, increasing the diversion rate to 77% (Figure 8).

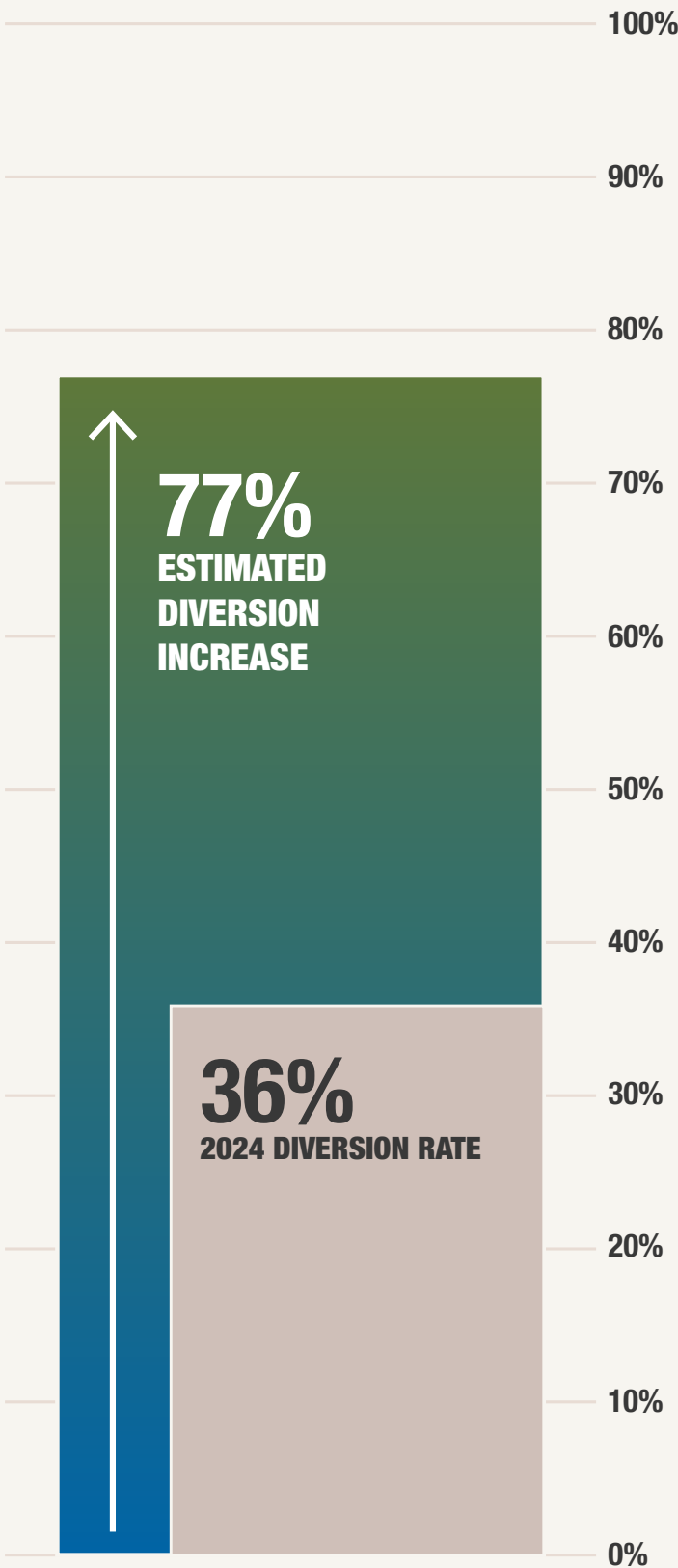


Figure 8: Miami-Dade County Estimated Diversion Results

An estimated
1,739,561
MTCO₂E REDUCTION

is equivalent to GHG
 emissions from:

405,762
 Gasoline-powered vehicles
 driven for one year

Figure 9: Greenhouse Gas Emissions Equivalences

Energy use of
233,618
 homes for one year



GREENHOUSE GAS REDUCTIONS

Using the WARM data, an analysis was conducted to estimate greenhouse gas emissions reductions resulting from the implementation of the Zero Waste Strategies (Figure 9). An estimated 1,739,561 MTCO₂E will be reduced after full implementation of the strategies—equivalent to the greenhouse gas emissions from 405,762 gasoline-powered passenger vehicles driven for one year, or the energy use of 233,618 homes for one year.⁴

COST ANALYSIS RESULTS

The cost analysis was conducted to estimate planning-level costs and the number of staff needed to implement the 31 Zero Waste Strategies. The total estimated cost to implement all Zero Waste Strategies was \$1,363,921.5 This included an estimated total of \$1,014,880 in one-time costs to start all strategies and an ongoing annual cost of \$349,040 for all strategies.

An estimated three full-time equivalent (FTE) positions would be needed to implement the one-time and annual tasks. Those FTE tasks would be performed by Code Inspectors, the Resiliency Director, and the Waste Diversion Manager. Contractor support is recommended for 19 Zero Waste Strategies, and technical assistance is recommended for eight strategies. These positions are temporary positions hired to complete a specific scope of work related to strategy implementation. Contractor support work is generally conducted through the county's Communications and Information Technology Department, and the tasks outlined here include creating educational materials, conducting stakeholder outreach, and establishing program guidelines. These personnel would work alongside the Resiliency Director, the Waste Diversion Manager, and Code Enforcement. The technical assistance personnel would be hired temporarily to work with the business and multifamily sector on strategy implementation.

⁴ U.S. EPA Greenhouse Gas Equivalencies Calculator

⁵ Costs estimated include county staff labor and any contractors needed for implementation or annual tasks. Infrastructure costs associated with equipment, land, or building purchases were analyzed separately and are presented in Appendix E.

Zero Waste Strategies

Table 5: Zero Waste Master Plan Strategy Overview

Time Frame for Implementation:

- S Short 1–4 years
- M Medium 5–9 years
- L Long 10–13 years

Diversion Potential or Waste Reduction (Tons):

- <10,000
- 10,000–100,000
- 100,000>

Greenhouse Gas Reduction (MTCO2E):

- <(10,000)
- (10,000)–(100,000)
- (100,000)>

Total Implementation Costs

(does not include infrastructure costs, such as developing, purchasing, or operating facilities)

- < (10,000)
- (10,000)–(100,000)
- (100,000) >



Public Favorite strategies were determined based on stakeholder voting during the workshops.

Policy Strategies

	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite
Accessories Upon Request and Product Requirements	S				
Zero Waste Events and Venues*	M				
Universal Recycling and Composting Ordinance	S				
Save-As-You-Throw	S				
Mandatory Participation, Source Separation, and Enforcement	M				
Rate Structure Incentives and Reporting Requirements	M				
Construction Material Diversion and Separation Requirements	S				
Deconstruction Requirement	L				
New Development Compost Use Requirement	L				
Food Waste Diversion Requirements	S				

Program Strategies

	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite
Edible Food Donation	S	  	  	  	
Takeback Program	M	  	  	  	
Zero Waste Grants	L	  	  	  	
Market Development	M	  	  	  	
Reuse Directory	S	  	  	  	
Reuse, Share, Repair, and Refill Directory and Events	S	  	  	  	
Lead by Example	S	  	  	  	
Reusable Foodware	L	  	  	  	
Education, Outreach, Technical Assistance, and Enforcement	S	  	  	  	
Curbside Materials Collection	L	  	  	  	
Business Recognition Program with Green Teams	S	  	  	  	
Construction Materials Source Separation Program	S	  		  	
Green Building Credits	M	  	  	  	
Drop-Off Partnerships	S	  	  	  	

Infrastructure Strategies

	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite
Library of Things	M	  	  	  	
Reuse Warehouse	M	  	  	  	
Reusable Foodware Washing Infrastructure	L	  	  	  	
Reuse, Repair, and Recycling Center	L	  	  	  	
Water Bottle Refill Stations	S	  	  	  	
Organic Material Composting Infrastructure	S	  	  	  	
Construction Materials Processing Facility	M	  	  	  	

*Anticipated infrastructure costs are included in Appendix E, Department of Solid Waste Management (DSWM) Collection, Sorting, and Processing of Organics and Recyclables.

**Public Favorite strategies were determined based on stakeholder voting during the workshops.

Rethink and Redesign

The Miami-Dade County Zero Waste Master Plan includes strategies in the Rethink and Redesign category. The Rethink and Redesign strategies aim to transform the current system into one in which new systems direct materials to appropriate pathways, keeping them in circulation through reuse, recycling, and composting. Currently, many materials used in the county either do not fit into a zero waste system or are not properly diverted to systems that keep them in circulation. The Rethink and Redesign strategies aim to keep materials in use by creating new pathways, policies, or programs.

The Rethink and Redesign policy strategies include creating event guidelines, establishing standardized recycling and composting systems for the county, incentivizing the reduction and diversion of waste, implementing reporting requirements to improve tracking, and requiring the use of locally produced soil amendments made from composting local food scraps and vegetative materials. The Rethink and Redesign programs include businesses taking back “hard-to-recycle” materials, municipal governments leading by implementing zero waste policies and programs, a business recognition program, and Green Building Credits that work to create space and design for zero waste. The Rethink and Redesign strategies are listed in Table 6 along with the strategy type and implementation time frame.



Table 6: Rethink and Redesign Strategies Overview

Rethink and Redesign Zero Waste Strategies	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite**
Zero Waste Events and Venues	M				
Universal Recycling and Composting Ordinance	S				
Save-As-You-Throw	S				
Rate Structure Incentives and Reporting Requirements	M				
New Development Compost Use Requirement	L				
Takeback Program	M				
Lead by Example	S				
Business Recognition Program with Green Teams	S				
Green Building Credits	M				

* Anticipated infrastructure costs are included in Appendix E, Department of Solid Waste Management (DSWM) Collection, Sorting, and Processing of Organics and Recyclable.

** Public Favorite strategies were determined based on stakeholder voting during the workshops.

Time Frame for Implementation:

- S Short 1–4 years
- M Medium 5–9 years
- L Long 10–13 years

Diversion Potential or Waste Reduction (Tons):

- <10,000
- 10,000–100,000
- 100,000>

Greenhouse Gas Reduction (MTCO2E):

- <(10,000)
- (10,000)–(100,000)
- (100,000)>

Total Implementation Costs

(does not include infrastructure costs, such as developing, purchasing, or operating facilities)

- < (10,000)
- (10,000)–(100,000)
- (100,000) >



Public Favorite strategies were determined based on stakeholder voting during the workshops.

Zero Waste Events and Venues

Guidelines for events to make them zero waste

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite	

A **Zero Waste Events and Venues** strategy creates guidelines around events on county property to make them as close to zero waste as possible. Guidelines can include requiring a Zero Waste Plan for events; requiring recycling and composting collection bins; using reusable foodware when possible; ensuring all foodware is reusable, recyclable, or compostable; rescuing edible food; and including standardized signage. Zero Waste event regulations would be required as part of the permitting process, ensuring that the ordinance and guidelines are followed and allowing for a system to verify that all guidelines are met.

EXAMPLES

Event – Ultra Music Festival launched its award-winning sustainability program, “Mission: Home,” in 2019 at Bayfront Park. Since then, it has expanded from 20 basic protocols to 65 distinct sustainability initiatives across five pillars: Waste Reduction, Pollution Prevention, Nature Preservation, Community Engagement, and Climate Action. By 2024, Ultra achieved a 50% waste diversion rate through recycling, composting, and repurposing. The festival also prohibited Styrofoam, bioplastics, and single-use plastic food service items, reducing plastic distribution by 88%; eliminated more than 605,000 single-use water bottles through free refill stations; diverted nearly 20,000 pounds of stage wood for reuse or mulch; and donated more than 84,000 pounds of unused food, beverages, and supplies to local homeless shelters.

Venue – The Miami Beach Bandshell is an open-air venue managed by the Rhythm Foundation that actively champions environmental sustainability. As a founding member of the PlasticFreeMB program, it has eliminated single-use plastics, offers free water hydration stations, and exclusively uses recyclable aluminum cans for source separation in clean stream collection containers. Additionally, the venue operates an innovative photovoltaic fabric canopy that harnesses solar energy to power its lighting, earning it recognition as a leader in green event operations.

Universal Recycling and Composting Ordinance

Amending the Universal Recycling Ordinance to mandate compost collection across all sectors

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

This ordinance requires all sectors to have garbage, recycling, and composting services. Single-family residents will receive curbside collection of garbage, recycling, and compost (including food scraps and yard debris). For the multifamily sector (i.e., condos and apartment complexes), this ordinance will require an appropriate number of recycling and composting bins based on the number of units and ensure they are equally as accessible as garbage bins or dumpsters. The commercial and institutional sectors will also be required to have recycling and composting services with appropriate volumes and accessibility. This ordinance also requires uniform, standardized garbage, recycling, and composting signage, including wording, pictures, curbside recycling cart color, and languages. The ordinance also requires all haulers to report tonnage for all materials managed and cubic yards collected from each service location to the municipality and/or county.

Reporting is essential for tracking and monitoring progress while working toward zero waste. This ordinance aims to create a uniform system for garbage, recycling, and composting across the county and across all sectors.

This strategy is an expansion of Chapter 15 Section 2 (solid waste collection services, container usage, condition, and location) of the Miami-Dade County Code.⁶

6 Miami-Dade County Code Chapter 15 Section 2 - SOLID WASTE MANAGEMENT

EXAMPLE

In Minnesota, Hennepin County’s Ordinance 13 expanded its mandatory curbside recycling collection to include organics collection for commercial businesses in 2020 and residents in 2022. Collection services must be provided at least weekly; cities may meet this requirement through citywide contracts or by requiring private haulers to provide the service. The ordinance also includes provisions for right-sizing of collection containers, universal color-coding, and bin labeling requirements. Additionally, each city must report all information relating to waste generation, collection, and disposal within its boundaries to the county on an annual basis.

Save-As-You-Throw

Volume-based fee structure for garbage service for single-family residents

Time Frame:

S

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



This **Save-As-You-Throw (SAYT)** ordinance enacts a single-family residential, volume-based, garbage service. In the volume-based SAYT program, residents are charged based on the amount of waste they dispose of in the garbage, similar to a utility service, creating a direct financial incentive for waste reduction and reuse. Miami-Dade County DSWM offers garbage carts in three sizes: 35 gallon, 65 gallon, and 95 gallon. In the volume-based SAYT program using carts, residents pay based on cart size—the smaller the cart, the lower the cost. SAYT programs work best when paired with recycling and compost curbside collection systems, providing residents with opportunities to reduce waste and increase diversion. SAYT programs should also be paired with increased efforts to prevent illegal dumping and to ensure proper recycling.

EXAMPLE

In July 1994, the City of Gainesville entered into two private contractor agreements: one for residential trash and recycling collection and another for yard trash recycling. The solid waste agreement used a variable-rate structure, charging residents \$13.50, \$15.96, or \$19.75 per month based for 35-, 64-, or 96-gallon trash setouts, while recycling service remained unlimited. As a result, solid waste collection declined by 18%, recyclable recovery increased by 25%, and disposal tonnage dropped 18%, generating \$186,200 in residential-sector savings, or \$7.95 per home.

The City of Austin also uses a variable rate pricing* structure, charging residents based on trash cart size to encourage waste reduction, recycling, and composting. Residents may choose 24-, 32-, 64-, or 96-gallon carts, with 2026 monthly rates of \$28.50, \$30.05, \$36.30, and \$64.10, respectively. By treating trash service as a utility with lower monthly costs for smaller carts and paying more for larger carts, the program helped increase the diversion rate from 9.8% to 35% between 1991 and 2010 and reduced the amount of garbage collected from households each week from 43 to 27 pounds.

*Variable Rate Pricing' will be referenced as 'Save-As-You-Throw (SAYT)' throughout the Zero Waste Master Plan and its appendices."

Rate Structure Incentives and Reporting Requirements

Incentive and reporting requirements included in policies to increase diversion

Time Frame:

M

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Incentives and reporting requirements will be included in county policies related to garbage, recycling, composting, and construction debris. This will encourage diversion and provide county staff with quarterly and annual reports on tonnage by sector and service (garbage, recycling, composting, and construction materials). This strategy is aligned with the Universal Recycling and Composting Ordinance—the two strategies will work together to create a comprehensive zero waste system for collection and diversion of recyclable and compostable materials throughout the county.

EXAMPLE

The City of Boulder, Colorado, requires all private haulers to be licensed and submit annual reports on the amount of trash and/or recyclables collected. A city ordinance also requires haulers to provide residential customers with unlimited collection of recyclables as well as compostables collection.

-

New Development Compost Use Requirement

Using locally produced soil amendments for landscaping and growing food

Time Frame:	L
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

The **New Development Compost Use Requirement** ordinance requires that finished compost (i.e., black soil created over time by composting food scraps and yard debris) be used for all new development projects with landscaping on county properties. Under this ordinance, an incentive program will be created to encourage new residential, institutional, and commercial developments to use locally produced finished compost as well. The compost would need to meet standards for compost quality and reduced contamination and receive testing for chemicals of concern, such as persistent herbicides, heavy metals, and microplastics. This supports the creation of a circular organics economy that improves soil health and enhances water retention in green spaces. The requirement will encourage the development of local compost-processing infrastructure, support market demand for finished compost, and promote sustainable construction and land-use practices.

EXAMPLE

The City of Seattle has a compost use ordinance requiring city projects to use locally produced compost in landscaping, construction, and erosion and stormwater projects. The compost purchased prioritizes compost generated from the city’s food scraps and yard waste.

Takeback Program

Retailers or organizations take back products and packaging for reuse, recycling, or proper disposal

Time Frame:	M
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

A **Takeback Program** establishes a system in which retailers and other organizations voluntarily participate in taking back products and packaging for reuse, recycling, or proper disposal. The materials in this program fall outside the traditional recyclables collected in curbside systems. This is especially important for items that are toxic in their manufacture, use, or disposal and are not currently locally reusable, recyclable, or compostable. Examples of materials suitable for voluntary takeback programs include batteries, compact bulbs, pharmaceuticals, and paint.

EXAMPLE

The Take It Back! program in Ottawa, Ontario, is a voluntary product stewardship initiative that allows residents to return household items to more than 800 participating retailers and charitable organizations for reuse, recycling, or proper disposal. The program covers more than 130 products in five categories: automotive, garden supplies, health, electronics, and household products.

Lead by Example

Model zero waste policies and programs for public schools and municipal buildings, parks, and events

Time Frame:

S

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



The **Lead by Example** strategy applies to all county municipal and public school facilities, buildings, departments, and events. The goal is to have all operations follow all Zero Waste Strategies, including installing recycling and composting collection bins; hosting zero waste events; regulating the use of single-use materials; using reusable foodware; implementing surplus systems for office supplies, furniture, and equipment; and establishing a zero waste procurement system. This demonstrates that operations and facilities follow the same Zero Waste Strategies as residents, businesses, and institutions.

** This strategy is an enhancement of current programs and is already in progress at the time of publication. See the Foundation chapter for a list of current county programs.

Business Recognition Program with Green Teams

Recognition for businesses that implement and reach zero waste goals

Time Frame:

S

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Business Recognition Programs with Green Teams are designed to recognize businesses working toward and achieving zero waste. These businesses include green teams in their programs to increase their success. Criteria for recognition can include reducing single-use materials, using reusable materials, recycling all appropriate materials, and composting food scraps and food-soiled paper products. Metrics to achieve zero waste include a 90% or greater diversion from disposal. Recognition should include a sticker or decal at the business, on its website and social media, and on the municipal Zero Waste web page. Green teams are groups of employees within buildings or departments who ensure the success of zero waste programs.

**This is an enhancement of a current program. Refer to the Foundation chapter for a description of the county’s program, “Plastic Free 305.”

EXAMPLE

The Miami Green Key Initiative is a sustainable tourism program for the hospitality industry led by the Greater Miami Convention & Visitors Bureau in partnership with Green Key Global. The program sets benchmarks that enable hotels, resorts, and event spaces to enhance their operations through policies focused on waste reduction, recycling, composting, and responsible resource management. Businesses are awarded an Eco-Rating Level of 1 to 5 green keys, depending on their level of environmental and social sustainability. Both the Cadillac Hotel & Beach Club and 1 Hotel South Beach in Miami hold Green Key certifications, with Eco-Ratings of Level 4 and 5, respectively, for actions such as not allowing single-use straws, using materials crafted from reclaimed materials, recycling water, and other green efforts.

Learn more at <https://www.miamiandbeaches.com/hotels/green-key-hotels>

Green Building Credits

Including sustainable aspects in construction and remodeling projects that plan for zero waste implementations

Time Frame:	M
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

The **Green Building Credits** strategy is designed to encourage the creation of zero waste infrastructure space during the construction or remodeling of buildings. Recommendations and requirements can include sufficient space in loading docks, common areas, and parking areas for infrastructure for reuse, recycling, and composting (e.g., bins, dumpsters, rolling carts, and washing facilities). For multifamily complexes, credits involve ensuring adequate space for recycling and composting bins or dumpsters that are as convenient as the garbage dumpsters. Additionally, for multifamily complexes, credits encourage creation of a space to collect household items for reuse during peak move-in/move-out periods, reducing the need for roll-off dumpsters (especially near college and university campuses). For commercial food establishments, credits provide incentives for ensuring sufficient space for food serviceware washing stations. This strategy aims to remove barriers to achieving zero waste by ensuring space for programs and infrastructure.

EXAMPLE

In 2009, the Morro Bay City Council in California approved Resolution 24-09, establishing a Green Building Incentive Program for residential and commercial new construction projects and major renovations. Single-family dwellings and multifamily dwellings under three stories are now eligible for building and plan check fee rebates if they earn LEED for Homes certification. Multifamily dwellings four stories or greater and all new commercial construction projects must earn LEED certification to receive fee rebates. New construction of commercial interiors and tenant improvement projects must attain certification under the LEED for Commercial Interiors rating system to receive fee rebates. Commercial new construction and commercial interiors projects receive a greater fee rebate for each level of LEED certification attained. The program also includes incentives for greywater, renewable energy, and green roof systems.

Reduce and Reuse

The Miami-Dade County Zero Waste Master Plan includes strategies in the Reduce and Reuse category. The Reduce and Reuse strategies aim to reduce the generation and use of materials and create reuse systems. New systems will need to be established to reach these goals. Combined policies and programs will help create the systems needed to reduce and reuse materials. Many of the programs described these categories are already implemented in the county; therefore, they are enhancements, improvements, or expansions of existing programs.

Some of the Reduce and Reuse strategies aim to reduce reliance on single-use materials. Others are programs that aim to create or enhance systems that reduce the amount of materials sent to disposal and strengthen the local reuse economy through programs, events, and directories. The Reduce and Reuse Zero Waste Strategies are listed in Table 7 and described below.



Table 7: Reduce and Reuse Overview

Reduce and Reuse Zero Waste Strategies	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite**
Accessories Upon Request and Product Requirements	S				
Edible Food Donation	S				
Zero Waste Grants	L				
Market Development	M				
Reuse Directory	S				
Reuse, Share, Repair, and Refill Directory and Events	S				
Reusable Foodware	L				

*Anticipated infrastructure costs are included in Appendix E, Department of Solid Waste Management (DSWM) Collection, Sorting, and Processing of Organics and Recyclables.

**Public Favorite strategies were determined based on stakeholder voting during the workshops.

Time Frame for Implementation:

- S Short 1–4 years
- M Medium 5–9 years
- L Long 10–13 years

Diversion Potential or Waste Reduction (Tons):

-  <10,000
-  10,000–100,000
-  100,000>

Greenhouse Gas Reduction (MTCO2E):

-  <(10,000)
-  (10,000)–(100,000)
-  (100,000)>

Total Implementation Costs

(does not include infrastructure costs, such as developing, purchasing, or operating facilities)

-  < (10,000)
-  (10,000)–(100,000)
-  (100,000) >



Public Favorite strategies were determined based on stakeholder voting during the workshops.

Accessories Upon Request and Produce Requirements

Reducing single-use materials through regulations for to-go food and when dining out

Time Frame:

S

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



The Accessories Upon Request ordinance prevents businesses from automatically providing accessories, such as single-use utensils, napkins, and condiment packets, with a to-go food purchase. The customer must request the items, or the employee must ask if they are wanted. This ordinance prevents the use of unnecessary, single-use materials. Product requirements are regulations that prohibit the distribution and use of items, such as single-use plastic straws and stirrers, within the regulated area. The goal is to eliminate materials that cannot be reused, recycled, or composted.

EXAMPLE

Large-scale food delivery apps offer "single-use accessories" (utensils, napkins, straws, and condiments) upon request. This opt-in system defaults to no accessories to reduce plastic waste and help comply with local ordinances in cities and counties where distribution of single-use plastic items is prohibited.

Edible Food Donation

Expanding edible food recovery and connecting it to food banks and other organizations

Time Frame:

S

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



This program establishes a county-supported framework to recover surplus edible food from commercial generators (e.g., restaurants, grocery stores, hotels, hospitals, schools, and food processors). The program facilitates and expands the collection and donation of surplus edible food that would otherwise go to waste. The program leverages the Food Waste Diversion Requirements to collect edible food from commercial generators, local businesses, grocery stores, restaurants, and households. Food that is still safe for consumption is distributed to local food banks, shelters, and other community-based organizations, supporting individuals experiencing food insecurity. Edible food donation programs strengthen food security, reduce food waste, and reduce greenhouse gas emissions from landfills.

EXAMPLE

Miami-Dade County Public Schools in partnership with Food Rescue US of South Florida implemented a "Share Table" program to reduce food waste and combat hunger. Students can place unopened, non-perishable lunch items, such as whole fruits, snacks, and milk cartons, on a designated table. Their peers get first dibs and any left-over food at the end of the week is collected and donated to local social service agencies for distribution to others in the community.

Learn more at <https://foodrescue.us/school-share-table-initiative-in-miami/>

Zero Waste Grant

Allocating funds through a competitive process to local businesses or organizations working on zero waste programs

Time Frame:

L

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



Grant programs allocate funding through a competitive process to non-profit organizations, schools, and businesses assisting the community in implementing innovative reduction, reuse, recycling, and composting programs and fostering the culture change needed to achieve zero waste. These grants represent appropriate uses of public funds because of the many benefits the recognized groups have contributed to the communities that awarded them.

EXAMPLE

Alachua County's Zero Waste Grant program provides \$40,000 grants to nonprofit and for-profit organizations to support zero waste programs and infrastructure. Since launching in 2022, the county has held two funding rounds. In the first, the county awarded three grants: one to a composting business for a new truck and two to the same reuse nonprofit (one grant for a new truck and another to study reusable materials discarded by self-haul users at the transfer station). In the second round, held in 2025, the county again awarded three grants: one to a composting business to launch a food scrap drop-off system at five rural collection centers, one to a business collecting bulky reusable materials from residents, and another to a nonprofit reuse organization to expand its operations through building renovations.

Market Development

Developing a team to identify problematic materials that need diversion opportunities and find markets for them

Time Frame:

M

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



The **Market Development** program identifies materials that are not currently diverted toward their highest use and works to identify diversion opportunities for them. Some possible materials to investigate are single-use food serveware, tires, carpet, and plastic film and local options for recycling glass. The program facilitates collaborative efforts among city and county staff; local reuse, recycling, and composting industry experts; and higher education staff working in the industry, who meet regularly to find solutions. Local economic development staff should collaborate with this program to provide input on financial, permitting, feedstock, and marketing assistance.

EXAMPLE

Building strong sustainable markets can increase the value of waste tires as a raw material. The California Department of Resources Recycling and Recovery (CalRecycle) provides grants and loans to businesses and public entities for activities intended to develop markets for waste tires, such as funding research projects, stimulating business development, and assisting local government in implementing collection, outreach, and public education programs.

Learn more at <https://calrecycle.ca.gov/Tires/Grants/>

Reuse Directory

An online resource of surplus materials

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

A **Reuse Directory** is an online directory that shows surplus materials available for sale and for free. Users browse available materials and connect when needed. A for-profit, nonprofit, or municipal organization can operate the directory. The goal is to match excess materials with those who need or want them. In some communities, nonprofits have hosted a “Things Lab” or “Creative Reuse Center”—physical spaces where reusable materials are donated by businesses and the public and used by artists and teachers for art projects. Many municipal and institutional operations have warehouses or online platforms for exchanging surplus materials, including desks, vehicles, office supplies, and office furniture. These systems can be expanded to include materials for reuse or sales to the public.

Note: A description of the “County Store” that sells county-owned items is provided in the Lead By Example Appendix A.

EXAMPLE

Ohio and Michigan both use Rheaply’s statewide materials marketplace, an online platform for buying and reusing available materials. The marketplace helps users identify available items, diverts materials from disposal, and extends their useful life.

Reuse, Share, Repair, and Refill Directory and Events

Community events for reuse, share, and repair, along with a local reuse directory

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

The **Reuse, Share, Repair, and Refill Directory and Events** program aims to create events and a directory to normalize reuse, including sharing, repair, and refill, throughout the county. This program promotes and facilitates recurring community events focused on reusing, sharing, and repairing household goods, electronics, clothing, tools, and other durable items. These events aim to divert materials from disposal by extending product life cycles, fostering a culture of repair, and supporting a local circular economy. Events can be held in partnership with libraries, schools, community centers, nonprofits, and local businesses to maximize reach and accessibility. This program also creates a local reuse directory that lists businesses and organizations involved in reuse, repair, sharing (renting), and refilling.

EXAMPLE

In Texas, the City of Austin has been hosting Fix-It Clinics since 2015. This program promotes repair and reuse through community events where residents bring in broken items for fixer volunteers to attempt to repair. Repairing items at the Fix-It Austin events keeps them out of the disposal stream, helping Austin achieve its zero waste goals.

Reusable Foodware

Using reusable foodware for to-go food orders

Time Frame:

L

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



A **Reusable Foodware** program establishes the use of reusable foodware for to-go food orders, at events, universities, festivals, and food trucks. This will include cups, plates, bowls, clamshells, and utensils. Reusable foodware is durable and washable, and can be made of stainless steel, aluminum, or polypropylene. The goal is to replace single-use foodware with reusable foodware to reduce garbage and help create cultural change. This program works in collaboration with the Reusable Foodware Washing Infrastructure strategy.

EXAMPLE

ReThink Disposable, a program of Clean Water Action/Fund, provides a comprehensive Reusable Foodware Purchasing Guide and technical assistance to help food businesses replace single-use items with durable, cost-effective reusables. The initiative helps businesses save money, reduce waste, and improve sustainability.

Learn more at <https://cleanwater.org/publications/rethink-disposable-reusable-food-serviceware-guide>

Recycle and Compost

The Miami-Dade County Zero Waste Master Plan includes strategies in the Recycle and Compost category that aim to divert appropriate materials to recycling and composting streams throughout the county. Many of these strategies are enhancements to current strategies designed to create more robust, clearer, and uniform county systems. Other strategies in this category are new efforts to create innovative guidelines and streams to divert materials to recycling and composting.

The Recycle and Compost policy strategies seek to ensure uniform participation in recycling and composting across all sectors in the county, divert construction materials to recycling and composting, and ensure that edible food and food scraps are diverted through a robust system. The remaining Recycle and Compost strategies aim to enhance or strengthen other strategies, collect hard-to-recycle materials, and build systems for recycling and composting construction materials. The Recycle and Compost Zero Waste Strategies are listed in Table 8 and described below.



Table 8: Recycle and Compost Strategies Overview

Recycle and Compost Zero Waste Strategies	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite
Mandatory Participation, Source Separation, and Enforcement	M				
Construction Material Diversion and Separation Requirements	S				
Deconstruction Requirement	L				
Food Waste Diversion Requirements	L				
Education, Outreach, Technical Assistance, and Enforcement	S				
Curbside Materials Collection	L				
Animal Waste Collection	L	NA	NA		
Construction Material Source Separation Program	S				

Time Frame for Implementation:

- S Short 1–4 years
- M Medium 5–9 years
- L Long 10–13 years

Diversion Potential or Waste Reduction (Tons):

- <10,000
- 10,000–100,000
- 100,000>

Greenhouse Gas Reduction (MTCO2E):

- <(10,000)
- (10,000)–(100,000)
- (100,000)>

Total Implementation Costs

(does not include infrastructure costs, such as developing, purchasing, or operating facilities)

- < (10,000)
- (10,000)–(100,000)
- (100,000) >



Public Favorite strategies were determined based on stakeholder voting during the workshops.

Mandatory Participation, Source Separation, and Enforcement

Increasing correct participation in the recycling and composting systems to maximize the diversion of targeted materials

Time Frame:	M
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

The **Mandatory Participation, Source Separation, and Enforcement** ordinance requires recyclable and organic compostable materials to be separated from the garbage and trash streams and placed in the recycling and composting streams. This requirement strives to divert all appropriate materials from the garbage for recycling or composting. Source separation is the practice of placing materials in the recycling or composting stream at businesses, homes, workplaces, and events throughout the county, allowing these materials to stay in use and at their highest and best use. Enforcement guidelines are included in this initiative to ensure they are properly followed. This strategy works closely with the following strategies: **Universal Recycling and Composting, Pay-As-You-Throw, and the Curbside Materials Collection.**

This is an expansion of Chapter 15 Section 2.6 (Mandatory separation of recyclable materials from solid waste stream) of the Miami-Dade County Code.⁷

7 Miami-Dade County Code Chapter 15, 2.6 – Mandatory separation of recyclable materials from solid waste stream

EXAMPLE

Miami-Dade County has an existing ordinance (Sec. 15-2.6 – Mandatory separation of recyclable materials from solid waste stream) that requires all residential units and commercial establishments to separate recyclable materials from the garbage and trash streams. This strategy works to increase enforcement of the ordinance to ensure participation by first providing support to residents and businesses (consistent with the **Education, Outreach, Technical Assistance, and Enforcement** strategy), then increasing to notices and warnings, and escalating to fines (where appropriate).

Construction Material Diversion and Separation Requirements

Requirements for construction materials to be reused, recycled, or composted

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

The **Construction Material Diversion and Separation Requirements** strategy will require construction projects to meet performance standards for construction materials and demolition debris to enable their reuse, recycling, or composting. A specific requirement pertaining to on-site separation of materials will help project owners to maximize diversion. This ordinance, along with the Construction Material Source Separation Program and the Construction Material Processing Facility, establishes a robust zero waste system for construction materials by promoting their reuse, recycling, and composting in a circular flow.

EXAMPLE

During the development of Miami-Dade County's Zero Waste Master Plan, the county began developing an ordinance that would amend the Chapter 15 of the County Code mandating that haulers collecting C&D materials are required to haul a certain percentage of the collected C&D to a permitted C&D recovery facility.

Deconstruction Requirement

Requirements for structures to be deconstructed to salvage valuable materials before demolition

Time Frame:	L
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

The **Deconstruction Requirement** ordinance would require builders to remove valuable building components, such as doors, hardware, windows, fixtures, paneling, plumbing, electrical materials and more, before demolition. This strategy aims to salvage valuable materials that would otherwise be disposed of during demolition. For this strategy to be successful, there needs to be a reuse warehouse to handle the volume of salvaged materials, a market for deconstructed materials, clear guidelines, and educational materials to ensure a clear understanding. Deconstruction can initially cost 1.5 to 3 times as much as traditional demolition, but property owners can often offset the higher labor costs through charitable tax deductions for donated materials or by reselling high-value vintage items.

EXAMPLE

On September 8, 2022, the San Antonio (Texas) City Council adopted a deconstruction ordinance for certain older or historically designated residential structures of up to eight units, including accessory buildings, such as garages and carriage houses. Covered structures include those built on or before December 31, 1945, anywhere in the city, as well as those built on or before December 31, 1960, if they are designated local historic landmarks, located in a historic district, or within a Neighborhood Conservation District. The City of San Antonio Office of Historic Preservation offers annual deconstruction training.

Food Waste Diversion Requirements

Requirements for edible food and food scraps to be diverted from disposal

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

Public Favorite *



The **Food Waste Diversion Requirements** will establish requirements to divert food from disposal. Under this ordinance, commercial food businesses (e.g., restaurants, grocery stores, hotels, hospitals, schools, and food processors) must donate surplus edible food to food-recovery organizations that specialize in managing it for redistribution and/or separate food scraps and other organic material for diversion through composting, anaerobic digestion, or other approved recovery methods. In addition, the ordinance will require compost collection systems at multifamily properties (e.g., condos and apartment complexes) to collect residents' food scraps. Technical assistance and partnerships with local haulers and composting facilities are needed to ensure compliance with curbside collection laws, service availability, and processing infrastructure capacity. This Zero Waste Strategy will work in collaboration with the **Edible Food Donation Program** strategy and rely on **Organic Material Composting Infrastructure** to compost diverted food scraps.

EXAMPLE

Gainesville, Florida, has adopted both a Commercial Food Waste Collection ordinance and a Commercial Food Diversion ordinance. The collection ordinance requires commercial establishments generating one cubic yard or more of food waste per week to separate food scraps for composting. The diversion ordinance requires food retailers occupying at least 25,000 square feet to divert food and food waste in accordance with the U.S. EPA's Food Recovery Hierarchy, which has since been replaced by the Waste Food Scale.

Learn more at <https://www.epa.gov/sustainable-management-food/waste-food-scale>

Education, Outreach, Technical Assistance, and Enforcement

Providing comprehensive education, outreach, and technical assistance to all sectors about the Zero Waste Strategies

Time Frame:

S

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



An **Education, Outreach, Technical Assistance, and Enforcement** program is essential for zero waste to be successful throughout the county. This program supplies all sectors with information, assistance, and guidelines to comply with the new zero waste policies, programs, and infrastructure. Consistent and easy to understand signage for recycling is particularly important for multifamily complexes and commercial buildings. Educational materials will be created for websites, flyers, videos, mailers, and in-person and online events. Outreach is conducted using educational materials across all sectors to support knowledge-building around new zero waste policies and programs. Technical assistance is provided to help residents and business owners comply with the new policies and programs and understand the educational materials. Enforcement is a mechanism that supports technical assistance and further ensures compliance.

**This program is an enhancement of current programs.

EXAMPLE

The City of Miami Beach has a web page devoted to Reduce and Reuse information, “Dos & Don’ts” tips, downloadable flyers, and personnel contact information, with the goal of educating the community about waste diversion, reduction, and reuse. The city also offers a recycling toolbox for download. Local organizations like Debris Free Oceans offer support to municipalities with outreach and education, technical assistance for businesses, and coalition building. Meanwhile, Miami-Dade County created a Zero Waste web page with information on the planning process, how to get involved, frequently asked questions, and zero waste resources.

Curbside Materials Collection Program

Collection of hard-to-recycle or bulky materials curbside for reuse and recycling

Time Frame:

L

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



The **Curbside Materials Collection Program** establishes a system for collecting materials not accepted by residential recycling and composting systems. Materials like textiles, furniture, and expanded polystyrene are often difficult to recycle and are infrequently disposed of. The goal is to direct these materials to reuse or recycling facilities so they can be kept in use. This program could be run by county staff, municipal staff, or a private business.

EXAMPLE

In many states, residents can subscribe to private curbside services that collect several categories of hard-to-recycle materials—such as mixed plastics, textiles, small electronics, batteries, and other household items—every two months. Customers fill purchased bags at their convenience. When full, the bags are collected, transported to a central facility, and sent to partner organizations for reuse or recycling. Mail-in options are also often available. Alameda County, California, has a Reusable Materials Collection Program in which residents can place bulky items at the curb once a year for free for collection for reuse. Items collected will be sent to a reuse facility for sorting and evaluation for sale.

Construction Material Source Separation Program

Comprehensive information and outreach on strategies related to sustainable material management in construction projects

Time Frame:	
Diversion Potential:	  
Greenhouse Gas Reduction:	  
Implementation Cost:	  

The **Construction Material Separation Program** provides the construction sector with guidance on complying with requirements for the separation and diversion of construction materials. Program information will be made available on the county website detailing the opportunities, regulations, and guidelines for the reuse, recycling, and composting of materials associated with deconstruction, remodeling, construction, and demolition. The program explains the county’s construction rules and provides compliance information needed for the sector to comply.

EXAMPLE

C&D recycling is voluntary in Palm Beach County, Florida, but the Solid Waste Authority provides a C&D recycling and education program for project owners, contractors, haulers, and residents to learn about effective source separation at the job site and outlets for reuse or recycling.

Materials and Process Infrastructure

The Miami-Dade County Zero Waste Master Plan includes strategies in the Materials and Process Infrastructure category. The Materials and Process Infrastructure strategies aim to provide facilities, collection sites, and locations for reuse, recycling, and composting. Many of these infrastructure strategies are needed for the associated policy or program to be fully implemented and successful. The Organic Material Composting Infrastructure and the Construction Material Processing Facility are two essential Zero Waste Strategies in this category that are needed to complete the development of the zero waste system for compostable organic materials (e.g., food scraps and yard debris) and construction materials. These infrastructure strategies will enable the diversion of materials from the disposal stream. The Materials and Process Infrastructure Zero Waste Strategies are listed in Table 9 and described below.



Table 9: Infrastructure Strategies Overview

Infrastructure Zero Waste Strategies	Time Frame for Implementation	Waste Reduction	Greenhouse Gas Reduction	Implementation Cost*	Public Favorite
Drop-Off Partnerships	S				
Lending Libraries	M				
Reuse Warehouse	M				
Reusable Foodware Washing Infrastructure	L				
Reuse, Repair, and Recycling Center	L				
Water Bottle Refill Stations	S				
Organic Material Composting Infrastructure	S				
Construction Material Processing Facility	M				

Time Frame for Implementation:

- SShort 1–4 years
- MMedium 5–9 years
- LLong 10–13 years

Diversion Potential or Waste Reduction (Tons):

- <10,000
- 10,000–100,000
- 100,000>

Greenhouse Gas Reduction (MTCO2E):

- <(10,000)
- (10,000)–(100,000)
- (100,000)>

Total Implementation Costs

(does not include infrastructure costs, such as developing, purchasing, or operating facilities)

- < (10,000)
- (10,000)–(100,000)
- (100,000) >



Public Favorite strategies were determined based on stakeholder voting during the workshops.

Drop-Off Partnerships

A system for dropping off materials for reuse or recycling

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

A **Drop-Off Partnership** program involves working with private, municipal, and nonprofit organizations to establish the infrastructure needed for a drop-off system. The materials that would be dropped off will be diverted to reuse or recycling systems. Drop-off locations can include libraries, recycling centers, businesses, and nonprofit partners. The goal is to establish convenient locations for residents to drop off hard-to-recycle items or items that are infrequently reused or recycled. These can include paint, batteries, books, toner cartridges, electronics, and textiles. This program may collaborate with the **Reuse, Repair, and Recycling Center facility**, which can serve as a drop-off location.

**This is an enhancement of a current program in the county and can include additional materials, such as small electronic and vapes.

EXAMPLE

Bethlehem, New York, offers reuse and recycling drop-off boxes throughout town for clothing, textiles, stuffed animals, and shoes. Through a partnership with the American Clothing Recycling Company, these materials are collected for reuse and recycling, generating revenue for the town’s recycling program. Since 2015, the town has also partnered with Habitat for Humanity Capital District ReStore to provide a 40-foot walk-in donation container for accepted items and building materials.

Lending Libraries

Facilities that lend everyday items, such as tools or kitchen equipment, for use and return

Time Frame:	M
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

Lending Libraries are facilities that lend durable goods, such as tools, small kitchen appliances, electronics, party supplies, sports equipment, and other items, for use and return, like a book library. This reduces the need to purchase items that are rarely used. Lending libraries help reduce waste, lower consumer costs, and foster a culture of sharing and reuse. This strategy can also include an online platform for easy access to available items and to promote educational outreach by raising awareness of the environmental and economic benefits of borrowing instead of buying.

EXAMPLE

The St. Lucie County (Florida) Public Library also maintains a Library of Things, with available items including birding kits, health monitoring kits, book club kits, children’s kits, sports equipment, energy-saving kits, mobile hotspots, and musical instruments. Similarly, the Boca Raton (Florida) Public Library provides a Library of Things collection that includes arts and crafts supplies, audiovisual equipment, recreation items, home tools and equipment, technology, and children’s items.

Reuse Warehouse

A donation-based facility that accepts donations and sells used, durable household items to the public

Time Frame:

M

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



A **Reuse Warehouse** is a facility that accepts donations of reusable goods from the community, sorts the materials, and then places them on the floor for sale. This facility allows materials like building and construction materials; furniture; cabinets; household items, such as lamps, appliances, bookshelves, hardware, light fixtures; and everyday items, such as office/art supplies, to be reused by keeping them in use longer. The Reuse Facility will have a pickup-and-delivery plan with appropriate vehicles. The sales of these items offer low-cost items to community members who otherwise could not afford them. The reuse warehouse serves as a storage facility and sales floor.

EXAMPLE
Resource Depot, located in West Palm Beach, Florida, is a nonprofit creative reuse center that focuses on reusing and upcycling materials, such as office supplies, art supplies, excess materials, and samples.

Reusable Foodware Washing Infrastructure

A facility that prepares foodware for reuse through washing, drying, and storage

Time Frame:

L

Diversion Potential:



Greenhouse Gas Reduction:



Implementation Cost:



Public Favorite *



Reusable Foodware Washing Infrastructure is a facility for cleaning, drying, and storing reusable takeout or takeaway foodware. These facilities include dishwashers and equipment for drying, maintaining, and storing reusable foodware. The facility will wash reusable foodware, such as clamshell containers, utensils, bowls, plates, and lids, used by commercial reuse providers and work in collaboration with the Reusable Foodware Program to create a reusable foodware system at events, restaurants, food trucks, and festivals. This infrastructure should be centrally located or strategically located near a dense area that will use reusable foodware. There may be a need for more than one location.

EXAMPLE
Re:Dish operates in the Northeast (Philadelphia, Pennsylvania; New York City, New York; and Boston, Massachusetts) and offers a closed-loop system of reusable foodware and washing hubs. The program supplies, picks up, and professionally cleans reusable foodware, then returns fresh inventory. The program includes automated tracking, life cycle assessment-backed sustainability reporting, and ongoing support.

Reuse, Repair, and Recycling Center

A sustainability center for reuse, repair, and recycling

Time Frame:	L
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

A **Reuse, Repair, and Recycling Center** is a facility that accepts community materials for reusing, repairing, and recycling. Items accepted for reuse include household items, such as furniture, appliances, kitchenware, lamps, desks, books, office/party supplies, tools, and tables/chairs. Items accepted for recycling include traditional recyclables and hard-to-recycle items, such as pesticides, oils, cleaning supplies, paints, mattresses/box springs, batteries, glassware, electronic materials, and plastics. This facility will also have a community center for events like repair events. This facility is a sustainability center that aims to keep materials in use through reuse, repair, and recycling, and will collaborate with Drop-Off Partnership, Reuse Warehouse, Lending Libraries, and The Reuse, Share, Repair, and Refill Directory and Events strategies. This facility should be convenient to use and work in collaboration with drop-off sites throughout a municipality that collect similar materials from the community. This facility can also collaborate with Lending Libraries. Items from the community can also help stock the lending library with small appliances, tools, power tools, and tables/chairs.

EXAMPLE

Boulder, Colorado, has a section of town called Recycle Row, which is home to many zero waste facilities in close proximity. These facilities include a Center for Hard-to-Recycle Materials, Resource Central for building and household item donations and sales (both operated by an NGO named EcoCycle), a county-operated recycling drop-off center, a county-operated hazardous waste facility, and a county-operated yard waste and untreated wood waste drop-off site. These facilities offer the community many opportunities to participate in zero waste systems.

Water Bottle Refill Stations

Stations that allow water bottle refills using municipal water

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

Water Bottle Refill Stations allow residents and visitors to refill their bottles with municipal water. They are strategically situated around town at schools, municipal buildings, parks, walkways, and the airport. They can also be paired with pet waterers. This initiative aims to reduce the use of single-use plastic water bottles and promote access to clean, safe drinking water.

EXAMPLE

Miami-Dade County Water and Sewer Department (WASD) installs and manages hydration stations across county parks, government hubs, and transit centers. WASD also operates a specialized water trailer that is deployed to community events, green spaces like Bayfront Park, and various public outreach locations. This mobile unit dispenses chilled municipal water and helps eliminate the use of plastic bottles, which also helps to green events.

Organic Material Composting Infrastructure

A facility that accepts organic compostable materials and turns them into a soil amendment through composting

Time Frame:	S
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	
Public Favorite *	

Organic Material Composting Infrastructure accepts food scraps, inedible food, food-soiled paper, and yard debris to create a nutrient-rich soil amendment. Composting methods can include large-scale vermicomposting, windrow composting, aerated static pile composting, or in-vessel composting. The soil amendment products are intended for local use, which aligns with the strategy, New Development Compost Use Requirement. This facility could be co-located with other reuse and recycling infrastructure and works in conjunction with the following strategies: **Universal Recycling and Composting Ordinance, Food Waste Diversion Requirements, and Mandatory Participation, Source Separation, and Enforcement.**

EXAMPLE

New policies and programs aimed at recovering and processing organic materials require sufficient composting infrastructure to handle the increased volume. Fertile Earth Enterprise in Miami-Dade County piloted a project aimed at providing the county with proof-of-concept for large-scale composting, with a goal of diverting and composting over 100 tons of food scraps every 10 weeks using a covered aerated static pile designed to expedite the composting process while minimizing odors.

Construction Material Processing Facility

A construction material sorting center that diverts materials for reuse, recycling, or composting

Time Frame:	M
Diversion Potential:	
Greenhouse Gas Reduction:	
Implementation Cost:	

A **Construction and Demolition Processing Facility** accepts construction, deconstruction, demolition, and remodeling materials for reuse, recycling, and composting. The facility markets the materials for their highest and best use while keeping them out of the disposal stream. It is like a recycling facility that accepts mixed construction materials, which would be sorted and marketed. This facility will collaborate with the **Construction Material Source Separation Program** and the **Construction Material Diversion and Separation, and Deconstruction Requirements** strategies to create a circular system for construction materials.

EXAMPLE

The GreenWaste Zanker Resource Recovery Facility in San Jose, California, diverts more than 80% of the mixed C&D debris it receives, processing over 2,600 tons of concrete, asphalt, wood, and drywall each day through a multistage sorting system that combines heavy equipment, AI, advanced robotics, and manual quality control. Furthermore, the C&D recovery facility is adjacent to a MRF for mixed recyclables, an anaerobic digester for organics, a wastewater treatment plant, and landfill, making it an operative Sustainability Campus.

STRATEGY IMPLEMENTATION ROADMAP AND TIMELINE

The culmination of the Zero Waste Master Plan will take at least 13 years to implement, and each strategy is assigned to a time frame. The Zero Waste Strategies include implementation in the Short Term (1–4 years), Medium Term (5–9 years), and Long Term (10–13 years). The time frames were assigned based on the understanding that there is an order of progression and some strategies should be implemented before others and some strategies build on each other. Since implementation times can vary, with some strategies taking longer than others, a staggered approach is needed. Within the short-, medium-, and long-term solutions, the implementation sequence for each strategy was influenced by local stakeholder voting during public workshops held as part of the Public Involvement and Stakeholder Outreach process (see the Planning Chapter and Appendix C for detailed results of the stakeholder outreach and engagement process). This chapter details the implementation sequence, describes each step, and explains how the county can support municipalities in implementing and participating in the Zero Waste Strategies.

Figure 10 shows the roadmap for the Zero Waste Strategies, in the recommended order of implementation, within short-, medium-, and long-term time frames. During the Public Involvement and Stakeholder Input process, residents of Miami-Dade County were polled to select their favorite strategies. The strategies in bold represent the policies, programs, and infrastructure that received the most votes, indicating they were favored for implementation in the county.

Figure 10: Implementation Roadmap

Implementation Roadmap



Short Term Strategies

- ◆ Universal Recycling and Composting Ordinance
- ◆ Education, Outreach, Technical Assistance, and Enforcement
- ◆ Food Waste Diversion Requirements
- ◆ Edible Food Donation
- ◆ Organic Material Composting Infrastructure
- ◆ Pay-As-You-Throw
- ◆ Construction Material Diversion and Separation Requirements
- ◆ Lead by Example
- ◆ Reuse Directory
- ◆ Reuse, Share, Repair, and Refill Directory and Events
- ◆ Water Bottle Refill Stations
- ◇ Drop-Off Partnerships
- ◇ Accessories Upon Request and Product Requirements
- ◇ Construction Material Source Separation Program
- ◇ Business Recognition Program with Green Teams

Medium Term Strategies

- ◆ Lending Libraries
- ◆ Zero Waste Events and Venues
- ◆ Reuse Warehouse
- ◆ Takeback Program
- ◆ Market Development
- ◇ Mandatory Participation, Source Separation, and Enforcement
- ◇ Construction Materials Processing Facility
- ◇ Green Building Credits
- ◇ Rate Structure Incentives and Reporting Requirements

Long Term Strategies

- ◆ Reuse, Repair, and Recycling Center
- ◆ Zero Waste Grants
- ◆ Reusable Foodware Washing Infrastructure
- ◇ Reusable Foodware
- ◇ New Development Compost Use Requirement
- ◇ Curbside materials collection
- ◇ Deconstruction Requirement

Short-Term Strategy Implementation Steps

Short-term strategies should be launched immediately after the Zero Waste Master Plan is published and should be rolled out over the following four years. The 15 short-term strategies below are recommended for implementation in the order listed, but some, especially the first five, can be implemented simultaneously. Some strategies depend on others before they can be fully implemented, while others will be built upon as the implementation process moves forward.

Figure 11 shows the roadmap for the Short-Term (1–4 years) Zero Waste Strategies, in the recommended order of implementation. During the Public Involvement and Stakeholder Input process, residents of Miami-Dade County were polled to select their favorite strategies. The strategies in bold represent the policies, programs, and infrastructure that received the most votes, indicating they were favored for implementation in the county.



Figure 11: Short-Term Strategies

- ◆ **Universal Recycling and Composting Ordinance**
- ◆ **Education, Outreach, Technical Assistance, and Enforcement**
- ◆ **Food Waste Diversion Requirements**
- ◆ **Edible Food Donation**
- ◆ **Organic Material Composting Infrastructure**
- ◆ **Pay-As-You-Throw**
- ◆ **Construction Material Diversion and Separation Requirements**
- ◆ **Lead by Example**
- ◆ **Reuse Directory**
- ◆ **Reuse, Share, Repair, and Refill Directory and Events**
- ◆ **Water Bottle Refill Stations**
- ◇ Drop-Off Partnerships
- ◇ Accessories Upon Request and Product Requirements
- ◇ Construction Material Source Separation Program
- ◇ Business Recognition Program with Green Teams

Universal Recycling and Composting Ordinance

Amending the Universal Recycling Ordinance to mandate compost collection across all sectors

Implementing the **Universal Recycling and Composting Ordinance** builds on the current Universal Recycling Ordinance, Section 15-2 (Solid waste collection services, container usage, condition, and location). Because it applies to all sectors, it is a significant ordinance and should be implemented in the short term. The following steps outline implementation of this robust ordinance for the county.

IMPLEMENTATION STEPS:

1. Draft proposed amendments to the Universal Recycling Ordinance (Section 15-2 of the Code) to include universal composting requirements for adoption by the Board of County Commissioners.
2. Draft an enforcement plan that uses outreach materials for multifamily, commercial, and institutional sectors.
3. Prepare educational materials related to components of the updated ordinance to use during outreach, enforcement, on social media, during technical assistance, and for the county's website.
4. Create educational materials such as mailers with basic information on reuse, recycling, composting, garbage systems, and program requirements that are distributed annually to all residents and new residents.
5. Develop a technical assistance program that uses outreach materials for multifamily, commercial, and institutional sectors.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide model educational materials and a model enforcement plan.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Save-As-You-Throw and Organic Material Composting Infrastructure (short-term time frame strategies)
- » Mandatory Participation, Source Separation, and Enforcement, and the Rate Structure Incentives and Reporting Requirements, and the Curbside Materials Collection (medium-term and long-term time frame strategies).



Education, Outreach, Technical Assistance, and Enforcement

Providing comprehensive education, outreach, and technical assistance to all sectors about the Zero Waste Strategies

The implementation of this program is essential for zero waste to succeed throughout the county and should begin in the short term. This program will continue throughout the Zero Waste Strategy implementation period (13 years) and beyond. Educational materials will need to be continually updated as more strategies are implemented, and it is important to ensure messages remain consistently accurate. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Develop An Educational Program That Follows The Implementation Timeline Of The Strategies And Prepare Educational Materials As The Strategies Are Developed And Introduced.
2. Create New And Enhanced Educational Materials For The Website, Social Media, And During In-Person Outreach.
3. Ensure All Materials (Handouts, Fact Sheets, Videos, Mailers, And Posters) Are Inclusive And Multilingual (At A Minimum English, Spanish, And Haitian Creole).
4. Work With A Community-Based Social Marketing Organization Or An Expert When Developing Educational Materials.
5. Establish Garbage, Recycling, And Composting Signage Guidelines (I.e., Colors, Fonts, Wording, Pictures, And Placement) For All Collection Containers (I.e., Carts, Bins, Dumpsters, And Indoor Receptacles).
6. Update Miami-Dade County's 311 Service Or Create A Two-Way Communication Portal On The Miami-Dade Zero Waste Website For The Stakeholders And The Public To Ask Questions And Report Violations.
7. Create A "New Resident Welcome Packet" That Covers Sector-Based Information On Reuse, Recycling, Composting, And Garbage Policies, Programs, And Infrastructure. Partner With Realtors/Property Managers, Hoas, And Miami-Dade County Department Of Housing And Community Development.
8. Ensure Educational Materials Are Tailored To Each Sector, Including (But Not Limited To) Residential (Single-Family And Multifamily Establishments), Commercial (For-Profit Business, Nonprofit Organizations, Construction Industry), And Institutional (K-12 Public Schools, Private Schools, And Higher Education).
9. Prioritize The Creation Of Food Waste Reduction And Food Scrap Diversion Outreach And Education Materials.
10. Develop A Technical Assistance Program Specifically For Multifamily Complexes, Businesses, And Institutions To Ensure Understanding And Compliance With New Zero Waste Strategies.
11. Conduct Outreach To Schools, Faith-Based Organizations, And Businesses To Help Them Build Capacity And Organize Green Teams.
12. Develop An Enforcement Plan And Schedule That Includes Conducting Inspections Of Collection Containers To Ensure Signage Guidelines Are Being Followed And Monitor Contamination Levels. Include A Corrective Action Component That Provides Technical Assistance And Educational Materials To Facilitate Compliance, Improve Sorting, And Reduce Contamination.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials, a technical assistance plan, and a compliance and enforcement plan.

TIMING IMPLEMENTATION AND RELATED STRATEGIES

The Education, Outreach, Technical Assistance, and Enforcement strategy is integral to all the Zero Waste Strategies.

Food Waste Diversion Requirements

Requirements for edible food and food scraps to be diverted from disposal

The implementation of the **Food Waste Diversion Requirements** is essential to prevent food from going to disposal, preserving its highest and best use. The following steps outline development and implementation of this ordinance.

IMPLEMENTATION STEPS:

1. Draft a Food Waste Diversion ordinance for the multifamily, commercial, and institutional sectors that follows the U.S. EPA Wasted Food Scale (preventing wasted food, donating edible food first, etc.).⁸
2. Within the ordinance language, set thresholds for enactment, such as a facility's square footage, tons of materials generated in a specific time frame (e.g., weekly, monthly), or other appropriate criteria. Begin by mandating the diversion of edible food and food scraps from the largest generators (e.g., high-organic generators).
3. Create educational materials for outreach, technical assistance, enforcement, and for the county's website (education materials should be developed in conjunction with the Edible Food Donation program).
4. Develop a technical assistance program for business and multifamily complexes.
5. Develop an enforcement plan and schedule that combines enforcement actions with educational outreach materials to be used with technical assistance.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials and enforcement plan information.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

Edible Food Donation

8 U.S. EPA Wasted Food Scale

Edible Food Donation

Expanding edible food recovery and connecting it to food banks and other organizations

The implementation of this program builds on the work already taking place in Miami-Dade County and is connected to many other Zero Waste Strategies that aim to divert food from disposal, such as the Food Waste Diversion Requirements. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Inventory all existing local and regional organizations with programs to actively retrieve surplus food, accept food donations, and/or redistribute food.
2. Create education and outreach materials for stakeholder meetings, code enforcement, community events, presentations, and content for the county's website and social media.
3. Coordinate stakeholder meetings and conduct a needs assessment to expand operations and capacity, such as staffing, vehicles, and storage.
4. Systematically categorize the types of edible food that may be covered by the program (e.g., prepared hot and cold food, packaged food, perishable food) and develop guidelines around recovery, transport, storage, processing, donating, and redistribution.
5. Forge partnerships with the Miami-Dade County Department of Community Services and community organizations that have experience in food insecurity, such as the United Way Miami and Feeding South Florida.
6. Investigate edible food rescue application services.
7. Develop a technical assistance program for businesses and organizations participating in the program.
8. Create a system for tracking recovered tonnages, reporting results to the county, and conduct annual program assessments for continual improvement.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines, best practices, and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

Food Waste Diversion Requirements

Organic Material Composting Infrastructure

A facility that accepts organic compostable materials and turns them into a soil amendment through composting

Implementation of the **Organic Material Composting Infrastructure** is a critical step toward becoming a Zero Waste Community, and the Department of Solid Waste Management (DSWM) is currently conducting a one-year pilot study.⁹ This pilot study will ensure that any composting operation in Miami-Dade County can be integrated into DSWM operations while also prioritizing environmental protection. The following steps outline implementation of this infrastructure in the county.

IMPLEMENTATION STEPS:

1. Develop a comprehensive countywide organics management plan.
2. Conduct market research and financial analysis.
3. Determine site location, ownership and operator, and whether the infrastructure is built on county property and run by the county or private sector business.
4. If needed, develop a Request for Proposal (RFP), soliciting proposals from the private sector to provide organic waste processing services and beneficial use services.
5. Assess the feasibility of co-locating with other reuse and recycling infrastructure.
6. Develop a media campaign to promote the new program, facility and operations, and any co-located reuse, recycling, or environmental education infrastructure.
7. Develop educational materials for outreach, events, social media, and the county’s website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Universal Recycling and Composting Ordinance**
- » **Food Waste Diversion Requirements**
- » **Mandatory Participation, Source Separation, and Enforcement**
- » **New Development Composting Requirements**

Save-As-You-Throw

Volume-based fee structure for garbage service for single-family residents

The implementation of the **Save-As-You-Throw (SAYT)** ordinance establishes a single-family residential, volume-based garbage service in which residents pay based on the desired cart size. This SAYT incentive program encourages waste reduction and enhances collection systems for single-family residences when paired with curbside recycling and compost services required by the Universal Recycling and Composting Ordinance. The following steps outline implementation of this ordinance for single-family residents.

IMPLEMENTATION STEPS:

1. Draft an ordinance for a SAYT garbage collection system for single-family residents with three bin size options (35, 65, and 95 gallons) for a once-a-week pickup schedule.
2. Design the fee structure to incentivize waste reduction and diversion by scaling the price exponentially for the third and fourth largest carts.
3. The implementation of SAYT should be accompanied by curbside recycling, yard debris, and food scrap collection.
4. Develop educational materials for outreach, events, social media, mailers, and the county’s website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide model ordinance language and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

Universal Recycling and Composting Ordinance

9 The pilot program is described in Report on Composting Operations, Siting, Considerations, Regulatory Requirements and Current Recommendations.

Construction Material Diversion and Separation Requirements

Requirements for construction materials to be reused, recycled, or composted

The implementation of this ordinance will be carried out in collaboration with the Construction Material Source Separation Program and the Construction Material Processing Facility. The integration of these three strategies establishes an effective zero waste framework for construction materials, ensuring their continued circulation through reuse, recycling, and composting systems. The following steps outline implementation of this infrastructure in the county.

IMPLEMENTATION STEPS:

1. Conduct a feasibility study to determine the throughput capacity of construction material recycling facilities in Miami-Dade County.
2. Draft ordinance language to regulate construction materials for on-site separation at construction sites, hauling, and processing aimed at high diversion.
3. Conduct regional stakeholder meetings to identify the barriers, opportunities, and benefits of construction material diversion requirements.
4. Align ordinance requirements with current construction management requirements and recognized practices across the county to increase collaboration.

COUNTY SUPPORT FOR MUNICIPALITIES

Provide ordinance guidelines, requirements, and parameters.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Construction Material Source Separation Program
- » Construction Materials Processing Facility

Lead by Example

Model Zero Waste policies and programs for municipal buildings, parks, and events

Implementation of the internal county policy will begin in the short term but will take many years to complete due to the large number of county buildings and locations. The following steps outline development and implementation of this program in county buildings and facilities.

IMPLEMENTATION STEPS:

1. Update the current county procurement policy to be a zero waste procurement policy by expanding and identifying parameters for procurement operations, such as items made from recycled content, reusable packaging, durable items, items with minimal packaging, and recyclable and compostable items. Vendors that meet the guidelines will be identified, and items and materials identified in vendors' catalogs or on their websites will also be highlighted for easy ordering.
2. Assign dedicated staff to ensure all facilities and buildings have standardized recycling and composting bins and signage. Also, ensure there is adequate washing infrastructure for reusable foodware where appropriate.
3. Create a Zero Waste Events Guide for internal events and events open to the public. The guide should identify parameters, such as restricting single-use foodware up to a certain number of employees/guests, requiring use of recyclable or compostable (PFAS-free)¹⁰ foodware for larger events, and not allow expanded polystyrene or single-use bags at any event. Swag items (gifts given out) should be eliminated, reduced, or thoughtfully chosen through the lens of zero waste.
4. Ensure there are water bottle refill stations for employees and guests at all properties, encouraging the use of reusable water bottles.
5. Enhance the current surplus operation system to include furniture, office supplies, vehicles, equipment, and other supplies commonly used by staff.
6. Establish guidelines that enhance the current policy that eliminates the use of single-use plastics at events, in contracts, on property, and in the break room. Single-use plastics include bags, cups, plates, cutlery, clamshells, and bowls.
7. Establish Green Teams at every facility or department. This ensures that Zero Waste practices are met, challenges are faced, and consistency is maintained.
8. Establish guidelines on remodeling and new construction in the county to adhere to the county standards of reuse, recycling, and composting construction materials to keep them from going to disposal.
9. Ensure there is dishwashing infrastructure for office breakrooms and kitchenettes that allows for reusable foodware use.
10. Develop educational materials for outreach, events, social media, and the county's website. This public-facing information shows that the county is leading by example with the internal policies and programs related to zero waste.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines, best practices, and educational materials.

10 Per and poly-fluoroalkyl substances (PFAS)

Reuse Directory

An online resource of surplus materials

The implementation of a reuse directory will help the county keep materials in use longer by matching up surplus items. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Partner with an organization to create an online marketplace that matches excess materials with those who need them.
2. Identify the program parameters for the online reuse directory that will include items for sale or for free.
3. Identify the materials to be included in the directory, such as household furniture, office furniture, household items, building materials, construction materials, hardware, office and school supplies, and other excess items that can be reused.
4. Develop educational materials that include how to use the directory information for outreach, events, social media, and the county's website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials.

Reuse, Share, Repair, and Refill Directory and Events

Community events for reuse, share, and repair, along with a local reuse directory

The implementation of the reuse events program, along with a reuse directory, will help the county increase the local circular economy, thereby increasing participation in reuse. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Identify the program parameters for the online directory, quarterly events, and educational materials.
2. Develop an online directory on the county's Zero Waste website that lists all businesses or organizations within the county that do reuse, sharing, renting, repair, and refill. This can be like the Recycle Right A to Z directory, but instead of the alphabet, it lists sections for Reuse, Share, Rent, Repair, and Refill. Ensure there is a pathway for businesses and organizations to "apply" to be listed in the directory.
3. Partner with a local organization to create and run quarterly reuse, share, and repair events. The quarterly events will feature a repair event and swaps (e.g., clothing, books, household items). Events can be held at the Reuse, Repair, and Recycling Center, which will serve as the county's Sustainable Solid Waste Center, or at other locations like libraries.
4. Create educational materials about Reuse, Share, Repair, and Refill, including information on the directory and events.
5. Develop educational materials that include information on the local directory and the quarterly events for outreach, events, social media, and the county's website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will share program information and educational materials.

Water Bottle Refill Stations

Stations that allow water bottle refills using municipal water

The implementation of **Water Bottle Refill Stations** should begin in the short term, but full implementation may take several years. The stations may need maintenance, repairs, and replacement after implementation. The following steps outline implementation of this infrastructure in the county.

IMPLEMENTATION STEPS:

1. Assess the need for Water Bottle Refill Stations in county buildings, public schools, transit stations, parks, and community centers.
2. Establish guidelines for installing Water Bottle Refill Stations in new and remodeled buildings and locations prioritizing areas that are "installation ready" with existing electrical and water hookups and/or collocated with traditional drinking fountains. Share guidelines with the construction sectors that carry out remodeling and new construction.
3. Develop an incentive program for the private sector to install Water Bottle Refill Stations.
4. Develop educational materials about the benefits of refilling with municipal water for outreach, events, social media, and the county's website.
5. Investigate a mobile-friendly application showing where the Water Bottle Filling Stations are located.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide assessment steps, best practices, educational materials, and product information.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Lead by Example**
- » **Green Building Credit Program**

Drop-Off Partnerships

A system for dropping off materials for reuse or recycling

Implementing **Drop-Off Partnerships** gives residents another way to divert materials for reuse and recycling, expanding their opportunities to participate in zero waste systems. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Establish and enhance partnerships with organizations and businesses, and work with existing municipal operations to establish and enhance drop-off centers or events for residents to drop off hard-to-recycle items, such as batteries, textiles, electronics, paint, books, toner cartridges, and more.
2. Develop educational materials for outreach, events, social media, and the county’s website.
3. Establish uniform collection regulations, signage, and communication for all drop-off sites and events.
4. Establish markets for the hard-to-recycle materials for reuse and recycling.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines, best practices, educational materials, and participation information.

Accessories Upon Request and Product Requirements

Reducing single-use materials through regulations for to-go food and when dining out

The implementation of these ordinances will help regulate single-use materials, which are challenging to recycle or compost and often do not fit into any zero waste system. In this case, regulations are needed to reduce material use. The following steps outline implementation of these ordinances.

IMPLEMENTATION STEPS:

1. Draft an **Accessories Upon Request** ordinance to prevent the automatic distribution of materials such as single-use utensils, condiment packets, and napkins. Include regulations for online orders through food delivery application services.
2. Draft an ordinance that bans plastic straws and stirrers (this can be separate or combined with similar regulations).
3. Include these targeted materials in the Plastic Free 305 (i.e., Zero Waste 305) program.
4. Develop educational materials about the new regulations for consumers and food-generating businesses for outreach, events, social media, and the county’s website.
5. Develop a technical assistance program for businesses.
6. Draft an enforcement plan to ensure proper compliance with the ordinances. The first level of enforcement should include educational information with technical assistance.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials and information on the enforcement plan.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Reusable Foodware Program
- » Business Recognition Program with Green Teams

Construction Material Source Separation Program

Comprehensive information and outreach on strategies related to sustainable material management in construction projects

The implementation of this program will work in collaboration with construction material requirements and a construction sorting facility to create a robust zero waste system for construction materials. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Develop the construction material program information, which is based on the Construction Material Diversion and Separation Requirements.
2. Develop a county website page dedicated to construction, remodeling, and deconstruction information. This information details the county’s construction materials regulations, programs, participation steps, and infrastructure. Include forms, links, and other pertinent information, such as the Florida Building Codes.
3. Develop educational materials, such as videos, FAQs, and PDF guides, available for stakeholders and can be used during outreach, events, social media, and the county’s website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials, best practices, and program details.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Construction Material Diversion and Separation Requirements
- » Construction Materials Processing Facility

Business Recognition Program with Green Teams

Recognition for businesses that implement and reach zero waste goals

The implementation of a business sector recognition program will incentivize businesses to actively work toward zero waste. This program will provide businesses with details on how to participate, achieve zero waste, and be recognized. The following steps outline implementation of this program in the county.

IMPLEMENTATION STEPS:

1. Expand a current program, such as the Plastic Free 305, to make a Business Recognition Program with Green Teams to recognize businesses working toward or achieving zero waste.
2. This expansion can include more aspects related to zero waste, including reuse, source reduction, recycling, and composting organic materials. Possible name change: Zero Waste 305.
3. Develop recognition tiers (Bronze, Silver, Gold, and Platinum) and parameters for achievement, such as using reusable instead of single-use materials, recycling and composting systems, diverting edible food, surplus material systems, internal green teams, and a collection system for donation.
4. Create a county web page with the program details, application system for recognition, and recognition area. This should include decals for the business, a decal/logo for the business website, social media, and other marketing avenues.
5. Develop site visit criteria to ensure the businesses are incorporating the parameters outlined for achievement.
6. Develop educational materials about the business recognition program for outreach, events, social media, and the county's website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines and educational materials.

Medium-Term Strategy Implementation Steps

Medium-term strategies begin implementation five years after the Zero Waste Master Plan is published and continue for four more years. Nine Zero Waste Strategies will be rolled out during this period, with some potentially extending into the long-term time frame. The medium-term strategies are ordered based on stakeholder feedback and recommended to be implemented in the order described.

Figure 12 shows the roadmap for the medium-term (5–9 years) Zero Waste Strategies in the recommended order of implementation. During the Public Involvement and Stakeholder Input process, residents of Miami-Dade County were polled to select their favorite strategies. The strategies in bold represent the policies, programs, and infrastructure that received the most votes, indicating they were favored for implementation in the county.



Figure 12: Medium-Term Strategies

- ◆ **Lending Libraries**
- ◆ **Zero Waste Events and Venues**
- ◆ **Reuse Warehouse**
- ◆ **Takeback Program**
- ◆ **Market Development**
- ◆ Mandatory Participation, Source Separation, and Enforcement
- ◆ Construction Materials Processing Facility
- ◆ Green Building Credits
- ◆ Rate Structure Incentives and Reporting Requirements

Lending Libraries

Facilities that lend everyday items, such as tools or kitchen equipment, for use and return

The implementation of **Lending Libraries** helps create a culture of sharing in the county. The following steps outline implementation of this infrastructure.

IMPLEMENTATION STEPS:

1. Develop a program to establish lending libraries across the county. This can begin with a pilot location in a high-density residential area and expand to neighborhoods throughout the county. The county could partner with an NGO to operate the lending library.
2. Possible locations include libraries, community centers, or local organizations' facilities. These could also be at the Reuse, Repair, and Recycling Center or any other established county facility.
3. Develop a list of materials to be included and ask for donations. Items can include tools, small kitchen appliances, event items like tables and chairs, outdoor gear such as binoculars, and more.
4. If the county operates the Lending Library, develop a website devoted to the Lending Library with an online catalog and a button for item suggestions.
5. Develop educational materials about the Lending Library for outreach, events, social media, and the county's website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide participation and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Reuse Directory**
- » **Reuse, Share, Repair, and Refill Directory and Events**

Zero Waste Events and Venues

Guidelines for events to make them zero waste

The implementation of this strategy includes modifying event application requirements to include new regulations and creating program guidelines. The following steps outline implementation of this strategy.

IMPLEMENTATION STEPS:

1. Establish partnerships with large venues and stadiums, event planning organizations, event greening organizations, and food rescue organizations to establish a coordinated implementation effort.
2. Modify permit application to include requirements for all events on county property to submit a Zero Waste Plan with their application. The Zero Waste Plan for events will include recycling and composting services, edible food recovery, a water refill station, appropriate signage, and requirements for foodware. Foodware should be made of reusable materials (e.g., washable materials like metal or plastic) when possible; if not, recyclable or compostable foodware materials can be used.
3. Draft a Zero Waste Events Guide that includes the events requirement and information on reusable, recyclable, and compostable foodware, recycling and composting services, signage requirements, how to fill out the events permit application, vendors available to assist, and any other necessary information.
4. Develop educational materials about the Zero Waste Events and Venues strategy for outreach, events, social media, and the county's website.
5. Draft a Zero Waste Events Toolkit that can be used by residents holding events of any size in their home, place of work, or at school.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide model ordinance language, the event guide, and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

Edible Food Recovery

Reuse Warehouse

A donation-based facility that accepts donations and sells used, durable household items to the public

This facility can be implemented by the private or nonprofit sector and will serve the entire community. The following steps outline implementation of this infrastructure.

IMPLEMENTATION STEPS:

6. Develop a plan to have a reuse facility in the county.
7. Conduct market research and financial analysis.
8. Determine site location, ownership and operator, and whether the infrastructure is built on county property and run by the county or a private sector business.
9. If needed, develop an RFP, soliciting proposals from the private sector to develop, build, and operate a reuse warehouse.
10. Assess the feasibility of co-locating with other solid waste management infrastructure.
11. Develop a media campaign to promote the new program, facility and operations, and any co-located infrastructure.
12. Develop educational materials for outreach, events, social media, and the county's website.
13. If the county operates the infrastructure, develop a list of items accepted, the intake and sales process, and a delivery and pickup plan.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide facility information and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Reuse Directory**

Takeback Program

Retailers or organizations take back products and packaging for reuse, recycling, or proper disposal

Implementing this program will provide another opportunity for community members to divert materials. The following steps outline implementation of this program.

IMPLEMENTATION STEPS:

1. Develop a takeback program for materials that are hard to recycle and fall outside the curbside recycling system. Begin by identifying targeted materials.
2. Establish partnerships with nonprofits, retailers, and other businesses to establish takeback programs for materials.
3. Create, obtain, or enhance an online system that tells consumers where they can take back items.
4. Develop educational materials for outreach, events, social media, and the county’s website.
5. Continuously update the online system and continue to reach out to partners to identify more places that consumers can drop off items.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines, best practices, educational materials, and participation information.

Market Development

Developing a team to identify problematic materials that need diversion opportunities and find markets for them

Market Development implementation includes forming a group and working to solve problems around materials that are difficult to divert from disposal. The following steps outline implementation of this program.

IMPLEMENTATION STEPS:

1. Initiate a working group of individuals from municipalities, material industries, and colleges/universities that can collaborate on finding solutions to materials that do not have a diversion opportunity. Identify individuals to include, as well as the meeting schedule, location, and agenda.
2. The working group can identify the materials that do not have current opportunities for diversion and conduct research to find local and regional solutions for material diversion.
3. The working group can prepare a request for a Letter of Interest to attract a processor or manufacturer.
4. The working group can create research on economic development needs for attracting industry to the area to collaborate on material diversion.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide participation opportunities and information gleaned from the working group.

Mandatory Participation, Source Separation, and Enforcement

Increasing correct participation in the recycling and composting systems to maximize the diversion of targeted materials

The implementation of this ordinance expands the current county ordinance (Miami-Dade County Ordinance Chapter 15, 2.6 – Mandatory separation of recyclable materials from solid waste stream) to include composting regulations, with the goal of ensuring compliance across sectors. The following steps outline implementation of this ordinance.

IMPLEMENTATION STEPS:

1. Draft proposed amendments to present to the Board of County Commissioners to expand the Mandatory separation of recyclable materials from the solid waste stream ordinance to include compostable materials.
2. Prepare educational materials related to the updated ordinance for outreach, mailers, events, social media, and the county’s website.
3. Develop a technical assistance program for businesses, institutions, and multifamily complexes to ensure proper understanding and compliance.
4. Draft an enforcement plan that includes technical assistance and the use of outreach materials.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide educational materials, a technical assistance plan, enforcement plan information, and best practices.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Universal Recycling and Composting Ordinance**
- » **Rate Structure Incentives and Reporting Requirements**
- » **Save-As-You-Throw**
- » **Curbside Materials Collection**

Construction Material Processing Facility

A construction material sorting center that diverts materials for reuse, recycling, or composting

Implementing this infrastructure is necessary to ensure the capacity to process construction materials diverted under the construction material ordinance and program. It is essential to develop this facility because the construction materials ordinance and program were implemented in the short term. The following steps outline implementation of this infrastructure in the county.

IMPLEMENTATION STEPS:

1. Request a resolution directing the county mayor or the county mayor's designee to conduct a needs assessment for a Construction Material Processing Facility and provide recommendations.
2. Develop a plan to have a Construction Material Processing Facility in the county.
3. Determine site location, ownership and operator, and whether the infrastructure is built on county property and run by the county or a private sector business.
4. If needed, develop an RFP soliciting proposals from the private sector to develop, build, and run a Construction Material Processing Facility.
5. Assess the feasibility of co-locating with other solid waste infrastructure.
6. Develop a media campaign to promote the new program, facility and operations, and any co-located infrastructure.
7. Develop educational materials for outreach, events, social media, and the county's website.
8. This facility can accept materials such as rock, asphalt, concrete, bricks, wood, doors, hardware, windows, plant debris, and other construction materials.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide facility details and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Construction Material Diversion and Separation Requirements
- » Construction Material Source Separation Program
- » Deconstruction Requirements

Green Building Credits

Including sustainable aspects in construction and remodeling projects that plan for Zero Waste implementations

The implementation of Green Building Credits will set standards for sufficient zero waste space in new and remodeled buildings. The following steps outline implementation of this strategy.

IMPLEMENTATION STEPS:

- » Develop standards for zero waste space in new and remodeled buildings and an incentive program to encourage adoption of the standard. This should include language about sufficient space in new construction or remodeling projects for bins or carts for reuse, recycling, and composting at loading docks, common areas, and hallways. It should also include requirements for dishwasher capacity in K-12 schools and municipal building breakrooms and common areas and back-of-house areas for food-generating businesses.
- » Develop an outreach program with technical assistance to stakeholders to ensure proper understanding and compliance.
- » Develop educational materials for outreach, events, social media, and the county's website.

COUNTY SUPPORT FOR MUNICIPALITIES

- » The county will provide model ordinance language, educational materials, and enforcement plan information.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Construction Material Diversion and Separation Requirements
- » Construction Material Source Separation Program
- » Deconstruction Requirements

Rate Structure Incentives and Reporting Requirements

Incentive and reporting requirements included in policies to increase diversion

The implementation of this ordinance, like the Mandatory Participation, Source Separation, and Enforcement strategy, reinforces many other short-term policies and programs, specifically for multifamily complexes and commercial buildings. The following steps outline implementation of this strategy.

IMPLEMENTATION STEPS:

- » As part of an ordinance requiring Universal Recycling and Composting or other contract for collection services, establish the levels of services and tiered rate structure for multifamily complexes and commercial buildings based on the volume of garbage, recycling, and organics services needed.
- » Establish minimal levels of recycling and organics service volumes based on the number of units in multifamily establishments.
- » Require the provision of recycling and organics collection whenever garbage collection is provided.
- » Develop an outreach program with technical assistance to stakeholders to ensure proper understanding and compliance.
- » Require permitted or contract haulers to report tons and cubic yards of the material collected and hauled for garbage, recycling, and organic materials on a quarterly and annual basis using an online system. Reports would be in total, not by individual buildings.
- » Calculate the county’s recycling progress from reported data and post results on the Zero Waste website.

COUNTY SUPPORT FOR MUNICIPALITIES

- » The county will provide educational materials and enforcement plan information.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Universal Recycling and Composting Ordinance**
- » **Mandatory Participation, Source Separation, and Enforcement**

Long-Term Strategy Implementation Steps

The Long-term strategies are scheduled to begin implementation 10 years after the publication of the Zero Waste Master Plan and will continue for an additional three years. During this time, seven Zero Waste Strategies will be initiated. The long-term strategies are ordered based on stakeholder feedback and recommended to be implemented in the order described.

Figure 13 shows the roadmap for the long-term (10-13 years) Zero Waste Strategies in the recommended order of implementation. During the Public Involvement and Stakeholder Input process, residents of Miami-Dade County were polled to select their favorite strategies. The strategies in bold represent the policies, programs, and infrastructure that received the most votes, indicating they were favored for implementation in the county.



Figure 13: Medium-Term Strategies

- ◆ **Reuse, Repair, and Recycling Center**
- ◆ **Zero Waste Grants**
- ◆ **Reusable Foodware Washing Infrastructure**
- ◆ Reusable Foodware
- ◆ New Development Compost Use Requirement
- ◆ Curbside materials collection
- ◆ Deconstruction Requirement

Reuse, Repair, and Recycling Center

A sustainability center for reuse, repair, and recycling

Implementing this facility will make it the county’s sustainability hub for reuse, repair, and recycling. The facility will offer many ways for community members to come together and participate. The following steps outline implementation of this infrastructure.

IMPLEMENTATION STEPS:

1. Develop a plan to have a Reuse, Repair, and Recycling Center in the county that acts as a sustainability center and will be a drop-off center for reuse and recycling and an event center for reuse events.
2. Determine site location, ownership and operator, and whether the infrastructure is built on county property and run by the county or a private sector business.
3. If needed, develop an RFP, soliciting proposals from the private sector to develop and operate a Reuse, Repair, and Recycling Center.
4. If funding is available, develop a community grant to help grantees launch programs and activities at this facility.
5. Assess the feasibility of co-locating with other solid waste management infrastructure (i.e., Sustainable Solid Waste Campus).
6. Develop a media campaign to promote the new program, facility and operations, and any co-located infrastructure.
7. Develop educational materials for outreach, events, social media, and the county’s website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide facility information and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Zero Waste Grants
- » Reuse, Share, Repair, and Refill Directory and Events

Zero Waste Grants

Allocating funds through a competitive process to local businesses or organizations working on zero waste programs

The implementation of a Zero Waste Grants program will enable NGOs to create zero waste systems that support opportunities for reduction and diversion. The following steps outline implementation of this program.

IMPLEMENTATION STEPS:

1. Establish grant criteria that allocate funds on a competitive basis for businesses, nonprofits, or organizations working on Zero Waste Strategies.
2. Implement the grant program, evaluate applications, and award grants. Require quarterly reporting and review reports as they are submitted.
3. Establish a grant cycle of every other year.
4. Develop informational materials for outreach, events, social media, and the county’s website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program information.

Reusable Foodware Washing Infrastructure

A facility that prepares foodware for reuse through washing, drying, and storage

The implementation of this strategy is needed for any Reusable Foodware Program to succeed. The following steps outline implementation of this infrastructure.

IMPLEMENTATION STEPS:

1. Develop a plan to have a Foodware Washing facility in the county.
2. Determine site location, ownership and operator, and whether the infrastructure is built on county property and run by the county or a private sector business.
3. If needed, develop an RFP soliciting proposals from the private sector to provide reusable foodware washing services.
4. Assess the feasibility of co-locating with other infrastructure.
5. Develop a media campaign to promote the new program, facility and operations, and any co-located infrastructure.
6. Develop educational materials for outreach, events, social media, and the county’s website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide best practices and infrastructure information.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

Reusable Foodware

Reusable Foodware

Using reusable foodware for to-go food orders

The implementation of this program will build a reusable foodware system while reducing reliance on single-use materials. The following steps outline implementation of this program.

IMPLEMENTATION STEPS:

1. Develop a program that incentivizes the use of reusable foodware at events, festivals, to-go food orders, universities, and with food trucks.
2. Identify the reusable foodware options for plates, bowls, cups, utensils, and clamshell containers.
3. Conduct stakeholder outreach to appropriate businesses and organizations.
4. Establish a partnership with an organization to lead this program.
5. Develop educational materials for outreach, events, social media, and the county's website.
6. Conduct outreach about program details to restaurants, universities, food trucks, and festival organizers.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines, best practices, and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Reusable Foodware Washing Infrastructure

New Development Compost Use Requirement

Using locally produced soil amendments for landscaping and growing food

The implementation of this ordinance will help create a local circular system of resources flowing through the county by using compost produced from local food scraps and yard debris.¹¹ The following steps outline implementation of this infrastructure.

IMPLEMENTATION STEPS:

1. Building on Ordinance No. 14-65 and adopted Resolution No. R-1158-23, request a new resolution directing the county mayor or the county mayor's designee to provide recommendations with respect to using locally produced finished compost in new county property development, and new residential, institutional, and commercial development projects.
2. Draft an ordinance requiring county landscaping projects to incorporate locally produced finished compost in landscaping during new construction and any landscaping project. Ensure collaboration with planning and zoning departments.
3. Develop an incentive program for the private sector to use locally produced finished compost.
4. Develop educational materials for outreach, events, social media, and the county's website that highlight the economic and environmental benefits of using locally produced finished compost.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide model ordinance language and educational materials.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » Universal Recycling and Composting Ordinance
- » Organic Material Composting Infrastructure

¹¹ Compost means the controlled biological decomposition of organic materials.

Curbside Materials Collection Program

Collection of hard-to-recycle or bulky materials curbside for reuse and recycling

The implementation of this strategy establishes convenient ways for residents to divert hard-to-recycle and bulky, reusable materials from disposal. The following steps outline implementation of this program.

IMPLEMENTATION STEPS:

1. Investigate door-to-door, home pickup service providers for hard-to-recycle and bulky materials.
2. Develop an RFP soliciting proposals from the private sector to provide hard-to-recycle and bulky item pickup services to the single-family and multifamily sectors.
3. Develop a single-family and multifamily program where hard-to-recycle materials and bulky items can be placed at the curb (single-family) and designated area (multifamily) for pickup.
4. Identify the items included in this program. Items should include textiles, electronic items, furniture, bulky household items, books, dishware, appliances, scrap metal, hard-to-recycle plastic packaging such as expanded polystyrene, mattresses and box springs.
5. Develop educational materials for outreach, events, social media, and the county's website.

COUNTY SUPPORT FOR MUNICIPALITIES

The county will provide program guidelines and participation information.

Deconstruction Requirement

Requirements for structures to be deconstructed to salvage valuable materials before demolition

Implementing this requirement will involve salvaging building materials before demolition. The following steps outline implementation of this strategy.

IMPLEMENTATION STEPS:

1. Request a resolution directing the county mayor or county mayor's designee to evaluate the feasibility of deconstruction based on the type of structures and possible materials salvaged that are anticipated to be demolished and provide recommendations.
2. Conduct regional stakeholder meetings with the community to identify the barriers and benefits of Deconstruction Requirements.
3. Draft ordinance language that could be implemented in the county.

COUNTY SUPPORT FOR MUNICIPALITIES

- » The county will provide model ordinance language.

TIMING IMPLEMENTATION WITH RELATED STRATEGIES

- » **Construction Material Diversion and Separation Requirements**
- » **Construction Material Source Separation Program**
- » **Reuse Warehouse**

POLICY, LEGISLATION, AND ORDINANCE PLAN

The County's Zero Waste Master Plan includes 11 ordinances that will be phased in over the 13-year implementation process. Each ordinance is assigned an implementation time frame, either Short Term (1–4 years), Medium Term (5–9 years), or Long Term (10–13 years), which dictates when implementation will begin. Within each time frame, the ordinances are ordered based on stakeholder voting during public workshops held as part of the Public Involvement and Stakeholder Engagement process (see the Planning Development chapter for details). As the county implements the ordinances, it will develop corresponding program information and share details with the municipalities.

Each zero waste policy strategy will need an ordinance outlining the regulations. County staff will do this work, with help and oversight from the County Attorney's Office. Once the ordinance is complete, it will be submitted through the mayor to the Board of County Commissioners. In addition, the policy strategies described here are presented as sequential. However, many of these policies should be implemented concurrently. This section details the zero waste policies the county will implement within each time frame.

Figure 14 shows the list of the county ordinances in the Zero Waste Master Plan and the order of implementation. During the Public Involvement and Stakeholder Input process, residents of Miami-Dade County were polled to select their favorite strategies. The strategies in bold represent the policies, programs, and infrastructure that received the most votes, indicating they were favored for implementation in the county.

Figure 14: Ordinance Implementation

Short-Term Policy Strategies (1–4 years)

Universal Recycling and Composting Ordinance

Food Waste Diversion Requirements

Save-As-You-Throw

Construction Material Diversion and Separation Requirements

Accessories Upon Request and Product Requirements

Medium-Term Policy Strategies (5–9 years)

Zero Waste Events and Venues

Mandatory Participation, Source Separation, and Enforcement

Green Building Credits

Rate Structure Incentives and Reporting Requirements

Long-Term Policy Strategies (10–13 years)

New Development Compost Use Requirement

Deconstruction Requirement

Short-Term Policy Strategies

The county will begin implementation by modifying the current Universal Recycling Ordinance (Miami-Dade County Code Chapter 15 Section 2) and amending it to the “Universal Recycling and Composting Ordinance.” This will be a significant piece of legislation, as it applies to all sectors and includes many new mandates on composting, reporting, color-coding, and signage standardization. It is recommended that this ordinance be implemented first. The implementation of this ordinance will be phased, include an educational grace period, and a process to ensure all sectors understand the new requirements.

Another short-term policy the county will implement is the Food Waste Diversion Requirements, as it is essential to establish criteria for diverting food (both edible and inedible) from disposal. This ordinance is essential for all sectors in the county to follow new guidelines for keeping food at its highest and best use (human consumption). It will require tremendous cooperation, education, and outreach. The ordinance and corresponding programs will set the parameters and provide stakeholders with the information they need to comply.

The Save-As-You-Throw ordinance should follow closely after the Universal Recycling and Composting Ordinance because they are closely connected in the context of single-family curbside services in the county. The SAYT ordinance includes language on a volume-based, variable-cart-size curbside garbage collection system

for single-family residents. A SAYT system incentivizes garbage reduction by charging a lower fee for a smaller cart, but this incentive is contingent on the availability of curbside diversion opportunities, such as recycling and composting. Therefore, it is essential to have curbside recycling and composting services and systems in place, as mandated by the Universal Recycling and Composting Ordinance, when the SAYT ordinance goes into effect.

The Construction Materials Diversion and Separation Requirements ordinance, which was initiated at the time of the Zero Waste Master Plan's publication, should be continued and completed during the short-term implementation phase. This is a critical ordinance for the county that will regulate construction materials and maximize recovery for reuse and recycling.

The Accessories Upon Request ordinance should also be drafted and implemented in the short term (within four years). The county can access existing model ordinance language to simplify and streamline the process for adopting this ordinance. Related to the Accessories Upon Request ordinance is the Product Requirements ordinance, as both regulate single-use materials. Recommended to be regulated under the Product Requirements is prohibiting single-use plastic straws and stirrers. Similar ordinances have been passed by other communities in Florida, including 10 municipalities within Miami-Dade County.



Medium-Term Policy Strategies

The medium-term time frame policies will begin with the Zero Waste Events and Venues ordinance, which applies to events based on criteria to be determined, such as the number of attendees and event size. This ordinance is essential because the requirements will be similar to those community members see at businesses and in their homes (i.e., recycling and composting). Having consistent zero waste systems across the county at events, in businesses, and at schools is crucial. This ordinance solidifies the event component of that system.

The Mandatory Participation, Source Separation, and Enforcement ordinance will follow next and expand the current county ordinance (Miami-Dade County Code, Chapter 15 Solid Waste Management, Section 2.6). This ordinance reinforces systems for recovering materials from the waste stream and will work in conjunction with the Universal Recycling and Composting Ordinance.

The Green Building Credits set standards and create incentive programs to encourage the allocation of physical space for zero waste infrastructure during remodeling and new construction. To achieve zero waste, there needs to be space for dishwashers, bins, dumpsters, and areas to collect and store surplus building materials. Space limitations in renovations or new construction projects are common, and this ordinance aims to circumvent those barriers.

The final ordinance listed in the medium-term time frame is the Rate Structure Incentives and Reporting Requirements. This ordinance also supports and enhances the Universal Recycling and Composting Ordinance by mandating similar regulations, including reporting requirements and service-level considerations.

Long-Term Policy Strategies

The New Development Compost Use Requirement and the Deconstruction Requirements are the final policies to be implemented. The New Development Compost Use Requirement helps create a circular system in which food scraps and yard debris are turned into finished compost for use in landscaping, agriculture, or aquaculture. The Deconstruction Requirements are focused on salvaging materials from buildings before demolition. Zero waste systems prioritize reusing materials before discarding them, and this ordinance would help create reuse systems.

Some of these ordinances apply to municipalities, others to municipalities that use county garbage and recycling services, and some to the county service area. The details of how the county ordinance will apply to the municipalities are included in the next section of the Implementation Chapter, titled "How Municipalities Will Implement Zero Waste." The county will provide the municipalities with resources to adopt county ordinances or create their own. The level of support will vary and includes, but is not limited to, model ordinance language, program guidelines, best practices, enforcement plans, and model educational materials. Providing this support ensures the municipalities have what they need to fully implement or participate in the new Zero Waste Strategies.

HOW MUNICIPALITIES WILL IMPLEMENT ZERO WASTE

The Miami-Dade County Zero Waste Master Plan's success will, in part, depend on how the 34 Miami-Dade County Municipalities implement the 31 Zero Waste Strategies outlined in this plan. Many of the municipalities have already implemented some of the 31 Zero Waste Strategies (See the section in the Foundation chapter, titled “Municipal Level”). For municipalities without Zero Waste Strategies, it is recommended that municipal staff work closely with county staff to implement them. This will help municipalities align with the policies and programs and adapt them to their community’s local demographics and unique characteristics. The municipalities should view the county as a resource for model ordinance language, educational materials, and enforcement and program guidelines. Municipalities with some of the Zero Waste Strategies in place should serve as models for others to follow and consider sharing model ordinance language, program guidelines, educational materials, and best practices. The time frame and implementation steps for the 31 strategies are outlined earlier in this chapter, and it is recommended that the municipalities follow closely behind the county in implementation. This section provides information on how each strategy applies to the municipality, the support provided by the county, and the recommendation on the municipality's next steps.

Zero Waste Policy Strategies

Of the 31 Zero Waste Strategies, 11 are policy recommendations. For these, the county will pass ordinances over time as they implement the strategies. For the county to pass an ordinance, county staff must draft it with help and oversight from the County Attorney’s Office. Once the ordinance is complete, it will be submitted through the mayor to the Board of County Commissioners.

The 11 county policies in the Zero Waste Master Plan will affect the municipalities differently. Certain ordinances are effective throughout the entire county, including all municipalities within it. Others apply solely to the county service area, while some are relevant only to municipalities that have entered into interlocal agreements with the county. For policies that do not directly mandate municipal compliance, it is recommended that they pass similar ordinances to align with the county in working toward zero waste (Figure 15). When appropriate, the county will provide model ordinance language to municipalities to facilitate implementation of the ordinances.

Figure 15: Ordinance Implementation Scenarios

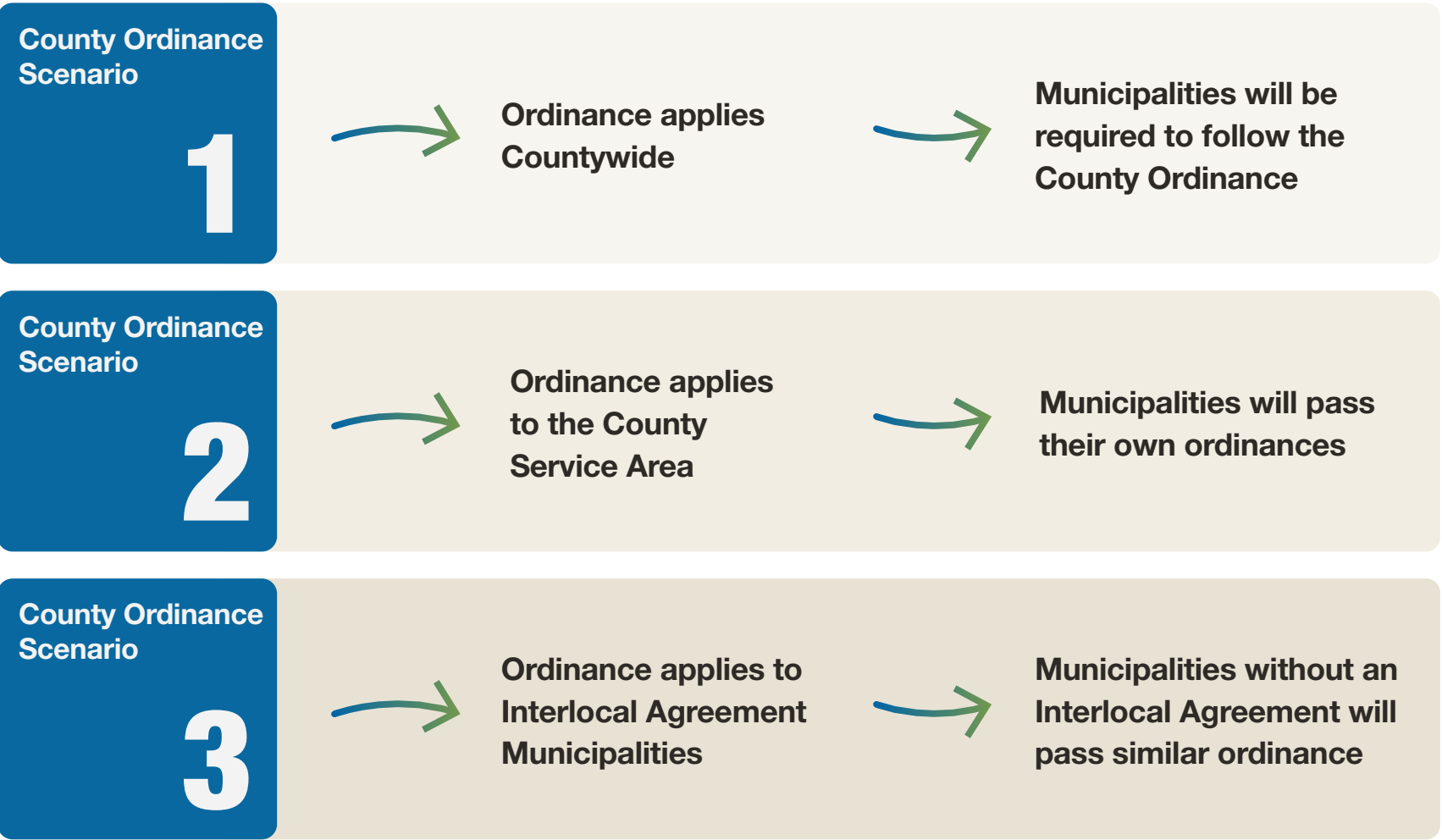


Table 10 shows the specific recommendations for the municipalities for each policy strategy.

Table 10: Recommended Policies Implemented at Municipal Level

Zero Waste Strategy	County Requires Municipalities to Follow	County Provides Ordinance Language for Municipalities to Implement and Pass	Required Through Interlocal Agreement
Accessories Upon Request and Product Requirements ¹²			
Zero Waste Events and Venues			
Universal Recycling and Composting ¹³			
Save-As-You-Throw			
Mandatory Participation, Source Separation, and Enforcement ¹⁴			
Rate Structure Incentives and Reporting Requirements			
Construction Material Diversion and Separation Requirements			
Deconstruction Requirement			
New Development Compost Use Requirement			
Food Waste Diversion Requirements			
Green Building Credits			

12

Many municipalities have product policies in place.

13

This strategy is an expansion of Chapter 15 Section 2 (Solid waste collection services, container usage, condition, and location) of the Miami-Dade County Code.

14

This is an expansion of Chapter 15 Section 2.6 (Mandatory separation of recyclable materials from solid waste stream) of the Miami-Dade County Code.

Zero Waste Program Strategies

The Zero Waste Master Plan includes many programs. These programs support the policies and work together to create comprehensive zero waste systems. The programs generally need guidelines and educational materials, and some require partnerships for full implementation. Municipalities should collaborate with the county when implementing zero waste programs to ensure their efforts align with county guidelines. The county should provide municipalities with educational materials that they can adapt to their local demographics and unique characteristics.

Table 11 shows the specific recommendations for the municipalities for each program strategy.

Table 11: Recommended Programs Implemented at Municipal Level

Zero Waste Strategy	County Implemented Programs Will Be Used by the Municipalities	County Provides Program Guidelines for Municipalities to Implement	Programming Provided Through Interlocal Agreement
Edible Food Donation			
Takeback Program			
Zero Waste Grants			
Market Development			
Reuse Directory			
Reuse, Share, Repair, Refill Directory and Events ¹⁵			
Lead by Example			
Reusable Foodware			
Education, Outreach, Technical Assistance, and Enforcement			
Curbside Materials Collection ¹⁶			
Business Recognition Program with Green Teams			
Construction Material Source Separation Program			
Drop-Off Partnerships			

¹⁵ Municipalities are encouraged to implement reuse, share, and repair events.

¹⁶ Municipalities without interlocal agreements will implement a Curbside Materials Collection program.

Zero Waste Infrastructure Strategies

The municipalities will largely rely on county and privately owned infrastructure. However, it is advisable to consider undertaking certain infrastructure projects, since facilities may be required to provide sufficient capacity to meet the community's needs.

Table 12 shows the specific recommendations for the municipalities for each infrastructure strategy.

Table 12: Recommended Infrastructure Implemented at Municipal Level

Zero Waste Strategy	County Infrastructure	Municipalities to Implement Infrastructure
Lending Libraries		
Reuse Warehouse		
Reusable Foodware Washing Infrastructure		
Reuse, Repair, and Recycling Center		
Water Bottle Refill Stations		
Organic Material Composting Infrastructure		
Construction Material Processing Facility		

