



Implementation Plan

Solid Waste Master Plan

Task 13

Pinellas County, Florida

April 2020

FINAL

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Figure 1: Strategy Implementation Timeline 1

Introduction


This Implementation Plan describes each of the 28 recommended strategies and presents the estimated implementation and monitoring activities over the 30-year planning period, by category. Similar to the Solid Waste Master Plan document, each strategy is categorized into one of five groups (Minimize Generation, Maximize Recycling and Diversion, Maximize Recovery, Responsibly Manage What's Left Over and Collaborate with Partners) based on how each recommended strategy addresses its respective placement on the Zero Waste to Landfill Loop. These recommended strategies were evaluated, refined and developed collaboratively between the HDR Team, Pinellas County (County) Solid Waste staff, and community stakeholders through a series of tasks, discussions, and workshops. Detailed descriptions and summaries of impacts for each of the strategies are contained in the Task 8 Scenario Development and Testing Report. The short-listing of recommended strategies is summarized in the Task 11 Preferred Scenario Report. Note the recommended strategies have been numbered for the ease of reference, which is not meant to reflect prioritization or preference.

The implementation timing of each recommended strategy was reviewed and determined based on efforts anticipated for each individual strategy as well as interdependency on other strategies, where applicable. Because the specific year in which a strategy may be implemented could vary, implementation timing has been characterized in general terms. For purposes of this Implementation Plan, "short term" refer to strategies recommended for implementation by 2024. "Intermediate" refers to strategies recommended for implementation between 2025 and 2033. "Long term" refers to strategies recommended for full implementation between 2034 and 2048. "Ongoing" refers to strategies for which the implementation and/or analysis spans across multiple terms and are needed on an ongoing basis to determine if, and when, specific policies, programs, or projects should be developed.


It is important to note that actual implementation timelines may need to be adjusted over time based on future conditions. The specific year in which the strategies are implemented, if at all, will be determined by the County.


Figure 1 below depicts the anticipated timing for implementation of the recommended strategies using dark, solid bars to indicate the timing of implementation activities and light, solid bars to indicate ongoing efforts after implementation.

Figure 1: Strategy Implementation Timeline

	#	STRATEGY	SHORT TERM (THROUGH 2024)	INTERMEDIATE TERM (2025 THROUGH 2033)	LONG TERM (2034 THROUGH 2048)
 MINIMIZE GENERATION	1.1	Commercial Sector Edible Food Waste Prevention, Reduction, and Reuse	Ongoing Promotion		
	1.2	Continue to Promote Waste Prevention and Reuse	Ongoing Promotion		
	1.3	Promote Low Waste/ Zero Waste Events at Public Venues	Develop Guide	Ongoing Promotion	
	1.4	Promote Institutional Sector Food Waste In-House Composting Program	Ongoing Promotion		
	1.5	Environmentally Preferable Purchasing Guide	Develop Guide	Ongoing Promotion	
	1.6	Promote Commercial Sector C&D Recovery and Recycling	Ongoing Promotion		

#	STRATEGY	SHORT TERM (THROUGH 2024)	INTERMEDIATE TERM (2025 THROUGH 2033)	LONG TERM (2034 THROUGH 2048)
 MAXIMIZE RECYCLING AND DIVERSION	2.1 Organize Collection in Unincorporated Area with Universal Recycling	Phase 1 through Phase 3		Add Food Waste
	2.2 Commercial Sector Food Waste Collection	Promotion	Collect and Process	
	2.3 Residential Sector Food Waste Diversion Program	Promotion		Add Food Waste
	2.4 Curbside Collection of Electronic Waste	With Organized Collection		Promotion
	2.5 Universal Recycling Ordinance	Educate	Enforce	Ongoing Promotion
	2.6 Further Standardize and Expand Recycling Education Efforts	Standardize	Ongoing Promotion	
	2.7 Expand Cutting Waste at Work (CWW) Program	Expand CWW	Ongoing Promotion	

#	STRATEGY	SHORT TERM (THROUGH 2024)	INTERMEDIATE TERM (2025 THROUGH 2033)	LONG TERM (2034 THROUGH 2048)
 MAXIMIZE RECOVERY	3.1 MRF Processing Capacities and Contamination	Ongoing Evaluation		
	3.2 Develop Ash Recycling Methods and Specifications	Develop Methods	Promotion	
	3.3 Increase the Ability to Process Waste at the WTE Facility	Increase Capacity	Monitor	
	3.4 Develop Advanced Metals Recovery Facility at the Complex	Develop Facility	Recover Metals	



RESPONSIBLY
MANAGE WHAT
IS LEFT OVER

#	STRATEGY	SHORT TERM (THROUGH 2024)	INTERMEDIATE TERM (2025 THROUGH 2033)	LONG TERM (2034 THROUGH 2048)
4.1	Extend the Landfill Life Through Bulky Waste Processing	Develop Process	Recover Bulky Waste	
4.2	Traffic Improvements at the Complex	Implement		
4.3	Extend the Landfill Life through On-site Transfer Station Development and Off-Site Disposal of MSW	Design/Build	Transfer Outage Waste	
4.4	Revise Flow Control Ordinance	Implement	Enforce	
4.5	Explore the Possible Utilization of the Surface of the Closed Toytown Landfill	Ongoing Evaluation		
4.6	Monitor and Evaluate the Potential Availability of Contiguous Properties for Purchase	Ongoing Evaluation		
4.7	Expand Capacity of Existing Disposal Area	MSE Berm	Ongoing Expansion	

	#	STRATEGY	SHORT TERM (THROUGH 2024)	INTERMEDIATE TERM (2025 THROUGH 2033)	LONG TERM (2034 THROUGH 2048)
 COLLABORATE WITH PARTNERS	5.1	Regional Partners Committee	Form Committee	Ongoing Communication	
	5.2	Information and Resource Sharing	Communicate	Transfer Outage Waste	
	5.3	Legislative and Regulatory Monitoring and Advocacy	Ongoing Communication		
	5.4	Develop Cooperative Agreement with Tampa Bay Area Plants for Recycling Ash as Construction Products	Develop Agreement	Recycle Ash	

1 Minimize Generation

1.1 Promote Commercial Sector Edible Food Waste Prevention, Reduction and Reuse; Ongoing

Approximately 68 percent of County generated wasted food is contributed by industrial, institutional and commercial sectors that include establishments such as restaurants, grocers, food retailers and wholesalers, food manufacturers, and hotel/motels. The County's restaurants are estimated to contribute the largest fraction (approximately 55 percent) of commercially generated wasted food in the County. Feeding the hungry by donating the wasted food to the food banks and shelters is the most preferred option for the reuse of edible food and would enhance the community's food security. This strategy focuses on the education and management on the process of managing edible food segregation, storage and transport for commercial establishments who generate food waste such as restaurants, grocery stores, food retailers and wholesalers and donation to food banks.

In the short term, the County could develop educational materials related to commercial sector edible food waste prevention, reduction and reuse and work with commercial establishments and food banks to collaborate in a donation program. If successful, based on program assessment, this strategy would be considered ongoing and continue into the intermediate- and long-term.

1.1.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin in the short-term with the development of educational materials, as shown in **Table 1-1**, and if successful, continue as an ongoing project.

Table 1-1. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Develop educational materials related to Commercial Sector Edible Food Waste Prevention, Reduction and Reuse.	County Solid Waste staff coordinating with local food banks; Marketing and Communications Staff to create material	Second and third quarter 2020
Identify and encourage commercial establishments that produce edible food waste, to participate in a donation program to food banks. Facilitate collaboration between commercial sector and food banks.	County Solid Waste staff coordinating with commercial establishments and local food banks; Marketing and Communications Staff to promote	Initiate in fourth quarter of 2020 (then ongoing)

1.1.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 1-2**, monitoring of this strategy can be accomplished through evaluation of program participation and diversion accomplished.

Table 1-2. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Assess progress and participation, refine educational program, and evaluate program participation rate and potential diversion rate. Determine program success and whether to keep ongoing.	County Solid Waste staff	First quarter of 2021 and ongoing

1.2 Continue to Promote Waste Prevention and Reuse; Ongoing

Generally, the County could focus on expanding the promotion of waste prevention and reuse opportunities. Pinellas County's "A to Z Guide" for recycling and disposal options for residential waste in and around the County already provides extensive resources and is continually monitored and updated. Continuing to inform residents and businesses that the A to Z Guide is available to them is an important part in continuing to promote waste prevention and reuse, as well as proper handling of materials.

One area that could benefit from increased development is the reduction or diversion of organics. While the guide touches on waste reduction, supporting consumer habits that promote purchasing based on needs, and additional promotion of techniques to reduce or divert organics can be developed and included in outreach materials. The County could start with educating residents regarding the significance and impacts of preventing and reducing wasted food. Education could be provided as well as incentives for activities such as backyard composting or vermiculture to avoid disposal of food scraps and yard waste. The County could also direct residents to compostable material drop-offs and support community gardens which often offer composting education or are a location for food scrap composting.

1.2.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin and be completed in the near term, with ongoing updates, as shown in **Table 1-3**.

Table 1-3. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Research additional means to promote purchasing based on needs for source reduction	County Solid Waste staff	Second and third quarter 2020
Research techniques to divert organics to include in education and outreach materials	County Solid Waste staff	Second and third quarter 2020
Identify and work with community gardens and other organizations to determine if locations accept food scraps and/or offer education for backyard composting	County Solid Waste staff coordinating with community gardens	Second and third quarter 2020
Based on results of research activities listed above, incorporate additional promotion information for source reduction in the A to Z Guide	County Solid Waste staff and County Marketing and Communications staff	Fourth quarter 2020
Incorporate additional source reduction information in other education and outreach materials	County Solid Waste staff and County Marketing and Communications staff	Fourth quarter 2020
Continuous updates to information in outreach materials as necessary	County Solid Waste staff and County Marketing and Communications staff	Ongoing



1.2.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 1-4**, monitoring of this strategy can be accomplished by incorporating the research for source reduction activities into the County's current practices for updating the A to Z Guide. Measuring success of this strategy could be accomplished by tracking the County's per capita waste generated each year, as reported in the Annual Municipal Solid Waste Reports published by the Florida Department of Environmental Protection (FDEP).

Table 1-4. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Continuous updates to information in outreach materials as necessary	County Solid Waste staff and County Marketing and Communications staff	Ongoing
Track waste generation per capita	County Solid Waste staff as reported in FDEP annual reports	Annually, beginning in 2021

1.3 Promote Low Waste / Zero Waste Events at Public Venues; Short term, Intermediate

The County's Parks Department has initiated efforts to develop a guide for low waste / zero waste events on County property. The Sustainability Coordinator could become involved in continuing to develop a guide for low waste/ zero waste events at public venues that the County's Parks Department has already initiated. County Solid Waste staff would need to provide expertise as the guide is developed. The zero waste guide should include guidance for pre-event planning as well as event set up and tear down, as well as tracking metrics to be able to report the success of events.

In the short term, the guidance could be voluntary, where the County encourages and promotes low waste or zero waste events on County property by disseminating the guidance at the point of a request to use a County venue.

In the intermediate term, the County could determine the acceptance of requiring zero waste events on County property and implement a policy to require the guidance be followed for all events held at a County venue.

The guidance information could be shared with the municipalities within the County for use at municipal venues to send a consistent message countywide.

1.3.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin, and the zero waste guide could be completed in the near term, as shown in **Table 1-5**. Determining whether to require compliance would occur in the intermediate term.

Table 1-5. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Coordinate with the Parks Department to determine status of a zero waste guide for events on County property	Sustainability Coordinator	Second quarter 2020
Work with the Parks Department to complete the guide, including tracking mechanisms for events to document success	Sustainability Coordinator working with Solid Waste staff and Parks Department staff	Second and third quarter 2020
Develop a report template to document success of events	Sustainability Coordinator working with Solid Waste staff and Parks Department staff	Third quarter 2020
Provide the guide and reporting template to County departments responsible for permitting events at public venues, to disseminate to entities seeking event permits	Sustainability Coordinator working with County departments that permit events at public venues	Fourth quarter 2020
Share guide and reporting template with municipalities in the County (and potentially Regional Partners Committee described in Section 5.1)	Sustainability Coordinator through the TMC (and Regional Partners Committee meeting)	Fourth quarter 2020
Make the guide available on the County Solid Waste webpage	Sustainability Coordinator working with Solid Waste staff and Marketing and Communications Department	Fourth quarter 2020
Disseminate promotional materials touting prior successful events (using report to document success)	Sustainability Coordinator working with Marketing and Communications Department	Ongoing, beginning with first event held using the guide with metrics reported
Determine if it is acceptable to require the zero waste guide be followed on public property, via ordinance revisions	Sustainability Coordinator working with County Executive Team	First quarter 2025
If acceptable, adopt County Code revisions (two public hearings)	County Attorney's Office and Board of County Commissioners	Second quarter 2025

1.3.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 1-6**, monitoring of this strategy can be accomplished with tracking the success of events once the zero waste guide has been developed and implemented. If the guide practices become a requirement, enforcing the requirements would become necessary.

Table 1-6. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor success of events at public venues, using report that documents success for each event	Sustainability Coordinator working with other County departments that have public event venues (i.e. Parks Dept.) and the entities holding events	Ongoing, beginning with first event held using the guide with metrics reported
Update promotional materials touting prior successful events	Sustainability Coordinator working with Marketing and Communications Department	Ongoing, quarterly
If requiring zero waste events, enforce with assistance from County agencies that permit events at public venues and Code Enforcement	Sustainability Coordinator working with County departments that permit events at public venues and Code Enforcement	Ongoing, beginning in third quarter 2025



1.4 Promote Institutional Sector Food Waste In-House Composting Programs; Ongoing

The County's institutional sector, that includes correctional facilities and educational institutions, generate wasted food. To divert wasted food from these types of facilities the County could implement, as an ongoing strategy, an educational program that encourages the responsible authorities of these institutions to implement in-house composting programs. The County has a total of 20 correctional facilities and over 270 educational institutions. The in-house composting and use of generated compost could result in savings on waste collection and disposal for these entities.

The County could identify those institutions that would be potential candidates for a pilot program for in-house composting of food waste, develop educational materials that outline strategies for the institutional sector to implement over the long-term to divert food waste from disposal and provide guidance in the establishment of compost yards at each facility.

1.4.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin as shown in **Table 1-7**, and if successful continue as an ongoing strategy.

Table 1-7. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Identification of institutions that could participate in in-house composting of food waste, discussions regarding potential implementation of composting programs and development of educational materials.	County Solid Waste staff	Third quarter of 2020 and ongoing

1.4.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 1-8**, monitoring of this strategy can be accomplished with tracking institutional sector participation once implementation of a program has occurred, monitoring and providing technical support as the program expands, as well as identifying potential consumers for excess compost if needed.

Table 1-8. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Provide ongoing information to participants, request feedback and provide guidance, as possible.	County Solid Waste staff	First quarter 2021 and ongoing
Identification of potential customers for excess compost.	County Solid Waste staff	Ongoing

1.5 Develop and Implement an Environmentally Preferable Purchasing Guide; Short-term

The County could, through its Sustainability Coordinator, develop an Environmentally Preferable Purchasing Guide (EPPG) to promote and encourage environmental stewardship across all County agencies to enhance the County's existing guidelines. Regulations for recycled content could also be implemented; in particular County Code Section 2-184. –



“Purchases of maintenance, repair and operating supplies and services” could be revised to add a statement about purchasing supplies low in toxicity and/or with recycled content, such as paper, and specifying a minimum percentage of recycled content.

The Sustainability Coordinator could interview County employees from multiple departments across the County in order to represent and the different departments varying purchasing interests in the EPPG. The Sustainability Coordinator should also ensure that appropriate financial burden exemptions are included in the EPPG (e.g. if meeting the specified recycled content increases the price of a product to be purchased by a certain percent, the purchasing department would be exempt from the EPPG standard). The EPPG could include supporting markets for recycled and other environmentally preferable products by encouraging County agencies and contractors to buy such products wherever practicable as well as outlining operating standards for waste reduction and recycling. The purchasing guidelines can go beyond purchasing recycled content items and include initiatives such as hand dryers and refillable soap dispensers in County restrooms. These initiatives could be reiterated through policy memos distributed to all County departments.

1.5.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin could be completed in the near term, as shown in **Table 1-9**.

Table 1-9. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Work with representative from different County agencies to understand current purchasing practices and needs	Sustainability Coordinator	Third quarter 2020 through second quarter 2021
Determine acceptable standards and goals for purchasing guidelines, and reasonable exemptions, for source reduction, reuse and recycling efforts	Sustainability Coordinator	Third quarter 2020 through second quarter 2021
Develop the EPPG	Sustainability Coordinator	Third quarter 2021
Revise County Code, as necessary (specifically, Section 2-184)	Sustainability Coordinator working with County Attorney's Office and the Purchasing Department	Third quarter 2021
Adopt County Code revisions (two public hearings)	County Attorney's Office and Board of County Commissioners	Fourth quarter 2021
Develop policy documents to disseminate to all county agencies supporting the EPPG	Sustainability Coordinator working with County Executive Team	Fourth quarter 2021
Disseminate policy documents supporting EPPG to all County agencies	Sustainability Coordinator	Fourth quarter 2021

1.5.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 1-10**, monitoring of this strategy can be accomplished with tracking mechanisms incorporated in the EPPG, as the EPPG should include measurable goals and reportable metrics in order to monitor progress (i.e. 100% recycled content paper, compliance goal of 90% of County agencies).

Table 1-10. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Develop tracking mechanism for Purchasing Department to implement	Sustainability Coordinator working with the Purchasing Department	Third quarter 2021
Monitor progress of compliance	Purchasing Department	Beginning in 2022
Develop annual reports of results of EPPG Countywide	Sustainability Coordinator working with Purchasing Department	Beginning in 2022, annually

1.6 Promote Commercial Sector C&D Debris Recovery and Recycling; Short Term, Ongoing

Based on the composition of the C&D materials that are currently recycled, it was assessed that all of the gypsum drywall and asphalt shingles and a large fraction of wood is still being landfilled. The County could encourage C&D recycling of the readily recyclable C&D debris materials through educational promotions. The County could initially organize workshops and events with contractors to understand the constraints of recycling C&D debris generated by the commercial sector. The County could investigate opportunities to recycle gypsum drywall, asphalt shingles and wood waste concurrently with the County staff evaluating potential policies and initiatives for the enhancement of recovery and recycling of C&D debris. Undertaking a market feasibility study to assess the amount of recyclable C&D debris that is still disposed would be beneficial to the County in determining the direction for future programs related to C&D recovery and recycling programs and could also be implemented in the short to intermediate term. Assessing the amount and types of C&D generated in the County could be aided by requiring permit seekers to provide information on types and amounts of C&D anticipated in the project.

1.6.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin as shown in **Table 1-11**. If it is determined through the market feasibility study that there is readily available C&D debris for recovery and recycling, this would continue as an ongoing strategy.

1.6.2 Monitoring Activities, Responsible Parties and Timing

Monitoring activities for this strategy could include implementation and enforcement of policies and procedures by County Solid Waste Staff working with Building Services Department; however, as the specific policies and procedures are yet to be determined, specific monitoring activities are not known at this time.



Table 1-11. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Review County policies and regulations to evaluate the relevance to the enhancement of recovery and recycling of C&D debris	County Solid Waste staff	Fourth Quarter 2020
Organize workshops with stakeholders to understand constraints for the recovery and recycling and C&D debris	County Solid Waste staff	Fourth Quarter 2020
Perform a Market Feasibility Study to assess the amount of readily recyclable C&D debris that could be captured and recycled that is currently disposed	County Solid Waste staff	First Quarter 2021
Develop and promulgate policies and ordinances for County adoption based on relevance and effectiveness for enhancement of C&D debris recovery and recycling	County Solid Waste staff working with County Attorney's Office	Second Quarter 2021
Complete estimates of the annual generation rate of C&D debris materials through permits issued by the County and engage stakeholders	County Solid Waste staff, Building Services Dept	Third Quarter 2021

2 Maximize Recycling and Diversion

2.1 Organize Collection in Unincorporated Areas with Universal Recycling; Short term, Intermediate, Add Organics Long Term

Given the feedback received through customer surveys, public workshops and hauler interviews, the County should take steps to move toward organizing collection for residential curbside customers in the unincorporated area. Taking a phased approach would allow the County to meet with requirements of the Florida “displacement law” (e.g. Florida Statute 403.70605 (3) – DISPLACEMENT OF PRIVATE WASTE COMPANIES). A phased approach would also allow the County to better understand the current practices and associated costs of curbside collection in the unincorporated area, determine the appropriate number of zones to include in the unincorporated area, determine the most commonly desired service types and levels for residential collection, and determine which customer sectors (i.e. single family, multifamily, commercial) should be included in the exclusive franchise.

- **Phase 1 – Customer and Hauler Outreach** - is anticipated to occur over a four-year period, and could include:
 - Encouraging residents of the unincorporated area to participate in a residential survey and to send in their trash collection bills to evaluate current collection rates under the open market licensing system.
 - Providing notices and updates on efforts to organize collection through traditional media outlets such as local newspapers as well as social media outlets.
 - Conducting focus group meetings with residents and one-on-one conversations at community meetings or Homeowners Association (HOA) meetings
 - Meeting with the currently licensed haulers in group settings and one-on-one to understand their concerns and thoughts regarding organizing collection, and which sectors to include (or exclude) in organized collection.
 - Including multifamily and business sector representatives in the outreach efforts to gauge acceptability of exclusively franchising garbage collection for all three sectors.
 - Surveying residents in the Lealman MSBU, with an emphasis on gauging what services and frequency of services is desired.
- **Phase 2 – Legal Guidance and Non-exclusive Franchising** - is anticipated to occur over a three-year period (depending on “Displacement Law” impacts) and could include:
 - Engaging legal guidance on the specifics of meeting State law as well as best practices for procuring haulers.
 - Implementing a non-exclusive franchising system to provide the County with more control over minimum standards of hauler vehicles and customer service practices without displacing haulers.
 - After seeking legal guidance, it may be determined that the County can require the non-exclusively franchised haulers to provide pricing information to the County.
 - Determining the appropriate steps to providing the proper notices and holding the proper public hearings regarding exclusively franchising.



- Continuing discussions with the haulers, residents and businesses to determine the appropriate number and location of zones.
- **Phase 3 – Implement Exclusive Franchises** – is anticipated to begin nine years from the start of Phase 1, and could include:
 - Competitively procuring an exclusively franchised hauler for each of the zones in the unincorporated area.
 - To increase participation in recycling, the exclusive franchise agreements for each zone should include curbside collection of garbage and recyclables.
 - Whether to include separate collection of yard waste may depend upon whether the County has implemented other initiatives for separating yard waste.
 - Whether to include bulk waste collection would be determined through surveys and community meeting conducted in the first phase, as would frequency of service.
 - Whether to include multifamily and commercial collection services would be determined in Phase 1 and/or Phase 2.
 - Number of zones would be determined in Phase 1 and/or Phase 2.

In the long term, after implementing the exclusive franchises, the County could further assess the County citizen's interest in participating in a residential source segregated organic waste collection program and if it is perceived that there is adequate interest and residents would likely participate, the County could consider implementing a source segregated organic waste collection program.

2.1.1 Implementation Activities, Responsible Parties and Timing

Efforts to begin organizing collection in the unincorporated area could begin as shown in **Table 2-1**; however, many steps are required to implement exclusive franchises, which would likely be completed in 2029.

Table 2-1. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Phase 1 – Customer and Hauler Outreach		Phase 1 Complete by 2024
Develop survey tools, administer surveys, compile results	Solid Waste staff working with Marketing and Communications Department	Second quarter 2021 through fourth quarter 2021
Hold community and/or HOA meetings	Solid Waste staff working with Marketing and Communications Department	Second quarter 2022 through fourth quarter 2024
Conduct one-on-one and group meetings with haulers	Solid Waste staff	First quarter 2022 through fourth quarter 2024
Survey Lealman MSBU residents regarding universal recycling collection	Solid Waste staff working with Marketing and Communications Department	First quarter 2022 through fourth quarter 2022

Table 2-1 (Continued). Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Phase 2 – Legal Guidance and Non-Exclusive Franchising		Phase 2 Complete by 2027
Obtain legal advice on displacement law and non-exclusive franchising	Solid Waste staff working with County Attorney's Office	First quarter 2025
Seek Board of County Commissioner approval of non-exclusive franchising	Solid Waste staff working with County Attorney's Office	Fourth quarter 2025
Develop non-exclusive franchise agreements	Solid Waste staff working with County Attorney's Office	First and second quarter 2026
Revise relevant ordinance language (two public hearings)	Solid Waste staff working with County Attorney's Office	Third quarter 2026
Execute non-exclusive franchise agreements	Solid Waste staff	Fourth quarter 2026
Phase 3 – Implement Exclusive Franchises		Phase 3 Complete by 2033
Seek Board of County Commissioner approval of exclusively franchising	Solid Waste staff working with County Attorney's Office	First quarter 2027
Determine house counts and tax assessment parcels to be included	Solid Waste staff working with County Property Appraisers Office	First and second quarter 2028
With legal guidance, develop procurement package including Request for Proposal (RFP) language, draft franchise agreement language, and necessary forms	Solid Waste staff and Purchasing Department (potentially with outside consultants)	Third quarter 2028
Release the RFP	Solid Waste staff and Purchasing Department (potentially with outside consultants)	Fourth quarter 2028
Evaluate and rank responses	Solid Waste staff and Purchasing Department (potentially with outside consultants)	Second quarter 2029
Award franchise agreements	Board of County Commissioners	By fourth quarter 2029
Revise relevant ordinance language (two public hearings)	Solid Waste staff working with County Attorney's Office	By fourth quarter 2029
Hire two more FTEs to monitor the franchise agreements	Solid Waste staff	By fourth quarter 2029
Long Term – Organics		Implementation Depends on Acceptability
Add organics collection to residential services in Exclusive Franchise Agreements	Solid Waste staff working with franchised haulers	Depends on acceptability; not anticipated until 2034 or later

2.1.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 2-2**, due to the nature of this strategy, monitoring would primarily be accomplished through monitoring the franchise agreements.



Table 2-2. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor non-exclusive franchise agreements	Solid Waste staff (additional FTE hired)	Ongoing, beginning when/if non-exclusive agreements are executed, for duration of non-exclusive agreements
Monitor exclusive franchise agreements	Solid Waste staff (estimated two more additional FTEs hired)	Ongoing, beginning when/if exclusive franchise agreements are executed, for duration of exclusive franchise agreements

2.2 Implement Commercial Sector Food Waste Collection Program; Intermediate, Long Term

If it is determined that there is adequate demand and likely participation in voluntary food waste diversion programs (see Section 1.1), the County could implement strategies and an educational program for the commercial sector and food banks aimed at collection of the non-edible fraction of wasted food generated from the commercial sector and assist the commercial sector and food banks to begin a segregation and donation program. Implementation of this strategy supports the EPA's food diversion goals, would support composting operations reducing fertilizer needs when the composted material is applied and decreases emissions from landfill disposal.

As an ongoing strategy, to fully implement this recommendation and mandate source segregation of commercial sector food waste, the County's current ordinance would need to be amended for inclusion of universal food waste collection from commercial generators with significant engagement among stakeholders. Segregation bins would need to be purchased and provided to businesses for pre- and post-consumer wasted food collection with coordination established between business and haulers for collection and potential end users of the wasted food collected.

2.2.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time sensitive, development of programs could only begin after successful educational programs and interest by commercial establishments for more robust programs as outlined in Section 1.1, as shown in **Table 2-3**.



Table 2-3. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Review the County's current ordinances for potential amendments needed for implementation of mandatory commercial sector food waste collection and engage other County staff to assess interest in moving forward	County Solid Waste staff	Intermediate (2025-2033).
Assess interest and engage stakeholders in likely participation from commercial establishments in the segregation and implementation of food waste collection	County Solid Waste staff	Intermediate (2025-2033).
Develop educational materials to educate commercial businesses on the positive environmental impacts of food waste collection and segregation programs	County Solid Waste staff	Intermediate (2025-2033).
Amendment of the current County Ordinance to mandate commercial source separation and food waste	County Solid Waste staff and Stakeholders	Long Term (2034-2048).
Implementation of a commercial sector food waste collection program including providing business with educational materials, determining the collection needs, purchase of segregation bins, coordinate collection service, determine users of the source segregated food waste collected	County Solid Waste staff, businesses and private haulers	Long Term (2034-2048).
Provide ongoing administrative efforts such as recognition events to encourage participation	County Solid Waste staff; Marketing and Communications Department	Long Term (2034-2048).

2.2.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 2-4**, monitoring of this strategy can be accomplished through review of participation rates and diversion amounts.

Table 2-4. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor participation rates and diversion amounts	County Solid Waste staff	Long Term (2034-2048).
Evaluate future collection needs	County Solid Waste staff	Long Term (2034-2048).
Identify potential food waste consumers	County Solid Waste staff	Long Term (2034-2048).



2.3 Develop a Residential Sector Food Waste Diversion Program; Long Term

The County's residential sector generates approximately 30 percent of the total wasted food generated in the County. Prior to development of a food waste diversion program, the County could evaluate markets for end products, determine desirability/acceptability among residents, and develop educational materials for distribution to community members. Diversion of residential wasted food for animal feed, processing in an anaerobic digester or composting all depend on residential collection of organics curbside and could be implemented in the long term if the County implements organized organics collection in the unincorporated area of the County.

As a long-term strategy, the County could implement the following to enact an organics (materials originating from plant or animal sources including yard waste, food scraps, non-recyclable paper) diversion program for the residential sector:

- Application of wasted food in producing animal feed and/or use in animal farms.
- Explore opportunities to divert wasted food as a feed in the County's existing anaerobic digesters (AD) at the wastewater treatment facilities.
- Explore opportunities for composting other organic waste.
- Identify the County's compost user's requirements and work with registered/permitted composting facilities in and around the County to initiate a composting program that can manage residential sector organics.
- Explore opportunities to begin a composting operation at the County's Solid Waste Disposal Complex (Complex).

For the County to install an anaerobic digester or construct a composting facility at the Complex, permits would need to be acquired and financing obtained for facility construction.

2.3.1 Implementation Activities, Responsible Parties and Timing

As shown in **Table 2-5**, implementation of this strategy is dependent on the County organizing collection in the unincorporated area (See Section 2.1).

Table 2-5. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Determine acceptability among residents and develop educational materials related to Residential Organics Diversion.	County Solid Waste staff	Dependent on the implementation of curbside residential organics collection. See Section 2.1 for timeline.
Identify end-markets and potential avenues for source separated organics such as AD installation and operations, compost operations, animal farms and existing facilities	County Solid Waste staff	Dependent on the implementation of curbside residential organics collection. See Section 2.1 for timeline.
Installation of appropriate facilities as deemed financially viable and begin AD and/or composting operations at the County Complex.	County Solid Waste staff	Dependent on the implementation of curbside residential organics collection. See Section 2.1 for timeline.

2.3.2 Monitoring Activities, Responsible Parties and Timing

Monitoring of this strategy is dependent on the County implementing organized collection and would be determined at that time.

2.4 Implement Curbside Collection of Electronic Waste; Short Term, Intermediate

Electronic wastes contain certain metals in their components that could have a hazardous nature under the right conditions. Typically, the materials of concern are lead, mercury and other heavy metals. Therefore, electronic waste is typically managed through Household Hazardous Waste (HHW) programs. However, electronic waste from residences is considered household waste and as such carries an exemption from being regulated as hazardous waste. The County could collect these materials curbside, particularly in the Lealman district (unless or until the remaining unincorporated area has organized collection), to either recycle or process with garbage for disposal. Should the County organize collections in the unincorporated county, collection of electronic curbside could also be facilitated. If collected for disposal, electronic waste could be collected as part of regular MSW collection if the materials are sized such that they can be collected in this manner. For larger items, the electronics could be collected as part of bulky waste collections.

2.4.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy in the Lealman district could begin immediately, as shown in **Table 2-6**. Collection of electronic waste curbside in unincorporated portions of the County requires organized collection to be adopted, which is anticipated to occur in the intermediate term.

Table 2-6. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Determine if electronic waste should be recycled or disposed	County Solid Waste staff	Second quarter of 2020
Determine if electronic waste should be collected as part of regular MSW or separately. If part of regular MSW, implement policy changes.	County Solid Waste staff	Second and third quarter of 2020
Update and release public education materials to communicate the changes to how these materials are managed at the curb.	County Solid Waste staff working with Marketing and Communications Department	Fourth quarter of 2020
Amend Lealman Contract to include collection of electronic wastes	County Solid Waste staff working with County Attorney's Office	Fourth quarter of 2020 and first quarter of 2021
Implement organized collection in unincorporated area, including electronic waste	County Solid Waste staff, as described in Section 2.1.	2026, depending on Strategy to implement collection in unincorporated areas

2.4.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 2-7**, monitoring of this strategy can be accomplished by tracking the tons of electronic waste received through the HHW programs and confirming a decline due to the waste being managed at the curb.

Table 2-7. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Track volume of electronic waste received through the HHW programs.	County Solid Waste staff	2021 and ongoing
Track how the materials are managed at the curb to determine if updates in education materials are needed.	County Solid Waste staff working with Marketing and Communications Department	2021 and ongoing
If electronic waste is collected separately, track volume of waste collected.	County Solid Waste staff	2021 and ongoing

2.5 Implement a Universal Recycling Ordinance; Short Term, Intermediate

In the unincorporated areas, there is not currently a County requirement for the residences and businesses to participate in recycling collection services. Providing universal recycling services via ordinance requiring residents and businesses to participate in recycling would increase recycling participation in the County. The establishment of a Universal Recycling Ordinance (URO) for the unincorporated areas would require the drafting of the ordinance, and the passing of the ordinance by the Board of County Commissioners. A better understanding of the number and types of businesses in the unincorporated area would also be necessary, which could be accomplished through a waste profiling procedure, potentially initiated and coordinated through existing Business Waste Assessment Section (BWAS) efforts. (If the URO is implemented, the existing BWAS program would expand beyond voluntary participation and become a part of enforcement efforts.) The waste profiling procedure could require businesses to submit information related to the type and size of business. For the Lealman MSBU, an amendment to the ordinance establishing the MSBU, and an amendment to the franchise agreement would be required to implement universal recycling. The URO would only be applicable in the unincorporated areas of the County and would not apply to municipalities in the County. Implementation could be phased in, with efforts for a commercial URO in the short term leading to enforcement efforts in the intermediate term.

The URO would not need to include the residential sector if organized collection is implemented in the unincorporated areas including recycling collection as part of standard services; therefore, the addition of the residential sector to the URO could be added in the intermediate term. Whether the URO should apply to multifamily would also depend on what is included organized collection. For the commercial sector, the URO could provide a list of materials commonly recycled and require businesses to select at least one item from the list to recycle. Providing flexibility for the commercial sector would allow businesses to make reasonable decisions for the type of business and type of waste generated that could be recycled. The URO could begin with education and outreach rather than enforcement with penalties, to allow a grace period. The URO should also include reasonable exemptions for which businesses can apply.

2.5.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of the URO for the commercial sector could be completed in the short term, as shown in **Table 2-8**. Whether the residential sector should be included in the URO would be determined based on whether organized collection is implemented, anticipated to occur in the intermediate term. Adding the residential sector to the URO could occur in the intermediate term, if necessary.



Table 2-8. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Determine acceptability of a URO through community outreach (as part of survey and outreach efforts described in Section 2.1)	Solid Waste staff working with Marketing and Communications Department	Third quarter 2020 through second quarter 2021
Determine whether revisions to Building Code would be necessary to require new buildings and retrofitted buildings to accommodate recycling containers for multifamily and business entities (as part of efforts included in Section 2.1)	Solid Waste staff working with County Attorney's Office	Fourth quarter 2021
If necessary, revise Building Code (two public hearings)	Solid Waste staff working with County Attorney's Office	First quarter through third quarter 2022
Seek BOCC approval of implementing a URO	Solid Waste staff working with County Executive Team	Fourth quarter 2021
Draft URO language requiring participation in recycling programs for commercial sector	Solid Waste staff working with County Attorney's Office	First and second quarter 2022
Hold public hearings as required to adopt new ordinance language	BOCC	Third quarter 2022
Hire two additional FTE's to assist with education and enforcement (same FTE's as described in Section 2.1)	Solid Waste staff	First quarter 2023
Develop a comprehensive list of business in the unincorporated area through coordination with BWAS staff	Solid Waste staff	Beginning second through fourth quarter 2023
Enforce the URO for commercial sector	Educate with Solid Waste BWAS staff; enforce with Solid Waste dedicated Code Enforcement officers	Beginning first quarter 2025, ongoing
Amend Lealman MSBU ordinance to include URO (two public hearings)	Solid Waste staff working with County Attorney's Office	First and second quarter 2021
Amend Lealman MSBU franchise agreement to include recycling collection as part of base service	Solid Waste staff working with County Attorney's Office and franchised hauler for Lealman MSBU	First and second quarter 2021
If organized collection does not occur, revise URO to include residential sector (two public hearings)	Solid Waste staff working with County Attorney's Office	First quarter 2026

2.5.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 2-9**, monitoring of this strategy can be accomplished by tracking the number businesses in compliance with URO through enforcement efforts, and tracking recycling rates reported by FDEP in the Annual Solid Waste Management reports.



Table 2-9. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Track number of businesses in compliance with URO	Solid Waste dedicated Code Enforcement officers	Beginning in first quarter 2025, ongoing
Track countywide traditional recycling rates	FDEP Annual Solid Waste Management Report	Ongoing

2.6 Further Standardize and Expand Recycling Education Efforts; Short Term

There are certain steps the County can take to move toward more standardized recycling collection and therefore education and outreach in an effort to minimize confusion and contamination in recyclables Countywide. The County could work with the regional MRFs currently processing residential recyclables generated in the County to identify which specific materials can and cannot be included in recycling programs to determine whether differences between the materials accepted in recycling programs can be easily resolved. Through the Recycling Workshop held in July of 2018, steps have already been initiated, through the formation of a committee called Contract Transparency, which is focused on processing contract best practices; it may be possible to add efforts for consistency regarding which materials can be included in recycling programs.

The County could standardize recycling containers in all County buildings with consistent labeling on or near containers to combat recycling confusion. Coordination with municipalities to provide the same recycling containers and labeling for municipal buildings in each jurisdiction should be encouraged, which can be initiated with the TMC. Assuming consistency in materials accepted in each recycling program within the County can be reached, streamlining education materials as well as labeling of containers can be implemented countywide, and potentially regionally.

Once consistency is reached, expanding education and outreach efforts could include sharing of printed materials countywide, adjusting the Recycling Guide, County website, and each jurisdiction's websites and education materials. The development of a smartphone application such as the "My Waste" app (by Municipal Media Inc.) or the ReCollect app available on Google Play could be more easily customized countywide with consistent recycling program materials, which could allow for the potential to share the cost of such an application across each municipality and the County for a subscription to be available countywide to all residents.

The County could work with the TMC to consistently add to collection contracts the requirement for haulers to replace labels on residential containers periodically to address fading images. Requiring haulers to deliver education materials (i.e. door hangers) could also be included as a requirement in collection contracts. For the municipalities that provide their own collection services, reminding residents with printed material and replacing faded labels periodically can become a policy.

2.6.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin immediately, and the standardized labeling and outreach materials could be completed in the short term, as shown in **Table 2-10**.

Table 2-10. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Initiate discussions with regional MRF's to identify differences and seek to resolve differences in materials accepted in recycling programs	Solid Waste staff working with the TMC	Second quarter 2020
Through the TMC, obtain buy-in on standardizing materials accepted (perhaps in conjunction with the Recycling Workshop committee formed to address processing contracts)	Solid Waste staff working with the TMC	Third and fourth quarter 2020
Through the TMC, obtain buy-in on the use of a smartphone application such as "My Waste" (by Municipal Media Inc.) or ReCollect to be made available countywide	Solid Waste staff working with the TMC	Fourth quarter 2020
Through the TMC, obtain buy-in on requiring residential recyclables haulers to replace labels and deliver education materials (i.e. door hangers) periodically, via collection contracts or city policy	Solid Waste staff working with the TMC	Fourth quarter 2020
Standardize labeling on all recycling containers in County buildings	Solid Waste staff working with the County's Real Estate Management Department and the Cities of Clearwater, Largo and St. Petersburg who service some County buildings	First quarter 2021, then ongoing as necessary
Standardize education and outreach materials	Solid Waste staff working with Marketing and Communications Department, and potentially TMC members	First quarter 2021, then ongoing as necessary
Subscribe to a smartphone application	Solid Waste staff working with Marketing and Communications Department, and potentially TMC members	Second quarter 2021, then annually
Disseminate (or make available) updated education and outreach materials, through the TMC	Solid Waste staff working with Marketing and Communications Department, and potentially TMC members	Second quarter 2021

2.6.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 2-11**, monitoring of this strategy can be accomplished by tracking the total tons recycled and contamination rates, which would include working with members of the TMC and the MRF's processing materials generated in the County. The MRF's likely perform periodic audits per processing agreements, which would show contamination rates.

Table 2-11. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Tons recycled	Solid Waste staff working on and reviewing FDEP Annual Solid Waste Management Report	Beginning in 2021, ongoing
Contamination rates	Solid Waste staff working with members of the TMC and MRF's processing materials generated in the County conducting periodic audits	Beginning in 2021, ongoing

2.7 Expand Cutting Waste at Work (CWW) Program; Short Term¹

Cutting Waste at Work (CWW) is a program provided by the County's Solid Waste Department designed to help businesses identify and reduce unnecessary physical waste. Interested businesses call Pinellas County staff and have a pre-screening assessment to ensure the program is right for them. Then, County staff schedules and conducts an on-site assessment, and the business is asked to provide a waste and recycling invoice to help determine the amount of wastes generated and collected. County staff provides the participating business a detailed business report, which also acts as a customized waste reduction program.

The County could establish its own "low waste" or "zero waste" certification program to recognize businesses that reach a certain threshold of waste prevention and diversion. The County could develop the program to recognize low waste generators for businesses that implement waste prevention practices, expand traditional recycling, and implement additional diversion programs, essentially following the recommendations included in the County's current audit reports.

The County could add to the reports provided to businesses minimum standards and expectations for waste and recycling services to provide each business with a benchmark of best practices, which may help the business in establishing waste reduction and recycling goals.

Increasing/targeting multifamily complexes within the CWW program would require the audits performed by County staff to identify space constraints and other impediments to recycling and provide solutions to the property manager to overcome the impediments. Standardized recommendations can be developed to provide multifamily complexes; however, specific instructions would be most beneficial to address each location. If multifamily complexes are increased within the CWW program, adjustments to the County's Solid Waste website should address multifamily specifically.

Note that if the Universal Recycling Ordinance described in Section 2.1 is implemented, the CWW program may expand from a voluntary program to include assistance with enforcement efforts.

2.7.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin immediately, as shown in **Table 2-12**, and the expansion of the CWW program could be completed in the short term.

¹ Note that feedback received after this strategy was developed resulted in some changes in the CWW program and a reduced need to hire more staff.



Table 2-12. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Hire and train one additional FTE to assist expansion of CWW program¹	Solid Waste staff	First quarter 2020
Research and determine best approach to establish a County zero waste certification program, including best approach to recognition for businesses receiving certification	Solid Waste staff working with Marketing and Communications Department	First quarter 2020
Train County Solid Waste staff to confirm certification process	Solid Waste staff	Second quarter 2020
Implement and promote the zero waste certification process	Solid Waste staff working with Marketing and Communications Department	Third quarter 2020
Implement recognition of businesses receiving zero waste certification	Solid Waste staff working with Marketing and Communications Department	Fourth quarter 2020, then ongoing
Research and establish basic standards of service for waste and recyclables, by business type and number of employees, to add to Audit Reports provided to businesses	Solid Waste staff	First quarter 2020
Determine whether addressing space constraints through the County building code is appropriate, if it is deemed necessary to go further than the Florida Statute requirement to provide adequate space for recycling containers	Solid Waste staff working with County Attorney's Office	Second quarter 2020
If necessary, revise Building Code (two public hearings)	Solid Waste staff working with County Attorney's Office; BOCC approval	Third quarter 2020
Research and establish best practices for multifamily recycling programs to create standard information as well as guidance for auditors to provide specific guidance	Solid Waste staff	First quarter 2021
Adjust the County Solid Waste website to specifically provide a resource for multifamily complexes	Solid Waste staff	Second quarter 2021
Increase outreach targeting multifamily complexes to the CWW program (or create a new program name as part of rebranding the CWW)	Solid Waste staff working with Marketing and Communications Department	Second quarter 2021
Share best practices information with municipalities that control recycling collection from multifamily complexes	Solid Waste staff	Second quarter 2021

1. Note that feedback received after this strategy was developed resulted in a reduced need to hire more staff.



2.7.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 2-13**, monitoring of this strategy can be accomplished by tracking the number of participants in the voluntary programs, estimating tons recycled or diverted as part of the certification program, and tracking recycling rates reported by FDEP in the Annual Solid Waste Management reports.

Table 2-13. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Continue tracking and report number of businesses participating in audits and implementing recycling programs	Solid Waste staff	Continue current tracking, ongoing
Track and report number of businesses receiving zero waste certification	Solid Waste staff	Beginning in fourth quarter 2020, ongoing
Track and report number of multifamily complexes participating in audits and implementing recycling programs	Solid Waste staff	Beginning in third quarter 2021, ongoing
Track countywide traditional recycling rates	FDEP Annual Solid Waste Management Report	Ongoing

3 Maximize Recovery

3.1 Evaluate MRF Processing Capacities and Address Recycling Contamination; Ongoing

As an ongoing strategy, the County will continue to monitor the marketplace as well as coordinate with municipal partners and regional stakeholders such as Hillsborough and Pasco County. Through coordination, Pinellas County will be mindful of opportunities to partner on processing contracts and organize in light of changing legislation. The County may also consider the development of a County or municipally owned MRF. The advantage to ownership is guaranteed available processing capacity and customization of equipment to meet community needs. This does not remove risks due to market impacts which affects both public and private operations. A feasibility study to determine facility locations, capital and operating costs and market conditions is the likely first step in pursuing a publicly owned facility and can be prepared during the next few years. The study will also need to identify suitable partners and when materials are no longer under competing contracts. Construction of a facility will likely take four to six years if the County proceeds with this development.

3.1.1 Implementation Activities, Responsible Parties and Timing

Implementation of this strategy could begin immediately, as shown in **Table 3-1**.

Table 3-1. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Continue to coordinate with regional communities as to the status of recycling processing in the region.	County Solid Waste staff	First quarter of 2020 and ongoing
Conduct a market study for recyclables	County Solid Waste staff	First quarter 2020.
Conduct composition study of county-wide recyclables	County Solid Waste staff	Second through fourth quarter 2020

3.1.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 3-2**, monitoring activities for this strategy include observing the marketplace for changes in recycling processing needs do to market fluctuations.

Table 3-2. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor the marketplace for recycling processing needs.	County Solid Waste staff	Ongoing

3.2 Develop Ash Recycling Methods and Specifications; Short Term, Intermediate

Post combustion ash research in Florida and the US has progressed to a point where beneficial uses exist for this by-product. In Europe, most ash systems separate bottom and fly ash and bottom ash is regularly use as an aggregate substitute in construction projects. Pilot testing of ash as a construction material in Pasco and Hillsborough counties has seen positive results and is achieving favorable views with Florida's environmental regulators. An initial step in the beneficial use of ash is to develop product specifications and applications for ash. Standardization of material properties and different ash applications will assist with

development of a marketplace for ash reuse and diversion from landfill disposal. Diversion of ash from disposal will increase the life of the Bridgeway Acres Landfill and offset the need for other soil and aggregate use. Although market may be several years away, developing specifications and performing the needed testing and pilot programs could be started in the very near term.

3.2.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation could begin in the short-term, as shown in **Table 3-3**, through pilot testing of beneficial ash applications, with market development for the ash occurring in the intermediate term.

Table 3-3. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Pilot testing of beneficial ash applications	County Solid Waste staff	Fourth quarter 2020
Develop specifications and permit selected beneficial use applications	County Solid Waste staff working with FDEP regulators	Fourth quarter 2022
Develop markets for the beneficial use of ash.	County Solid Waste staff potentially working with other counties in the region	2023-2033

3.2.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 3-4**, monitoring activities would occur if ash processing commences.

Table 3-4. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor ash end-use applications including tons recycled and final application.	County Solid Waste staff	2023-2033 and ongoing.

3.3 Increase the Ability to Process Waste at the Waste-to-Energy (WTE) Facility; Short Term, Intermediate, Long Term

The Pinellas County Waste to Energy (WTE) facility currently processes a large portion of the waste received at the Complex. With a total capacity estimated at around 1,000,000 tons per year, the WTE has the capability to process most of the waste up through 2026 at which time the capacity will be exceeded, and additional strategies will need to be implemented to process the excess received waste. Increasing the processing capacity involves efficiency increase for smaller improvements to large construction projects to add new capacity by expanding the current WTE or building a new facility although the larger construction projects were deemed to be cost prohibitive in the vetting stage of the planning process.

The County can implement improvements in the next five years that will maximize the current WTE facility's processing potential as well as enhancing energy development to maximize electrical revenues. Capital expenses for these projects are estimated between \$10 and \$15 million while expanding the WTE may cost \$225 to \$275 million. Significant capacity increases will need to be started in the next few years but will not be available until beyond 2026.

Short term developments involve two strategies to increase plant efficiency and ultimately processing capacity and maximizing revenue potential. The first is to increase the WTE tip



floor providing for additional waste storage, flexibility in handling oversized materials and capacity to level waste feed throughput across varying delivery rates. The second is to develop new onsite electrical generation to offset plant parasitic loads and to diversify electrical distribution to electrical meters onsite that are receiving energy through the grid at higher market pricing.

Current Federal electric market regulations make expansion of the WTE beyond its current configuration difficult. While these regulations do not restrict additional development, the County is afforded revenue generation protections if the WTE remains at the current size.

3.3.1 Implementation Activities, Responsible Parties and Timing

Plant capacity is decreasing and expected to be exceeded in 2028. Implementation of this strategy can begin and be completed in the near term as shown in **Table 3-5** to expand the plant capacity and provide additional flexibility for other strategies in the near and intermediate term.

Table 3-5. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Investigate onsite electrical generation initiatives including solar generation to offset parasitic loads.	County Solid Waste staff	First quarter 2021
Identify ability to convert onsite electrical meters to WTE supplied power.	County Solid Waste staff	Second quarter 2021
Solicit design services for WTE tip floor expansion and develop and permit design,	County Solid Waste staff	Third quarter 2021 through fourth quarter 2022
Solicit Construction bids	County Solid Waste staff	Second and third quarter 2023
Construct tip floor expansion	County Solid Waste staff with selected vendor	Third quarter 2024 through second quarter 2025
Monitor tip floor capacity and throughput	County Solid Waste staff	Ongoing post construction.

3.3.2 Monitoring Activities, Responsible Parties and Timing

While there are no direct monitoring activities associated with this strategy, County Solid Waste staff would be expected to participate in the tip floor expansion project during construction.

3.4 Develop an Advanced Metals Recovery Facility at the Complex; Short Term

The combustion of waste at the WTE facility releases energy from the waste as well as makes metals available for recovery. Items such as coins, nails, silverware, cans, and housing hardware like hinges are some examples of materials that are removed from the post-combustion ash at the WTE. Existing ferrous and non-ferrous systems recover mostly larger metallic items. Within the ash are additional smaller metals that the traditional recovery systems cannot remove. An advanced metals recovery facility is designed to capture these small recoverable metal materials. The technology is currently available and being used throughout Europe and at a few US locations. Once a vendor is identified, a facility could be installed within a few years. Although modification of the current ash and metals handling equipment at the WTE will be required, this modification is not beyond the current engineering and construction capabilities of the contractors that install these advanced metal recovery systems. Initial estimates indicate that up to 16,000 additional tons of metals with a value of

\$1 to \$4 million could be recovered per year over the planning period. Revenue is dependent on ever changing scrap metal markets.

3.4.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy can begin in the short-term with the development of an RFP to assess potential vendors and technology availability for ash recycling methods, as shown in **Table 3-6**.

Table 3-6. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Develop an RFI to determine potential vendors and applicability of certain technologies to the Pinellas WTE facility	County Solid Waste staff	First Quarter 2021
Identify location for AMR facility	County Solid Waste staff	Third Quarter 2021
Develop an RFP to solicit design and construction of an AMR facility	County Solid Waste staff	Fourth quarter 2021
Solicit for construction and operation of the AMR facility	County Solid Waste staff	Solicitation first quarter of 2022, Construction start second quarter of 2022, operation fourth quarter 2022

3.4.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 3-7**, monitoring activities would commence upon facility start-up and are expected to include contract administration, operational reviews and tracking of quantities of metals recycled.

Table 3-7. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor operations, tracking of recycled metals tonnage and contract administration for an AMR facility.	County Solid Waste staff	Fourth quarter 2022 and ongoing

4 Responsibly Manage What's Left Over

4.1 Extend the Landfill Life Through Bulky Waste Processing; Short Term

Loads of waste delivered to the Complex may include oversized items which cannot be processed at the WTE due to their size restrictions. The County could develop full scale bulky waste processing capability at the Complex, either through a public/ private partnership or through design and acquisition of the appropriate equipment and operating facility. This type of system would result in more diversion of materials from the landfill, improved operation of the WTE and improved compaction of materials in the landfill by their removal from the landfilled waste stream, due to the size reduction of hard-to-manage items such as mattresses and furniture.

4.1.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin immediately, as shown in **Table 4-1**.

Table 4-1. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Identify location at the Complex for bulky waste processing	County Solid Waste staff	First Quarter 2022
Procure and contract a firm to design the bulky waste processing facility and update the Traffic Master Plan for inclusion of facility	County Solid Waste staff	Second Quarter 2022
Design the bulky waste processing facility, determine costs to construct; update the Traffic Master Plan	Consultant	Third and fourth quarter of 2022
Obtain capital funds	County Solid Waste staff	First quarter of 2023
Procure and contract a firm to permit the bulky waste processing facility	County Solid Waste staff	First quarter of 2023
Permit the bulky waste processing facility	Consultant	Second Quarter 2023
Procure and contract a firm to construct the bulky waste processing facility and implement updated Master Traffic Plan	County Solid Waste staff	Third Quarter 2023
Construct the bulky waste processing facility and implement updated Master Traffic Plan	Contractor	Construction start fourth quarter of 2023, operation fourth quarter 2024
Purchase the equipment for the bulky waste processing facility	County Solid Waste staff	Second and third quarter of 2024

4.1.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 4-2**, monitoring of this strategy would entail ongoing administration of the operation of the facility, and coordination with operations at the Complex.



Table 4-2. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Ongoing administration of the operation of the facility, including processing, disposal and maintenance of the system	County Solid Waste staff	Fourth quarter 2024 and ongoing after
Coordination with operations at the existing Complex, WTE facility and landfill.	County Solid Waste staff	Fourth quarter 2024 and ongoing after
Track volume of bulky waste entering facility and volume once processed to understand benefit	County Solid Waste staff	Fourth quarter 2024 and ongoing after

4.2 Improve Traffic Movement at the Complex; Short Term

The efficient movement of vehicles at the Complex is becoming increasingly constricted due to the added activities and the increased number of waste deliveries. A master traffic plan should be considered to fully analyze the existing traffic conditions that are experienced during waste deliveries. This could be implemented by observing the waste delivery process throughout the Complex, including the WTE facility, and recording information to gain an initial understanding of the operations at the Complex. Based on existing conditions, the master traffic plan would aid in proposing improved traffic patterns and potentially relocate services at the Complex, including the scale location. This allows opportunity for multiple site layouts to be considered.

4.2.1 Implementation Activities, Responsible Parties and Timing

County staff has noted that the facility experiences congestion during peak periods. Providing alternative access points can relieve the congestion of deliveries at the beginning of the waste delivery process and would recreate a ripple effect, easing of congestion throughout the process until the truck leaves the facility. Therefore, this strategy should begin immediately, as shown in **Table 4-3**.

Table 4-3. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Procure and contract a firm to perform an existing conditions traffic study and Master Traffic Plan for the Complex	County Solid Waste staff	First quarter of 2021
Perform a traffic study of all traffic flow existing conditions at the Complex	Consultant	Second quarter of 2021
Prepare a Master Traffic Plan for the Complex	Consultant	Third quarter 2021
Procure and contract a firm to implement Master Traffic Plan at the Complex	County Solid Waste staff	Fourth quarter of 2021
Implement Master Traffic Plan at the Complex, including new access, egress and interior Complex roads and signage	Contractor(s)	First quarter of 2022

4.2.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 4-4**, monitoring of this strategy can be accomplished by reviewing the Traffic Master Plan for the Complex at a minimum annually and provide updates as new facilities/operations are integrated at the Complex.

Table 4-4. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Periodic review of Traffic Master Plan	County Solid Waste staff	Annually
Update Traffic Master Plan when new facilities/operations are integrated on-site.	County Solid Waste staff	As needed.

4.3 Extend the Landfill Life Through Development of an On-site Transfer Station for Off-site Disposal of Waste; Short Term, Intermediate, Long Term

Currently, MSW is delivered to the Complex where the majority of the waste is processed through the WTE facility. Due to increased downtimes at the WTE, MSW disposed at the landfill has increased. The County could consider the diversion of MSW, for disposal at other locations, through the development of a transfer station facility and the solicitation of pricing and agreements for transportation and disposal at off-site disposal facilities. A transfer station facility could also assist the County in the handling of other materials for processing prior to shipment such as yard waste, recyclables, tires and bulky wastes.

4.3.1 Implementation Activities, Responsible Parties and Timing

Implementation of this strategy is dependent on the need to move waste offsite for processing. As development of processing in the region is not active, this may not be implemented until the intermediate or long term, as shown in **Table 4-5**.

Table 4-5. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Identify location at the Complex for Transfer station	County Solid Waste staff	First Quarter 2024; dependent on the need to move waste offsite for processing
Procure and contract a firm to design the Transfer Station and update the Traffic Master Plan for inclusion of facility	County Solid Waste staff	Second Quarter 2024
Design the Transfer Station, determine costs to construct, and update Traffic Master Plan	Consultant	Third and fourth quarter of 2024
Obtain capital funds	County Solid Waste staff	First quarter of 2025
Procure and contract a firm to permit the Transfer Station	County Solid Waste staff	First quarter of 2025
Permit the Transfer Station	Consultant	Second Quarter 2025
Solicitation of pricing and agreements for transportation and disposal at off-site disposal facilities	County Solid Waste staff	First and Second Quarter 2025
Procure and contract a firm to construct the Transfer Station and implement updated Master Traffic Plan	County Solid Waste staff	Third Quarter 2025
Construct the Transfer Station and implement updated Master Traffic Plan	Contractor	Construction start fourth quarter of 2025, operation fourth quarter 2026
Purchase the equipment for the Transfer Station	County Solid Waste staff	Second and third quarter of 2026
Monitor Transfer Station operations for suitable performance and throughput	County Solid Waste staff	Ongoing after construction

4.3.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 4-6**, monitoring of this strategy would entail ongoing administration of the operation of the facility, and coordination with operations at the Complex.

Table 4-6. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Ongoing administration of the operation of the facility, including pricing, marketing, managing off-site disposal agreements and maintenance of the system.	County Solid Waste staff	Fourth quarter 2026 and ongoing after
Coordination with operations at the existing Complex, WTE facility and landfill	County Solid Waste staff	Fourth quarter 2026 and ongoing after

4.4 Revise the Flow Control Ordinance and Evaluate the Need to Expand Licensing of Haulers; Short Term

While currently no challenge is expected in Pinellas County, County Code Chapter 106 (Flow Control Ordinance) could be proactively amended to strengthen its provisions to better withstand any possible future challenge for the flow of solid waste. As reported in the 2017 FDEP annual solid waste management report, some Class I waste later identified as contaminated soil, and some Class III waste is leaving the County's system. While the specific makeup of the Class III waste leaving the County could not be determined at the time of this writing, strengthening provisions and expanding the enforcement of Chapter 106 to include these additional types of waste could prevent the waste from leaving the County's system. Further investigation into the makeup of the Class III waste should be conducted to determine whether it is in the County's best interest to regulate the flow of additional forms of solid waste.

In conjunction with determining the need to revise the Flow Control Ordinance, the County could also determine whether the licensing of haulers in the unincorporated area of the County is necessary. If licensing is expanded, it would include the licensing of other classes of solid waste haulers, such as those that handle and transport C&D, special wastes, wood wastes, and various classes of commercial and industrial waste (for example contaminated soils), which could occur in conjunction with expanding the Flow Control Ordinance.

4.4.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, as shown in **Table 4-7**, implementation of changes to Code Chapter 106 is dependent on the determination of whether amending the code would be beneficial, which in part depends on the outcome of the feasibility study described in Section 1.6 related to Commercial Sector C&D Debris Recovery and Recycling, as well as further research into the types of Class III wastes that may be leaving the County.

Table 4-7. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Determine whether strengthening of existing provisions is necessary to maintain the current control of the flow of municipal solid waste	Solid Waste staff working with County Attorney's office (potentially with outside legal counsel)	First quarter 2021
Determine the makeup of the Class III waste currently leaving the County and whether it is preferred for the County to control the flow of all solid waste	Solid Waste staff (potentially working with outside consultant)	Second quarter 2021

Activity	Responsible Party	Timing
If it is determined beneficial to expand the flow control ordinance and/or strengthen existing provisions, obtain BOCC approval to amend County Code Chapter 106	Solid Waste staff working with County Attorney's office	First quarter 2022
Revise Code Chapter 106 (two public hearings)	Solid Waste staff working with County Attorney's office (potentially with outside legal counsel)	First quarter 2022
If it is determined beneficial to expand current licensing procedures, revise relevant Code chapter	Solid Waste staff working with County Attorney's office	First quarter 2022
If it is determined beneficial, implement expanded licensing	Solid Waste staff working with County Attorney's office	First quarter 2022
Enforcement of Flow Control Ordinance and/or expanding licenses	Solid Waste staff working with Code Enforcement	Ongoing

4.4.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 4-8**, monitoring of this strategy can be accomplished by enforcing the ordinance and licensing procedures, and tracking the tons leaving the County as reported by FDEP in the Annual Solid Waste Management reports.

Table 4-8. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Track waste leaving the County	FDEP Annual Solid Waste Management Report	Ongoing

4.5 Explore the Possible Utilization of the Surface of the Closed Toytown Landfill; Ongoing

Because of the nature of the Toytown Landfill property (it is first and foremost a closed MSW landfill), the uses to which the property can be put are very limited. According to a 2005 report prepared by Kessler Consulting, Inc., titled "Toytown Landfill Redevelopment Options Assessment", closed landfills are best suited for low intensity redevelopment options such as recreational facilities (i.e. ballfields, soccer fields, etc.), and not for high density development (hotels, shopping malls, baseball stadiums, etc.). The County could consider preserving the unfilled or relatively unfilled areas on the Toytown Landfill for potential future solid waste facilities and operations.

A study to identify the areas of the landfill property that were not filled for possible use for future solid waste handling or processing facilities would need to be conducted to more fully understand the areas of the Toytown site that could support a solid waste facility for such purposes, and to help determine the potential for co-locating non-solid waste related low-intensity activities on the remainder of the property

4.5.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, the County could initiate the necessary coordination with the Economic Development Department and feasibility studies in the short term, or at any time the County deems appropriate or necessary, as shown in **Table 4-9**.

Table 4-9. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Coordinate with the Economic Development Department to agree on the long-term future use of the Toytown Landfill property	Solid Waste staff working with County Administration	To be determined by County Administration
Perform necessary studies to identify the areas of the landfill property that were not filled, or were only minimally filled, for possible use for future solid waste processing facilities	Solid Waste staff (potentially with outside consultant)	To be determined by County Administration
Determine what solid waste facilities, if any, would be suitable for construction on the unfilled portions of the landfill	Solid Waste staff (potentially with outside consultant)	To be Determined by County Administration

4.5.2 Monitoring Activities, Responsible Parties and Timing

The nature of this strategy does not lend itself to specific monitoring or measurements, and instead would be continuously monitored and adjusted as necessary, per Solid Waste staff determinations.

4.6 Monitor and Evaluate the Potential Availability of Contiguous Properties for Purchase; Ongoing

Because of the County's high population density and the lack of other suitable large tracts of property, there are no opportunities for the Solid Waste System to pursue and utilize other Pinellas County properties outside of the property that it currently owns. In general, solid waste facilities are more successful in expanding their operations laterally, if suitable adjacent property is, or becomes available. Adjacent properties are not currently available; however, it may be worthwhile to continue to pursue the potential future availability of adjacent properties for Solid Waste purposes, as deemed necessary.

4.6.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, the County could initiate determination of what type of facilities would be helpful to the Solid Waste System to be sited on adjacent property and pursue adjacent property at any time the County deems appropriate or necessary, as shown in **Table 4-10**.

Table 4-10. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Evaluate Master Plan recommendation for future space needs to support proposed physical infrastructure/processes	Solid Waste staff	Fourth quarter of 2020
Coordinate with REM to conduct an evaluation of adjacent properties and/or properties in close proximity that could support Master Plan physical infrastructure/process	Solid Waste staff with REM	Fourth quarter of 2021
Purchase adjacent property, as available and deemed necessary	Solid Waste, REM and BOCC	Third quarter of 2022

4.6.2 Monitoring Activities, Responsible Parties and Timing

The nature of this strategy does not lend itself to specific monitoring or measurements, and instead would be continuously monitored and adjusted as necessary, per Solid Waste staff determinations.

4.7 Expand the Capacity of the Existing Disposal Area; Short Term, Intermediate

With a finite footprint and an inability to site or develop additional landfill space within the county, maximizing the County's current landfill asset, ensures the long-term viability of landfill disposal availability. While the goal of the County's plan is 'zero waste to landfill', the availability of a contingency for upsets in the system is a core responsibility of a municipal waste management system. The use of waste as a construction material is common at landfills and alternative applications for different waste types should be an ongoing evaluation. In addition, vertical expansion of airspace within the existing landfill footprint using MSE berms is a viable expansion methodology. An MSE Berm consists of a nearly vertical face (e.g. 3V:1H) that would generate a veneer layer of additional airspace along the outer slopes and top deck of the existing landfill. The steep outer slope of the berm would allow vertical airspace gain with minimum or no impact to land surface outside the current landfill footprint.

4.7.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin with a feasibility study, as shown in **Table 4-11**.

Table 4-11. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Procure and contract a firm to perform a feasibility study	County Solid Waste staff	First quarter of 2022
Perform a feasibility study, including determining costs	Consultant	2022-2024
Procure and contract a firm to permit the MSE Berm	County Solid Waste staff	Second quarter 2025
Permit the MSE Berm	Consultant	Third quarter of 2025
Procure and contract a firm to design the MSE Berm	County Solid Waste staff	Fourth quarter of 2025
Design the MSE Berm	Consultant	First through second quarter 2026
Procure and contract a firm to construct the MSE Berm	County Solid Waste staff	First quarter of 2026
Construct the MSE Berm	Contractor	Second through fourth quarter 2026

4.7.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 4-12**, monitoring of this strategy would entail determining the consistency and physical properties of the WTE ash and identifying methods of obtaining uniform and consistent ash material.



Table 4-12. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Periodically assess the consistency of WTE ash received at the site to develop the design basis to use ash as structural fill	County Staff	Ongoing
Identify methods of obtaining fairly uniform and consist ash material for MSE berm	County Staff	Ongoing
Implement a laboratory testing program to determine physical properties of processed ash	County Staff	Ongoing



5 Collaborate with Partners

5.1 Form a Regional Partners Committee; Short term, Intermediate

Coordinating with representatives from Manatee County, Hillsborough County, Pasco County, Sarasota County, and the City of Tampa (Regional Partners), the County could form a Regional Partners Committee to collaborate in two main areas:

- Information and resource sharing (ongoing)
- Legislative and regulatory monitoring and advocacy (ongoing)

5.1.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin immediately, and would be ongoing, as shown in **Table 5-1**.

Table 5-1. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Identify specific personnel from each jurisdiction to participate in the Regional Partners Committee	County Solid Waste staff with representatives from Regional Partners	First quarter 2020
Participate in the initiation of the Regional Partners Committee with a meeting (or conference call)	County Solid Waste staff with representatives from Regional Partners	First quarter 2020
Continue to meet regularly, at a frequency agreed to by members of the Regional Partners Committee, to determine appropriate topics and approaches for regulatory or legislative initiatives and information and resource sharing	County Solid Waste staff with representatives from Regional Partners	Ongoing
Determine as a group the appropriate level of involvement from which regional partners, and for which topics to continue collaboration over time	County Solid Waste staff with representatives from Regional Partners	Ongoing
Develop interlocal agreements to manage scheduled outages at the WTE Facility	County Solid Waste staff with representatives from Regional Partners	By fourth quarter 2027
Acquire transfer equipment and personnel (or a contractor) to deliver waste during outages; refer to Section 4.3 for development of an onsite transfer station, which would be necessary before transferring could be initiated	County Solid Waste staff	First quarter 2028

5.1.2 Monitoring Activities, Responsible Parties and Timing

Monitoring of this strategy can be accomplished through ongoing discussions with the Regional Partners. The nature of this strategy does not lend itself to specific measurements, and instead would be continuously monitored and adjusted as necessary, per consensus with the Regional Partners.

5.2 Information and Resource Sharing; Ongoing

The following potential action items related to information and resource sharing were identified through discussions with Regional Partners. The Regional Partners Committee would determine the best approach(es) to share lessons learned and best practices on any number of topics and allow the jurisdictions to continue discussing the potential for shared processing and/or disposal capacity and other resources.

- Interlocal agreements between jurisdictions to manage scheduled outages at WTE facilities or other circumstances. (For the purpose of measuring impacts, it is assumed the County would sign an interlocal agreement with Hillsborough County.)
- Issue a region-wide Request for Letters of Interest (RFI) to describe certain problem materials the region has in common and see what solutions the private sector might propose.
- Share lessons learned and best practices relating to low or zero waste events held in one jurisdiction with the other jurisdictions.

5.2.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin immediately, and would be ongoing, as shown in **Table 5-1**.

5.2.2 Monitoring Activities, Responsible Parties and Timing

Monitoring of this strategy can be accomplished through ongoing discussions with the Regional Partners. The nature of this strategy does not lend itself to specific measurements, and instead would be continuously monitored and adjusted as necessary, per consensus with the Regional Partners.

5.3 Legislative and Regulatory Monitoring and Advocacy; Ongoing

The following potential action items related to legislative and regulatory initiatives were identified through the master planning process and/or discussions with Regional Partners. It would be up to the Regional Partners Committee to determine which action items would be initiated.

- Monitor FDEP and other state level efforts for product stewardship opportunities to support;
- Monitor national level efforts for product stewardship opportunities to support;
- Coordinate with municipalities within the County and Regional Partners to implement incentives or fees that are successful within other jurisdictions for items such as plastic straws, plastic bags, and polystyrene packaging;
- Continue to monitor legislative actions related to latex paint and the Product Stewardship Institute and the Florida Chapter of the North American Hazardous Materials Management Association initiative;
- Continue to monitor the state legislature for other Extended Producer Responsibility initiatives related to household hazardous waste, in addition to paint;
- Monitor the Public Service Commission and federal and state level efforts related to renewable energy and power generation;
- Monitor Senate Bill 816 (bill was vetoed by the Governor but as passed by the legislature would have required counties and municipalities to address the contamination of recyclable material in specified contracts, and would have prohibited counties and municipalities from requiring the collection or transport of contaminated recyclable material, as defined in the contracts, by residential recycling collectors);
- Determine whether legislative advocacy would be beneficial for projects the Regional Partners agree would be worthwhile (e.g. regional capacity or regional beneficial reuse of ash) and collaborate as a region on such advocacy.

5.3.1 Implementation Activities, Responsible Parties and Timing

While this strategy is not necessarily time-sensitive, implementation of this strategy could begin immediately, and would be ongoing, as shown in **Table 5-1**.

5.3.2 Monitoring Activities, Responsible Parties and Timing

Monitoring of this strategy can be accomplished through ongoing discussions with the Regional Partners. The nature of this strategy does not lend itself to specific measurements, and instead would be continuously monitored and adjusted as necessary, per consensus with the Regional Partners.

5.4 Develop Cooperative Agreements with Tampa Bay Area WTE Plants for Recycling Ash as Construction Products; Short term

In addition to developing recycling methods and specifications for the beneficial use of ash, securing large quantities of ash has been seen as a limiting factor in using ash on significant construction projects. To procure greater ash quantities, cooperative agreements with neighboring WTE facilities (Tampa, Hillsborough, Pasco and possibly Lee), would provide for greater economies of scale for beneficial reuse. Should the County pursue development of a mechanically stabilized earthen wall to increase airspace at the BWA, additional source materials may be required to reduce construction timelines. Incorporation of ash as an aggregate in road construction project is an additional example where the output of one WTE cannot keep up with the required quantities where sourcing ash from multiple sources may make ash reuse more desirable. Use of ash from multiple WTEs requires appropriate cooperative agreements and coordination with construction contractors in the area. Regulatory approvals are still required and may slow down the initial efforts to reuse ash

5.4.1 Implementation Activities, Responsible Parties and Timing

Implementation of this strategy is dependent on the implementation of the Development of Ash Recycling Methods and Specifications (Section 3.2), as shown in **Table 5-2**.

Table 5-2. Implementation Activities, Responsible Parties, and Timing

Activity	Responsible Party	Timing
Identify specification for ash after feasibility study for MSE wall	County Solid Waste staff	Dependent on implementation of 3.2
Develop cooperative agreements template and engage regional WTE facilities	County Solid Waste staff	Dependent on implementation of 3.2

5.4.2 Monitoring Activities, Responsible Parties and Timing

As shown in **Table 5-3**, monitoring for this strategy would only occur if the Development of Ash Recycling Methods and Specifications strategy, described in Section 3.2, is implemented. If implemented, monitoring would include end use markets as utilization and contract administration.

Table 5-3. Monitoring Activities, Responsible Parties and Timing

Activity	Responsible Party	Timing
Monitor end-use market utilization of as including type of use, tonnage and resulting project implementation.	County Solid Waste staff	Dependent on implementation of 3.2.
Contract administration and monitoring of cooperative agreements.	County Solid Waste staff	Dependent on implementation of 3.2.

