

# Memorandum



**Date:** November 19, 2024

Agenda Item No. 2(B)(8)  
December 3, 2024

**To:** Honorable Chairman Oliver G. Gilbert, III and  
Members, Board of County Commissioners

**From:** Daniella Levine Cava  
Mayor

A handwritten signature in blue ink that reads "Daniella Levine Cava".

**Subject:** Report on Recommendations with respect to Composting Operations in Miami-Dade County  
– Directive No. 231904

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## Executive Summary

On December 12, 2023, the Board of County Commissioners (Board) adopted Resolution No. R-1158-23, sponsored by Commissioner Eileen Higgins and Co-Sponsored by Commissioner Marlene Bastien, Senator Rene Garcia and Commissioner Raquel A. Regalado, directing the County Mayor or County Mayor's designee to provide recommendations with respect to composting operations in Miami-Dade County as to where and how composting operations may be most appropriate and under what circumstances and conditions, together with related recommendations for proposed regulatory changes to facilitate such composting operations. The recommendations shall consider what changes to the County Code, implementing orders, County policies, or other sources of law or policy are required for such purpose. For such recommendations, the County Mayor or County Mayor's designee should consider, as appropriate, the experiences and insights of other local and state governmental entities in Florida or elsewhere in the United States. Furthermore, in commitment to this effort, I included remarks in my January 2024 State of the County Address that we will focus on zero-waste strategies, more reducing waste, and recycling refuse.

This attached report explores the composting industry, applicable regulations, challenges and opportunities at the local, regional, and national level, and outlines 3 immediate changes that will serve to enable composting in Miami-Dade:

- A specific zoning code amendment to exempt commercial composting operations on farms from a public hearing.
- A recently adopted EQCB Class Variance Order is explained, which temporarily allows compost operations to be approved administratively, under certain conditions, on properties not served by public water or public sanitary sewer, in lieu of having each such property seek a separate EQCB variance.
- The report also states that DSWM, as outlined in the 96-168 Bond Ordinance, will take the necessary steps to illustrate that composting facilities do not compete with the Solid Waste System on case-by-case basis.

The report also identifies that while there exists potential for composting opportunities within the County, the development of any program to facilitate composting must be informed by County-specific data and information which is not currently available. The Biscayne Aquifer is the

principal source of drinking water to Miami-Dade and Monroe County's residents. It is one of the most permeable aquifers in the world, making it highly vulnerable to contamination. On average, the top of the aquifer lies between two to four feet below our land surface. This is in contrast with more northern regions of the state and elsewhere in the United States where the top of the aquifer sourced for potable water occurs at much deeper depths. As such, groundwater protection is more critical and a primary consideration regarding appropriate regulatory requirements for composting in MDC. As such, the report recommends a pilot-type study to evaluate composting efforts for organic waste streams. This pilot would offer data regarding environmental considerations to inform future policy and regulatory changes.

The report also outlines that DSWM will conduct market research to identify potential long-term composting solutions that consider the environmental implications emphasized by RER. Once DSWM has identified a potential solution that could allow composting to operate in Miami-Dade County, DSWM and RER will meet with the appropriate vendor(s) to identify potential next steps and how/if the identified solution could be part of a larger waste diversion effort. These steps and the results of the pilot-type study would offer data regarding environmental considerations to inform future policy and regulatory changes, in addition to providing important information to the DSWM as it considers the feasibility of larger scale compost operations, including cost considerations. It is also recommended that the administration regularly seek input from both experts in the field from various County departments and experts from outside the County, and consider, when appropriate, to incorporate such input into the administration's findings, and produce a comprehensive composting implementation plan to be presented to the Board after completion of the sampling effort, pilot study, and market research.

Nature recycles organic matter via biological decomposition, facilitated by microorganisms (composting) continuously, as evidenced by the organic rich detritus layer which accumulates on forest floors worldwide. Modern, structured, composting operations accelerate the natural process via optimization of the factors controlling the process. The benefits of compost are well-documented and include but are not limited to soil amendment/ nutrient enrichment, soil stabilization, reduced synthetic fertilizer usage, waste disposal minimization, and reduction of landfill footprint. However, the challenges associated with composting, particularly when done improperly, include the potential for soil and groundwater contamination, air quality impacts as well as contamination of the compost itself are also well-documented. Composting of municipal solid waste instead of source separated organic materials can cause significant environmental implications: lead and cadmium at concentrations which exceed state and county groundwater criteria by several orders of magnitude have been documented in leachate from composting operations, PFAS concentrations up to 1000 times higher than the maximum contaminant level recently established by the EPA has been documented in groundwater at a Massachusetts compost facility and compost contaminated with trace metals and PFAS has been reported in literature. These findings are critical considerations for any composting program/policy development in Miami-Dade given the geology of the Biscayne Aquifer.

The attached report was prepared by staff of the Department of Regulatory and Economic Resources (RER-Planning, Development Services, and Division of Environmental Resources



Management), and the Department of Solid Waste Management (DSWM). In accordance with Ordinance No. 14-65, this report will be placed on the next available full Board meeting agenda, without committee review, as directed in Resolution No. R-1158-23. If you have any questions or require additional information, please contact Lourdes Gomez, Director, Department of Regulatory and Economic Resources or Dr. Aneisha Daniel, Director, Department of Solid Waste Management.

Attachment – Report on Composting Operations, Siting Considerations, Regulatory Requirements and Current Recommendations

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# MIAMI-DADE COUNTY



## Report on Composting Operations, Siting Considerations, Regulatory Requirements and Current Recommendations

### RER-DERM

Department of Regulatory and Economic Resources  
Division of Environmental Resources Management

### DSWM

Department of Solid Waste Management  
Division of Resilience and Intergovernmental Affairs

## **Executive Summary:**

Composting is the controlled biological decomposition of organic materials, like food waste and yard waste. Composting provides a unique opportunity to mitigate the climate impact of organic waste by avoiding the methane emissions associated with organic decomposition in landfills. Composting also can produce a soil amendment that may improve soil health and stability while simultaneously finding a beneficial use to yard and food waste. Though the benefits of composting are well-documented, there are environmental contamination concerns that must be addressed: in particular, there are some PFAS and metal concentration concerns that should be investigated to determine any impact composting operations may have to the Biscayne Aquifer. Although PFAS and metal concentration can be a concern for any composting operation, the risks posed to our Biscayne Aquifer are exceptional; given that the Biscayne Aquifer is the drinking water source for millions, is within close proximity to the ground, and is one of the most permeable aquifers in the world, it is critical to adequately assess the risks posed to it.

Recognizing that composting of organic waste is likely a critical step towards becoming a Zero Waste County, it is recommended that the Department of Solid Waste Management (DSWM) conduct a one-year pilot-type study. This one-year pilot-type study will allow the Department of Regulatory and Economic Resources (RER) to analyze the compost product, any leachate from the operation, and any stormwater runoff for any contaminations. This pilot-type study will ensure that any composting operation in Miami-Dade County contributes to the climate mitigation of organic waste while also prioritizing environmental protection.

While DSWM works on executing the one-year pilot-type study, DSWM and RER will take immediate action to improve the regulatory environment for composting. RER has drafted a zoning ordinance to allow commercial composting on farms. To address the implications that the Bond Ordinance has on composting operations, DSWM has clarified with its bond engineer that composting facilities do not inherently compete with the System. Accordingly, DSWM should evaluate and approve composting facilities for operations on a case-by-case basis.

## **Background**

Section 15-1(i) of the Code of Miami-Dade County Code Fla. (the “Code”) defines composting as the “controlled biological decomposition of organic materials.”<sup>1</sup> The United States Environmental Protection Agency (“EPA”) defines composting as the process by which biological decomposition of organic material is carried out, under controlled aerobic conditions, to produce a nutrient-rich, biologically stable soil amendment: compost.<sup>2</sup> In addition to the soil amendment benefits of compost, composting provides for beneficial reuse of material that would otherwise be landfilled or incinerated. The diversion of the organic waste stream from landfills and waste-to-energy (WTE) facilities has the added benefit of helping reduce greenhouse gas emissions and extending the life of these facilities. Composting has other overarching benefits: compost used in agriculture and horticulture may improve soil fertility; promotes soil stability and resilience by increasing organic content and enhancing microbial diversity and abundance; increases nutrient availability, thereby reducing reliance on fertilizer; increases

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<sup>1</sup> *Compost* shall mean the controlled biological decomposition of organic materials.

<sup>2</sup> USEPA. <https://www.epa.gov/recycle/composting-home>

nutrient uptake; and improves disease resistance.<sup>3</sup> Improved soil fertility contributes to agricultural productivity, improved food security, and improves agricultural economic viability. Improved soil stability provides benefits for flood protection, water storage, and erosion reduction, among others.

Although the benefits of composting are well documented, this waste management technique is not without challenges. Environmental issues such as air quality concerns associated with the generation of toxic gases (e.g. hydrogen sulfide, volatile organic compounds, and oxides of nitrogen) and the potential for water pollution resulting from leachate generation can arise from composting operations, particularly if these facilities aren't carefully controlled operations that reduce leachate generation.

Components of this report are divided into three sections based on the compost stream: yard waste composting, food waste composting, and Municipal Solid Waste ("MSW") composting. Yard waste composting is comprised of yard trash such as branches, grasses, leaves, and other organic landscaping materials. Food waste composting is comprised of food waste streams. MSW composting is comprised of organic materials (e.g., yard trash and food waste), paper, cardboard, and any other material that is derived from organic material. Yard waste composting and food waste composting streams are often source-separated, meaning that they are never co-mingled with other waste streams. MSW composting, however, starts as co-mingled waste and is separated, often by a combination of manual labor and sorting technologies at material recovery facilities ("MRF"). Each composting stream has benefits and areas of concern that need to be addressed to have a successful composting operation.

The report will explore the composting industry, applicable regulations, and challenges at the local, regional, and national level and provides a path forward to addressing composting within Miami-Dade County ("MDC" or the "County").

## **Composting Methods**

There exist a variety of composting methods and techniques that allow for the decomposition of organic materials. Composting methods vary in their requirements: some composting techniques require electricity and can operate in a small footprint while other techniques require significant amounts of acreage and limited utilities. A Preliminary Solid Waste System Sitings Alternative Report prepared by Arcadis on behalf of the County's Department of Solid Waste Management<sup>4</sup> (Arcadis Report) reviewed three specific composting techniques: windrow, aerated static pile ("ASP"), and in-vessel composting. Windrow composting is the most common method of composting in the United States; most composting facilities operating without a permit in Miami-Dade County are operating small-scale windrow composting operations. Windrow composting consists of rows of organic materials that are turned regularly; these composting facilities often require front-end loaders, excavators, or windrow turners.

During ASP composting air is introduced into the composting mass via mechanical means therefore eliminating the need to physically "turn the pile" as is required for windrowing. The air blown through the piles allows for the organic material to be exposed to oxygen to facilitate effective decomposition. ASP for large-scale composting operations uses blower systems to move air through piles of organic

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<sup>3</sup> Grand, A., and Michel, V., 2020. Compost: Advantages And Disadvantage:  
<https://docisolation.prod.fire.glass/?guid=668981a3-3832-42b2-4465-c0ca1419191a>

<sup>4</sup> Microsoft Word - FINAL Preliminary SWS Siting Alternatives Report. 2023 (miamidade.gov)

material. In-vessel composting processes organic material in a closed vessel which mechanically turns or mixes the organic material with bulking agents like wood chips<sup>5</sup>.

The Arcadis Report reviewed the development time, cost per ton, capacity, and other anticipated considerations of each composting method. Assuming the composition of the waste delivered to the County Solid Waste Management System (the System) is the same as FDEP's composition and 100% of the food waste is recovered, Arcadis estimated that to compost all the approximately 350,007 tons of organic waste (food and yard waste) that could potentially be received by the System, three facilities (windrow, ASP, or in-vessel) would be needed to maintain reasonable collections routing. The estimated first year cost to construct and operate either three windrow composting facilities or three ASP composting facilities is between \$25.2M and \$28.0M, not including the cost of leachate management. Alternatively, the estimated first year cost to construct and operate an in-vessel composting facility is estimated between \$3.1M and \$17.5M, not including the capital cost of land or buildings. If equally sized, each windrow composting facility would require a minimum of approximately 64 acres (total of 192 acres), each ASP would require a minimum of approximately 40 acres (total of 120 acres), and between 2 to 3 in-vessel composting facilities (1-20 acres per vessel) with multiple composting units would be required to handle all the organic waste in the County. These acreage requirements account for the time required for each composting stage to operate concurrently. In-Vessel composting is often not considered a popular composting method because of the utilities required for composting.

According to the BioCycle 2023 Compost Survey, 38% of composting facilities used exclusively windrow composting, 23% used exclusively ASP Composting, and 2% used exclusively container or in-vessel composting<sup>6</sup>. Despite in-vessel composting solutions being less popular, they require a significantly smaller amount of space compared to windrows and ASP. According to the aforementioned Arcadis report, composting facilities of the size and scope required to compost all organic waste would require between 3-5 years to develop, depending on permitting and utility requirements. Private composting facilities would require a comparable footprint if they were to compost a significant amount of organic waste generated in the County and would need to anticipate similar costs.

### **Composting Program Considerations**

A successful composting program requires long-term planning, investment and commitment. While small scale programs are encouraged and provide benefits for soil enhancements on a local scale, significant impacts with respect to long term waste reduction, greenhouse gas emissions and the economic benefits of composting are most likely to be realized through large-scale, county-wide programs facilitated by support of County leadership. The primary considerations for implementation of a successful composting program in Miami-Dade County are:

1. Regulatory
2. Solid Waste
3. Environmental
4. Land Use and Zoning
5. Infrastructure

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<sup>5</sup> [Approaches to Composting | US EPA](#)

<sup>6</sup> [BioCycle Nationwide Survey: Full-Scale Food Waste Composting Infrastructure In The U.S. | BioCycle](#)

6. Economics
7. Education and Outreach

## **1. Regulatory Considerations**

The feedstock for any composting operation consists of discarded or left-over organic material (food waste, vegetative debris, and yard trash) and as such these materials are defined as solid waste pursuant to the State and the Code. Chapter 62-701.2(113) Florida Administrative Code (“F.A.C”) includes yard trash in the definition of “special waste”, a category of solid waste requiring special handling. Section 24-5(297), of the Code includes yard trash in its definition of solid waste<sup>7</sup>.

In Florida, at the state level, composting is regulated under the Solid Waste Management Facility Rule Chapter 62-701, F.A.C. as well as Chapter 62-709, F.A.C. - Criteria for Organics Processing and Recycling Facilities. Composting facilities may also be subject to additional state and federal regulations, including regulations related to soil and water pollution, point sources, and drinking water. In MDC, in addition to being governed by the state regulations, composting operations fall under the purview of Chapters 15 and 24 of the Code as it relates to permitting and environmental issues, and Chapter 33 as it relates to zoning issues. Unless otherwise exempt, a County Resource Recovery Management Facility permit is required for composting operations. Approval of this MDC permit, which is issued by the RER-Division of Environmental Resources Management (“DERM”) requires prior zoning approval as well as approval from the Department of Solid Waste Management (“DSWM”)—once zoning approval and DSWM provide approval, only then can DERM provide a permit on behalf of the County. Depending on the particular aspects of the proposed operation and facility, and the proposed location, additional County approvals could be needed, and that would be evaluated on a case-by-case basis. Composting operations located within municipalities could be subject to additional municipal regulations as well as municipal zoning requirements.

## **2. Solid Waste Considerations**

DSWM has two (2) regulatory considerations that must be addressed for composting facilities to successfully operate in Miami-Dade County: (i) the Solid Waste Bond Ordinance; and (ii) the hauler permitting requirements. All capitalized terms used but not defined in this “Solid Waste Considerations” section shall have the meanings ascribed to them in Ordinance 96-168 (the “Bond Ordinance”). A copy of the Bond Ordinance is provided in Attachment A.

Section 611 of the Bond Ordinance requires MDC to “develop and maintain any necessary enforcement programs” and “not agree to or approve any modifications of such agreements, orders, directives, or ordinances which would adversely affect the receipt of Operating Revenues”. Section 612 of the Bond Ordinance prohibits the County from permitting or consenting to any construction, acquisition or operation of private solid waste disposal facilities that would compete with the System. However, such

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<sup>7</sup> *Solid waste* shall mean garbage, rubbish, refuse, trash, yard trash, construction and demolition debris, or other discarded material, including solids or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations. However, subsurface materials which do not contain hazardous materials and which are extracted as a result of rockmining are not included in this definition  
Section 24-5(297), Code of Miami-Dade County.



facilities may be allowed within the County, given a written certification by the DSWM Director that such facilities will not adversely affect Operating Revenues, approved by the Bond Engineer and filed with the Finance Director.

In collaboration with DSWM's Bond Engineers, an opinion letter was issued on the impact private composting facilities would have on operating revenues. The opinion letter deems any compost facility classified as an exempt facility under Chapter 62-709.305, FAC to "represent a de minimis impact on the Department's potential tonnages and revenues." The opinion letter states that composting facilities are, by definition, solid waste processing facilities as opposed to solid waste disposal facilities. The opinion letter further reflects DSWM's current position on composting: "The Department does not have and does not intend to develop composting facilities, so a private composting facility would not compete or tend to compete with the System." Based on the definitions outlined in the opinion letter, composting facilities in MDC would not violate the Bond Ordinance. In the event that composting facilities have such a significant financial impact on the DSWM or DSWM were to develop its own composting facility, a host fee on each ton of material received by a composting facility could help offset any revenue lost, according to the opinion letter. A copy of the opinion letter is provided in Attachment B.

The DSWM has alternative avenues to approve food and yard waste composting facilities. Section 102 of the Bond Ordinance includes "contracts entered into by the County for the collection, transportation, storage, treatment, disposal and recycling of solid waste" as part of the System. Therefore, composting could become feasible within the County if DSWM were to contract composting services to a private composting facility.

Additionally, any composting company that is servicing residential or commercial entities must first register with DSWM as a permitted hauler. Commercial composting facilities that have one vehicle "engaged in a business requiring the transport of solid waste and/or recyclable material in Miami-Dade County" must receive a small hauler permit. Any operation with more than one vehicle in its fleet would require a general hauler permit. Both permits require the hauler to transport the solid waste to an approved recycling or solid waste facility. Hauling requirements apply to all waste haulers in Miami-Dade County, regardless of if they are hauling material to be composted.

The composting approach that would have the most significant impact to waste diversion efforts in the shortest amount of time is to follow the guidelines in Section 611 and 612 of the Bond Ordinance and have the Director draft a written certification for existing composting facilities, receive approval from the Bond Engineer and file with the Finance Director. Future compost facilities would still be required to undergo the previously described approval process as outlined in the Bond Ordinance.

#### Yard Waste:

Beginning in March of 2024, the County has been piloting a mulching program with Florida Wood Recycling (9651 NW 89<sup>th</sup> Avenue, Medley, FL), an approved facility currently permitted to receive 99 tons/day of yard trash and clean wood from DSWM and other yard trash and wood waste generators. Florida Wood Recycling processes the yard trash and clean wood into mulch with minimal effect on DSWM Operating Revenues. DSWM intends to continue to identify techniques to divert clean yard trash from landfill for beneficial use.

### Food Waste:

There are several small-scale composting facilities that accept food waste from the public for composting. The resulting compost is typically utilized as part of agronomic or horticultural activities onsite at the composting facility.

### MSW Waste:

A dedicated composting program for organics from MSW waste would likely require DSWM to operate a MRF to separate compostable waste from non-compostable waste; such a facility would be similar to MRFs that separate recyclable and non-recyclable waste. DSWM could also have its MSW waste processed and sorted by a facility that could compost the separated organic waste. This process would require DSWM to send all MSW to a MRF—or similar facility—to have its waste sorted. To prevent a significant financial impact to DSWM and a violation of the Bond Ordinance, DSWM would likely have to require all non-organic waste to be sent to a System landfill or WTE facility and charge a tipping fee after sorting. There are currently no known operating MSW composting facilities in South Florida.

## **3. Environmental Considerations**

MDC's Climate Action Strategy ("CAS"), launched on Oct. 27, 2021, has a goal of cutting Miami-Dade's greenhouse gas emissions 50 percent by 2030 from 2019 levels, with the goal of achieving net zero by 2050.<sup>8</sup> The EPA estimates that in 2018, the composting of 24.9 million tons of organic waste (food waste plus yard trash) resulted in a reduction of 6.19 Million Metric Tons of Carbon Dioxide Equivalent, or the equivalent of taking 1.4 million cars off the road.<sup>9</sup> Thus, composting can be an important strategy in achieving the County's greenhouse gas emissions reduction goal.

Approach 7 of the County's CAS targets reducing per capita waste generation by 50% by 2030 and provides recommendations to achieve this goal: composting is one of the strategies referenced in the plan. The EPA estimated that, in 2018, approximately 292 million tons of MSW was generated in the United States and that organic material consisting of food waste, yard trimmings, wood and paper/paperboard comprise 51.4 percent of MSW in landfills.<sup>6</sup> Nationally, the per capita MSW generation in 2018 (the latest year for which data was found) was estimated at 4.9 pounds per day.<sup>10</sup> By comparison, the 2018 per capita MSW generation for the state of Florida and MDC was significantly more at 12.4 pounds per day and 9.8 pounds per day, respectively.<sup>11</sup> Since 2018, Florida's per capita waste generation has increased by 3.5% whereas Miami-Dade County's per capita waste generation rate has increased by 10.4% to 10.82 pounds per day.<sup>12</sup> These statistics suggest that

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<sup>8</sup> Miami-Dade County Climate Action Strategy; <https://www.miamidade.gov/green/library/climate-action-strategy-final-draft.pdf>

<sup>9</sup> USEPA, 2020. Advancing Sustainable Materials Management: 2018 Fact Sheet Assessing Trends in Materials Generation and Management in the United States. (USEPA) [https://www.epa.gov/sites/default/files/2021-01/documents/2018\\_ff\\_fact\\_sheet\\_dec\\_2020\\_fnl\\_508.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf)

<sup>10</sup> OECD Data: Municipal Waste. <https://data.oecd.org/waste/municipal-waste.htm>

<sup>11</sup> FDEP. 2018 County Municipal Solid Waste Per Capita. FDEP <https://floridadep.gov/waste/waste-reduction/documents/2018-msw-collected-capita>

<sup>12</sup> [2023 County MSW Collected Per Capita | Florida Department of Environmental Protection](#)

a comprehensive composting program may potentially be a game changer in the County's arsenal of strategies in support of its zero-waste commitment.

The Biscayne Aquifer, a shallow, unconfined, highly permeable, and highly transmissive aquifer underlying Miami-Dade, Broward, and portions of Palm Beach County, is the principal source of drinking water to Miami-Dade and Monroe County's residents. The Biscayne Aquifer is one of the most permeable aquifers in the world<sup>13</sup> and lies at shallow depths everywhere. On average, the top of the Biscayne Aquifer lies between two to four feet below land surface in most areas of MDC. Approximately 410 million gallons of water are withdrawn from the Biscayne Aquifer daily in MDC alone. The characteristics of the Biscayne Aquifer render it highly vulnerable to contamination. The absence of a significant soil buffer between the land surface and the top of the Biscayne Aquifer in MDC facilitates rapid downward transport of contaminants, from a surface discharge to the groundwater. This contrasts with more northern regions of the state and elsewhere in the United States where the top of the aquifer sourced for potable water occurs at much deeper depths. As such, groundwater protection is more critical and a primary consideration regarding appropriate regulatory requirements for composting in MDC.

The requirements of Chapter 62-709, F.A.C., provide very limited design and operating criteria for composting facilities, and are inadequate to ensure protection of the MDC environmental resources. However, any MDC Resource Recovery Management Facility permit issued in response to the recent Environmental Quality Control Board ("EQCB") order (discussed below) will contain specific permit conditions for composting operations which will provide for environmental resources protection.

#### Food Waste:

Organic material consists of between 60 to 90 percent moisture by weight. During the composting process much of this moisture is leached out of the composting material. Additionally, stormwater percolation through composting material and moisture added to material during the composting process can contribute to leachate formation if facilities are not designed to separate rainfall from organic wastes and compost<sup>14</sup>. If not properly managed or designed to limit leachate formation, leachate from composting material can infiltrate through the underlying soils and create groundwater pollution.

Probably the greatest cause of composting facilities shut down in the US is odors.<sup>15</sup> The composting process can produce noxious gases and odors which include volatile organic compounds ("VOCs"), the amount and type of emissions depends on a number of variables, including the feedstock, age of the pile, temperature, O<sub>2</sub> levels, humidity and pH.<sup>16</sup> Complaints of "... objectionable odors and flies," is implicated in the recent closure, by Palm Beach County Solid Waste Authority (2023), of a composting

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<sup>13</sup> Parker, et al. 1955. Water Resources of Southeastern Florida. With Special Reference To The Geology And Ground Water of the Miami Area. GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1255, USGS

<sup>14</sup> [Composting leachate: characterization, treatment, and future perspectives | Reviews in Environmental Science and Bio/Technology \(springer.com\)](#)

<sup>15</sup> Alexander, R., 2022. How To Avoid Composting Facility Development Pitfalls. <https://www.biocycle.net/how-to-avoid-composting-facility-development-pitfalls/>

<sup>16</sup> Romain A.C., D. Godefroid, M. Kuske, J. Nicolas. (2005) Monitoring the exhaust air of a compost pile as a process variable with an e-nose. Downloaded at [https://www.researchgate.net/publication/241101188\\_Monitoring\\_the\\_exhaust\\_air\\_of\\_a\\_compost\\_pile\\_with\\_an\\_e-nose\\_and\\_comparison\\_with\\_GC-MS\\_data](https://www.researchgate.net/publication/241101188_Monitoring_the_exhaust_air_of_a_compost_pile_with_an_e-nose_and_comparison_with_GC-MS_data)

operation in Palm Beach County. A California Integrated Waste Management Board report found that, while not the only factor, odor was a major cause of the closure at 4 of 10 composting sites that had had odor problems.<sup>17</sup> On the other hand, the County is not aware of odor being documented as an issue at some small scale composting facilities in Miami-Dade County.<sup>18</sup> Proper management can minimize the generation of nuisance odors during composting; however, as the above mentioned California report indicates, “odor generation is an inevitable result of the inevitable decomposition of organic matter and ... odorous compounds inherently form as raw organic materials [including yard waste] decomposes.” Odor generation tends to be less of an issue with ASP or in-vessel composting systems versus windrowing. DERM is able to take enforcement action to address nuisances including nuisance odors.

Vermin and birds (both native and invasive) are attracted to food waste and organic decay; therefore, as with other solid waste management facilities, vermin rodents, insects, and birds are a potential nuisance at certain composting facilities. Additionally, invasive vectors could also have greater environmental implications than being a potential nuisance—improperly controlled composting operations may harbor, concentrate, and spread invasive pests.<sup>19</sup> Vermin issues are not as much of a concern for ASP or in-vessel composting systems. The type of feedstock greatly influences the degree to which vermin are an issue. Facilities utilizing feedstock consisting of discarded food, especially discarded food of animal origin, face greater challenges with respect to vermin. These vectors (whether native or invasive) and their presence at composting facilities are determined by how well controlled the organic material decomposition process is at these facilities—for example, bulking and grinding of food waste with shredded wood minimizes odor and acts as a deterrent in attracting birds and other animals<sup>20</sup>.

Per- and polyfluoroalkyl substances (“PFAS”), are a group of synthetic chemicals that have been used in many consumer products since the 1950s. The documented potential health effects of PFAS include reproductive effects such as decreased fertility, developmental effects, or delays in children, including low birth weight, accelerated puberty, bone variations, increased risk of some cancers, including prostate, kidney, and testicular cancers, and interference with the body’s natural hormones<sup>21</sup>.

PFAS contamination has been documented in soil and groundwater at compost facilities. In 2022, PFAS (defined as the sum of PFOA and PFOS for the purposes of this discussion) concentrations above the 2016 EPA health advisory level of 70 parts per trillion (and several orders of magnitude above the recently announced EPA Maximum Contaminant Level (“MCL”) of 4 ppt) was documented in more than 100 private drinking water wells surrounding an organic waste composting facility in Massachusetts. Concentrations as high as 2444 ppt was documented in a private well located approximately 1500 feet downgradient of the facility’s operations and PFAS concentration of over 4000 ppt were documented in wells at the facility.<sup>22</sup> The source of the PFAS contamination at the composting facility has not been confirmed, but the state of Massachusetts has brought an enforcement action against

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<sup>17</sup> California Integrated Waste Management Board . 2007. Comprehensive Compost Odor Response Project.

<https://www2.calrecycle.ca.gov/Publications/Details/1241>

<sup>18</sup> [sw#2050-report-4-19-24.pdf \(miamidade.gov\)](#)

<sup>19</sup> Correspondence with RER Agriculture Manager, Charles LaPradd

<sup>20</sup> [Foods Scraps Composting and Vector Control \(unl.edu\)](#)

<sup>21</sup> USEPA. Our Current Understanding of the Human Health and Environmental Risks of PFAS.

<https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas>

<sup>22</sup> Westminster PFAS Data And Resources. <https://westminsterpfas.com/reports/>

the composting facility and required it to be shut down. There is also a class action lawsuit against the composting facility, which alleges, in part, that the composting facility knowingly accepted PFAS-laden materials from containerboard manufacturing facilities<sup>23</sup>. This issue of contamination illustrates the importance of source-separating waste streams and regulating what materials can be permitted on composting facilities.

A 2019 study of source separated organic material and yard trash composting facilities in Minnesota documented the presence of one of more PFAS at concentrations above screening criteria in contact water (any surface water that has come into contact with waste materials) at all the site samples including the yard trash composting sites.<sup>24</sup> The prevalence of PFAS at compost facilities is not a natural by-product of the decomposition of organic materials. The occurrence of PFAS at food waste composting facilities is believed to originate primarily from utensils and other food service ware that are advertised as “compostable”.<sup>25</sup> A study out of the University of Florida found that when source separated, PFAS in food waste composting is not measurable; however, this is only the case if the food service ware is separated prior to being added to windrows<sup>26</sup>. However, in another study, out of Purdue University, analysis of 10 U.S. composts showed that while, in general, PFAS concentrations were higher in composts with compostable food packaging PFAS was also detected in compost from food waste without compostable food packaging.<sup>27</sup>

Despite the difference in PFAS concentrations for source-separated waste streams, considerations for PFAS are critical for guaranteeing composting facilities pose minimal impact to the environment. In February of 2024, the FDA announced that substances containing PFAS used as grease-proofing agents on paper and paperboard for food contact use are no longer being sold by manufacturers into the US market.<sup>28</sup> As the impact of this and other adopted and proposed rules related to the regulation of PFAS at the federal level come into effect, the presence of PFAS in this component of the waste stream will continue to be evaluated. The County could potentially regulate some compostable service ware to address the impact PFAS-treated service ware has on composting facilities. Although provisions in the Florida Statute Section 403.7033 preempt local governments, such as the County, from adopting certain regulations related to plastic bags, wrappings, and food containers, such as take-out containers made of Styrofoam,<sup>29</sup> the County could consider adopting regulations related to compostable straws and cutlery. Additionally, education and outreach could be coupled with any legislative action—an example of one educational outreach campaign could include the Plastic Free 305 Campaign: when Plastic Free 305 is encouraging Miami-Dade County businesses to substitute single-use plastics with compostable alternatives, they could educate businesses to only replace items with PFAS-free alternatives. Although

<sup>23</sup> [PFAS contamination: Westminster lawsuit could be first of kind in US \(telegram.com\)](#)

<sup>24</sup> Investigation of Per- and Polyfluoroalkyl Substances (PFAS) at Select Source Separated Organic Material and Yard Waste Sites, Minnesota. <https://www.pca.state.mn.us/sites/default/files/w-sw4-37.pdf>

<sup>25</sup> Evidence of compost contamination with per- and polyfluoroalkyl substances (PFAS) from “compostable” food serviceware | Biointerphases | AIP Publishing

<sup>26</sup> [Investigating the sources and fate of per- and polyfluoroalkyl substances \(PFAS\) in food waste compost - ScienceDirect](#)

<sup>27</sup> Y. J. Choi, R. Kim Lazcano, P. Yousefi, H. Trim, and L. S. Lee. (2019) Perfluoroalkyl acid characterization in U.S. municipal organic solid waste composts. *Environmental Science & Technology Letters* 6: 372-377. *Environ. Sci. Technol. Lett.* 6, 372 (2019). <https://doi.org/10.1021/acs.estlett.9b00280>

<sup>28</sup> <https://www.fda.gov/food/hfp-constituent-updates/fda-announces-pfas-used-grease-proofing-agents-food-packaging-no-longer-being-sold-us>

<sup>29</sup> [Statutes & Constitution :View Statutes : Online Sunshine \(state.fl.us\)](#)



education and outreach alone are insufficient for preventing PFAS in compost, it is an integral part of reducing PFAS concentrations.

### MSW Waste:

Concerns with improper leachate management are significantly higher for MSW composting facilities. A MSW facility processing 1000 tons of source-separated organic waste per day can produce over 1000 gallons of leachate per day.<sup>30</sup> Although facilities with this amount of waste throughput are considerably larger than most composting facilities, it illustrates that the ratio of waste generation to leachate is 1 ton: 1 gallon. To mitigate the environmental impact of leachate from compost operations, leachate can be collected and recycled in future composting processes. Although this process does not eliminate leachate formation, it can significantly reduce potential discharge of leachate into the environment.

A Connecticut study to evaluate MSW compost leachate documented high levels of organic matter, nitrate, and the trace metals Cu, Ni and Zn in the leachate of a sandy soil to which MSW had been added.<sup>31</sup> Other studies have documented elevated concentrations of nutrients and trace metals (e.g. Cd, Ni, Co, Zn, Cu, Pb, Cr, etc.) in leachate from mixed MSW composting operations,<sup>32,33</sup> including facilities composting vegetative organic waste only. Although there have been occurrences in which trace metals have been identified in compost from source-separated organics, most of the occurrences in which there was a presence of heavy metals occurred in MSW composting programs. MSW composting programs, unlike source-separated composting programs, compost the residual organic material once recyclables and any other potential contaminants have been removed from the waste stream. According to the EPA—despite being removed—heavy metals from batteries and other materials often contaminate the compost stream, resulting in compost with trace metals<sup>34</sup>. The State of Washington has also recognized that heavy metal concentrations in composts are “usually produced from mixed waste and industrial waste streams”<sup>35</sup>. The most effective method for mitigating these contaminants is for composting facilities to collect compostable materials that have never been co-mingled with any other waste streams as lower contaminant concentration have been documented in composting utilizing source separated waste streams.<sup>36</sup> However, as indicated in the Arcadis Report, one of the most difficult issues in the recovery of materials from a solid waste stream is how to efficiently, effectively and economically separate the various materials from MSW.

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<sup>30</sup> Bakhshoodeh, R., Alavi, N., Majlesi, M., and Paydary, P., 2017. Compost leachate treatment by a pilot-scale subsurface horizontal flow constructed wetland. *Ecological Engineering*, 105, 7-14, August 2017. [https://www.researchgate.net/publication/316835835\\_Compost\\_leachate\\_treatment\\_by\\_a\\_pilot-scale\\_subsurface\\_horizontal\\_flow\\_constructed\\_wetland](https://www.researchgate.net/publication/316835835_Compost_leachate_treatment_by_a_pilot-scale_subsurface_horizontal_flow_constructed_wetland)

<sup>31</sup> Kaschl, A., Romheld, V., and Chen, Y., 2002. The Influence of soluble organic matter from municipal solid waste compost on trace metals leaching through calcareous soils. *Science for the Total Environment* 291 Issue 1-3, May 2002.

<sup>32</sup> Sawhney, B.L., Bugbee, G.J., and Stilwell, D.E., 1994. Leachability of Heavy Metals from Growth Media Containing Source-Separated Municipal Solid Waste Compost. <https://access.onlinelibrary.wiley.com/doi/10.2134/jeq1994.00472425002300040015x>

<sup>33</sup> Christensen, T.H., and Tjell, J.C., 1984. Leaching from land disposed municipal compost: 4. Heavy metals. *Waste Management and Research*, Volume 2, Issue 4 1984.

<sup>34</sup> [Composting Yard Trimmings and Municipal Solid Waste | US EPA ARCHIVE DOCUMENT](#)

<sup>35</sup> [Chemical and Physical Characteristics of Compost Leachates A Review \(psu.edu\)](#)

<sup>36</sup> <https://compost.css.cornell.edu/MSWFactSheets/msw.fs3.html>



Odors can also be a significant problem for MSW Compost facilities: in MDC, Agripost, a facility which began operation as a MSW composting facility in 1989 was closed in 1991, at least in part, because of problems with odor emissions.<sup>37</sup> As a MSW composting facility, Agripost received garbage from the County's Solid Waste Department, the incoming garbage was screened to remove bulky items, inspected, and hand-picked to remove potentially hazardous material such as car batteries, paint cans and propane, and subjected to magnetic screening to remove ferrous material. The remaining material was shredded without further source separation.<sup>38</sup> According to Agripost, the remaining material was shredded to "increase the exposed surface area to instantly destroy odor causing bacteria". Although shredding organic waste can increase the decomposition rate of the composting process, it does not substitute the required steps necessary to facilitate the controlled decomposition of organic material. Source-separated composting facilities, on the other hand, would not have received co-mingled garbage and would have received food waste and yard waste from which plastics, batteries, and other contaminants would have already been separated. The example of Agripost again illustrates the importance of source-separating organic materials to minimize odors and contaminants

Concentrations of lead and cadmium several orders of magnitude above the state's and MDC's groundwater criteria, along with elevated concentrations of other trace metals, and polycyclic aromatic hydrocarbons were documented in a research article which summarized several studies conducted which characterized compost leachate from organic wastes co-mingled with MSW and sludge.<sup>39</sup>

The U.S. Environmental Protection Agency (EPA) classifies lead as a probable human carcinogen. The Agency for Toxic Substance and Disease Registry ("ATSDR") reports that lead can cause health problems in almost every organ and system in the body, but its primary impact is to the nervous system. Long-term exposure to lead can result in decreased learning, memory, and attention, and has been documented to cause developmental delays and learning difficulties in children.<sup>40</sup> Cadmium is a known human carcinogen. Long-term exposure to lower levels of cadmium leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones, especially in children.<sup>41</sup>

#### Yard Waste:

Although source separated yard waste composting is expected to be more environmentally benign than other compost waste streams it is not without challenges. A study at two green waste composting facilities in the San Joaquin Valley, California detected more than 100 VOCs emitted from the compost piles at the study site.<sup>42</sup> Elevated levels of phenol, ammonia and nitrate produced by the natural decomposition process have been documented in leachate from yard trash composting. A 2016 study of

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<sup>37</sup> DERM File -SW-1057

<sup>38</sup> [AGRIPOST RECYCLING PLANT DADE FLA.wmv \(dropbox.com\)](#)

<sup>39</sup> Roy, D., Azai, A., Benkaraache, S., Drogui, P., and Tyagi, R.D., 2018. Composting leachate: characterization, treatment, and future perspectives - Review Paper. *Rev Environmental Science and Technology*. <https://doi.org/10.1007/s11157-018-9462-5>

<sup>40</sup> ATSDR Lead ToxFAQs. <https://www.atsdr.cdc.gov/toxfaqs/tfacts13.pdf>

<sup>41</sup> ATSDR Cadmium ToxFAQs. <https://www.atsdr.cdc.gov/toxfaqs/tfacts5.pdf>

<sup>42</sup> Kumer, A, Alaimo, C.P., Horowitz, R., Mitloehner, F.M., Kleeman, M.J., and, Green, P.G., 2011. Volatile organic compound emissions from green waste composting: Characterization and ozone formation. *Atmospheric Environment*, Volume 45, Issue 10, March 2011, Pages 1841-1848.

the impacts to groundwater from compost/vegetative organic waste management facilities in Suffolk County New York documented trace metal in groundwater downgradient of yard trash composting facilities with manganese, iron and aluminum being most frequently detected at concentration above Miami-Dade County criteria.<sup>43, 44</sup>

When composting facilities are uncontrolled and leachate generation is not managed, stormwater infiltration through, and runoff from, composting operations may also create water quality issues for nearby surface waters and ecologically sensitive areas (e.g., wetlands). The primary pollutants in runoff are similar to those documented in leachate. However, the potential for contamination with pathogenic organisms is an additional concern with respect to runoff since these organisms may be transported to surface water receptors either absorbed on particles or suspended in the water. Once again, the risk from pathogenic organisms is predicated on composting facilities managing the decomposition of organic materials—when done correctly, the composting process effectively neutralizes most pathogens. Pathogenic removal occurs as long as the temperature in the compost heap stays at 55°C (131°F) for three days.<sup>45</sup> The EPA requires composting facilities to maintain this temperature threshold or allows facilities to maintain temperature at 40°C for five days during which temperature exceeds 55°C for at least four hours.<sup>46</sup>

The extent of the contamination threat and specific contaminants of concern depends on the feedstock material, the source of the material, the composting methodology employed, and the environmental controls in place or lack thereof. The potential for pathogenic contamination is reduced in compost from feedstock consisting exclusively of yard trash and vegetative material versus feedstock which includes food waste and animal byproducts.

Miami-Dade County's own experience with Florida Wood Recycling which is permitted as a source separated yard trash and wood mulching facility illustrates the importance of proper leachate control. Groundwater monitoring at the facility has documented concentrations of arsenic and iron above the groundwater criteria.

Notwithstanding the potential for ground and groundwater contamination, composting and water quality protection are not mutually exclusive. Water quality protection can be accomplished with proper engineering design which minimizes leachate production, provides for leachate containment, collection and appropriate disposal, and ensures proper stormwater management. Additionally, attention to siting,

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<sup>43</sup> New York State Department of Environmental Conservation, New York State Department of Health, Suffolk County Department of Health Services. July 2013. Downloaded at <https://cc.howardcountymd.gov/sites/default/files/migrate/files/Long%2520Island%2520Compost-2013-Horseblock%2520Road%2520Investigation%2520Report%2520-%2520July%2520201....pdf>

<sup>44</sup> Suffolk County Department of Health Services, 2016. Investigation of the Impacts to Groundwater Quality from Compost/Vegetative Organic Waste Management Facilities in Suffolk County. January 2016. Downloaded at <https://www.suffolkcountyny.gov/portals/0/FormsDocs/health/EnvironmentalQuality/Investigation%20of%20the%20Impacts%20to%20Groundwater%20Quality%20from%20Compost%20and%20Vegetative%20Organic%20Waste%20Management%20Facilities%20in%20Suffolk%20County.pdf>

<sup>45</sup> Jones, P & Martin, M., 2003. A review of the literature on the occurrence and survival of pathogens of animals and humans in green compost (ucanr.edu)

<sup>46</sup> P:\WTC-Studies\EPA Contract\04 Fact Sheets\Option Year 1 - 738965\Deliverables-Draft\Composting for Biosolids Mangement.PDF

feedstock sources, adequate source segregation, and compost pile management are critical components of any compost facility design.

### Compost Quality

Concerns have been voiced regarding potential contamination present in the final compost product. Concentrations of trace metals (e.g., lead, cadmium, zinc, copper, chromium, mercury, and nickel)<sup>47,48</sup> pesticide and herbicide residues<sup>49,50</sup> and PFAS<sup>51</sup> have been documented in compost. The presence of metals in compost might be attributable to feedstock contamination (inadequate source separation resulting in unacceptable material inclusion) as well as background influences (natural or anthropogenic background levels). Pesticide and herbicide are more common in compost generated from yard trimmings and grass and may be attributable to the use of agrochemicals in lawn care, landscaping, and residential/commercial pest control. PFAS are more frequently documented and at higher concentrations in compost produced from feedstock which includes food scraps and compostable serving ware, as well as compost from biosolids. However, PFAS contamination has been documented in yard trash compost.<sup>52</sup> While the range of concentrations documented in the referenced study are below Florida's current provisional soil cleanup target levels the findings are significant in light of the USEPA's April 10, 2024, announcement of significantly lower maximum contaminant levels (MCLs) for drinking water for the two PFAS compounds that are currently regulated as well as MCLs for three other compounds. Since, the soil cleanup target levels are developed using the drinking water numbers and its associated toxicity number, it is anticipated that the direct exposure and leachability cleanup target levels for PFAS in soils (and hence acceptable concentrations of PFAS in compost) will be significantly lower than the current provisional levels.

62-709.550 F.A.C. classifies compost according to source, maturity, foreign matter content, particle size as well as allowable metal concentrations. The allowable end use of the compost is determined by its classification. The classification system does not provide criteria for several of the metal documented to be detected in compost nor does it provide criteria for PFAS nor herbicide or pesticide residues.

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<sup>47</sup> Farrell, M and Davey Jones, 2009. Heavy contamination of a mixed waste compost: Metal speciation and Fate. *Bioresources Technology*. 100 (2009) 4423-4432.

<sup>48</sup> Bozym, M., 2017. Heavy metal content in compost and earthworms from home composters. *Environment Protection and Natural Resources*. Vol 26, No 4(74)

<sup>49</sup> Oregon Department of Environmental Quality, Fact Sheet -Herbicide Residues in Compost. <https://www.oregon.gov/deq/mm/Documents/mmHerbicideResFS.pdf>

<sup>50</sup> California Integrated Waste Management Board, San Diego State University. 2005. Survey of Compost Samples for Presence of Clopyralid Herbicide. <https://www2.calrecycle.ca.gov/Publications/Details/1122>

<sup>51</sup> Coker, C., 2020. Managing PFAS Chemicals In Composting And Anaerobic Digestion. *Biocycle* January 21, 2020. <https://www.biocycle.net/managing-pfas-chemicals-composting-anaerobic-digestion/#:~:text=Composted%20biosolids%20had%20concentrations%20of,22%20and%2052%20%C2%B5g%20Fkg.>

<sup>52</sup> Biraj Saha,,Mohamed Ateia, Sujan Fernando, Jiale Xu, Thomas DeSutter, and Syeed Md Iskander, 2024. PFAS occurrence and distribution in yard waste compost indicate potential volatile loss, downward migration, and transformation. *Environ. Sci.: Processes Impacts*, 2024, 26, 657. <https://pubs.rsc.org/en/content/articlehtml/2024/em/d3em00538k>

The use of contaminated compost in horticulture and agriculture can result in soil contamination and also accumulate on crops grown in these contaminated soils.<sup>53</sup> Improperly composted material can harbor, concentrate and spread invasive pests, which can devastate agriculture, landscapes and the natural environment.<sup>54</sup>

#### **4. Land Use and Zoning Considerations**

In unincorporated Miami-Dade County, composting would generally be consistent with the County's Comprehensive Development Master Plan (CDMP) on: "Agriculture" designated properties inside and outside the Urban Development Boundary ("UDB") depicted on the CDMP Land Use Plan ("LUP") map where the composting operation is ancillary to and supportive of the agricultural industry; on properties designated "Industrial and Office" on the LUP map inside the UDB; and on properties zoned IU-3 (heavy industrial uses) and on currently approved solid waste disposal sites. Such uses, however, are subject to applicable environmental and other development regulations. In general, the determination of whether a composting operation is ancillary to and directly supportive of an agricultural operation or the agriculture industry rests on if the compost is used on a farm or if the feedstock for the composting operation is derived from a farm(s). Where composting occurs on a farm with the feedstock derived from the farm and/or other farms within the industry and the resulting compost is used on the farm(s), the composting is a part of the farm operation and is ancillary to and directly supportive of the industry. Where the feedstock is derived from the farm and the resulting compost is used outside the farm or agriculture area, the compost operation is ancillary to and directly supportive of the industry. Where the feedstock is not derived from a farm(s), but the resulting compost is used on a farm(s), then the composting operation is ancillary to and directly supportive of the industry. However, farm generated compost for off-site non-farm use will be subject to more stringent environmental requirements such as testing and the protection of groundwater quality. From a CDMP consistency perspective, a composting operation ancillary to a farm is subordinate to and occurs on less acreage than the farm operation. Composting operations that are not ancillary to a farm but where the compost produced is used on a farm(s) in the agriculture industry would generally be determined to be directly supportive of the industry and consistent with the CDMP for Agriculture designated properties. For any particular operation or property, consistency with the CDMP may be reviewed on a case-by-case basis and could be affected by facts such as where some compost is used on farms in the agricultural industry and some compost is used elsewhere.

Where the compost feedstock is not derived from a farm(s) and the resulting compost is not used on a farm(s) then the compost operation is not ancillary to or supportive of the agriculture industry. It should be noted that composting facilities that are not ancillary to or supportive of the agriculture industry would not be consistent with the County's CDMP in the "Agriculture" designated areas of the county. There may be an opportunity to evaluate current policies to identify additional land use categories where composting could be made consistent with the CDMP, and/or seek to expand what would be consistent with the CDMP for composting operations in areas outside of the UDB. These areas may include certain "Open Land" designated areas and certain areas designated "Institutions, Utilities, and Communications" on the LUP map where environmental considerations can be adequately addressed.

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<sup>53</sup> Oregon State University Extension Service; Herbicide-Contaminated Compost and Soil Mix What You Should Know — and What You Can Do About It. <https://extension.oregonstate.edu/catalog/pub/em-9307-herbicide-contaminated-compost-soil-mix-what-you-should-know-what-you-can-do>

<sup>54</sup> Ibid (footnote 19)

As noted in the Recommendations section, RER staff has drafted a zoning code amendment to provide an administrative review process for commercial composting on farms. Regardless of where such facilities might ultimately be allowed in MDC, very specific design criteria would apply for facilities which include provisions for leachate management, containment, and disposal; minimizing contact with storm water and containment of any stormwater runoff; odor control and abatement, and air quality management, which would be memorialized via regulations or permit. Vector control, fire safety, and site access are also critical design requirements. Chapter 24 of the MDC's Code prohibits the siting of composting facilities (and any resource recovery management facility) within wellfield protection area zones or within wetlands areas.

## **5. Infrastructure Considerations**

Composting facilities may be categorized, based on quantity of material processed per year as large (>100,000 tons per year) medium (>10,000<100,000 tons per year) or small (< 10,000 tons per year). Eighty percent of composting facilities nationally are categorized as small. However, small facilities account for approximately six percent of compost produced per year, only. Small composting facilities typically produce compost for on-site use or in the cases of community gardens, to serve the adjacent community. The opportunities for small facilities in the urban areas of Miami-Dade County, even if they could be allowed under special zoning provisions, are likely to be constrained by the potential cost, including the costs associated with nuisance abatement and environmental protection. The start-up cost for a 4.5-acre facility in Winterville, Georgia in 2011 was estimated at \$1.5 million.<sup>55</sup> In vessel composting, such as that used at Zoo Miami, may be the best option for small composters given the reduced land space requirement and the opportunity for better control of potential nuisance contributors.

Most compost produced nationwide is produced at full scale medium sized industrial facilities. Industrial scale composting is land intensive. By its nature, composting is a process that can take up to 90 to 120 days. As such, the facility must provide adequate space for storing feedstock, a mixing area, curing material at different stages of the process, and product storage. In addition to process related infrastructure (e.g., equipment, machinery, structures) infrastructure is required to ensure environmental protection, (e.g., leachate management, stormwater system design, air quality).

## **6. Economic Considerations**

The success of any composting program will be determined by its economic viability. Although the County has not independently verified these numbers, for information purposes only, the U.S. Composting Council has reported that, "[e]stablishing an industrial-scale composting facility is an expensive undertaking. ..., acquiring and preparing the land, purchasing, and installing the equipment, and securing the necessary permits can require anywhere from \$500,000 to \$2,000,000."<sup>56</sup> Operational costs vary with size and location of the facility, composting methodology, efficiency of feedstock collection system, and quality of compost marketed.

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<sup>55</sup> PROOF ACC Solid Waste-Compost Facility-Brochure.

<https://www.accgov.com/DocumentCenter/View/66482/ACC-SolidWaste-CompostFacility-Brochure-003?bidId=>

<sup>56</sup> US Composting Council. Financing Industrial Composting Facilities: Challenges and Opportunities.

[https://floridaforce.org/wp-content/uploads/2022/06/WHITE-PAPER-Financing\\_Industrial\\_Compost.pdf](https://floridaforce.org/wp-content/uploads/2022/06/WHITE-PAPER-Financing_Industrial_Compost.pdf)



From the perspective of commercial and institutional generators, compelling reasons to compost may include, saving money by reducing waste disposal fees; to meet established targets and goals related to waste reduction, recycling, sustainable materials management, and mitigation of greenhouse gas emissions; to include sustainable waste management practices in marketing materials and sales strategies; to qualify for certain government incentives and by avoiding penalties for non-compliance with mandatory programs.

The inclusion of financial incentives to business and residents to encourage composting is a component of many successful composting programs nationwide. Several jurisdictions (e.g., San Francisco, Massachusetts) have effectively utilized a pay-as-you-throw (“PAYT”) program to reduce household waste and control disposal cost. Under the program waste disposal fees are hinged to the quantity of waste produced. In San Francisco, residents are assessed a lower monthly fee by switching from a standard sized 32-gallon garbage bin to a 16-gallon bin.<sup>57</sup> Similar PAYT programs have been implemented in Florida to encourage recycling rates, but not yet composting rates: City of Gainesville witnessed an 18% decrease in the solid waste collected and a 25% increase in recovered recyclables in its first year<sup>58</sup>. This illustrates that PAYT programs could be utilized to reduce household waste and recover more materials that have beneficial reuse opportunities.

## **7. Education and Outreach Considerations**

Although the idea of waste reduction and alternate solid waste management strategies, including composting, has gained traction in the past decade, widescale acceptance has not been attained in Florida. Several of the barriers to wide scale acceptance and implementation of a composting program have been detailed above. The degree of public buy-in and commitment is critical to the success of any composting program.

Composting programs require the public to change their waste handling habits. Individuals are more inclined to change behavior when the change is beneficial to them. In support of its mandatory recycling and composting ordinance, the City of San Francisco implemented an extensive education and outreach campaign to communicate the benefits of composting, “So rather than just telling people what to put in what bin, we focus our communications to help people better understand all the good reasons to compost” reports Robert Reed, public relations manager at Recology, the City of San Francisco’s sole permitted waste collector.<sup>59</sup> On the other hand, the failure of New York City’s initial efforts at organic waste segregation on support of composting is believed to at least in part have been attributable to a lack of public outreach and public education.<sup>60</sup> In addition to understanding the “why” of organic waste segregation in support of composting, educating the public on the “how” of waste segregation (i.e., what is acceptable to put in the food waste bin) is equally important. Minimization of contamination is crucial to the quality and usability of the final compost product and source separation at the point of generation is essential to reducing the potential for contamination.

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<sup>57</sup> NRDC. San Francisco composting - from fork to farm and back. <https://www.nrdc.org/sites/default/files/food-matters-san-francisco-composting-cs.pdf>.

<sup>58</sup> [PAYT Success Story: Gainesville, FL | Pay-As-You-Throw | US EPA](#)

<sup>59</sup> *ibid* (footnote 49)

<sup>60</sup> Post by Hannah Wallace May 20, 2022. How San Francisco Cracked the Urban Composting Code. <https://reasonstobecheerful.world/san-francisco-composting-california-law/>



## **Opportunities for Composting in Miami-Dade County**

Nationally, the amount of organic waste (yard trimmings, food, and other organics) composted increased by 21% between 2005 and 2018,<sup>61</sup> primarily because of public policy initiatives and programs to reduce greenhouse gas emissions and combat climate change. In Florida, organic waste made up 24% of the total MSW in 2022, of this approximately 24% was recycled. For the same reporting period, organic waste accounted for 29% of MSW in MDC, with less than 5% recycled. Yard trash accounted for the highest percent (54%) of organic waste recycled in the County in 2022 however, only 10% of the yard trash generated was recycled.<sup>62</sup>

The Code requires source separation of recyclable material from other MSW at residential and commercial establishments and mandates a recycling program for specific streams of recyclable material at commercial and multifamily establishments. This current regulatory framework provides entry points for the expansion of the recycling programs to include organic waste stream recycling at those facilities already required to participate in recycling. However, organic waste is not currently included as recyclable material in the Code. Therefore, a Code amendment would be required to facilitate the expansion of the existing program to include organic waste on the list of Recyclable Materials: Commercial Establishments provided in Section 15-2.3(a)

### **Yard Waste:**

MDC currently has two facilities permitted to receive and process yard trash into a by-product that can be used for composting. Atlas Grinding and Recycling, located in Unincorporated South Miami-Dade County, is permitted to accept and process approximately 500 tons/day of source separated yard trash and vegetative debris. The facility is in an IU-1 zoned area with a portion of the property zoned agricultural. Florida Wood, located in Medley on a property zoned for light manufacturing, while being permitted primarily as a construction and demolition debris management facility, is also permitted as a 99 tons/day mulching facility for source separated yard trash and clean wood.

Based on information available from the FDEP, source separated yard trash provides the primary feedstock for most organic waste composting operations within Florida.<sup>63,64</sup> Section 15-5 of the Code defines yard trash as “vegetative matter resulting from landscaping maintenance and land clearing operations.”<sup>65</sup> Given that DSWM allows residents to drop off yard trash at Trash and Recycling Centers or submit a Bulky pickup request for yard trash, the County already has in place the logistical mechanism for generating the feedstock for a yard trash composting program and can use this as the foundation for

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<sup>61</sup> USEPA, 2020. Advancing Sustainable Materials Management: 2018 Fact Sheet - Assessing Trends in Materials Generation and Management in the United States. [https://www.epa.gov/sites/default/files/2021-01/documents/2018\\_ff\\_fact\\_sheet\\_dec\\_2020\\_fnl\\_508.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf)

<sup>62</sup> FDEP, 2022. Final Disposition of MSW Chart. <https://floridadep.gov/waste/waste-reduction/documents/2022-final-disposition-msw-chart>

<sup>63</sup> FDEP. Florida Department of Environmental Protection, Yard Trash Transfer Stations, Yard Trash Recycling Facilities, Manure Blending Facilities, and Manure/Animal Byproducts/Vegetative Waste Composting Facilities Currently Registered OR Operation is Addressed Under a Permit. [https://fldeploc.dep.state.fl.us/www\\_wacs/Reports/Yard\\_Trash\\_Processors\\_current\\_webupdates.asp](https://fldeploc.dep.state.fl.us/www_wacs/Reports/Yard_Trash_Processors_current_webupdates.asp)

<sup>64</sup> FDEP. FDEP Oculus Document Management System. <https://depedsms.dep.state.fl.us/>

<sup>65</sup> Florida Statute Section 403.703(48).

building a comprehensive composting program, informed by the experience of other jurisdictions such as San Francisco and New York. The DSWM has started using this framework in its mulching pilot program.

Although voluntary composting options have existed in New York City since the early 1990s, in June 2023 the city implemented a mandatory yard trash (leaves, flowers, twigs and grass clippings) recycling program using a phased approach. The New York program involved phasing by geographic location rather than by industry; the initial phase of the program involved mandatory curbside recycling of yard trash for the borough of Queens. Based on the success of the Queens program, the other boroughs will be phased in by October 2024.<sup>66</sup> New York City has also offered food waste drop-off programs for residents interested in promoting beneficial reuse of food waste<sup>67</sup>.

According to the RER Agriculture Manager, Miami-Dade County is the leading producers of potted plant material in the country. The vast majority of the materials used for growing medium for potted plants and landscape material is imported into the County since there are very few producers generating high-quality material; Atlas Grinding is the only producer in the County providing feedstock for producing potted plant material. A yard waste composting operation could provide yet another feedstock for producing potted plant material and other products in the landscape industry in the County<sup>68</sup>.

#### Food Waste:

The City of San Francisco has implemented one of the most successful composting programs in the country. From a regulatory perspective, they utilized a phased approach, targeting first the food service industry with the passage of the Food Service Waste Reduction Ordinance in 2006 which required restaurants and food vendors to use recyclable or compostable food service ware and prohibited the use of polystyrene foam. This was followed in 2007, with the passage of the Plastic Bag Reduction Ordinance (updated 2012), and in 2009 the Mandatory Recycling and Composting Ordinance, which required San Francisco residents and businesses to properly sort recyclables from compostables.<sup>69</sup>

MDC currently has one permitted mixed waste composting facility, Zoo Miami. The facility is permitted to compost organic material, generated onsite and produced for onsite use. The feedstock includes animal waste, separated food waste and soiled paper, and cardboard. Composting is performed using an in-vessel composter located within a roofed area.

#### **Composting Efforts in Florida**

The FDEP list 23 Organic Waste Processing facilities, spread across 13 counties, currently registered or operating under a permit facility in Florida<sup>70</sup>. The majority are in private ownership. In addition, several

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<sup>66</sup> John, A., 2023. How to Compost Yard Waste Curbside in New York. The City June 30, 2023.

<https://www.thecity.nyc/2023/06/30/how-compost-yard-waste-curbside-queens-brooklyn/>

<sup>67</sup> <https://www.nyc.gov/site/dsny/collection/residents/food-scrap-drop-off.page>

<sup>68</sup> Email correspondence with RER Agriculture Manager, Charles LaPradd

<sup>69</sup> NRDC. San Francisco composting - from fork to farm and back. <https://www.nrdc.org/sites/default/files/food-matters-san-francisco-composting-cs.pdf>

<sup>70</sup> Florida Department of Environmental Protection, Yard Trash Transfer Stations, Yard Trash Recycling Facilities, Manure Blending Facilities, and Manure/Animal Byproducts/Vegetative Waste Composting Facilities Currently

County and municipal governments across the state are initiating activities to process vegetative and food waste materials. Most operations tend to focus on yard waste over food waste and very few, if any, facilities are moving towards MSW composting. In an example of a public-private partnership, Indian River County has partnered with Atlas Organics to process 175,000 tons per year (TPY) of yard trash and food waste.<sup>71</sup> The yard trash processing (grinding) occurs on the County's current yard waste processing facility on landfill property and is then moved to an adjacent property for composting.

In Palm Beach County, yard waste mulching and grinding predominantly takes place on agricultural land, for beneficial use on that same land. To a lesser extent this material is then composted to produce and augment soil. Additionally, the Solid Waste Authority of Palm Beach County promotes backyard composting and offers tips and resources to residents on their website.<sup>72</sup>

City of Gainesville has passed several ordinances which are aligned with their goal of becoming a Zero Waste city by 2040. For example, City of Gainesville requires food retailers occupying at least 25,000 square feet to "divert food or food waste from the waste stream" and requires food waste to be separated and collected by food waste registrant collectors to be composted<sup>73</sup>. City of Gainesville legislation requires the food waste processing facility meet permitting requirements within the State of Florida. The facility is also not required to be within city or county limits. City of Gainesville has also received federal funding to pay for composting equipment, hauling, and processing of some residential food waste.

### **Current Miami-Dade County Initiatives**

#### **Yard Waste:**

The BCC recently approved an award of a competitive contract for the purchase of green waste processing and beneficial use services for the County's North Zone (area north of Flagler St.). The contract which is for an initial three years (with the option of two two-year extensions) will provide for the off-site receiving, handling, and processing for beneficial reuse 12,500 tons per year of source-separated yard trash. Under the terms of the contract beneficial reuse is as defined in Chapter 62-709 F.A.C and means that "readily degradable organics are placed on or in the soils to provide a viable benefit, such as reducing erosion and water loss, regulating soil temperature preventing the growth of weeds, or serving as a soil amendment upon decomposition."

The definition of beneficial reuse opens the door for the yard trash collected under the contract to be either composted or mulched. The final product could then be used for erosion control or as alternative daily cover at the landfills.

Additionally, on December 14, 2023, the EQCB through Board Order No. 24-01 (see Attachment C) granted a 4-year class extension, subject to conditions, that allows DERM to grant certain administrative approvals for composting operations on certain properties not served by public water or public sanitary

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Registered OR Operation is Addressed Under a Permit.

[https://fldeploc.dep.state.fl.us/www\\_wacs/Reports/Yard\\_Trash\\_Processors\\_current\\_webupdates.asp](https://fldeploc.dep.state.fl.us/www_wacs/Reports/Yard_Trash_Processors_current_webupdates.asp)

<sup>71</sup> Atlas Organics Vero Beach <https://atlasorganics.net/locations/florida/vero-beach/>

<sup>72</sup> Information obtained by email from Dan Pellowitz (Executive Director of the Solid Waste Authority of Palm Beach County)

<sup>73</sup> [Gainesville Zero Waste Initiative Welcome to the City of Gainesville \(gainesvillefl.gov\)](https://www.gainesvillefl.gov/zero-waste-initiative/welcome-to-the-city-of-gainesville/)

sewer, where previously each such application required an individual variance from the EQCB. The extension of time is limited to facilities that process yard trash, or vegetative wastes, or manure, only.

#### Food Waste:

DSWM promotes home composting in connection with the County Library system and the local University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) extension office by hosting informational talks and providing free compost bins to homeowners that partake in the classes.<sup>74</sup> The County began its partnership with UF/IFAS in 2014 in its efforts to encourage Miami-Dade County residents to reduce their waste footprint. Since beginning this collaboration, over 2,700 individuals have learned how to compost at home and in 2023 alone, nearly 700 individuals participated in the program. These individuals are expected to divert at least 33,500 pounds of food waste from the landfill this year.

#### MSW Waste:

Given the history of MSW composting facilities in the County, there aren't currently any known MSW composting facilities in MDC. The community appetite for such a facility may be minimal. The minimal appetite coupled with the regulatory requirements, may be some of the reasons there currently aren't any MSW composting facilities in Miami-Dade County.

#### **Recommendations**

RER staff has drafted zoning code amendments for composting as part of normal farm operations and composting as an ancillary commercial use where it is demonstrated to be directly supportive of a farm or the county's agricultural industry. As an ancillary use, fruits, vegetables and clean yard trash could be composted for sale. The draft amendments contemplate administrative site plan approvals and certificates of use as requirements for these businesses.

The experience in jurisdictions with a successful, centralized composting program indicates that economic motives, community engagement, public buy-in, and stricter waste collection policies (e.g., mandatory requirements or regulatory prohibitions) are essential to the success of the program.

Yard trash and vegetative waste represents the preferred feedstock for most composting operations nationwide; 71% of composting facilities compost only yard trash and vegetative waste. Yard trash and vegetative waste represents the largest percentage of the organic waste stream generated in the County. According to a Yard Waste Composition Study conducted by the University of Florida, it is estimated that a total of 443,135 tons of yard waste are generated in MDC on an annual basis<sup>75</sup>. As such there is significant opportunity for yard waste composting and beneficial reuse of the final product. Based on the availability and the already existing regulatory and institutional framework for yard waste, it seems intuitive that any large-scale composting program at the county level should target yard waste composting as the first phase. DSWM has taken an initial first step by collaborating with Florida Wood Recycling and having a percentage of the yard trash recycled into beneficial use.

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<sup>74</sup> Miami Dade Solid Waste Management, Home Composting.

<https://www.miamidade.gov/global/solidwaste/home-composting.page>

<sup>75</sup> [miami-dade\\_county\\_2021\\_yard\\_waste\\_mang.\\_report\\_final.pdf\(earthjustice.org\)](#)

To better inform any policy decision with respect to “where and how composting operations may be most appropriate and under what circumstances and conditions” as well as to make “recommendations for proposed regulatory changes to facilitate such composting”, as directed by Resolution R-1158-23 (Attachment D), DERM staff finds that data, specific to Miami-Dade County, is required. Based on the vulnerability of the Biscayne Aquifer and the documented potential environmental impacts of composting facilities as described above, any effort to facilitate additional composting opportunities in MDC must be informed by data quantifying the environmental risk and identifying potential measures to abate said risk. As indicated in the body of this report, data regarding the potential for contamination from certain composting activities are well documented, but the literature is also clear that the level of impact depends on various factors including, environmental controls, adequacy of source separation efforts, type of feedstock, composting methodology, and local geology.

To adequately evaluate the environmental concerns, infrastructural requirements, the feasibility and effectiveness of source separation and the economics of composting with respect to end product quality and market, and to develop minimum requirements and guidance for current and future applicants for composting facilities or expansion of existing facilities, staff recommends a one-year pilot study, coordinated, and implemented by DSWM at the former West Opa Locka Airport facility. The study will enable the county to evaluate the process in a controlled environment, including proper management of source separation activities, leachate generation and leachate management systems, odor generation and odor control strategies, as well as characterization of leachate and compost quality. DERM staff has also initiated soil sampling at certain accessible compost facilities across MDC, however, due to various factors, such as the lack of a controlled environment and lack of infrastructure related to leachate sampling and leachate management in particular, this effort will only provide preliminary data with respect to the environmental impacts to soil that may arise from such operations and would not be an adequate substitute for the West Opa Locka pilot study.

DSWM will pursue funding opportunities, including but not limited to, grants, to assist in the financing of this one-year study. Additionally, DSWM will utilize a contractor to facilitate composting at the West Opa Locka Airport facility. DSWM will also work to develop its waste collection strategy, implement any regulatory framework required to support source separation and collection as well as to engage and educate the public with respect to the program. The data generated will inform the county’s policy, regulatory framework, and management strategies with respect to composting operations: both large and small scale (e.g., community composting, institutional composting, etc.).

The EQCB’s December 2023 extension approval for composting operations provides an opportunity for private entities to establish yard waste, vegetative waste, or manure composting operations in MDC. These facilities will be required to obtain DERM approval and will be required to comply with certain minimum requirements with respect to leachate and stormwater management, storage areas and processing areas, monitoring and quality and reporting. Data obtained from any such permitted facility could supplement the data from the pilot study.

Additionally, as previously provided, the BCC recently approved the award of a contract to process, for ultimate beneficial reuse, approximately 12,500 ton per year of yard trash. The contract affords the opportunity to earmark this material for processing via composting or mulching. DSWM staff, in partnership with the awarded vendor, will request that a percentage of the material received be

composted at an appropriate facility. DSWM is also in the process of awarding a yard waste grinding contract which could also be crafted to include a composting component.

DSWM will also conduct market research and identify potential composting solutions that take into consideration environmental impacts, quality of the compost produced, and the overall throughput of these potential composting facilities. Potential solutions that are identified to be possible contenders that meet the aforementioned requirements will meet with both DSWM and DERM staff to determine the feasibility of a potential partnership.

Concurrent with the pilot study, staff recommend that the County conduct a composting feasibility study to evaluate and make recommendations on other aspects of the composting industry, including but not limited to infrastructure needs, regulatory approach, market analysis, and public education strategies. For such study, the County should seek input from representatives from the applicable county departments, potential public sector partners with expertise in composting, academia, and potential significant end users of compost (agriculture, the landscape industry, golf courses and citizens). County staff could consider and, as appropriate, incorporate such input, along with the findings of the pilot study, into a comprehensive composting implementation plan to be presented to the BCC within a year of completion of the pilot study.

DSWM will also complete the requirements outlined in Section 611 and Section 612 of the Bond Ordinance to indicate whether or not composting facilities currently compete with the System. Accordingly, excluding the environmental considerations outlined in this report, composting facilities could be an integral component of waste diversion for the County and would help the County achieve the State's 75% recycling goal. In addition to completing the requirements outlined in Section 611 and 612 of the Bond Ordinance, DSWM will assess the feasibility of a host fee for composting facilities that may have the potential of financially impacting the System. Further, DSWM will require all composting facilities to provide estimations of total waste processed. If future composting facilities request to operate in MDC, DSWM will once again complete the requirements outlined in the Bond Ordinance. DSWM will also investigate and evaluate the potential of a more stream-lined yard waste collection program.

## **Conclusion**

Composting and its end product, compost, have obvious benefits to the environment, however there are also significant challenges associated with composting if done improperly. To maximize the benefits without compromising public health and wellbeing while ensuring the protection of environmental resources, especially in urban metropolis and environmentally vulnerable areas like MDC, a comprehensive composting program which involves all the stakeholders and which accounts for all the challenges and opportunities involved, is required. The acquisition of data and market research, specific to MDC, is the first step in the development of such a program.

### **Attachments:**

**Attachment A – 96-168 Bond Ordinance**

**Attachment B – Bond Engineer Opinion Letter**

**Attachment C – EQCB Order 24-01**

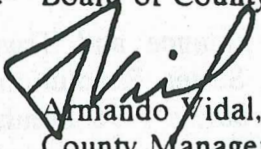
**Attachment D – Resolution R-1158-23**



**MEMORANDUM** Substitute  
Agenda Item No. 4(O)

**TO:** Hon. Chairperson and Members  
of Board of County Commissioners

**DATE:** November 12, 1996

**FROM:**   
Armando Vidal, P.E.  
County Manager

**SUBJECT:** Ordinance Authorizing the  
Issuance of \$150 Million of  
Solid Waste System Refunding  
Revenue Bonds

96-168

**RECOMMENDATION:**

It is recommended that the Board enact the accompanying Ordinance which authorizes the issuance of not to exceed \$150,000,000 Dade County, Florida Solid Waste System Refunding Revenue Bonds, Series 1996 (the "Series 1996 Bonds") for the purpose of providing funds which together with other available funds of the Metro Dade Department of Solid Waste (the "Department") will be sufficient to: (i) refund all of the outstanding Dade County, Florida Solid Waste System Revenue Bonds, Series 1985A; (ii) refund all of the outstanding Dade County, Florida Solid Waste System Special Obligation Refunding Revenue Bonds, Series 1986; (iii) refund all of a certain Loan from the State of Florida; (iv) provide for Credit Facilities, if advisable; (v) provide for the funding of a Reserve Account, if advisable; and (vi) pay the costs of issuing the Series 1996 Bonds. The Series 1996 Bonds will be paid by Pledged Revenues of the Solid Waste System (the "System").

**BACKGROUND:**

The County has previously obtained from the State of Florida, acting through the Department of Environmental Protection of the State of Florida and the Division of Bond Finance of the Florida Board of Administration, a loan (the "1978 Loan") which is currently outstanding in the aggregate principal amount of \$43,230,000. The County then issued its \$101,016,329.55 aggregated principal amount of Dade County, Florida Solid Waste System Special Obligation Revenue Bonds, Series 1985A (the "Series 1985 Bonds") which are currently outstanding in the aggregate principal amount of \$5,342,598.80 and its \$103,988,680.10 aggregated principal amount of Dade County, Florida Solid Waste System Special Obligation Refunding Revenue Bonds, Series 1986 (the "Series 1986 Bonds" and together with the Series 1985 Bonds and the 1978 Loan, the "Refunded Obligations") which are currently outstanding in the aggregate principal amount of \$89,493,680.20. The Refunded Obligations were all issued to finance solid waste disposal facilities comprising the System.

It is in the best interest of the Department to refund the Refunded Obligations (i) to show present value savings of approximately \$24,000,000 or 6% and (ii) to restructure the Department's debt by allowing more flexibility in the bond documents.

This Ordinance will be presented for consideration to the Finance and Trust Funds Committee at its scheduled meeting of October 7, 1996. A Series Resolution will be presented in the future with the details of the issuance of the Series 1996 Bonds for the review of the Finance and Trust Funds Committee and the adoption by the Board.

This Substitute Ordinance differs from the Original Ordinance in that it clarifies certain Sections to comply with the requests by the bond rating agencies regarding the (i) Additional Bonds Test; (ii) Rate Covenant; (iii) Flow of Funds; and (iv) permitted investments and to correct certain scrivener's errors.



Approved \_\_\_\_\_ Mayor

Veto \_\_\_\_\_

Override \_\_\_\_\_

Substitute

Agenda Item No. 4(O)

11-12-96

ORDINANCE NO. 96-168

ORDINANCE PROVIDING FOR ISSUANCE OF DADE COUNTY, FLORIDA SOLID WASTE SYSTEM REVENUE BONDS; PROVIDING THAT SUCH BONDS SHALL BE PAYABLE SOLELY FROM PLEDGED REVENUES; PROVIDING COVENANTS WITH RESPECT TO SUCH BONDS; AUTHORIZING ISSUANCE OF INITIAL SERIES OF SOLID WASTE SYSTEM REVENUE REFUNDING BONDS FOR PURPOSE OF REFUNDING, TOGETHER WITH OTHER AVAILABLE FUNDS, CERTAIN OUTSTANDING DADE COUNTY OBLIGATIONS PERTAINING TO ITS SOLID WASTE SYSTEM; PROVIDING FOR ESTABLISHMENT OF TERMS, MATURITIES, INTEREST RATES AND OTHER DETAILS OF BONDS, INCLUDING, WITHOUT LIMITATION, ESCROW DEPOSIT AGREEMENT AND OTHER DOCUMENTATION NECESSARY FOR REFUNDING BY SUBSEQUENT RESOLUTION; PROVIDING FOR ISSUANCE OF ADDITIONAL BONDS, REFUNDING BONDS AND COMPLETION BONDS; PROVIDING FOR CREDIT FACILITIES, RESERVE ACCOUNT CREDIT FACILITIES AND HEDGE AGREEMENTS WITH RESPECT TO BONDS AS DETERMINED BY COUNTY; PROVIDING FOR SEVERABILITY AND EFFECTIVE DATE.

WHEREAS, Dade County, Florida (the "County") has previously entered into an Agreement Relating to Providing Funds for the Construction of Pollution Control and Abatement and Solid Waste Disposal Facilities dated as of July 10, 1978, as amended (the "State Loan Agreement") with the State of Florida acting through the Department of Environmental Protection of the State of Florida and the Division of Bond Finance of the State Board of Administration of the State of Florida (collectively, the "State Agencies"), pursuant to which (i) the State Agencies made a loan (the "1978 State Loan") to the County to finance certain solid waste disposal facilities of the County and (ii) the County is obligated to repay the 1978 State Loan and has pledged, among other things, the Pledged Revenues (as hereinafter defined) to secure such repayment obligation; and



WHEREAS, the County has also entered into an Indenture of Trust dated as of September 1, 1985, as supplemented and amended (the "Prior Indenture") with SunTrust Bank, National Association (formerly known as Sun Bank, National Association), as trustee, pursuant to which the County has issued (i) \$101,016,329.55 Dade County, Florida Solid Waste System Special Obligation Revenue Bonds, Series 1985A (the "Series 1985 Bonds") to finance or refinance additional solid waste disposal facilities of the County, \$5,342,598.80 of which are presently outstanding and (ii) \$103,988,680.10 Dade County, Florida Solid Waste System Special Obligation Refunding Revenue Bonds, Series 1986 (the "Series 1986 Bonds" and together with the Series 1985 Bonds, the "Prior Bonds") to advance refund a portion of the Series 1985 Bonds, \$89,493,680.10 of which are presently outstanding, which Prior Bonds are secured, among other things, by a pledge of the Pledged Revenues; and

WHEREAS, in order to achieve debt service savings and to modernize the provisions pursuant to which the County will issue its solid waste system bonds, and for other related reasons, the Board of County Commissioners of Dade County (the "Board") desires to pay all costs of refunding the 1978 State Loan and the Prior Bonds (collectively, the "Refunded Obligations") by issuing the Dade County, Florida Solid Waste System Revenue Refunding Bonds, Series 1996 (the "Series 1996 Bonds") in a principal amount not exceeding \$150,000,000; and

WHEREAS, the Board desires to make provision for the issuance of Additional Bonds, Refunding Bonds and Completion Bonds (as said terms are defined in this Ordinance) from time to time, subject to the terms of this Ordinance;

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF DADE COUNTY, FLORIDA:

#### ARTICLE I

##### Incorporation of Recitals and Definitions

SECTION 101. Incorporation of Recitals. The Board hereby finds and determines and does hereby incorporate as part of this Ordinance the matters set forth in the foregoing recitals.

SECTION 102. Meaning of Words and Terms. In addition to words and terms elsewhere defined in this Ordinance, the following words and terms shall have the following meanings, unless some other meaning is plainly intended:



"Accountant" means the certified public accountants or firm of certified public accountants employed by the County under the provisions of Section 608 of this Ordinance to perform and carry out the duties imposed on the Accountant by this Ordinance.

"Accounts" means the accounts established under, or pursuant to, the provisions of this Ordinance.

"Accreted Value" means, with respect to any Compounding Interest Bond, (a) the amount representing the Accreted Value of such Bonds as of any Compounding Date, as established by the schedule of Accreted Values relating to such Bond, which amount represents the initial principal amount thereof plus the amount of interest that has accrued to such Compounding Date calculated on the basis of a three hundred and sixty (360) day year of twelve (12) thirty (30) day months, and (b) as of any date other than a Compounding Date, the sum of (i) the Accreted Value on the preceding Compounding Date plus (ii) the product of (x) a fraction, the numerator of which is the number of days having elapsed from the preceding Compounding Date and the denominator of which is the number of days from such preceding Compounding Date to the next succeeding Compounding Date, multiplied by (y) the difference between the Accreted Values on such Compounding Dates, which amount represents the principal plus the amount of interest that has accrued to such date of determination. The Board may provide by Series Resolution that, with respect to any Series, the Accreted Value as of any date other than a Compounding Date shall be determined using a constant interest rate method rather than as provided in (b).

"Additional Bonds" means any Bonds issued at any time under the provisions of Section 208 of this Ordinance.

"Amortization Requirements" means such moneys required to be deposited in the Redemption Account for the purpose of paying when due or redeeming prior to maturity any Term Bonds issued pursuant to this Ordinance, or the specific amounts and times of such deposits to be determined in accordance with or under the authority of a Series Resolution authorizing the issuance of such Term Bonds.

"Annual Budget" means the Annual Budget adopted pursuant to Section 603 of this Ordinance.

"Board" means the Board of County Commissioners of Dade County, Florida, or any successor of the board or body in which the general legislative powers of the County shall be vested.



"Bond Year" means the period commencing the first day of October in each year and ending on the last day of September of the following year.

"Bonds" means, collectively, any bonds issued under the provisions of this Ordinance.

"Bondholders" or "Holders" means the registered owners of Bonds.

"Bond Service Account" means the Bond Service Account in the Debt Service Fund created and designated by Section 502 of this Ordinance, together with any Bond Service Account subaccount designated by this Ordinance or any applicable Series Resolution.

"Book-Entry Bonds" and "Bonds in Book-Entry Form" means Bonds which are subject to a Book-Entry System.

"Book-Entry System" or "Book-Entry-Only System" means a system under which either (a) bond certificates are not issued and the ownership of bonds is reflected solely by the register, or (b) physical certificates in fully registered form are issued to a securities depository or to its nominee as Registered Owner, with the certificated bonds held by and "immobilized" in the custody of such securities depository, and under which records maintained by persons, other than the Registrar, constitute the written record that identifies the ownership and transfer of the beneficial interests in those bonds.

"Capital Appreciation Bond" means a Bond which is a Compounding Interest Bond throughout its entire term.

"Clerk" means the ex-officio Clerk or any Deputy Clerk of the Board or the officer or officers succeeding to the principal functions of the Clerk.

"Code" means the Internal Revenue Code of 1986, as amended from time to time. Each reference to a section of the Code shall be deemed to include the related United States Treasury Regulations proposed or in effect and applied to the Bonds or the use of their proceeds, and also includes all amendments and successor provisions unless the context clearly requires otherwise.

"Committed Waste" means solid waste disposed at System Facilities pursuant to (1) municipal Interlocal Agreements, (2) collection by the Department in accordance with Section 1.01A(9) of the Metropolitan Dade County Home Rule Amendment and Charter, as amended,



and Section 15-13 of the Code of Metropolitan Dade County and at the direction of the County, (3) the Second Amended and Restated Agreement dated as of October 17, 1995 between Browning-Ferris Industries of Florida, Inc. d/b/a Community Recycling and Metropolitan Dade County for the Provision of Curbside Collection Service of Recyclable Materials, (4) the Non-Exclusive Agreement dated as of October 17, 1995 between Metropolitan Dade County, Florida and Browning-Ferris Industries of Florida, Inc. for Commitment to Use the County Solid Waste Management System for Municipal Solid Waste Disposal, (5) the Third Amended and Restated Agreement dated as of June 9, 1994 Establishing a Phase-Out Schedule for United Sanitation Landfill in Medley between Waste Management, Inc. of Florida and Metropolitan Dade County, Florida, and (6) such other agreements as the County or the Department may, from time to time, enter into with persons for the collection, transportation, storage, treatment, disposal or recycling of solid waste.

"Completion Bonds" means any Bonds issued at any time under the provisions of Section 210 of this Ordinance.

"Compounding Date" means, with respect to any Compounding Interest Bond, the date on which interest is compounded for purposes of determining its Accreted Value.

"Compounding Interest Bond" means a Bond, the interest on which (a) shall be compounded periodically, (b) shall be payable at maturity or redemption prior to maturity, and (c) shall be determined by reference to Accreted Value and includes, but is not limited to, Capital Appreciation Bonds and Convertible Capital Appreciation Bonds.

"Construction Fund" means the Dade County Solid Waste System Construction Fund, a special fund created and designated by Section 401 of this Ordinance.

"Consultant" means such qualified and nationally recognized independent consulting firm retained by the County, having favorable repute or skill and experience with respect to the services to be provided by such Consultant, as required by the Ordinance.

"Convertible Capital Appreciation Bond" means a Bond the interest on which from its issuance date or dated date until a specified conversion date is compounded periodically, and from and after such conversion date is payable not less often than annually, calculated on the basis of its Accreted Value on such conversion date, and the Accreted Value of which as of said conversion date is treated as the principal amount for purposes of payment or redemption after such conversion date.



"Cost" or "Costs" as applied to any Improvements, means and shall embrace the cost of acquisition and construction and all obligations for expenses and all items of cost which are set forth in Section 403 of this Ordinance.

"Counterparty" means a party, other than the County, to a Hedge Agreement.

"County" means Dade County, Florida, a political subdivision of the State of Florida.

"County Attorney" means the County Attorney of the County, any Assistant County Attorney, a designee of the County Attorney or any successor to the County Attorney.

"County Manager" means the County Manager of the County, any Assistant County Manager, a designee of the County Manager or any successor to the County Manager.

"Credit Agreement" means any contract, agreement, or other instrument executed by the County in connection with obtaining or administering any Credit Facility or Reserve Account Credit Facility for any Bonds, including, but not limited to, any reimbursement agreement, financial guaranty agreement, or standby bond purchase agreement.

"Credit Facility" means a policy of insurance, a letter of credit, surety bond or other financial product which guarantees the prompt payment of all or any portion of the principal of, premium, if any, or interest on any of the Bonds, or to provide funds for the purchase of any Bonds for retirement or remarketing.

"Credit Facility Charges" means (a) Initial Credit Facility Charges, and (b) Recurring Credit Facility Charges.

"Credit Facility Provider" means an insurance company, bank, or other organization which has provided a Credit Facility in connection with any Series of Bonds.

"Debt Service Fund" means the Dade County Solid Waste System Revenue Bonds Debt Service Fund, a fund created and designated by Section 502 of this Ordinance.

"Defeasance Obligations" means those obligations eligible to refund and defease Bonds of a Series which are defined and described in any applicable Series Resolution.



"Department" means the Metropolitan Dade County Department of Solid Waste Management, the administrative entity of the County that operates the System, or any successor entity.

"Depository" means any bank or trust company duly authorized by law to engage in the banking business and designated by the County as a depository of moneys under the provisions of this Ordinance.

"Director" means the director of the Department appointed by the County Manager.

"Finance Director" means the Finance Director of the County, his designee or the officer or officers succeeding to his principal functions.

"First Lien Obligations" means the Series 1996 Bonds and any additional Series of Bonds issued pursuant to this Ordinance, and shall also include, where applicable, other obligations, in each case satisfying the provisions of Section 208(b) and (c) or Section 209(c), as applicable, and specified by resolution of the Board to be First Lien Obligations.

"Fiscal Year" means the fiscal year of the County.

"Fitch" means Fitch Investors Service Inc., its successors and assigns, and if such entity no longer performs the functions of a securities rating agency, "Fitch" shall refer to any other nationally recognized securities rating agency designated by the County.

"Fixed Rate Bond" means a bond, the interest rate on which (a) is not, under any circumstances, subject to change during its remaining term, or (b) is subject to change at specified times and in specified amounts so that the yield and annual debt service for each period during its remaining term is fixed (such as a stepped coupon bond); any bond which was not a fixed rate bond as of its date of issuance shall become a fixed rate bond as of any date after its issuance on which it meets the requirements of (a) or (b), above.

"Funds" means the funds established under, or pursuant to, the provisions of this Ordinance.

"GAAP" means generally accepted accounting principles for enterprise funds.



"General Reserve Fund" means the Dade County Solid Waste System General Reserve Fund created and designated by Section 502 of this Ordinance.

"Government Obligations" means (a) any obligations which as to both principal and interest constitute non-prepayable and non-callable (except at the option of the Holder thereof) direct obligations of, or the timely payment of which is fully and unconditionally guaranteed as to full and timely payment by the full faith and credit of, the United States of America, including bonds, U.S. Treasury Securities-State and Local Government Series ("SLGS"), (b) other evidences of indebtedness issued or guaranteed by any agency or corporation which has been or may be created pursuant to an Act of Congress as an agency or instrumentality of the United States of America to the extent unconditionally guaranteed as to full and timely payment by the United States of America, (c) any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (i) which are not callable for redemption prior to maturity, or which have been duly called for redemption by the obligor on a date or dates specified and as to which irrevocable instructions have been given to a trustee in respect of such bonds or other obligations by the obligor to give due notice of such redemption on such date or dates, which date or dates shall be also specified in such instructions, (ii) which are secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash, bonds or other obligations of the character described in clauses (a) or (b) above which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on their maturity date or dates or the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this clause (c), as appropriate, and (iii) as to which the principal of and interest on the bonds and obligations of the character described in clauses (a) or (b) above on deposit in such fund along with any cash on deposit in such fund are sufficient to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this clause (c) on their maturity date or dates or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (i) of this clause (c), as appropriate; and (d) certificates that evidence ownership of the right to payments of principal and/or interest on obligations described in any of clauses (a), (b) or (c) of this definition, provided that such obligations shall be held in trust by a bank or trust company or a national banking association authorized to exercise corporate trust powers and subject to supervision or examination by federal, state, territorial or District of Columbia authority and having a combined capital, surplus and undivided profits of not less than \$100,000,000. The definition of Government Obligations does not include, nor does it permit, investment in mutual funds or unit investment trusts.



"Hedge Agreement" means and includes an interest rate exchange agreement, an interest swap agreement, forward purchase contract, put option contract, call option contract or other financial product which is used by the County as a hedging device with respect to its obligation to pay debt service on any of the Bonds, entered into between the County and a Counterparty; provided that such Counterparty shall be an entity whose long-term debt obligations, or whose payment obligations under the Hedge Agreement are guaranteed by an entity, whose senior long-term debt obligations are rated (on the date the Hedge Agreement is entered into) in one of the three highest rating categories by the Rating Agencies (to the extent a Rating Agency rates such Hedge Agreement); and further provided that such arrangement shall be specifically designated in a certificate of the Finance Director as a "Hedge Agreement" for purposes of this Ordinance; and provided further that at the time of entering into such Hedge Agreement the County shall have obtained written evidence that entering into such Hedge Agreement will not, in and of itself, result in a withdrawal or reduction of any rating assigned to the Bonds by a Rating Agency.

"Hedge Charges" means charges payable by the County to a Counterparty upon the execution, renewal or termination of any Hedge Agreement and any periodic fee payable by the County to keep such Hedge Agreement in effect and other payments required thereby, exclusive of Hedge Obligations.

"Hedge Obligations" means (a) net payments required to be made by the County under a Hedge Agreement from time to time as a result of fluctuation in hedged interest rates, or fluctuation in the value of any index of payment and (b) termination charges with respect to a Hedge Agreement, provided that with respect to any such termination charge, such termination charge may be considered as a Hedge Obligation (and not a Hedge Charge) if, on or before the date of entering into such Hedge Agreement, the County shall have obtained written evidence from each Rating Agency that such Hedge Agreement will not, in and of itself, result in the withdrawal or reduction of the rating(s) then applicable to the Bonds.

"Hedge Receipts" means net payments received by the County from a Counterparty under a Hedge Agreement.

"Improvements" means such improvements, renewals and replacements of the System or any of its parts and such extensions and additions as may be necessary or desirable, in the judgment of the County, to keep the same in proper condition for safe, efficient and economic operation and to integrate into the System any unit or part, and shall include such land, structures and facilities as may be authorized to be acquired or constructed by the County under the provisions of State law and such improvements, renewals and replacements of such



land, structures and facilities of the System and such extensions and additions as may be necessary or desirable for continuous and efficient service to the public.

"Initial Credit Facility Charges" means and includes any premium, commitment fee or other issuance charges payable by the County to any Provider for the issuance of any Credit Facility or Reserve Account Credit Facility relating to any Bonds, at the time of the initial issuance of such Bonds, together with any related fees and expenses, including, but not limited to, the legal fees and expenses of legal counsel to the Provider of any Credit Facility or Reserve Account Credit Facility, which the County is required to pay or for which it is required to make reimbursement, but shall not include any Payment Obligations or Recurring Credit Facility Charges.

"Interest" or "interest" means the interest on the specified obligations; in the case of Compounding Interest Bonds, the interest component included in the Maturity Amount (and in the Accreted Value thereof payable at redemption) shall be deemed to constitute principal; provided, however, that for purposes of any limitation contained in this Ordinance or in any Series Resolution on the issuance of an aggregate principal amount of Bonds of any Series, the principal amount of Compounding Interest Bonds shall be the initial principal amount thereof on the Issuance Date.

"Interest Payment Date" means, when used with reference to any Bonds, the dates on which interest is stated to be due, and any date on which interest becomes due on account of the early redemption or on account of the happening of an event which, under the terms of such Bonds, requires a payment of interest to be made.

"Interlocal Agreements" means the interlocal agreements entered into between the County and municipalities within the County for the delivery of solid waste from such municipalities to the County for disposal through the System facilities, together with all supplements and amendments thereto.

"Investment Obligations" means (a) Government Obligations, (b) bonds, debentures or notes issued by any of the following Federal agencies: Banks for Cooperatives, Federal Intermediate Credit Banks, Federal Home Loan Banks, Export-Import Bank of the United States, Government National Mortgage Association, Federal Land Banks, or the Federal National Mortgage Association (including participation certificates issued by such Association), (c) all other obligations issued or unconditionally guaranteed as to principal and interest by an agency or person controlled or supervised by and acting as an instrumentality of the United States Government pursuant to authority granted by the Congress, (d) general obligations of any



state of the United States (other than obligations rated lower than the three highest grades by the Rating Agencies, to the extent a Rating Agency rates such general obligations), (e) repurchase agreements with any bank or trust company organized under the laws of any state of the United States of America or any national banking association or government bond dealer reporting to, trading with, and recognized as a primary dealer by the Federal Reserve Bank of New York, which agreement is fully secured in an amount at least equal to one hundred three percent (103%) of its fair market value by Government Obligations delivered to another bank or trust company organized under the laws of any state of the United States of America or any national banking association, as custodian, (f) certificates of deposit or similar arrangements which are rated in one of the two highest rating categories by each Rating Agency (to the extent a Rating Agency rates such instruments) with any Federal or State of Florida bank, trust company or savings and loan association which is a member of the Federal Deposit Insurance Corporation, (g) investment agreements or contracts which are rated or are issued or guaranteed by an entity whose long-term unsecured obligations are rated in one of the two highest rating categories by the Rating Agencies (to the extent a Rating Agency rates such instruments), and which are not required to be registered under the Securities Act of 1933 but may be so registered, whereby under each such investment agreement or contract the party is absolutely and unconditionally obligated to repay the moneys invested by the County and interest thereon at a guaranteed rate, without any right of recoupment, counterclaim or set off; provided, however, that such party may have the right to assign its obligations under any such agreements or contracts to any other entity if the investment agreements or contracts shall continue to be rated in one of the two highest rating categories by the Rating Agencies (to the extent a Rating Agency rates such agreements or contracts) and if such agreements or contracts shall not be registered, the agreements or contracts shall not be required to be registered under the Securities Act of 1933 by reason of such assignment; and (h) any other investment which is a permitted investment for public funds under County ordinance or rule.

"Maturity Amount" means, with respect to any Compounding Interest Bond, the value of such Compounding Interest Bond which is due at its stated maturity.

"Maturity Date" means the stated date on which principal matures on Bonds or on which the Maturity Amount becomes payable on Compounding Interest Bonds.

"Maximum Principal and Interest Requirements" means, as of any particular date of calculation, the greatest amount of Principal and Interest Requirements for the then current or any future Fiscal Year.



"Mayor" means the Mayor of the County or in the absence of the Mayor, his designee or the officer or officers succeeding to that function.

"Moody's" means Moody's Investors Service Inc., its successors and assigns, and if such entity no longer performs the functions of a securities rating agency, "Moody's" shall refer to any other nationally recognized securities rating agency designated by the County.

"Multimodal Bond" means a Bond which contains provisions allowing for the payment of interest at different rates during different interest periods and for the establishment of different interest periods and interest rates; the interest rate during any particular interest period may be a Variable Rate or a fixed rate.

"Net Operating Revenues" means the Operating Revenues reduced by Operating Expenses.

"1978 State Loan" means that portion of the Refunded Obligations consisting of the outstanding balance of the loan made by the State to the County pursuant to that certain Agreement Relating to Providing Funds for the Construction of Pollution Control and Abatement and Solid Waste Disposal Facilities dated as of July 10, 1978, as amended, between the County and the State acting through the Department of Environmental Regulation of the State and the Division of Bond Finance of the Department of General Services of the State.

"Operating Expenses" means all current expenses, paid or accrued, for the operation, maintenance and ordinary current repairs of the System and its components, as calculated in accordance with GAAP, including, without limitation, fees payable by the County under any management contract for the operation of all or portions of the System, insurance premiums (or comparable payments under a self-insurance or risk management program), labor, cost of materials and supplies used for current operation, charges for the accumulation of appropriate reserves for current expenses not annually recurrent but which are such as may reasonably be expected to be incurred in accordance with GAAP and Credit Facility Charges, administrative expenses and professional fees and expenses, before depreciation, amortization and interest expense determined in accordance with GAAP, provided, however, there shall not be taken into account:

- (a) any gain or loss resulting from either the extinguishment or refinancing of indebtedness;



- (b) loss from the sale, exchange or other disposition of capital assets not made in the ordinary course of business;
- (c) any capital expenditures for renewal, replacement, expansion or acquisition of capital assets of the System (including any deposits to reserves); and
- (d) such other assumptions of liabilities related to inactive landfills (whether or not treated as Operating Expenses under GAAP), the payment for which will be made in future years.

"Operating Revenues" or "Revenues" means all operating income or earnings received or accrued by the County from the ownership, operation or use of all or any part of the System or other moneys paid to the Department, including, but not limited to, operating grants, delinquent charges and investment earnings, but excluding any income from the investment of the Construction Fund, proceeds from insurance (except business interruption insurance), condemnation or the disposition of property not in the ordinary course of business, and proceeds from the sale of any obligations of the County (exclusive of short-term obligations for System working capital).

"Ordinance" means this Ordinance as the same may be amended or supplemented from time to time in accordance with Article VIII.

"Outstanding" means, when used with respect to the Bonds, all Bonds previously delivered except:

- (a) Bonds paid or redeemed or delivered to or acquired by the County for cancellation;
- (b) Bonds issued under a particular Series Resolution which, under the terms of such Series Resolution, are no longer deemed to be outstanding (such as Bonds that have been defeased); and for purposes of voting, giving directions and granting consents, Bonds held by the County or by an agent of the County shall not be deemed outstanding, except that when Bonds are held by any tender agent or remarketing agent, such tender agent or remarketing agent rather than the County shall be deemed the holder for purposes of voting the same for purposes of amending this Ordinance or the Series Resolution under which the same were issued or for the purpose



of giving directions or granting consents under this Ordinance or such Series Resolution.

"Payment Obligation" means an obligation of the County arising under a Credit Agreement: (a) to reimburse any Provider for amounts advanced by such Provider under a Credit Facility or Reserve Account Credit Facility which are used (i) to pay any principal, Maturity Amount or Accreted Value of, premium on, or interest on any Bond or Bonds, or (ii) to purchase any Bond or Bonds for cancellation, or (iii) to purchase any Bond or Bonds for remarketing, or (b) to pay interest on any such advances.

"Pledged Revenues" means (a) Net Operating Revenues (whether or not on deposit in the Funds and Accounts) and (b) all moneys and investments (and interest earnings) on deposit to the credit of the Funds and Accounts, except for moneys and investments on deposit to the credit of any rebate fund or rebate account established pursuant to this Ordinance.

"Principal" or "principal" means the principal of the specified obligations; in the case of Compounding Interest Bonds, the interest component of the Maturity Value (or Accreted Value thereof payable upon redemption) shall be deemed to constitute principal; provided that for purposes of any limitation contained herein or in any Series Resolution on the aggregate principal amount of Bonds of any Series, the principal amount shall be the initial principal amount on the date of issuance.

"Principal and Interest Requirements" or "Debt Service Requirements" means the respective amounts which are required in each Fiscal Year to pay (a) principal and interest on all Bonds then Outstanding; and (b) the Amortization Requirements, if any, for all Term Bonds then Outstanding for such Fiscal Year, provided, however:

- (i) the amount of such Principal and Interest Requirements for any Fiscal Year may be reduced by the amount of any capitalized interest to be used to pay interest in such Fiscal Year; and
- (ii) the Principal and Interest Requirements for any Bonds bearing interest at a Variable Rate shall be determined as provided in the definition of "Variable Rate."

"Project" means the acquisition, construction, addition, improvement, sizing, separating and equipping of any Improvements to the System, identified as a Project by a Series Resolution providing for the issuance of any obligation to finance its cost, in whole or in part.



"Provider" means a Credit Facility Provider or Reserve Account Credit Facility Provider, as indicated by the context in which such term is used.

"Rate Stabilization Fund" means the Dade County Solid Waste System Rate Stabilization Fund created and designated by Section 502 of the Ordinance.

"Rating Agency" or "Rating Agencies" means Moody's, Standard and Poor's and Fitch, but only to the extent that each such entity has assigned a rating which is then in effect to any Series of Bonds Outstanding.

"Rebate Amount" means the amount of any rebate or penalty in lieu of rebate which is payable under Section 148(f) of the Code.

"Recurring Credit Facility Charges" means and includes (a) all charges payable by the County to any Provider of a Credit Facility or Reserve Account Credit Facility under any Credit Agreement to renew or extend the term of any Credit Facility or Reserve Account Credit Facility, (b) all charges of the type described in the definition of "Initial Credit Facility Charges" relating to the replacement of any Credit Facility or Reserve Account Credit Facility for any Outstanding Bonds with a new Credit Facility or Reserve Account Credit Facility, and (c) any other fees, charges or amounts the County is required to pay to any Provider of a Credit Facility or Reserve Account Credit Facility (other than Initial Credit Facility Charges and Payment Obligations) under any Credit Agreement, including, but not limited to, draw fees, transaction fees, "gross-up charges" termination fees, annual fees, expenses of such Provider which the County is required to pay or for which it is required to reimburse such Provider, and any payments the County is required to make to indemnify any such Provider for any costs or expenses incurred by it or any loss suffered by it in connection with a Credit Facility or Reserve Account Credit Facility, but shall not include any Payment Obligations.

"Redemption Account" means the Redemption Account in the Debt Service Fund created and designated by Section 502 of this Ordinance.

"Refunded Obligations" means collectively or individually, as the context requires, the Series 1985 Bonds, the Series 1986 Bonds and the 1978 State Loan.

"Refunding Bonds" means the Bonds issued at any time under the provisions of Section 209 of this Ordinance.



"Registrar, Paying Agent or Transfer Agent" means as to any Series of Bonds, a bank or trust company within or without the State, which has been designated by the County as the Registrar, Paying Agent or Transfer Agent, or any one or combination of these functions, for such Series; provided, however, that any bank or trust company designated as Registrar, Paying Agent or Transfer Agent for any Series of Bonds must have an aggregate unimpaired reported capital, surplus and retained earnings of not less than \$100,000,000.

"Regular Record Date" means that day in the month immediately preceding any scheduled Interest Payment Date, that is established as the Regular Record Date by the Series Resolution applicable to such Series of Bonds.

"Renewal and Replacement Fund" means the Dade County Solid Waste System Renewal and Replacement Fund created and designated by Section 502 of this Ordinance.

"Reserve Account" means the Reserve Account in the Debt Service Fund created and designated by Section 502 of this Ordinance.

"Reserve Account Credit Facility" means a surety bond, a policy of insurance, a letter of credit, or other financial product obtained by the County with respect to any Bonds, from an entity that is rated in one of the two highest rating categories by the Rating Agencies (to the extent a Rating Agency rates such Reserve Account Credit Facility") and which financial product provides for payment of Principal and Interest on such Bonds in amounts not greater than the Reserve Account Requirement for such Bonds in the event of an insufficiency of available moneys herein to pay when due principal of, premium, if any, and interest on such Bonds.

"Reserve Account Requirement" means the Maximum Principal and Interest Requirements in the then current or any subsequent Fiscal Year on all Outstanding Bonds or such lesser amount which is the greatest allowable under the Code.

"Revenue Fund" means the Dade County Solid Waste System Revenue Fund created and designated by Section 502 of this Ordinance.

"Separate System" means any solid waste system, facility or equipment which may be acquired by the County subsequent to the date of this Ordinance and designated by the County as a Separate System on or prior to the date of acquisition.



"Serial Bonds" means the Bonds of a Series which shall be stated to mature in sequential years.

"Series" means the Bonds delivered at any one or more times under the provisions of this Ordinance which are designated by or pursuant to this Ordinance or any supplemental ordinance of the Board or applicable Series Resolution as constituting a single Series.

"Series 1985 Bonds" means that portion of the Refunded Obligations consisting of the outstanding balance of the \$101,016,329.55 Dade County, Florida Solid Waste System Special Obligation Revenue Bonds, Series 1985A.

"Series 1986 Bonds" means that portion of the Refunded Obligations consisting of the outstanding balance of the \$103,988,680.10 Dade County, Florida Solid Waste System Special Obligation Refunding Revenue Bonds, Series 1986.

"Series 1996 Bonds" means those Bonds authorized to be issued for the purpose of refunding the Refunded Obligations.

"Series Resolution" or "Resolution" means, as to any one or more Series of Bonds, the resolution or resolutions, including any award resolution, of the Board providing for the authorization, sale and issuance of a Series of Bonds and includes any certificate of award, any trust indenture, the bond purchase agreement or other document or instrument that is approved by or required to be executed by any such Resolution, including any agreement relating to a State Loan.

"Standard and Poor's" means Standard and Poor's, a division of McGraw-Hill Corporation, its successors and assigns, and if such entity no longer performs the functions of a securities rating agency, "Standard and Poor's" shall refer to any other nationally recognized securities rating agency designated by the County.

"State" means the State of Florida.

"State Loan" means, generally, (a) any loan from the State to the County for Improvements to the System pursuant to an agreement entered into between the State and the County (other than the 1978 State Loan), and (b) any indebtedness (other than Bonds) issued for the purpose of providing funds for paying or prepaying all or any portion of a loan described in clause (a) of this definition.



"Subordinate Obligations" means indebtedness or other payment obligations which, with respect to any issue, by operation of law, contract, indenture or other document, is subordinated and subject in right to the prior payment, from Pledged Revenues, of the Bonds.

"System" means (a) the County's solid waste collection and disposal facilities and all Improvements including additional transfer stations, landfill or other related facilities, and all buildings, fixtures, equipment and all property, real and personal now or in the future owned, leased (as lessor or lessee), operated or used by the County in conducting and operating its solid waste collection and disposal facilities and providing services of collecting and disposing of solid waste and (b) contracts entered into by the County for the collection, transportation, storage, treatment, disposal and recycling of solid waste. System shall not include, at the option of the County, Separate Systems.

"Term Bonds" means that portion of the Bonds of any Series which are stated to mature on one date in a calendar year and which shall be subject to mandatory redemption by operation of Amortization Requirements.

"Variable Rate" means, when used with respect to any Bonds or Hedge Obligation, Bonds or Hedge Obligations having (or determined by reference to) an interest rate which is subject to future change so that at the date any calculation of interest is required to be made under this Ordinance or any Series Resolution, the interest payable at any future time or for any interest period (which is relevant to such calculation) is not known. For the following purposes, interest on Variable Rate Bonds shall be calculated as follows:

- (a) If, as of the date of any calculation, any Outstanding Bond is a Variable Rate Bond, or if any Additional Bond to be issued is a Variable Rate Bond, the following rules shall apply:
  - (i) At the time of establishing the Annual Budget for any Fiscal Year, the rate of interest on any outstanding Variable Rate Bond shall be deemed to be (A) if no Hedge Agreement relating to such Bond shall be in effect, the mean average interest rate borne by such Bond during the preceding twelve (12) months (or such shorter period as such Bond has been outstanding), or (B) if a Hedge Agreement relating to such Bond is in effect for any period during such Fiscal Year, the interest rate determined by taking into account the payments expected to be made or expected to be received by the County under such Hedge Agreement (other than



Hedge Charges) shall be used for such period, such that if the Bonds and the Hedge Agreement taken together result in a net fixed rate payable by the County for such period, such net fixed rate shall be deemed to be the rate of interest on such Bonds for purposes hereof, or (C) if two Variable Rate Bonds taken together result in a net fixed rate payable by the County, such net fixed rate shall be deemed to be the interest rate for such bonds for the purpose hereof. If a Hedge Agreement is in effect and the County's Hedge Obligation is a Variable Rate, then such rate shall be deemed to be the Assumed Interest Rate set forth in (a)(iii) below.

- (ii) For purposes of determining whether Additional Bonds may be issued under Sections 208 and 209 of this Ordinance, and for the purpose of compliance with the rate covenants set forth in Section 602, the rate of interest on any then outstanding Variable Rate Bonds shall be determined as set forth in (a)(iii) below.
- (iii) For purposes of determining whether Additional Bonds may be issued, the interest rate on the proposed Variable Rate Bond shall be deemed to be the "Assumed Interest Rate" as defined below; or if a Hedge Agreement is in effect the interest rate shall be as set forth in (i) B above. If a Hedge Agreement is in effect and the County's Hedge obligation is a variable rate, then such rate shall be deemed to be the Assumed Interest Rate. As used herein the "Assumed Interest Rate" shall be deemed to be the greater of (A) one hundred twenty five percent (125%) of the average of the actual interest rates on seven day obligations for the immediately preceding 52 weeks (or if not available for the 52 week period, then for the period for which available), as shown by the Public Securities Association Municipal Swap Index, published by Thompson Financial Services (or if such index is not published, a like 7 day index for high quality variable rate demand obligations selected by the County) for such period, or (B) one hundred twenty five percent (125%) of the average of the interest rate which would have been applicable to such Variable Rate Bonds pursuant to the index or formula specified for determination on the interest on such Variable Rate Bonds during the immediately

preceding 52 weeks (or if not available for such 52 week period, for the period for which available).

- (b) A Multimodal Bond shall be deemed to be a Variable Rate Bond unless and until it has been irrevocably converted to bear a fixed interest rate for the entire balance of its term.

**SECTION 103.** Interpretations. Unless the context shall otherwise indicate, the words "Bond", "Bondholder", "Holder", "owner" and "person" shall include the plural as well as the singular number; words of the masculine gender shall include correlative words of the feminine and neuter genders; the word "person" means any individual, corporation, partnership, joint venture, association, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision; and the word "Holder" or "Bondholder" when used in this Ordinance with respect to Bonds shall mean the registered owner of Bonds at the time issued and Outstanding.



## ARTICLE II

### Issuance of Bonds; Form, Execution, Delivery and Registration of Bonds.

SECTION 201. Authority for Issuance of Bonds. The Bonds authorized to be issued under this Ordinance are issued, and the Hedge Agreements authorized to be secured under the provisions of this Ordinance are entered into pursuant to the authority of the Constitution and laws of the State of Florida, including, but not limited to the Metropolitan Dade County Home Rule Amendment and Charter, as amended, Chapters 125, 159 and 166, Florida Statutes, and all other applicable laws.

(a) The Series 1996 Bonds. There is hereby authorized to be issued Bonds in one or more Series in an aggregate principal amount not exceeding \$150,000,000, for the purpose of refunding the Refunded Obligations, funding the Reserve Account and paying the costs of issuance of said Bonds, all as may be specified or provided for in the Series Resolution relating to the issuance of said Series 1996 Bonds.

The details of a plan of refunding, including providing for the creation of an escrow deposit agreement or agreements, the designation of an escrow agent or agents and providing for the purchase of Defeasance Obligations, will be as set forth in or provided for by the Series Resolution relating to the Series 1996 Bonds.

(b) Additional Bonds, Refunding Bonds and Completion Bonds. There may be issued, from time to time, pursuant to the provisions of this Ordinance, Additional Bonds, Refunding Bonds and Completion Bonds, subject to the terms and provisions of Sections 208, 209 and 210.

SECTION 202. Details of Bonds. The Series Resolution relating to any Series of Bonds shall provide for establishing the terms and provisions of the Bonds of each such Series, including, but not limited to the denomination of each Bond, the numbering sequence of the Bonds, interest rates, maturities, payment dates and redemption provisions. The Bonds of each Series shall bear an appropriate title, which shall include an identifying Series designation.

The County may issue all manner and forms of Bonds, including, but not limited to Fixed Rate Bonds, Variable Rate Bonds (including index, auction, inverse floater or other types of Variable Rate Bonds), Capital Appreciation Bonds, Convertible Capital Appreciation



Bonds, Compounding Interest Bonds, MultiModal Bonds, Serial Bonds, Term Bonds, taxable or tax-exempt Bonds, and any one or combination of these.

The County may enter into Hedge Agreements, Credit Facilities, Reserve Account Credit Facilities, agreements regarding Credit Facilities and Reserve Account Credit Facilities, and all other forms of contracts relating to the issuance of Bonds, whether or not related to a specific Series of Bonds.

Principal, interest or the Accreted Value thereof on the Bonds and premiums, if any, shall be paid in any coin or currency of the United States of America which, at the respective dates of payment thereof, is legal tender for the payment of public and private debts. The Bonds shall be payable at such places and in such other manner as shall be provided for in the Series Resolution under which such Bonds are issued.

**SECTION 203.      Execution and Form of Bonds.**

(a) Bonds shall be signed by, or bear the manual or facsimile signature of the Mayor and shall be signed by or bear the manual or facsimile signature of, the Clerk, and the official seal of the County or a facsimile of such seal shall be imprinted on the Bonds. When applicable, the Bonds shall be authenticated by manual signature of an authorized signer on behalf of an authenticating agent for such Bonds. The County may provide by Series Resolution any other uniform method for execution and authentication of Bonds.

(b) The form of any Bonds shall be specified in or provided for in the Series Resolution under which such Bonds are issued.

(c) Bonds issued pursuant to any Series Resolution may be issued in Book-Entry Form, or may be issued in fully certificated form.

**SECTION 204.      No Necessity for Validation.** The Bonds issued under and pursuant to this Ordinance are not required to be validated; however, Bonds of any Series may be validated at the option of the County.

**SECTION 205.      Negotiability, Registration and Transfer of Bonds.** At the option of the Holder and upon its surrender at the designated corporate trust office of the Registrar with a written instrument of transfer satisfactory to the Registrar, duly executed by the Holder or his duly authorized attorney, and upon payment by such Holder of any charge which



the Registrar may make as provided in this Section, a Bond may be exchanged for another Bond of the same Series, interest rate, maturity date and tenor of any other authorized denominations.

The Registrar shall keep books for the registration of Bonds and for the registration of transfers of Bonds. A Bond shall be transferable by its Holder in person or by his attorney duly authorized in writing only upon the registration books of the County kept by the Registrar and only upon its surrender together with a written instrument of transfer satisfactory to the Registrar duly executed by the Holder or his duly authorized attorney. Upon the transfer of any such Bond, the County shall issue in the name of the transferee a new Bond or Bonds.

The County, the Paying Agent and the Registrar shall deem and treat the person in whose name any Bond shall be registered upon the books kept by the Registrar as the absolute owner of such Bond, whether such Bond shall be overdue or not, for the purpose of receiving payment of, or on account of, the principal of and interest on such Bond as the same become due and for all other purposes. All such payments so made to any such Holder or upon his order shall be valid and effectual to satisfy and discharge the liability upon such Bond to the extent of the sum or sums so paid, and neither the County, the Paying Agent nor the Registrar shall be affected by any notice to the contrary.

In all cases in which the privilege of exchanging Bonds or transferring Bonds is exercised, the County shall execute and the Registrar shall authenticate and deliver Bonds in accordance with the provisions of this Ordinance or any applicable Series Resolution. All Bonds surrendered in any such exchanges or transfers shall forthwith be delivered to the Registrar and canceled by the Registrar in the manner provided in this Section. There shall be no charge for any such exchange or transfer of Bonds, but the County or the Registrar may require the payment of a sum sufficient to pay any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer. Neither the County nor the Registrar shall be required (a) to transfer or exchange Bonds for a period from a Regular Record Date to the next succeeding Interest Payment Date on such Bonds or 15 days next preceding any selection of Bonds to be redeemed or until after the mailing of any notice of redemption; or (b) to transfer or exchange any Bonds called for redemption. However, if less than all of a Term Bond is redeemed or defeased, the County shall execute and the Registrar shall authenticate and deliver, upon the surrender of such Term Bond, without charge to the Bondholder, for the unpaid balance of the principal amount of such Term Bond so surrendered, a registered Term Bond in the appropriate denomination and interest rate.



All Bonds paid or redeemed, either at or before maturity shall be delivered to the Registrar when such payment or redemption is made, and such Bonds, together with all Bonds purchased by the County, shall be promptly canceled. Bonds so canceled may at any time be destroyed by the Registrar, who shall execute a certificate of destruction in duplicate by the signature of one of its authorized officers describing the Bonds so destroyed, and one executed certificate shall be filed with the County and the other executed certificate shall be retained by the Registrar.

The County, by Series Resolution, may provide for the registration of the Bonds of any Series by adopting the Book-Entry System for such Series. Beneficial ownership of such Bonds shall be transferred in accordance with the procedures of the securities depository and its participants.

**SECTION 206. Bonds Mutilated, Destroyed, Stolen or Lost.** In case any Bond shall become mutilated, or be destroyed, stolen or lost, the County may in its discretion cause to be executed, and the Registrar shall authenticate and deliver, a new Bond of like date and tenor as the Bond so mutilated, destroyed, stolen or lost in exchange and substitution for such mutilated Bond upon surrender and cancellation of such mutilated Bond or in lieu of and substitution for the Bond destroyed, stolen or lost, and upon the Holder furnishing the County and the Registrar proof of his ownership and satisfactory indemnity and complying with such other reasonable regulations and conditions as the County and the Registrar may prescribe and paying such expenses as the County and the Registrar may incur. All Bonds so surrendered shall be canceled by the Registrar or Paying Agent on behalf of the County. If any of the Bonds shall have matured or be about to mature, instead of issuing a substitute Bond, the County may pay the same, upon being indemnified as aforesaid, and if such Bond be lost, stolen or destroyed, without surrender.

Any such duplicate Bonds issued pursuant to this Section 206 shall constitute original, additional contractual obligations on the part of the County whether or not the lost, stolen or destroyed Bonds be at any time found by anyone, and such duplicate Bonds shall be entitled to equal and proportionate benefits and rights as to lien on and source and security for payment from the Pledged Revenues, to the same extent as all other Bonds.

**SECTION 207. Preparation of Definitive Bonds; Temporary Bonds.** Until definitive Bonds are prepared, the Mayor and the Clerk may execute and the Registrar may authenticate, in the same manner as is provided in Section 203 of this Article II, and deliver, in lieu of definitive Bonds, but subject to the same provisions, limitations and conditions as the definitive Bonds, one or more printed, lithographed or typewritten temporary fully registered



Bonds, substantially of the tenor of the definitive Bonds in lieu of which such temporary Bond or Bonds are issued, in authorized denominations or any whole multiples, and with such omissions, insertions and variations as may be appropriate to such temporary Bonds. Upon the surrender at the corporate trust office of the Registrar of such temporary Bonds for which no payment or only partial payment has been provided, the Registrar shall authenticate and, without charge to the Holder, deliver in exchange, definitive Bonds of the same aggregate principal amount and maturity as the temporary Bond surrendered. Until so exchanged, the temporary Bonds shall in all respects be entitled to the same benefits and security as definitive Bonds issued pursuant to this Ordinance.

**SECTION 208.** Provisions for Issuance of Additional Bonds; Debt Service Coverage Requirements. Additional Bonds of the County and any other obligations that are First Lien Obligations, which for the purposes of this Section are deemed Additional Bonds (other than Completion Bonds and Refunding Bonds), may be issued under and secured by this Ordinance, subject to the conditions provided in this Section, from time to time, (i) for the purpose of paying all or any part of the cost of a Project, (ii) to refund any obligations of the County which financed or refinanced any Improvements, (iii) to finance termination payments relating to Hedge Agreements or (iv) to fund any contractual, tort or other similar liability of the County relating to the Department or the System.

Before any Series of Additional Bonds shall be issued under the provisions of this Section 208, the Board shall adopt a Series Resolution authorizing the issuance of such Additional Bonds, providing for the amount and the details thereof, and describing the purpose of such Additional Bonds. The Additional Bonds of each Series issued under the provisions of this Section shall be dated, shall mature (subject to the right of prior redemption) on such dates in such year or years not more than the number of years allowed by law after the date of such Additional Bonds, shall have such Paying Agents, and any Term Bonds of such Series shall have such Amortization Requirements, and may be made redeemable at such times and prices (subject to the provisions of Article III of this Ordinance), all as may be specified in or provided for by or pursuant to the Series Resolution authorizing the issuance of such Additional Bonds. Such Additional Bonds, if issued in certificated form, shall be executed substantially in the manner set forth in this Ordinance, with such changes as may be necessary or appropriate to conform to the provisions of the Series Resolution authorizing the issuance of such Additional Bonds. Prior to the delivery of each Series of Additional Bonds, there shall be filed with the Finance Director the following:

- (a) a copy, certified by the Clerk, of the Series Resolution mentioned above;



(b) a certificate, signed by the Finance Director

(i) setting forth the amount of the Net Operating Revenues for any 12 consecutive months (the "Computation Period") in the preceding 18 consecutive months. For purposes of this paragraph (b), the Net Operating Revenues, at the election of the County, may be adjusted as follows (provided that, each such adjustment shall be certified by the Consultant in a certificate or report which shall set forth the assumptions upon which it is based and shall state that such assumptions, in the opinion of the Consultant, form a reasonable basis for the conclusions expressed therein):

- (1) in case the rates and charges for the services furnished by the System shall have been revised and such revised rates and charges shall have gone into effect prior to the delivery of the Additional Bonds, by adjusting Net Operating Revenues by the amount which would have been received during the Computation Period if such rates and charges had been in effect during the Computation Period, and
- (2) in case an existing solid waste system, facility and/or equipment is to be acquired with the proceeds of the Additional Bonds, by adding the additional amount of Net Operating Revenues which would have been realized during the Computation Period if such existing solid waste system, facility and/or equipment to be acquired had been a part of the System during the Computation Period, and
- (3) in case the County shall enter into a contract with any governmental unit, the term of which shall be at least as long as the term of the Additional Bonds then sought to be delivered, in which the County agrees to furnish services for the collection and/or disposal of solid waste, the additional amount of Net Operating Revenues which would have been realized during the Computation Period if such contract had been in effect during the Computation Period, and



- (4) in case the County shall construct or acquire any Improvements to the System with the proceeds of the Additional Bonds then sought to be delivered and shall have established rates and charges to be charged and collected from the users of such Improvements, by adding the amount of the Net Operating Revenues estimated to be realized during the first twelve (12) months after the date of completion, as estimated by the Consultant, of such Improvements;
- (5) for purposes of this Section 208(b), by adding amounts on deposit in the Rate Stabilization Fund in an amount not to exceed twenty percent (20%) of Net Operating Revenues after adjusting for (1) - (4) above at the time the calculations required under this Section 208(b) are performed, but only to the extent that such amounts were deposited into the Rate Stabilization Fund prior to the Computation Period;
- (ii) setting forth the respective amounts of the Principal and Interest Requirements for each succeeding Fiscal Year including the Additional Bonds then requested to be delivered; and stating that the adjusted Net Operating Revenues (as determined by subparagraph (i) above) for the Computation Period shall have equalled at least the sum of:
  - (1) one hundred twenty percent (120%) of the Maximum Principal and Interest Requirement on all Bonds to be Outstanding as of the date of such issuance, plus
  - (2) one hundred percent (100%) of all required deposits to the Reserve Account (less any portion to be deposited from proceeds of Bonds) during the Computation Period.
- (c) a certificate signed by the Consultant setting forth:
  - (i) the Consultant's estimate of the Net Operating Revenues for each of the three Fiscal Years following the Fiscal Year in which the



Additional Bonds are to be issued, taking into account the rates and charges in effect on the date of delivery of such Additional Bonds and any revised rates and charges that shall become effective prior to or during such Fiscal Year; provided, however, that for purposes of this Section 208(c)(i), Net Operating Revenues for each of such three Fiscal Years shall include the amounts estimated by the Consultant to be on deposit in the Rate Stabilization Fund at the end of each Fiscal Year immediately preceding each such Fiscal Year; and

(ii) that after taking into account (i) above, the adjusted Net Operating Revenues for each of such three Fiscal Years will satisfy the ratio set forth in Section 208(b)(ii) above;

(d) an opinion of the County Attorney stating that the issuance of such Additional Bonds has been duly authorized.

State Loans. If the County enters into a State Loan, the covenants and agreements in this Ordinance shall be for the benefit of the Holder of such State Loan and the County shall further comply with all provisions of the instrument authorizing such State Loan.

When the documents mentioned above in this Section shall have been filed with the Finance Director and when the Additional Bonds described in the Series Resolution mentioned in clause (a) of this Section shall have been executed as required by this Ordinance, the County shall deliver such Additional Bonds at one time to or upon the order of the purchasers thereof, but only upon payment to the County of the purchase price of such Additional Bonds.

The proceeds, excluding accrued interest, any premium of such Series of Additional Bonds and any proceeds to be deposited in the Reserve Account, shall be deposited by the Finance Director with one or more Depositories to the credit of a special account or accounts, which shall be created and appropriately designated in the Series Resolution, and shall be applied to the purpose for which such Additional Bonds were issued and to pay the cost of issuance of the Bonds. The amount received as accrued interest and any premium on such Bonds shall be deposited to the credit of the Bond Service Account for application to the interest due on such Bonds. Any proceeds which are required by the applicable Series Resolution to fund the Reserve Account for such Bonds or to purchase a Reserve Account Credit Facility for such Bonds shall be used for said purpose.



**SECTION 209. Refunding Bonds.** Refunding Bonds may be issued under and secured by this Ordinance, subject to the conditions provided in this Section, from time to time for the purpose of providing funds for paying at maturity and redeeming all or any part of the outstanding Bonds of any one or more Series, including the payment of any redemption premium and any interest which will accrue on such Bonds and any expenses in connection with such paying at maturity and redemption.

Before any Series of Refunding Bonds shall be issued under the provisions of this Section, the Board shall adopt a Series Resolution authorizing the issuance of such Refunding Bonds, fixing or providing for the fixing of the amount and details, and describing the Bonds to be paid and redeemed. Such Refunding Bonds shall be dated, shall be stated to mature (subject to the right of prior redemption as hereinafter set forth) on such dates in such year or years not more than the number of years allowed by law after the date of such Refunding Bonds, shall have such Paying Agents, and any Term Bonds of such Series shall have such Amortization Requirements, and may be made redeemable at such times and prices (subject to the provisions of Article III of this Ordinance), all as may be specified in or provided for by the Series Resolution authorizing the issuance of such Refunding Bonds. Such Refunding Bonds, if issued in certificated form, shall be executed substantially in the manner set forth in this Ordinance, with such changes as may be necessary or appropriate to conform to the provisions of the Series Resolution authorizing the issuance of such Refunding Bonds. Prior to or simultaneously with the delivery of such Refunding Bonds by the Finance Director, there shall be filed with the Finance Director the following:

- (a) a copy, certified by the Clerk, of the Series Resolution authorizing the issuance of such Refunding Bonds;
- (b) an opinion of the County Attorney to the effect that the issuance of such Refunding Bonds has been duly authorized and that all conditions precedent to the delivery of such Refunding Bonds have been fulfilled;
- (c) a certificate, signed by the Finance Director, either:
  - (1) stating that (A) the Maximum Principal and Interest Requirements in any Fiscal Year thereafter on account of all Bonds to be Outstanding after the issuance of such Bonds shall not exceed the Maximum Principal and Interest Requirements in any Fiscal Year on account of all Bonds Outstanding immediately prior to the issuance of such Bonds, or (B) the aggregate Principal and Interest



Requirements in all Fiscal Years thereafter on account of all Bonds to be Outstanding after the issuance of such Bonds shall not exceed the aggregate Principal and Interest Requirements in all Fiscal Years on account of all Bonds Outstanding immediately prior to the issuance of such Bonds, or

(2) complying with Paragraph 208(b) hereof.

(d) such documents as shall be required by the Finance Director to show that provision has been duly made in accordance with the provisions of this Ordinance for the payment or redemption of all of the Bonds to be paid or redeemed.

When the documents mentioned above in this Section shall have been filed with the Finance Director and when the Refunding Bonds described in the Series Resolution mentioned in clause (a) of this Section shall have been executed as required by this Ordinance, the Finance Director shall deliver such Refunding Bonds at one time to or upon the order of the purchasers thereof, but only upon payment to the Finance Director of the purchase price of such Refunding Bonds.

**SECTION 210. Completion Bonds.** Bonds may be issued under and secured by this Ordinance, subject to the conditions provided in this Section, from time to time for the purpose of providing funds for paying the cost of completion of any Project for which one or more Series of Bonds have been issued, in a principal amount not greater than ten percent (10%) of the estimated cost of such Project.

Before any Series of Completion Bonds shall be issued under the provisions of this Section, the Board shall adopt a Series Resolution authorizing the issuance of such Completion Bonds, fixing or providing for the fixing of the amount and details thereof, and describing the Improvements. Such Completion Bonds shall be dated, shall be stated to mature (subject to the right of prior redemption as hereinafter set forth) on such dates in such year or years not more than the number of years allowed by law after the date of such Completion Bonds, shall have such Paying Agents, and any Term Bonds of such Series shall have such Amortization Requirements, and may be made redeemable at such times and prices (subject to the provisions of Article III of this Ordinance), all as may be specified in or provided for by the Series Resolution authorizing the issuance of such Completion Bonds. Such Completion Bonds, if issued in certificated form, shall be executed substantially in the manner hereinabove set forth, with such changes as may be necessary or appropriate to conform to the provisions of the Series



Resolution authorizing the issuance of such Completion Bonds. Prior to or simultaneously with the delivery of such Completion Bonds by the Finance Director, there shall be filed with the Finance Director the following:

- (a) a copy, certified by the Clerk, of the Series Resolution mentioned above authorizing the issuance of such Completion Bonds;
- (b) an opinion of the County Attorney stating that the signer is of the opinion that the issuance of such Completion Bonds has been duly authorized and that all conditions precedent to the delivery of such Completion Bonds have been fulfilled;

When the documents mentioned above in this Section shall have been filed with the Finance Director and when the Completion Bonds described in the Series Resolution mentioned in clause (a) of this Section shall have been executed as required by this Ordinance, the Finance Director shall deliver such Completion Bonds at one time to or upon the order of the purchasers thereof, but only upon payment to the Finance Director of the purchase price of such Completion Bonds.

SECTION 211. Moneys Held in Trust. All moneys which the County shall have withdrawn from the Debt Service Fund or shall have received from any other source and deposited with the Paying Agents, for the purpose of paying any of the Bonds hereby secured, either at the maturity or upon call for redemption, or for the purpose of paying any interest on, the Bonds, shall be held in trust for the respective Holders of such Bonds. But any moneys which shall be so set aside or deposited and which shall remain unclaimed by the Holders of such Bonds for the period of six (6) years after the date on which amount shall have become due and payable, upon the County's request in writing, shall be paid to the County or to such officer, board or body as may then be entitled by law to receive the same, and thereafter the Holders of such Bonds shall look only to the County or to such officer, board or body, as the case may be, for the payment and then only to the extent of the amounts so received without any interest, and the Paying Agents shall have no responsibility with respect to such moneys.

SECTION 212. Cancellation of Bonds. All Bonds paid, redeemed or purchased, either at or before maturity, shall be canceled by the Paying Agent upon the payment, redemption or purchase of such Bonds. All Bonds canceled under any of the provisions of this Ordinance shall be destroyed by the Paying Agent and the person so destroying such Bonds shall execute a certificate in triplicate describing the Bonds, and one executed certificate shall be filed with the Clerk, one executed certificate shall be filed with the Finance



Director and the other executed certificate shall be retained by the person making such certificate.

### ARTICLE III

#### Redemption

SECTION 301. Provisions for Redemption. Bonds may be subject to redemption prior to their maturity upon the terms and conditions and at such times, in such manner and at such redemption price or premium as shall be provided for by the Series Resolution adopted with respect to such Series of Bonds.

SECTION 302. Notice of Redemption. In the event any Bonds are called for redemption, the Paying Agent shall give notice in the name of the County, of the redemption of such Bonds, which notice shall (i) specify the Bonds, including Series designations, to be redeemed, the CUSIP numbers, certificate numbers, the date of issue, interest rate, maturity date of the Bonds to be redeemed, the redemption date, the date of notice, the redemption price and the place or places where amounts due upon such redemption will be payable (which shall be the designated principal corporate trust office of the Paying Agent or of its agent) and, if less than all of the Bonds of any Series are to be redeemed, the numbers of the Bonds and the portion of Bonds so to be redeemed and (ii) state that on the redemption date, the Bonds to be redeemed shall cease to bear interest.

Notice of redemption shall be given by the Paying Agent in the name of the County by mailing a copy of the redemption notice to the registered owners of the Bonds not less than 30 days (or, with respect to any Series of Bonds, such shorter period as may be provided in the applicable Series Resolution) prior to the date fixed for redemption, by first class mail at their addresses appearing on the bond registration books of the County maintained by the Registrar, and, if applicable, to the securities depository. Provision may be made in any applicable Series Resolution for notice by certified mail, or other type of special mailing, to the Holders of Bonds having an aggregate principal amount of, or Accreted Value in the case of Capital Appreciation Bonds, \$1,000,000 or more.

A second notice of redemption shall be given (within 60 days after the redemption date) in the manner required above, to the Holders of redeemed Bonds which have not been presented for payment within 30 days after the redemption date. However, failure to give such notice shall not affect the validity of the redemption of the Bonds.

(A) Anything contained in this Ordinance to the contrary notwithstanding, failure to mail any such notice (or any defect in the notice) to one or more Holders of Bonds



shall not affect the validity of any proceedings for such redemption with respect to Holders of Bonds to which notice was duly given.

(B) The redemption of any Bonds, other than mandatory sinking fund redemptions, may be conditioned upon the receipt by the County of the moneys necessary to pay the redemption price of the Bonds to be redeemed. Any notice of redemption which is conditioned on the receipt of such necessary moneys shall state that the redemption is so conditioned.

(C) Any Bonds which have been duly selected for redemption, as well as any Bonds which are deemed to be paid in accordance with this Article III, shall cease to bear interest on the specified redemption date.

## ARTICLE IV

### Construction Fund

SECTION 401. Construction Fund. There is hereby created and established a special fund to be called the "Dade County Solid Waste System Construction Fund" (the "Construction Fund"), which shall be held by the Department. A separate account shall be established in the Construction Fund for each Series of Bonds from time to time relating to a Project, which shall be provided for in the applicable Series Resolution.

The moneys in the Construction Fund shall be held in trust and applied to the payment of the Cost of any Improvements and, pending such application, shall be subject to a lien and charge in favor of the Holders of the Bonds issued and Outstanding under this Ordinance and for the further security of such Holders until paid out, as provided in this Ordinance.

SECTION 402. Payments from Construction Fund. Payment of the Cost of any Improvements shall be made from the applicable account of the Construction Fund as provided for in the Series Resolution relating to the applicable Project. Moneys in the respective accounts shall be disbursed subject to such controls and procedures as the County may from time to time institute in connection with the disbursement of funds for paying the Cost of Projects, and in accordance with, or as provided for by the applicable Series Resolution.

SECTION 403. Cost of Improvements. The Cost of any Improvements to be constructed or acquired shall include, without limitation, the following:

- (a) obligations incurred for labor and materials and to contractors, builders and materialmen in connection with the construction of enlargements, improvements, and extensions, for machinery and equipment, for the restoration of property damaged or destroyed in connection with such construction, for the relocation, demolition and disposal of structures necessary or desirable in connection with such construction or the operation of the System;
- (b) interest accruing upon any Bonds prior to the commencement of and during construction or for any additional period as may be determined by the County, subject to any limitation in the applicable Series Resolution;



- (c) the cost of acquiring any solid waste system, facility or equipment now serving any portion of the County and adjacent territory, or any part of such system, facility or equipment, either within or without or partly within and partly without the corporate limits of the County;
- (d) the cost of acquiring by purchase, and the amount of any award or final judgment in any proceeding to acquire by condemnation, such land, structures, facilities and improvements, interests in lands as necessary or convenient in connection with such construction or with the operation of the System, and the amount of any damages incident thereto;
- (e) expenses of administration properly chargeable to such construction or acquisition, legal, architectural and engineering expenses and fees, cost of audits and of preparing and issuing the Bonds, fees and expenses of consultants, financing charges, taxes or other governmental charges lawfully assessed during construction, interest accrued during construction premiums on insurance in connection with construction, the cost of funding the Reserve Account, costs of Credit Facilities, Hedge Charges, costs of issuance and all other items of expense not elsewhere specified herein, incident to the financing, construction or acquisition of any Improvements and the placing of the same in operation; and
- (f) any obligation or expense advanced by the County for any of the foregoing purposes, which is legally reimbursable.

**SECTION 404. Disposition of Construction Fund Balance.** When the construction of any Improvements shall have been completed, which fact shall be determined by the County Manager or Finance Director in a manner approved by him, the balance in the Construction Fund not reserved by the County for the payment of any remaining part of the Cost of such Improvements shall, at the option of the County, (i) be deposited to the credit of the Renewal and Replacement Fund, (ii) be deposited to the credit of the Debt Service Fund, (iii) be applied to purchase or redeem Outstanding Bonds, or (iv) be applied to the Cost of other Improvements to the System.



## ARTICLE V

### Revenues and Funds

**SECTION 501. Security for Bonds, Hedge Obligations and other First Lien Obligations.** The Bonds shall be a special and limited obligation of the County, payable solely from and secured by a prior lien upon and a pledge of the Pledged Revenues of the System as provided in this Ordinance. Until payment has been provided for as permitted in this Ordinance, the payment of the principal of and interest on the Bonds, all Hedge Obligations and other First Lien Obligations shall be secured forthwith equally and ratably by an irrevocable lien on the Pledged Revenues, and the County does hereby irrevocably pledge and grant a lien upon such Pledged Revenues to the payment of the principal of and interest on the Bonds, the reserves therefor, Hedge Obligations, other First Lien Obligations and for all other required payments under this Ordinance including Hedge Charges, in the manner and with the priority of application as provided in this Ordinance. Unless provided for by supplemental ordinance, no Holder nor any Counterparty shall have the right to require or compel the exercise of the ad valorem taxing power of the County or taxation in any form of any property for payment of the Bonds, Hedge Obligations, other First Lien Obligations or Hedge Charges, or be entitled to payment of such amount from any other funds of the County, except from the Pledged Revenues in the manner provided in this Ordinance.

**SECTION 502. Creation of Funds and Accounts.** The following special Funds and Accounts are hereby created and established: the "Dade County Solid Waste System Revenue Fund" (the "Revenue Fund"); the "Dade County Solid Waste System Revenue Bonds Debt Service Fund" (the "Debt Service Fund") together with three separate accounts in said Debt Service Fund, designated "Bond Service Account", "Redemption Account", and "Reserve Account", respectively; the "Dade County Solid Waste System Renewal and Replacement Fund" (the "Renewal and Replacement Fund"); the "Dade County Solid Waste System Rate Stabilization Fund" (the "Rate Stabilization Fund"); the "Dade Solid Waste System Operating Expense Reserve Fund" (the "Operating Expense Reserve Fund"); and the "Dade County Solid Waste System General Reserve Fund" (the "General Reserve Fund").

A. **Trust Funds.** The moneys in each of said Funds and Accounts shall be held in trust by the County and applied as provided in this Article V with regard to each such Fund and Account and, pending such application, shall be subject to a lien and charge in favor of the Holders of the Bonds and Counterparties until paid out or transferred as provided in this Ordinance.



B. Government Accounting Effect. The cash required to be accounted for in each of the Funds and Accounts may be deposited in a single bank account, provided that adequate accounting records are maintained to reflect and control the allocation of the cash on deposit for the various purposes of such Funds and Accounts. The designation and establishment of the various Funds and Accounts in and by this Ordinance shall not be construed to require the establishment of any completely independent, self-balancing funds, as such term is commonly defined and used in governmental accounting, but rather is intended solely to constitute an earmarking of the Pledged Revenues and certain other assets of the System for certain purposes and to establish certain priorities for application of the Operating Revenues and other assets as provided in this Ordinance.

C. Subaccounts. In each Series Resolution, the County may create subaccounts within the Funds and Accounts with respect to one or more Series of Bonds and may provide that deposits to such Funds and Accounts shall be appropriately credited to such subaccounts, together with amounts received pursuant to any Credit Facility or Hedge Agreement. Amounts held in any such subaccount may be required to be held solely for the applicable Series of Bonds and applied to their payment or to the payment of Payment Obligations and Hedge Obligations relating to such Series.

SECTION 503. Flow of Funds. For as long as any of the principal of and interest on any of the Bonds shall be outstanding and unpaid, or until payment has been provided for as permitted by this Ordinance, or until there shall have been set apart in the Debt Service Fund, including the Reserve Account, or in an irrevocable escrow account with a Depositary, a sum sufficient to pay when due the entire principal of the Bonds remaining unpaid, together with interest accrued or to accrue, and all First Lien Obligations, Hedge Obligations and Hedge Charges, the County covenants with the Holders of any and all Bonds as follows:

Application of Revenues. All Revenues shall be deposited as received in the Revenue Fund. Moneys in the Revenue Fund shall be applied to pay Operating Expenses. Thereafter, the County, on or before the 20th day of each month, commencing in the month immediately following the first delivery of any Bonds, shall apply the remaining amount in the Revenue Fund to the credit of the following Funds and Accounts in the following order:

- (i) to the credit of the Bond Service Account, an amount equal to one-sixth (1/6th) of the amount of interest payable on the Bonds of



each Series on the Interest Payment Date next succeeding (less any amount received as capitalized or accrued interest from the proceeds of any Bonds which is available for such interest payment) and an amount equal to one-twelfth (1/12th) of the next maturing installment of principal (or Accreted Value, as applicable) on all Serial Bonds then outstanding; provided, however, that:

- (1) in each month intervening between the date of delivery of a Series of Bonds, and the next succeeding Interest Payment Date and the next succeeding principal payment date, respectively, the amount specified in this subparagraph (i) shall be that amount which when multiplied by the number of deposits to the credit of the Bond Service Account required to be made during such respective periods will equal the amounts required (in addition to any amounts received as accrued interest or capitalized interest from the proceeds of such Bonds) for such next succeeding interest payment and next maturing installment of principal, respectively;
- (2) the amount specified in this subparagraph (1) shall be reduced to take into account Hedge Receipts to be received on or before the succeeding Interest Payment Date and shall be increased to provide for the payment of any Hedge Obligations to be paid on or before the succeeding Interest Payment Date; and
- (3) with respect to any Bonds (or any Hedge Agreement) bearing interest at a Variable Rate and/or payable other than semiannually, the amount specified in this subparagraph (i) for the payment of interest (or Hedge Obligation) shall be that amount necessary to provide substantially equal monthly payments for the payment of such interest (or Hedge Obligation) on the payment dates therefor.



- (ii) to the credit of the Redemption Account an amount equal to one-twelfth (1/12th) of the principal amount (or Accreted Value, as applicable) of Term Bonds of each Series then Outstanding required to be retired in satisfaction of the Amortization Requirements for such Bond Year, plus the redemption premiums, if any, which would be payable in such Bond Year for such Term Bonds were to be redeemed prior to their respective maturities from moneys held for the credit of the Debt Service Fund; and
- (iii) to the credit of the Reserve Account the amount required under Section 507 for such month; provided, however, no deposit shall be required in any month in which the amount on deposit in the Reserve Account is at least equal to the Reserve Account Requirement. If a Reserve Account Credit Facility is utilized and its Provider is required to advance any sums to meet Principal and Interest Requirements or other sums required to be funded from the Reserve Account, the County shall reimburse the Provider in accordance with the requirements of the Credit Agreement entered into between the County and such Provider with respect to such Reserve Account Credit Facility; and
- (iv) to the payment of principal (including amortization installment, if any) of, and premiums and interest on, and other required payments with respect to Subordinate Obligations; and
- (v) to the credit of the Renewal and Replacement Fund, an amount equal to one-twelfth (1/12th) of the amount to be deposited in such Fund from Revenues, if any, recommended by the Consultant pursuant to the provisions of Section 607 of this Ordinance, to the credit of said Fund during such Fiscal Year; and
- (vi) in the discretion of the County, to the credit of the Rate Stabilization Fund such sums as shall be determined by the County; and
- (vii) to the credit of the Operating Expense Reserve Fund, the remaining balance to the extent required to make the amount on deposit in the Operating Expense Reserve Fund equal to at least



one sixth (1/6th) of the budgeted Operating Expenses for the then current Fiscal Year; and

- (viii) to the credit of the General Reserve Fund, the remaining balance, if any.

If the amount deposited in any month to the credit of any of the Accounts or Funds shall be less than the amount required to be deposited under the provisions of this Section, the requirement shall nevertheless be cumulative and the amount of any deficiency in any month shall be added to the amount otherwise required to be deposited in each subsequent month until such time as all such deficiencies have been made up.

Notwithstanding the foregoing application of Revenues, the County may by Series Resolution provide for the payment from Revenues of First Lien Obligations not constituting Bonds and for the funding of any reserve accounts established with respect to such First Lien Obligations on a parity with the payment of Bonds issued under this Ordinance and the funding of the Reserve Account, respectively, as set forth above.

**SECTION 504. Payment of Operating Expenses.** The Operating Expenses of the System shall be paid from the Revenue Fund. Such Operating Expenses shall be paid as the same become due and payable, shall be made in accordance with standard practices and procedures of the County established from time to time, and the Annual Budget.

**SECTION 505. Application of Monies in Bond Service Account.** (a) Except as provided in subsection (b), all Hedge Receipts shall be deposited by the County directly into the Bond Service Account and applied as provided in this Section. The Finance Director, on or before each interest or principal payment date, shall withdraw from the Bond Service Account, and deposit in trust with the Paying Agents the amounts required for paying the interest on the Bonds as such interest becomes due and payable and the principal of all Serial Bonds as such principal becomes due and payable. In addition, on or before each payment date for any Hedge Obligation, the Finance Director shall withdraw from the Bond Service Account the amount payable with respect to such Hedge Obligation and pay such amount to the applicable Counterparty. Such payments may be made by wire transfer or other electronic means or as may be provided with respect to any Book-Entry System.

(b) Hedge receipts constituting termination payments may, at the option of the County, be applied to acquire a replacement Hedge Agreement on terms similar to the expired or terminated Hedge Agreement and, in such event, only the Hedge Receipts in excess of the



cost of entering into such replacement Hedge Agreement shall be deposited into the Bond Service Account as required by subsection (a).

**SECTION 506. Application of Moneys in Redemption Account.** Moneys held for the credit of the Redemption Account shall be applied to the retirement of the Bonds as follows:

(a) Subject to the provisions of paragraph (c) of this Section, the Finance Director may purchase any Term Bonds secured hereby and then outstanding, whether or not such Term Bonds shall then be subject to redemption, on the most advantageous terms obtainable with reasonable diligence, such price not to exceed the principal of such Term Bonds plus the amount of the redemption premium, if any, which might on the next redemption date be paid to the Holders of such Term Bonds if such Term Bonds should be called for redemption on such date from moneys in the Debt Service Fund. The Finance Director shall pay the interest accrued on such Term Bonds to date of settlement from the Bond Service Account and the purchase price from the Redemption Account, but no such purchase shall be made by the Finance Director within the period of forty-five (45) days next preceding any Interest Payment Date on which such Term Bonds are subject to call for redemption under the provisions of this Ordinance, except from moneys other than moneys set aside or deposited for the redemption of Term Bonds.

(b) Subject to the provisions of Article III of this Ordinance and paragraph (c) of this Section, the Finance Director may call for redemption on each Interest Payment Date on which Term Bonds are subject to redemption that amount of such Term Bonds as, with the redemption premium, if any, will exhaust the moneys which will be held for the credit of the Redemption Account on said Interest Payment Date as nearly as may be practicable; provided, however, that not less than Fifty Thousand Dollars (\$50,000) principal amount of Term Bonds shall be called for redemption at any one time unless a lesser amount shall be required to satisfy the Amortization Requirement for any Bond Year. Such redemption shall be made pursuant to the provisions of Article III of this Ordinance and the applicable Series Resolution. The Finance Director, on or before the redemption date, shall withdraw from the Bond Service Account and the Redemption Account and set aside in separate accounts or deposit with the Paying Agent the respective amounts required for paying the interest on, and the principal and redemption premium of, the Term Bonds so called for redemption.



(c) Moneys held by the Finance Director in the Redemption Account shall be applied by the Finance Director each Bond Year to the retirement of Bonds then outstanding in the following order:

First: to the retirement of Term Bonds to the extent of the Amortization Requirement, if any, for such Bond Year for such Term Bonds, plus the applicable premium, if any, and any deficiency in any preceding Bond Years in the purchase or redemption of such Term Bonds under the provisions of this subdivision and, if the amount available in such Bond Year shall not be sufficient therefor, then in proportion to the Amortization Requirement, if any, for such Bond Year for the Term Bonds of each such Series then outstanding, plus the applicable premium, if any, and any such deficiency.

Second: Term and Serial Bonds may be retired by optional redemption or by purchase as provided in or by the Series Resolution under which such Bonds are issued.

Upon the retirement of any Bonds by purchase or redemption the Finance Director shall file with the Clerk and the Director a statement briefly describing such Bonds and setting forth the date of their purchase or redemption, the amount of the purchase price or the redemption price of such bonds and the amount paid as interest thereon. The expenses in connection with the purchase or redemption of any Bonds shall be paid by the Department from the Revenue Fund.

SECTION 507. Application of Moneys in Reserve Account. Each Series of Bonds shall be secured by the Reserve Account. The Reserve Account shall be funded with cash, investments or a Reserve Account Credit Facility or any combination of them. Upon the initial issuance of any Bonds, the County shall deposit into the Reserve Account the amount necessary to make the balance in the Reserve Account equal to the Reserve Account Requirement; provided, however, that if the County shall have obtained written evidence from each Rating Agency that a withdrawal or reduction in the rating(s) then assigned to the Outstanding Bond will not result, the County may fund not less than fifty percent (50%) of the Reserve Account Requirement applicable to any Series of Bonds on the date of issuance of the applicable Bonds, and the remaining Reserve Requirement may be funded in substantially equal monthly installments over a period not to exceed 36 months, all as same may be provided for in the applicable Series Resolution. Moneys held for the credit of the Reserve Account shall first be used for the purpose of paying the interest on and the principal of the Bonds whenever and to the extent that the available moneys held for such purpose for the credit of the Bond



Service Account and the General Reserve Fund shall be insufficient for such purpose, and thereafter for the purpose of making deposits to the credit of the Redemption Account of the Debt Service Fund pursuant to the requirements of clause (b) of Section 503 of this Ordinance whenever and to the extent that withdrawals from the Revenue Fund and the amount on deposit in the General Reserve Fund are insufficient for such purposes, and shall next be used to pay Payment Obligations with respect to the applicable Reserve Account Credit Facility, if any. Amounts withdrawn from the Reserve Account for the purpose of payment of debt service on any Bonds shall be replenished by substantially equal monthly deposits into the Reserve Account over a period not to exceed 60 months. If at any time the moneys held for the credit of the Reserve Account shall exceed the Reserve Account Requirement, such excess shall be withdrawn by the Finance Director and deposited to the credit of the Revenue Fund.

**SECTION 508. Application of Moneys in Renewal and Replacement Fund.**

Except as provided in this Section, or except in case of an emergency caused by some extraordinary occurrence, so characterized in a certificate signed by the Director and filed with the Finance Director, and an insufficiency of moneys held for the credit of the Revenue Fund to meet such emergency, moneys held for the credit of the Renewal and Replacement Fund shall be disbursed only for the purpose of paying the cost of unusual or extraordinary maintenance or repairs, the cost of renewals and replacements, the cost of acquiring, installing or replacing equipment and acquiring and constructing additions, extensions and improvements and engineering, legal and administrative expenses relating to the foregoing and the cost of providing a local share of moneys required to entitle the County to receive federal or state grants or participate in federal or state assistance programs related to the System.

If at any time the moneys held for the credit of the Bond Service Account, the General Reserve Fund and the Reserve Account shall be insufficient for the purpose of paying the interest on and the principal of the Bonds as such interest and principal become due and payable, then the Finance Director shall withdraw from any moneys held for the credit of the Renewal and Replacement Fund and deposit to the credit of the Bond Service Account an amount sufficient to make up any such deficiency. If at any time the moneys held for the credit of the General Reserve Fund and the Reserve Account shall be insufficient for making the deposits to the credit of the Redemption Account required by clause (b) of Section 506 of this Article, then the Finance Director shall withdraw from any moneys held for the credit of the Renewal and Replacement Fund and deposit to the credit of the Redemption Account an amount sufficient to make up any such deficiencies; provided, however, that no such transfer shall be made unless the moneys then held for the credit of the Bond Service Account are at least equal to the maximum requirement therefor under Section 505. For purposes of this Section, amounts in any subaccount of the Reserve Account which serves as security for particular Bonds, are available



for the payment of debt service on those particular Bonds and are not available for the purpose of paying debt service on any other Bonds.

**SECTION 509.**      Application of Moneys in Rate Stabilization Fund. Moneys held for the credit of the Rate Stabilization Fund may only be used for transfer to the credit of the Revenue Fund at the time and in the amounts determined by the County; provided that such moneys shall be deposited to the credit of the Revenue Fund to the extent necessary to avoid a deficiency in the required deposits and payments.

**SECTION 510.**      Application of Moneys in the General Reserve Fund. Moneys held for the credit of the General Reserve Fund at the election of the County may be applied to one or more of the following purposes:

- (a) to make up deficiencies in any of the Funds and Accounts created by this Ordinance including, but not limited to, any deficiencies in the Revenue Fund required for the payment of Operating Expenses;
- (b) to pay the principal of and the interest on any Subordinate Obligations issued or incurred by the County;
- (c) to pay the Cost of Improvements;
- (d) to purchase or redeem Bonds;
- (e) to pay the Cost of any item qualifying as an authorized expenditure from the Renewal and Replacement Fund;
- (f) to pay principal, interest and redemption premium, if any, on any general obligation bonds issued by the County for the purposes of the System, if such amount is set forth in the Annual Budget; and
- (g) any other lawful purpose of the System, including, but not limited to, the payment of rebate, Credit Facility Charges, Hedge Charges and Payment Obligations and to make contributions to other funds of the County in the amounts to be determined by the Board, to the extent legally permitted.

Provided, however, that in the event of any deficiencies in any Funds or Account created by this Ordinance, the moneys in the General Reserve Fund shall be applied to make up all such



deficiencies prior to applying any moneys in the Reserve Account or the Renewal and Replacement Fund for such purpose.

**SECTION 511.**     Investment of Moneys in Funds and Accounts. All moneys in the Funds and Accounts shall be invested and reinvested in Investment Obligations. Investment Obligations allocated to any Fund or Account shall mature not later than the respective dates, as estimated by the Department, that moneys held for the credit of such Fund or Account will be needed. In the case of the Reserve Account, Investment Obligations shall mature (or be subject to mandatory purchase at the option of the Holder) not later than seven (7) years, unless the Investment Obligation is of such a nature that it can be drawn upon or redeemed at par, in which event such Investment Obligation may mature not later than the final maturity on Bonds secured by the Reserve Account. Investment earnings may be retained in such account to the extent necessary to maintain the Reserve Account Requirement, or may be transferred to the Construction Fund, if any, if necessary or desirable in connection with any Series as determined by the County at or prior to the issuance of such Series. Except as otherwise provided in this Ordinance with respect to any particular moneys, and except to the extent necessary to be pay any Rebate Amount, all income received on Investment Obligations shall upon receipt be deposited into the Revenue Fund.

**SECTION 512.**     Security for Deposits. Any and all moneys deposited under the provisions of this Ordinance shall, to the extent provided in this Ordinance, be trust funds under the terms of this Ordinance and shall not be subject to any lien or attachment by any creditor of the County or the Department other than as provided in this Ordinance. Such moneys shall be held in trust and applied in accordance with the provisions of this Ordinance.

All money deposited in the Funds and Accounts in excess of the amount guaranteed by the Federal Deposit Insurance Corporation or other federal agency shall be continuously secured for the benefit of the County and the Holders in such manner as may then be required or permitted by applicable State or federal laws and regulations regarding the security for, or granting a preference in the case of, the deposit of trust or public funds; provided, however, that it shall not be necessary to give security for any money that shall be represented by obligations purchased under the provisions of this Ordinance as an investment of such money unless otherwise required by applicable law.



## ARTICLE VI

### Covenants

**SECTION 601. Power to Issue Bonds and Pledge Revenues.** The County is duly authorized under all applicable laws to create and issue the Bonds and to pledge the Pledged Revenues in the manner and to the extent provided in this Ordinance. Except to the extent otherwise provided herein, the Pledged Revenues are and will be free and clear of any pledge, lien, charge or encumbrance prior to, or of equal rank with, the security interest, pledge and assignment created by this Ordinance, and all action on the part of the County to that end has been and will be duly and validly taken. The County covenants that it will not issue, undertake or incur any indebtedness of any nature secured by a lien on the Pledged Revenues prior or superior to the lien on the Pledged Revenues created under this Ordinance. The Bonds and the provisions of this Ordinance are and will be the valid and legally enforceable obligations of the County in accordance with their terms and the terms of this Ordinance.

**SECTION 602. Rate Covenant.** The County further covenants that it will fix, charge and collect rates and charges for the use of the services and facilities furnished by the System and that from time to time, and as often as it shall be necessary, it will adjust such rates and charges by increasing or decreasing the same or any selected categories of rates and charges, so as to provide Net Operating Revenues in each Fiscal Year, commencing with the Fiscal Year beginning October 1, 1996, equal to (a) one hundred twenty percent (120%) of the Principal and Interest Requirements on the Bonds for such Fiscal Year, plus (b) one hundred percent (100%) of the required deposits into the Reserve Account (less any portion thereof to be deposited from proceeds of Bonds) in such Fiscal Year. For purposes of this Section 602, Net Operating Revenues in each Fiscal Year may be adjusted by adding amounts on deposit in the Rate Stabilization Fund as of the end of the immediately preceding Fiscal Year in an amount not to exceed twenty percent (20%) of Net Operating Revenues.

**SECTION 603. Annual Budget.** The County covenants that on or before the first day of each Fiscal Year it will adopt a budget of Operating Expenses and Capital Expenditures for such Fiscal Year (herein sometimes called the "Annual Budget"). Copies of the Annual Budget shall be filed with the Clerk and the Finance Director and mailed by the County to those Providers, Counterparties and Bondholders who shall have filed a request for the same and who have submitted their names and addresses with the Clerk for such purpose.

If for any reason the Annual Budget shall not have been adopted before the first day of any Fiscal Year, the Annual Budget for the preceding Fiscal Year, until the adoption of



the Annual Budget for such Fiscal Year shall be deemed to be in force and shall be treated as the Annual Budget until the current Annual Budget is adopted under the provisions of this Article.

The Board may at any time adopt an amended or supplemental Annual Budget for the remainder of the then current Fiscal Year and the Annual Budget so amended or supplemented shall be treated as the Annual Budget under the provisions of this Article. Copies of any such amendment or supplemental Annual Budget shall be filed with the Clerk and the Finance Director and mailed by the County to those Providers, Counterparties and Bondholders who shall have filed their names and addresses with the Clerk for such purpose.

**SECTION 604. Payment of Principal, Interest and Premiums.** The County covenants that it will promptly pay the principal of and the interest on each and every Bond issued under the provisions of this Ordinance at the places, on the dates and in the manner specified in this Ordinance and in said Bonds and any premium required for the retirement of said Bonds by purchase or redemption according to their true intent and meaning. Bonds issued under the provisions of this Ordinance and Hedge Agreements shall not be deemed to constitute a debt of the County or a pledge of the faith and credit of the County but such Bonds shall be payable solely from the Pledged Revenues. The issuance of the Bonds shall not directly or indirectly or contingently obligate the County to levy or to pledge any form of taxation whatever, nor shall any such Bonds constitute a charge, lien or encumbrance, legal or equitable, upon any property of the County.

**SECTION 605. Construction of Improvements; Operation as Part of the System.** The County covenants that it will construct any Improvements for the construction of which Bonds shall be issued under the provisions of this Ordinance, or for which moneys repayable from the proceeds of Bonds shall have been or are to be expended, in accordance with plans approved by the Consultant and that upon the completion of such Improvements it will operate and maintain the same as a part of the System.

**SECTION 606. Covenant as to Maintenance, Repair and Operation.** The County covenants that it will establish and enforce reasonable rules and regulations governing the use of the System and the operations, that it will operate the System in an efficient and economical manner, that it will at all times maintain the System in good repair and in sound operating condition and will make all necessary repairs, renewals and replacements, and that it will comply with all valid acts, rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to the System.



**SECTION 607.**     Employment of Consultant. The County covenants and agrees that so long as any Bonds are outstanding under this Ordinance, it will employ a Consultant whose duty shall be to prepare and file with the County on or before the 1st day of July in each year a report setting forth their recommendations as to any necessary or advisable revisions of rates and charges and such other advice and recommendations as they may deem desirable. The Consultant shall include in such report its recommendations as to the amount that should be deposited monthly during the next Fiscal Year to the credit of the Renewal and Replacement Fund for the purposes set forth in Section 508 of this Ordinance.

Anything in this Ordinance to the contrary notwithstanding, if the County shall comply with all recommendations of the Consultant in respect of rates and charges, it will not constitute an Event of Default under this Ordinance if the total amounts deposited to the credit of the Bond Service Account, the Redemption Account or the Reserve Account, as the case may be, in any Fiscal Year, shall be less than the amounts required in Section 602; provided, however, that in any Fiscal Year the County shall have Net Operating Revenues of at least 100% of Principal and Interest Requirements and 100% of all required deposits to the Reserve Account for such Fiscal Year.

The County shall employ a Consultant to make physical inspection of the System facilities annually, to include the County-owned resource recovery facility, and to render a detailed written report as to the state of condition and repair of such facilities, including therein recommendations as to repairs, replacements and improvements required for each facility of the System.

The County further covenants that the Consultant shall at all times have free access to all properties of the System for the purposes of inspection and examination, and that the County's books, records and accounts relating to the System may be examined by the Consultant at all reasonable times.

**SECTION 608.**     Employment of Accountant. For the purpose of performing and carrying out the duties imposed on the Accountant by this Ordinance, the County will employ an accountant of suitable experience and responsibility.

**SECTION 609.**     Insurance. The County covenants that it will maintain a practical insurance program, with reasonable terms, conditions, provisions and costs, which the County determines will afford adequate protection against loss, caused by complete or partial damage to or destruction of the System and also such comprehensive public liability insurance on the System for bodily injury and property damage.



All such insurance policies shall be carried by a responsible insurance company or companies satisfactory to the County Manager and authorized and qualified under the laws of the State of Florida to assume the risk of any loss to the System.

The proceeds of all such insurance covering damage to or destruction of the System shall be deposited with the Finance Director and shall be available for and, to the extent necessary, shall be applied to the repair, replacement or reconstruction of the damaged or destroyed property, and shall be paid out in the manner hereinabove provided for payments from the Construction Fund. If such proceeds are more than sufficient for such purpose, the balance remaining shall be deposited to the credit of the General Reserve Fund. If such proceeds shall be insufficient for such purpose, the deficiency may be supplied out of any moneys in the General Reserve Fund or the Renewal and Replacement Fund. The proceeds of all insurance covering loss of Operating Revenues shall be deposited to the credit of the Revenue Fund.

Notwithstanding the foregoing provisions of this Section, the County may institute and maintain self-insurance programs with regard to such risks as shall be consistent with the recommendations of the Dade County Insurance Department.

**SECTION 610. Records, Accounts and Audits.** The County covenants that it will keep the accounts of the System separate from all other accounts of the County or of any of its departments, and that it will keep accurate records and accounts of all items of cost and of all expenditures relating to the System and of the Operating Revenues collected and the application of such Operating Revenues.

The County further covenants that, at the end of each Fiscal Year, it will prepare financial statements of the System in accordance with GAAP and that it will cause an audit of the financial statements to be made by the Accountant. Such audit will be conducted in accordance with generally accepted auditing standards. The audit will be completed within sixty (60) days after the completed financial statements are submitted to the Accountant and such financial statements shall be submitted to the Accountant within sixty (60) days after the end of the Fiscal Year. The County will also cause an annual report of operations of the System to be prepared, such annual report to cover the matters usually contained in annual reports for solid waste systems. Within a reasonable time thereafter reports of each such audit and copies of each annual report shall be filed with the Finance Director and the Director. The scope of the Accountant's audit will be sufficient to enable them to express an opinion that the County has complied with the conditions and covenants of this Ordinance or to the extent that such audit causes them to be of the opinion that compliance has not been met, to report events of non-compliance which came to their attention as a result of their audit which was designed for



the purpose of testing such compliance. The cost of such audits shall be treated as a part of the cost of operation.

The County further covenants that it will cause any additional reports or audits relating to the System to be made as required by law.

For the purposes of this Ordinance each Fund and Account shall be a series of accounts within the book of accounts of the System and shall connote a segregation of accounts, which will support special purpose disclosure reports, not to be construed as a separate set of books of accounts.

SECTION 611. Waste Commitment Covenant. In order to cause Committed Waste to continue to be delivered to the System, the County shall diligently enforce or cause the enforcement of those provisions of all agreements, orders, directives and ordinances which require delivery of such waste to the System. The County will develop and maintain any necessary enforcement programs and will not agree to or approve any modifications of such agreements, orders, directives or ordinances which would adversely affect the receipt of Operating Revenues. Such programs may include County permit suspension or revocation, vehicle surveillance, financial undertakings, civil penalties (to the extent permitted by applicable law), the seeking of injunctive relief, and other appropriate enforcement practices and remedies.

SECTION 612. Competitive Facilities. To the extent permitted by law, the County shall not permit or consent to the construction, acquisition or operation of any private solid waste disposal facilities within the County that may compete or tend to compete with the System unless the Department shall determine, in a written certificate of the Director approved by the Consultant and filed with the Finance Director, that such facilities will not adversely affect Operating Revenues and the Board shall have adopted a resolution approving the construction, acquisition and operation of such facilities.

SECTION 613. Provision of Disposal Service. The County shall provide or cause the provision of service for the disposal of solid waste generated within the geographical boundaries of the County or otherwise delivered to the System. Except as permitted by Section 612 of this Ordinance, the County shall provide such service through the System, using such technologies and upon such terms and conditions as the County determines, consistent with prudent solid waste management practices and in a manner which will not impair the ability of the County to comply with Sections 602 and 611 of this Ordinance.



SECTION 614. Supervisory Personnel. The Director shall serve as the manager of the System. The County shall require all employees who may have possession of money of the County derived from the operation of the System to be covered by a fidelity bond, written by a responsible indemnity company in amounts fully adequate to protect the County from loss.

SECTION 615. No Free Service. The County will not render or cause to be rendered any free services of any nature by the facilities of the System nor will any preferential rates be established for users of the same class; the County including its departments, agencies and instrumentalities in the service area, shall avail itself of the facilities of the System, and the same rates, fees and charges applicable to other customers receiving like services under similar circumstances shall be charged to the County and any such department, agency or instrumentality. Such charges will be paid as they accrue, and the County shall transfer from its appropriate funds sufficient sums to pay such charges. The moneys so received shall be deemed to be Operating Revenues and shall be deposited and accounted for in the same manner as other Revenues.

SECTION 616. Enforcement of Collections. The County will diligently enforce and collect the rates, fees and other charges for the services of the System; will take all steps, actions and proceedings for the enforcement and collection of such rates, fees and charges that become delinquent, to the full extent permitted or authorized by law; and will maintain accurate records with respect thereto. All such rates, fees, charges and revenues herein pledged, as collected, shall be held in trust to be applied as provided in this Ordinance and not otherwise.

SECTION 617. Subordinate Obligations; Other Indebtedness. Nothing contained in this Ordinance shall limit the right of the County to incur (i) Subordinate Obligations or (ii) other indebtedness or obligations which are not secured by the Pledged Revenues.

SECTION 618. Municipal Incorporation. The County covenants to comply with the provisions of Ordinance No. 96-30, enacted by the Board on February 6, 1996, as the same may be amended from time to time, so long as any Bonds are Outstanding; provided, however, that the County retains the right to amend said ordinance from time to time in such manner as will not have a material adverse effect upon the Holders of the Bonds.

SECTION 619. Disposition of Assets. Except for the sale of parts, vehicles and landfill equipment being replaced in the ordinary course of business in accordance with



County policy and procedure, the County will not sell or otherwise dispose of any portion or component of the System, except under the following conditions:

- (1) If the original cost of the property in question, as determined by the Consultant, together with the original cost of all property previously sold or disposed of in such Fiscal Year, does not exceed two percent (2%) of the property, plant and equipment of the System as shown on the County's most recent audited financial statements, then such property may be sold, if the Board (by affirmative vote at a meeting duly called and held), shall find that such property is no longer necessary, useful or profitable in the operations of the System, and the Board authorizes the sale of such property. The proceeds received from the sale of such property shall be deposited in the Renewal and Replacement Fund.
- (2) If the original cost of the property in question, together with the original cost of all property previously sold or disposed of in such Fiscal Year, exceeds two percent (2%) of the property, plant and equipment of the System as shown on the County's most recent audited financial statements, then such property may be sold if a Consultant shall first find in writing delivered to the Department that the sale or disposition of such property will not materially and adversely affect the Net Operating Revenues of the System in any of the five (5) Fiscal Years following the Fiscal Year in which such property is sold, and if the Board (by affirmative vote at a meeting duly called and held) shall find that such property is no longer necessary, useful or profitable in the operations of the System, and the Board authorizes the sale of such property. The proceeds derived from the sale of such property shall be deposited first into the Renewal and Replacement Fund in an amount which the Consultant shall certify is necessary to replenish the fund to the level recommended by the Consultant for such Fiscal Year, and the remainder of the proceeds shall be used to either (a) pay the cost of acquisitions, extensions or improvements to the System, or (b) retire Bonds, if callable, or to defease Bonds, to the maximum extent possible, pursuant to Section 901.



## ARTICLE VII

### Events of Default; Remedies

SECTION 701. Events of Default. Each of the following events is hereby declared an "Event of Default":

(a) Payment of the principal of or any premium on any Bond shall not be made when the same shall become due and payable, either at maturity or on required payment dates by proceedings for redemption, purchase or otherwise; or

(b) Payment of any installment of interest on any Bond shall not be made when the same shall become due and payable; or

(c) The County shall fail to cause any Bond to be purchased at the time required by the Series Resolution under which such Bond was issued; or

(d) The County shall admit that it has been rendered incapable of fulfilling its obligations hereunder or under any Series Resolution to such an extent that the payment of or security for any of the Bonds will be materially adversely affected, and that such condition has continued unremedied for a period of thirty (30) days after the County first became aware of such condition; or

(e) An order or decree shall be entered, with the consent or acquiescence of the County, appointing a receiver or receivers of the County or of any of the Pledged Revenues, or any part thereof or the filing of a petition by the County for relief under federal bankruptcy laws or any other applicable law or statute of the United States of America or the State, which shall not be dismissed, vacated or discharged within thirty (30) days after its filing; or

(f) Any proceedings shall be instituted, with the consent or acquiescence of the County, for the purpose of effecting a composition between the County and its creditors or for the purpose of adjusting the claims of such creditors, pursuant to any federal or state statutes now or hereafter enacted, if the claims of such creditors are under any circumstances payable from the Pledged Revenues; or

(g) The entry of a final judgment or judgments for the payment of money against the County which subjects the Pledged Revenues to a lien for the payment of such judgment in contravention of the provisions of this Ordinance or of any Series Resolution for



which there does not exist adequate insurance, reserves or appropriate surety or indemnity bonds for the timely payment of such judgment, and any such judgment shall not be discharged within ninety (90) days from its entry or an appeal shall not be taken which shall stay the execution of or levy under such judgment; or

(h) Any Event of Default under any Series Resolution which, by the terms of such Series Resolution, shall be deemed an Event of Default under this Ordinance; or

(i) The County shall default in the due and punctual performance of any other of the covenants, conditions, agreements and provisions contained in any of the Bonds, in this Ordinance or in any Series Resolution on the part of the County to be performed (other than any covenants with respect to continuing disclosure required pursuant to Rule 15c2-12 (or any successor provisions) promulgated by the Securities and Exchange Commission, non-compliance with respect to which shall not be an Event of Default under this Ordinance), and such default shall continue for thirty (30) days after written notice specifying such default and requiring the same to be remedied shall have been given by the registered owners of not less than ten percent (10%) in aggregate principal amount (and Accreted Value, if applicable) of the one or more series of Bonds then Outstanding, with respect to which such default has occurred; or

(j) The County shall be in default on any payments which are due under any Credit Agreement relating to a Credit Facility or Reserve Account Credit Facility securing any Bonds and the Provider which issued such Credit Facility or Reserve Account Credit Facility notifies the Finance Director in writing by registered mail that it elects to treat such default as an Event of Default; or

Notwithstanding the foregoing, but subject to limitations in any Series Resolution or Credit Agreement, with respect to the events described in clauses (d), (h) and (i), above, the County shall not be deemed in default if such default can be cured within a reasonable period of time and if the County in good faith institutes appropriate curative action and diligently pursues such action until the default has been corrected.

SECTION 702. Notice of Default. If any Event of Default shall occur, the Finance Director shall give, or cause to be given, within thirty (30) days after the Finance Director has knowledge of the Event of Default, unless such Event of Default shall have been cured, written notice of the Event of Default, by first class mail to the Holders of all Bonds and by registered or certified mail, to each Provider and Counterparty.



**SECTION 703. Remedies.** Subject to Section 707, the Holders of not less than ten percent (10%) of the aggregate principal amount of the Bonds Outstanding may by suit, action, mandamus or other proceedings in any court of competent jurisdiction, protect and enforce any and all rights, including the right to the appointment of a receiver, existing under the laws of the State of Florida, or granted and contained in this Ordinance, and may enforce and compel the performance of all duties required by this Ordinance or by any applicable statutes to be performed by the County or by any of its officers. Nothing in this Ordinance, however, shall be construed to grant to any Holder of such Bonds any lien on any property of or within the corporate boundaries of the County. No Holder of Bonds, however, shall have any right in any manner whatever to affect, disturb or prejudice the security of this Ordinance or to enforce any right except in the manner provided in this Ordinance, and all proceedings at law or in equity shall be instituted and maintained for the benefit of all Holders of Bonds.

Nothing in this Ordinance shall be construed to preclude any Counterparty from exercising any and all rights and remedies, including the right to the appointment of a receiver, available to it under the laws of the State of Florida as a pledgee to enforce the obligations of the County under the applicable Hedge Agreement.

If any payments of Principal and Interest Requirements are made by a Credit Facility Provider with respect to Bonds which have not been defeased in accordance with the provisions of Section 901, the lien upon and pledge of the money on deposit from time to time in the Funds and Accounts and all covenants and other obligations of the Issuer to the Holders of such Bonds shall continue to exist and the Credit Facility Provider shall be subrogated to the rights of the Holders of such Bonds with respect to the Principal and Interest Requirements paid or insured by such Credit Facility Provider.

**SECTION 704. Pro Rata Application of Funds.** If at any time the available moneys in the Debt Service Fund shall not be sufficient to pay the principal of or the interest on the Bonds and Hedge Obligations as the same become due and payable, such moneys together with any moneys then available or thereafter becoming available for such purpose, whether through the exercise of the remedies provided for in this Article or otherwise, shall be applied as follows:

First: to the payment of all installments of interest then due and payable on the Bonds and all Hedge Obligations (other than termination payments), in the order in which such amounts become due and payable, and, if the amount available shall not be sufficient to make payment in full, then to the payment ratably, according to the amounts due, to the persons entitled to such payment,



without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds or applicable Hedge Agreement;

Second: to the payment of the unpaid principal of any of the Bonds and Hedge Obligations which are termination payments that have become due (other than Bonds called for redemption for the payment of which sufficient moneys are held pursuant to the provisions of this Ordinance), in the order of their due dates, and, if the amount available shall not be sufficient to pay in full the principal of Bonds due on any particular date, then to the payment of such principal, ratably according to the amount of such principal due on such date, to the persons entitled to such payment without any discrimination or preference except as to any difference in the respective rates of interest specified in the Bonds; and

Third: to the payment of the interest on and the principal of the Bonds, Hedge Obligations and Hedge Charges, and to the purchase and retirement of Bonds and to the redemption of Bonds, all in accordance with the provisions of Article V of this Ordinance.

For purposes of the foregoing provisions of this Section, if any principal or interest on any particular Bonds is paid with funds advanced under any Credit Facility, the Credit Facility Provider shall become subrogated to the Holder's right to payment from the County of such principal or interest and shall be entitled to receive payment from the County under the foregoing provisions.

Whenever moneys are to be applied by the County pursuant to the provisions of this Section, such moneys shall be applied by the County at such times, and from time to time, as the Finance Director in his sole direction shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future; the deposit of such moneys with the Paying Agents, or otherwise setting aside such moneys, in trust for the proper purpose, shall constitute proper application by the County; and the County shall incur no liability whatsoever to any Bondholder or to any other person for any delay in applying any such funds, so long as the County acts with reasonable diligence, having due regard to the circumstances, and ultimately applies the same in accordance with such provisions of this Ordinance as may be applicable at the time of application. Whenever the Finance Director shall exercise such discretion in applying such funds, he shall fix the date upon which such application is to be made and upon such date interest on the amounts of principal to be paid on such date shall cease to accrue. The Finance Director shall give such notice as he may deem appropriate of the fixing of any such date, and



shall not be required to make payment to the Holder of any Bond until such Bond shall be surrendered to him for appropriate endorsement.

The pro-rata application of moneys pursuant to this Section 704 shall be adjusted with respect to Variable Rate Bonds and any Bonds bearing interest payable other than semiannually so as to ensure that each person entitled to receive payment shall receive as nearly as practicable the same proportion of the total amount due to such person.

Notwithstanding the foregoing, moneys in each subaccount of the Reserve Account securing particular Bonds shall be used only to pay debt service on such particular Bonds (or to pay Payment Obligations to any Credit Facility Provider which has advanced moneys under a Credit Facility securing such Bonds) and moneys in any other subaccount in the Reserve Account shall not be used to pay debt service on said Bonds or to pay such Payment Obligations.

**SECTION 705.**      Effect of Discontinuance of Proceedings. In case any proceeding taken by any Bondholder or Credit Facility Provider on account of any default shall have been discontinued or abandoned for any reason, then and in every such case the County and the Bondholder or Credit Facility Provider shall be restored to their former positions and rights hereunder, respectively, and all rights and remedies of the Bondholders and Credit Facility Providers shall continue as though no such proceeding had been taken.

**SECTION 706.**      Restriction on Individual Bondholder Actions. No Holder of any of the Bonds nor any Counterparty shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the security of this Ordinance or to enforce any right under this Ordinance except in the manner provided in this Ordinance, and all proceedings at law or in equity shall be instituted, had and maintained for the benefit of all Holders of such Bonds, and all Credit Facility Providers, as their respective interests may appear.

Nothing in this Ordinance shall be construed to preclude any Counterparty from exercising any and all rights and remedies, including the right to the appointment of a receiver, available to it under the laws of the State of Florida as a pledgee to enforce the obligations of the County under the applicable Hedge Agreement.

**SECTION 707.**      Right to Enforce Payment of Bonds. Nothing in this Article shall affect or impair the right of any Holder of a Bond to enforce the payment of the principal of and interest on his/her Bond, or the obligation of the County to pay the principal of and interest on each Bond to the Holder thereof at the time and place stated in said Bond or the right

of any Counterparty to enforce payment of amounts due under a Hedge Agreement or the obligation of the County to make such payments in accordance with such Hedge Agreement.



## ARTICLE VIII

### Supplemental Ordinances

#### SECTION 801. Supplemental Ordinance Without Bondholders' Consent.

The Board, from time to time and at any time may enact such supplemental ordinances as shall not be incompatible with the terms and provisions of this Ordinance (which supplemental ordinance shall thereafter form a part of this Ordinance), in order to:

- (a) cure any ambiguity or formal defect or omission or to correct any inconsistent provisions in this Ordinance or in any supplemental ordinance or Series Resolution, or
- (b) grant to or confer upon the Bondholders any additional rights, remedies, powers, authority or security that may lawfully be granted to or conferred upon the Bondholders, or
- (c) add to the conditions, limitations and restrictions on the issuance of Bonds or the entering into of Hedge Agreements under the provisions of this Ordinance other conditions, limitations and restrictions to be observed, or
- (d) add to the covenants and agreements of the County in this Ordinance other covenants and agreements to be observed by the County or to surrender any right or power in this Ordinance reserved to or conferred upon the County, or
- (e) to make other changes or modifications to the provisions of this Ordinance which are not adverse to the interests of the Bondholders, any Credit provider or any Counterparty.

#### SECTION 802. Supplemental Ordinance With Bondholders' Consent.

Subject to the terms and provisions contained in this Section, and not otherwise, the Holders of not less than fifty-one percent (51%) in aggregate principal amount of the Bonds then outstanding shall have the right, from time to time, anything contained in this Ordinance to the contrary notwithstanding, to consent to and approve the enactment of such supplemental ordinance or supplemental ordinances as shall be deemed necessary or desirable by the County for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any



of the terms or provisions contained in this Ordinance or in any supplemental ordinance; provided, however, that nothing contained in this Ordinance shall permit, or be construed as permitting, (a) an extension of the maturity of the principal of or the interest on any Bonds, or (b) a reduction in the principal amount of any Bonds or the redemption premium or the rate of interest, or (c) the creation of a lien upon or a pledge of Revenues other than a lien and pledge created by this Ordinance, or (d) a preference or priority of any Bond or Bonds over any other Bond or Bonds, or (e) a reduction in the aggregate principal amount of the Bonds required for consent to such supplemental ordinance, or (f) a change in any State Loan which is adverse to the interests of the Bondholders. Nothing in this Ordinance contained, however, shall be construed as making necessary the approval by Bondholders of the adoption of any supplemental ordinance as authorized in Section 801 of this Article.

If the Holders (and Providers who are entitled to act in lieu of Holders) of not less than fifty-one percent (51 %) in aggregate principal amount of the Bonds outstanding at the time of the enactment of such supplemental ordinance shall have consented to and approved the enactment as provided in this Ordinance, no Holder of any Bond or Credit Facility Provider shall have any right to object to the enactment of such supplemental ordinance, or to object to any of its terms and provisions or its operation, or in any manner to question the propriety of its adoption, or to enjoin or restrain the Board from adopting the same or from taking any action pursuant to its provisions.

Upon the enactment of any supplemental ordinance pursuant to the provisions of this Section, this Ordinance shall be and be deemed to be modified and amended in accordance therewith, and the respective rights, duties and obligations under this Ordinance of the County and all Holders of Bonds then outstanding shall thereafter be determined, exercised and enforced in all respects under the provisions of this Ordinance as so modified and amended.

**SECTION 803. Rights of Credit Facility Provider.** In the event that a Credit Facility is in full force and effect as to a Series of Bonds and the Credit Facility Provider is not insolvent and no default of the Credit Facility exists on the part of the Credit Facility Provider, then the said Credit Facility Provider, in place of the Holders of that Series of Bonds, shall have the power and authority to give any consents and exercise any and all other rights which the Holders of that Series would otherwise have the power and authority to make, give or exercise, including, but not limited to, the exercise of remedies provided in Article VII, and the giving of consents to supplemental ordinances when required by Section 802 above, and such consent shall be deemed to constitute the consent of the Holders of all of those Bonds which are secured by such Credit Facility.



**SECTION 804. Supplemental Ordinances Part of Ordinance.** Any supplemental ordinance enacted in accordance with the provisions of this Article and approved as to legality by the County Attorney shall form a part of this Ordinance, and all of the terms and conditions contained in any such supplemental ordinance as to any provision authorized to be contained in such supplemental ordinance shall be and shall be deemed to be part of the terms and conditions of this Ordinance for any and all purposes. In case of the enactment and approval of any supplemental ordinance, express reference may be made in the text of any Bonds, if deemed necessary or desirable by the County.

**SECTION 805. Notice of Supplemental Ordinances.** The County shall give to the Rating Agencies advance notice of the proposed enactment of any supplemental ordinance, which notice shall include the substantial form of such supplemental ordinance.



## ARTICLE IX

### Defeasance

**SECTION 901. Cessation of Interest of Bondholders.** If, when any Bonds shall have become due and payable in accordance with their terms or shall have been called for redemption or instructions shall have been given either to call the Bonds for redemption or to pay the Bonds at their respective maturities and mandatory redemption dates or any combination of such payment and redemption, and, if applicable, provisions for redemption shall have been made by the County with an appropriate escrow agent, the whole amount of the principal and the interest and premium, if any, so payable upon such Bonds then Outstanding shall be paid or sufficient moneys or Defeasance Obligations shall be held by such escrow agent for such purpose, and provision shall also be made for paying all other sums payable by the County on said Bonds, then and in that case the right, title and interest of the Holders of said Bonds in this Ordinance and any applicable Series Resolution shall cease and become void; otherwise this Ordinance shall be, continue and remain in full force and effect; provided, however, that in the event Defeasance Obligations shall be deposited with and held by an escrow agent as above provided, in addition to the requirements set forth in Article III of the Ordinance with respect to any Bonds to be redeemed, the Finance Director, within thirty (30) days after such Defeasance Obligations shall have been deposited with such escrow agent, shall cause a notice to be mailed to all registered owners of such Bonds or published once in a daily newspaper of general circulation, or a financial journal, published in the Borough of Manhattan, City and State of New York, setting forth that such deposit of Defeasance Obligations has been made for the benefit of said Bonds and, to the extent said Bonds are to be redeemed prior to maturity, the date designated for the redemption of the Bonds. Further, when all amounts due under any Hedge Agreement and any Credit Facility shall have been paid or provided for (in the manner permitted under such Hedge Agreement or Credit Facility), then and only in that case the right, title and interest of the Counterparty or the Credit Facility Provider in this Ordinance shall cease and become void.



## ARTICLE X

### Miscellaneous Provisions

SECTION 1001. Inconsistent Ordinances. All ordinances, which are inconsistent with any of the provisions of this Ordinance are hereby declared to be inapplicable to the provisions of this Ordinance.

SECTION 1002. Further Acts. The officers and agents of the County are hereby authorized and directed to do all acts and things required of them by the Bonds and this Ordinance, for the full, punctual and complete performance of all of the terms, covenants, provisions and agreements contained in the Bonds and this Ordinance.

SECTION 1003. Headings Not Part of Ordinance. Any headings preceding the texts of the several Articles and Sections of this Ordinance and any table of contents, marginal notes or footnotes appended to copies of this Ordinance shall be solely for convenience of reference, and shall not constitute a part of this Ordinance, nor shall they affect its meaning, construction or effect.

SECTION 1004. No Third Party Beneficiaries. Except as otherwise expressly provided in this Ordinance, nothing in this Ordinance, expressed or implied, is intended or shall be construed to confer upon any person, firm or corporation, other than the County, any applicable Provider, any Counterparty and the Holders of the Bonds, any right, remedy or claim, legal or equitable, under or by reason of this Ordinance or any of its provisions, this Ordinance and all its provisions being intended to be and being for the sole and exclusive benefit of the County, each Provider, each Counterparty and the Holders from time to time of the Bonds.

SECTION 1005. Severability. In case any one or more of the provisions of this Ordinance or of any Bonds shall for any reason be held to be illegal or invalid, such illegality or invalidity shall not affect any other provision of this Ordinance or of the Bonds, but this Ordinance and the Bonds shall be construed and enforced as if such illegal or invalid provision had not been contained in this Ordinance.

SECTION 1006. Application of Florida Law. The Bonds are issued and this Ordinance is enacted with the intent that the laws of the State of Florida shall govern their construction.

SECTION 1007. Notice to Rating Agencies. In the event that the County transfers the operation of its resource recovery facility to a transferee entity, the County shall provide written notification to the Rating Agencies within thirty (30) days after the effective date of the transfer. Prior to the County entering into a Hedge Agreement with respect to the Bonds, the County shall provide written notification to the Rating Agencies.



SECTION 1008. Effective Date. This Ordinance shall take effect ten (10) days after its enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by the Board.

SECTION 1009. This ordinance does not contain a sunset provision.

PASSED AND ENACTED: NOV 12 1996

Approved by County Attorney as  
to form and legal sufficiency:

Prepared by:





Mr. Nicholas Ciano  
Chief of Resilience  
Technical Services and Environmental Affairs  
Miami-Dade County Department of Solid Waste Management  
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Date: October 4, 2024

Our Ref: 30189215

Subject: **Composting Facilities**

Dear Mr. Ciano,

Per your request, this letter provides the Bond Engineer's position regarding the operation of composting facilities in Miami-Dade County. The State of Florida regulations for composting facilities are included in Chapter 62-709, Florida Administrative Code (FAC), which defines a composting facility as *"a solid waste management facility where solid waste is processed using composting technology. Processing may include physical turning, windrowing, aeration or other mechanical handling of organic matter"*. Chapter 62-709, FAC divides composting facilities into three categories (exempt, registration, and permitted) depending on the type and quantity of materials processed.

The Miami-Dade County Code of Ordinances (Code) appears to be more restrictive than the State regulations regarding compost facilities. A Resource Recovery and Management Facility (RRMF) Solid Waste Permit is required under Chapter 24-18, Miami-Dade County Code, for facilities whose purpose is the disposal, recycling, incineration, processing, storage, transfer or treatment of solid or liquid waste. Chapter 15, Section 15-1 defines solid waste as "Garbage, trash, litter, yard trash, hazardous waste, construction and demolition debris, industrial waste, or other discarded material, including solid or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations". This definition appears to include all materials that would be processed in a composting facility. However, we understand that the Miami-Dade Department of Regulatory and Economic Resources (DER) does not require a RRMF permit for composting facilities that meet the exemption requirements in Chapter 62-709.305, FAC.

Exempt facilities are generally limited to farm usage rates for compost (about 20 tons per acre maximum) or having no more than 100 cubic yards on site at any one time of solid waste to be composted or undergoing the composting process and finished compost being stored for use. Due to the limited throughput of exempt facilities, we are of the opinion that they represent a de minimus effect on the Department's potential tonnages and revenues.

The other two categories of compost facilities (registration and permitted) can accept a wider range of materials and can have much higher processing capacities, so an RRMF permit should be required. In reviewing an RRMF permit application, the Director of the Department of Solid Waste Management or her designee must consider the following:

1. Whether operation of the facility as proposed will have an adverse impact on the county's ability to meet its financial obligations for existing county solid waste management facilities.

Mr. Nicholas Ciancio  
Chief of Resilience  
Technical Services and Environmental Affairs  
Miami-Dade County Department of Solid Waste Management  
October 4, 2024

2. Whether operation of the facility as proposed will have an adverse impact on the County's ability to meet operating requirements for any solid waste management facility operated under contract with the County.
3. Whether operation of the facility as proposed will have an adverse impact on the County's ability to comply with all State and Federal regulations governing solid waste management activities.

In reviewing RRMF applications for new private solid waste facilities, the primary concern of the Bond Engineer is ensuring that the Department complies with the requirements of Miami-Dade County Ordinance No. 96-168 (Bond Ordinance). One of the main requirements is in Section 612, Competitive Facilities:

*"To the extent permitted by law, the County shall not permit or consent to the construction, acquisition, or operation of the any private solid waste disposal facilities within the County that may compete or tend to compete with the System unless the Department shall determine... that such facilities will not adversely affect Operating Revenues..."*

Composting facilities appear to satisfy the Section 612 requirements as follows:

1. Composting facilities are solid waste processing facilities, not solid waste disposal facilities.
2. The Department does not have and does not intend to develop composting facilities, so a private composting facility would not compete or tend to compete with the System.
3. The solid waste tonnage (including compostable wastes) from Contract Municipalities is committed to the System through long term disposal agreements. Assuming the County continues to properly regulate and enforce the collection of solid waste (especially within the Contract Municipalities), the Operating Revenues of the System would not be adversely affected by the presence of private composting facilities. The Department would continue to control the waste tonnage that it collects directly, and the tonnage it receives from the Contract Municipalities.

The Department is responsible for the review of RRMF permit applications filed with RER. The Code requires that the Director of the Department of Solid Waste Management or her designee review all solid waste management facility operation permit applications and make a recommendation to the Director of the Department of Environmental Resources Management regarding such applications, subject to conditions. It should be noted that RRMF permit reviews do not consider the technical feasibility of the proposed facility.

Considering the many recent changes that have occurred in the County's Solid Waste System (System) and the potential to shift towards a Zero Waste management strategy in the near future, private composting facilities may benefit the System. Based on current and projected System facilities and operations, we are of the opinion that composting facilities do not represent a Competing Facility under Section 612 of the Bond Ordinance and that an RRMF permit application for a proposed composting facility could be considered for approval by the Director of the Department of Solid Waste Management.

The Department may also want to consider adding a condition to the RRMF permit for the application of a Host Fee on each ton of material received by the composting facility for processing, payable to the Department to offset the tip fees for the solid waste tonnage that the Department may direct to the composting facility. The Host Fee could be adjusted as necessary and would automatically escalate according to a published index to account for inflation.



Mr. Nicholas Ciano  
Chief of Resilience  
Technical Services and Environmental Affairs  
Miami-Dade County Department of Solid Waste Management  
October 4, 2024

If you have any questions regarding this letter, please contact us.

Sincerely,

Arcadis U.S., Inc.



Christopher C. Tilman, PE, BCEE  
Principal Management Consultant

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**BEFORE THE MIAMI-DADE COUNTY  
 ENVIRONMENTAL QUALITY CONTROL BOARD**

**IN RE** : **Board Order No. 24-01**  
 :  
**Director of the Department of Regulatory** :  
**and Economic Resources – Division of** :  
**Environmental Resources Management** :

THIS MATTER came before the Environmental Quality Control Board (EQCB) on December 14, 2023, as a request by the Director of Environmental Resources Management (DERM), for an extension of time for compliance from the requirements of section 24-43.1(4) and section 24-43.1(6) of the Code of Miami-Dade County, Florida (Code). The request is to allow the DERM Director, at the Director's discretion under the conditions provided herein, to allow the establishment and operation of composting facilities on properties not served by public water or public sanitary sewers during the four-year extension of time.

The DERM Director is requesting a four-year extension of time after which the applicable Code requirements would apply to the composting facilities. Upon expiration of the extension of time, any composting facility that was able to obtain the Director's approval during this extension of time would need to comply with the applicable Code requirements at that time.

**The Code**

Section 24-5(265) of the Code defines a "resource recovery and management facility" as follows: Resource recovery and management facility shall mean any facility the purpose of which is disposal, recycling, incineration, processing, storage, transfer, or treatment of solid or liquid waste; but for the purpose of permitting does not include sewage treatment, industrial waste treatment, or facilities exclusively within State or federal jurisdiction.

Section 24-5(360) of the Code defines "Yard trash" as follows: Yard Trash shall mean solid waste comprised of vegetative matter resulting from landscaping maintenance or land clearing operations and shall include, but not be limited to, Melaleuca, Australian pine, Brazilian pepper and other tree and shrub trimmings, grass clippings, palm fronds, trees and tree stumps, and soils not containing any hazardous materials.

Section 24-18(A)(7) states that no person shall operate, maintain, permit, cause, allow, let, or suffer the operation or maintenance of a public water system, public sewerage system, a location where a site rehabilitation action has been completed in accordance with the provisions set forth in Section 24-44(2)(k)(ii), or any of the following facilities, all of which will reasonably be expected to be a source of air pollution, ground pollution, or water pollution, without a valid operating permit issued by the Director or the Director's designee or in violation of any condition, limitation, or restriction which is part of an operating permit: Resource recovery and management facilities.

Section 24-43.1(4) of the Code states that no County or municipal officer, agent, employee, or board shall approve, grant, or issue any building permit, certificate of use, or occupancy (except for changes in ownership for facilities that do not require an operating permit pursuant to section 24-18), municipal occupational license (except for changes in ownership for facilities that do not require an operating permit pursuant to section 24-18), platting action (final plat, waiver of plat, or equivalent municipal platting action), development agreement subject to the Florida Local Government Development Agreement Act, zoning action (district boundary change, unusual use, special exception, use variance, or equivalent municipal zoning action), or other development order or development permit for any nonresidential land



use served or to be served by any source of potable water supply or an OSTDS without obtaining the Director's prior written approval pursuant to this subsection. The same Code section further requires that the Director shall only issue his written approval if it is demonstrated that the only liquid waste (excluding liquid wastes associated with the processing of agricultural produce in agricultural packing houses and liquid wastes associated with an agricultural vehicle or, agricultural equipment maintenance facilities, stormwater and water used within a self-contained water recycling car wash facility, provided said facility does not backwash the recycling filters) that shall be generated, disposed of, discharged, or stored on the property shall be domestic sewage discharged into an OSTDS that complies with section 24-42.7.

Section 24-43.1(6) of the Code provides that no building permit, certificate of use, certificate of occupancy, municipal occupational license, platting action (final plat, waiver of plat or equivalent municipal platting action), development agreement subject to the Florida Local Government Development Agreement Act, zoning action (district boundary change, unusual use, special exception, use variance, or equivalent municipal zoning action), or other development order or development permit for any nonresidential land use served or to be served by any liquid waste storage, disposal, or treatment method other than public sanitary sewers, or by any source of potable water supply other than a public water main, shall be approved without obtaining the Director's prior written approval. The same Code section also provides that nonresidential land uses served by an on-site sewage treatment and disposal system and public water may only be approved, if, among other requirements, the proposed land use does not generate a liquid waste other than domestic sewage, is not zoned IU-1 industrial (excluding commercial vehicle storage facilities with approved groundwater monitoring) and complies with all the requirements of Section 24-43.1(4) of the Code.

The same Code section also provides that nonresidential land uses served by a septic tank and by an on-site domestic well system may only be approved, if, among other requirements, the proposed land use does not generate a liquid waste other than domestic sewage, is not zoned IU-1 industrial, complies with all the requirements of section 24-43.1(4) of the Code and that the nonresidential land use will not use, generate, handle, dispose of, discharge or store hazardous materials on the property.

Section 24-8 of the Code states that the Board, in considering applications for extensions of time for compliance with the provisions of this chapter, shall take into account such factors as practicability, availability of equipment, and relative benefits to the community. The Board shall not have the power and authority to grant any application for an extension of time to comply with the prohibitions against open burning (section 24-41.4), or the prohibitions against reduction in animal matter (section 24-41.8), or the prohibitions against a nuisance (section 24-27), or the prohibitions against the discharge of cyanides or other toxic chemicals into the waters in excess of the standards set forth in section 24-42(3). Applications for extensions of time for compliance shall be considered on the basis of public interest and not merely on economic benefit to the applicant; applications shall be granted only when it is established that the requested extension of time for compliance will not be detrimental to the public health, welfare, and safety, and will not create or permit the continuation of a nuisance, or that no technically feasible, economically reasonable means of compliance are readily available to the applicant. The Board shall not have the power and authority to grant extensions of time for compliance with the regulations set forth in section 24- 25, Adoption of rules and regulations of the State of Florida Department of Environmental Protection, Florida Department of Health, or the United States Environmental Protection Agency, or applicable federal or state binding agreements.

Section 24-12 of the Code provides that the Environmental Quality Control Board shall have the power and authority to grant or extend from time-to-time variances and extensions of time for compliance with the requirements of chapter 24 to new or existing facilities, equipment, and processes. Such variances and extensions of time may be granted to specific facilities, equipment, or processes or to a class. The

Environmental Quality Control Board may grant such variances and extensions of time only if it is affirmatively established by competent factual data and information that strict compliance with the requirements of this chapter is impossible or inappropriate because of conditions beyond the control of the person or persons involved, or that strict compliance would result in substantial curtailment or closing down of a plant, project or operation which would be detrimental to the public interest, or that the particular operation is essential for the public health or the national security, or that no technically feasible, economically reasonable means of compliance are available to the person or persons involved, or that the variance or extension will not be detrimental to the public health, welfare and safety and will not create a nuisance and will not materially increase the level of pollution in this County, or that a more unhealthy condition will occur if a variance or extension is not granted. Variances and extensions shall be considered and acted upon in accordance with the provisions of section 24-4, section 24-12, section 24-13, and the provisions of section 24-8(5)(b) of the Code.

Section 24-13 of the Code provides that applications for variances or extensions of time for compliance with this chapter shall be filed with the Director in substantially the form prescribed therefor. The Director shall make written recommendations concerning such applications and promptly file the records with the Environmental Quality Control Board. The Director may initiate and file with the Board an application for variance or extension. Upon receipt of an application and the recommendations of the Director, the Board shall promptly hold a public hearing upon the application, after publication of notice of the hearing. All interested persons shall be entitled to be heard before the Board. The Board shall promptly hear and pass upon all such applications and shall set forth the grounds and reasons for granting or denying the application. Any person aggrieved by any decision of the Environmental Quality Control Board shall be entitled to judicial review in accordance with the Florida Rules of Appellate Procedure. The Board shall prescribe rules of procedure governing applications for variances or extensions of time, which shall conform to and be commensurate with the applicable and controlling provisions of this chapter. For purposes of this section, the County [Mayor] may constitute a person aggrieved whenever the Environmental Quality Control Board renders a decision adverse to the recommendation of the Director.

### **Request**

The EQCB finds that composting is a practice that can transform organic waste into nutrient-rich soil amendments, and has been widely recognized for its numerous benefits, including soil enrichment, reduced reliance on chemical fertilizers, and reduced methane emissions from landfills. Composting operations are subject to various regulatory requirements, including but not limited to local land use, zoning, and environmental regulations, which address matters such as compatibility with the surrounding neighborhood and the prevention of soil and water contamination.

The EQCB finds that typically, composting facilities require large properties for these operations. Many times, these properties are located in agriculturally zoned areas and outside the Urban Development Boundary where public water and sanitary sewer services are not available. In addition, farmers use soil amendments such as manure and compost to improve soil fertility and soil quality and to enhance populations of beneficial microorganisms in the soil. Sustainable and organic producers rely on manure and compost instead of synthetic chemicals to add fertility to their fields. Composting in agricultural areas would allow for the production of compost in support of agriculture.

The EQCB finds that DERM recognizes that composting could be a beneficial use of material that would otherwise be landfilled. DERM also recognizes that commercial composting facilities could support the County's zero-waste initiatives. Notwithstanding the benefits of composting, the EQCB finds that the environmental impacts of composting facilities need to be monitored and evaluated to determine whether they could be permanently allowed on certain properties. In light of this, DERM seeks a four-year extension of time to allow composting facilities on properties not served by public water and public



sanitary sewers provided those facilities are not within any portion of a wellfield protection area, are established with DERM-approved environmental controls such as DERM-approved groundwater monitoring, are established with DERM-approved stormwater management systems, are established with DERM operating permits to allow DERM inspection and monitoring and are established in conformance with all DERM recommended conditions. The EQCB finds that, depending on the type and scope of the composting activities, additional approvals from federal, state, county, or municipal agencies may be required.

The EQCB finds that a composting operation is categorized as a resource recovery and management facility in the Code. Pursuant to the Code, a resource recovery and management facility requires a DERM operating permit and has specific operating requirements to ensure the implementation of controls for dust suppression, odor, and litter. Additionally, a composting facility typically generates liquid waste other than domestic waste through the composting process, specifically a composting facility generates leachate that cannot be disposed of or discharged into an on-site sewage treatment and disposal system. Accordingly, and pursuant to the Code, a non-residential land use that generates a liquid waste other than domestic is prohibited on a property not served by public water and public sanitary sewers. Furthermore, a resource recovery and management facility is typically considered an industrial land use which is also prohibited on a property that is not served by public water and public sanitary sewers. Finally, pursuant to the Code and due to the nature of liquid wastes generated by a resource recovery and management facility that could impact the groundwater and ultimately the aquifer, these facilities are prohibited within any portion of a wellfield protection area.

The EQCB finds that in an effort to align with the current zero-waste initiative to reduce landfill usage and greenhouse gas emissions, the DERM Director is requesting a four-year extension of time to allow the DERM Director, at the Director's discretion under the conditions provided herein, to allow the establishment and operation of certain composting facilities not served by public water and public sanitary sewers. The EQCB finds that DERM is requesting that this extension of time be limited to compost facilities that accept and compost yard trash, and/or vegetative wastes, and/or, manure. In addition, DERM recognizes that composting facilities attract birds and could pose an airport hazard near airports and the Homestead Airforce Reserve Base. The EQCB finds that DERM is recommending that that this extension of time not include composting facilities within the Critical Approach Zone for airports and the Airport Land Use Restriction Area of the Homestead Airforce Reserve Base as outlined in Chapter 33 of the Miami-Dade County Code. The EQCB finds that this extension of time would allow the DERM Director, at the Director's discretion, to review, approve, allow permits, and issue operating permits for a composting facility and facilitate establishment of a composting facility during a limited time period. Finally, the EQCB finds that the extension of time establishes a process for a composting facility to obtain the DERM Director's approval and permit. This request does not prevent a particular property owner from seeking a variance or an extension for a composting facility.

#### **ACCORDINGLY, IT IS**

**ORDERED AND ADJUDGED** that based upon the testimony and evidence presented, specifically, that the class extension of time will allow the DERM Director, at the Director's discretion, to review, approve, allow permits, and issue operating permits for a composting facility and facilitate establishing a composting facility during a limited time period, that the extension of time establishes a process for a composting facility to obtain the DERM Director's approvals and permits, that the extension of time will allow the DERM Director, at the Director's discretion, to approve the establishment of composting facilities on properties not served by public water and public sanitary sewers, and not located within a wellfield protection area, and not within a Critical Approach Zone for airports or the Airport Land Use Restriction Area of the Homestead Airforce Reserve Base as outlined in Chapter 33 of the Code, that the

extension of time will be limited to compost facilities that accept and compost yard trash, and/or vegetative wastes, and/or, manure, and provided that the DERM Director determines that a property owner or compost operator is in compliance with the conditions enumerated below, a four year extension of time for compliance with the requirements of section 24-43.1(4) and section 24-43.1(6) of the Code, be and the same is hereby granted, subject to the following conditions:

1. This extension of time shall automatically expire on December 14, 2027. No approvals pursuant to section 24-43.1(4) and section 24-43.1(6), or other DERM approvals including operating permits that require consistency with Chapter 24, shall be issued based on this EQCB Order after December 14, 2027. Upon expiration of the extension of time, any composting facility that was able to obtain the Director's approval during this extension of time would need to comply with the applicable Code requirements at that time.
2. This extension of time shall be limited to the operation of composting facilities that accept and compost yard trash, and/or vegetative wastes, and/or manure.
3. If a facility is not eligible for this approval, or if the facility does not obtain the Director's approval pursuant to this EQCB Order, the property owner may file an application for a public hearing before the EQCB to request an applicable extension of time or variances where the property owner can present their own evidence to the EQCB. The property owner may not appeal the Director's decision not to exercise authority under this EQCB Order granting the Director's application for extension of time (because this extension of time allows the DERM Director, at the Director's discretion, to approve the establishment of composting facilities on properties that meet the conditions herein).
4. This extension of time shall not apply to properties located within any portion of any wellfield protection area.
5. Prior to operating the composting facility and before the DERM Director can grant approval pursuant to section 24-43.1 of the Code pursuant to this EQCB Order, the applicant must request an approval from the DERM Director and meet the following requirements for each composting facility:
  - a. Obtain DERM review and approval of a leachate control system prepared by a Florida licensed professional engineer that demonstrates control of leachate to ground and groundwater.
  - b. Obtain DERM review and approval of stable surfaces (e.g., compacted limerock pad, etc.) designed to minimize or eliminate degradation and erosion for the compost storage and processing areas, including finished compost storage areas.
  - c. Submit to DERM a certificate of completion by the engineer of record for the leachate control system approved pursuant to condition no. 5.a. and 5.b.
  - d. Obtain DERM review and approval of a stormwater management system in accordance with applicable federal, State, and local regulations and guidance.
  - e. The Property owner shall submit to DERM a properly executed covenant running with the land in favor of Miami-Dade County, that provides:
    - i. The property owner acknowledges and agrees to comply with the DERM-approved plans,
    - ii. The property owner acknowledges and agrees that this approval is being given

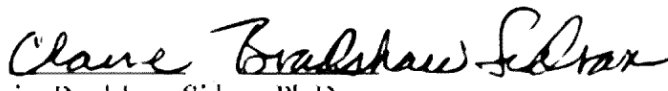


- pursuant to an extension of time to the Director,
- iii. The property owner property owner acknowledges and agrees that they may need to apply to the EQCB for an individual extension of time or variance or the property owner is required to connect to public water and public sanitary sewers to continue their operations,
  - iv. The property owner acknowledges and agrees that nothing in this Director's approval, which is based only on a temporary authorization from the EQCB, shall be construed to create any entitlement, right, property interest, or vested right to this particular use,
  - v. The property owner acknowledges and agrees that they are electing to proceed this way and they have the option to apply to the EQCB for their own extension of time or variance to those provisions of the Code.
- f. Obtain DERM approval of a groundwater monitoring plan. The groundwater monitoring plan shall, at a minimum, include a monitoring well in the areas of potential environmental impact, proposed sampling parameters, and sampling frequency. The plan shall encompass all areas to be used for the storage and processing of solid waste and finished compost. The Petitioners shall implement the groundwater monitoring plan within thirty (30) days of DERM approval.
  - g. Obtain DERM approval of a Miami-Dade County certificate of use, or municipal equivalent for the composting facility.
  - h. Prior to DERM approval of the required Miami-Dade County certificate of use or municipal equivalent for the composting facility, the Petitioner or the operator shall obtain all required annual operating permits from DERM including, but not limited to a Resource Recovery and Management Facility Annual Operating Permit (RRMF) pursuant to the Code and register with the Florida Department of Environmental Protection.
  - i. The DERM Resource Recovery and Management Facility Annual Operating Permit may require material testing.
  - j. The DERM Director may require additional requirements, based for example, on the particular operation or location of the composting facility.
6. This extension of time shall not apply to properties within the Homestead Airforce Reserve Base Airport Land Use Restriction Area and the Airport Critical Approach Zone as outlined in Chapter 33 of the Miami- Dade County Code.
  7. Neither this extension of time nor any approvals by the Director granted under this extension of time may be construed to authorize any pollution or contamination as defined in Chapter 24 or other applicable state and federal law.
  8. Stockpiles of vegetive waste and post-consumer vegetative waste to be composted, undergoing the composting process, and finished compost stored on site for use shall be stored at all times on a DERM-approved impervious surface that is bermed and under a permanent cover designed to prevent rainwater infiltration and runoff.
  9. Dust suppression, odor and litter control, and other measures shall be implemented, as applicable to prevent nuisance conditions as defined in Chapter 24.
  10. Equipment repair or maintenance of any kind is strictly prohibited. Equipment that cannot be taken off- site shall be repaired by a third-party contractor. Any waste generated by these activities shall

be taken off-site for proper disposal and disposal receipts maintained on-site for review.

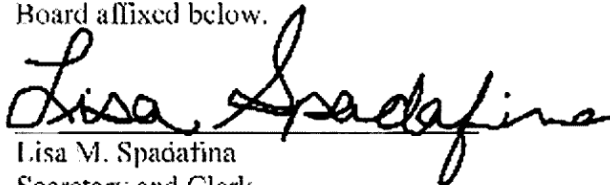
11. All compost storage and processing areas, including finished compost storage areas, shall be established on stable surfaces (e.g., compacted limcrock pad, etc.) designed to minimize or eliminate degradation and erosion as approved by DERM as part of Condition No. 5 above.
12. DERM review and approval are required prior to installing and operating an onsite domestic well system and an onsite sewage treatment and disposal system. The onsite domestic well system and onsite sewage treatment and disposal system shall be in conformance with the requirements of Chapter 24.
13. Failure at any time to comply with any of the approval and permit conditions as granted by the DERM Director shall render the extension of time granted by the DERM Director null and void. Upon compliance with the approval and permit conditions, the DERM Director may reinstate the extension of time.
14. This extension of time granted herein does not guarantee or ensure approvals from any other federal, state, county, or municipal agency, and the extension of time granted herein does not affect or modify any requirement of any other provision of law.

Done and Ordered this 26 day of January, 2024 in Miami-Dade County, Florida.

  
 Claire Bradshaw-Sidran, Ph.D.  
 Chairperson

#### FILING AND ACKNOWLEDGEMENT

Filed on this 26 day of January, 2024 with the Secretary of the Board as Clerk of the Environmental Quality Control Board, receipt of which is hereby acknowledged, and the seal of the Board affixed below.

  
 Lisa M. Spadafina  
 Secretary and Clerk

Approved as to form and legal sufficiency:

**GERALDINE BONZON-KEENAN**  
 Miami-Dade County Attorney

Attorney for the Board

**David  
 Sherman**

Digitally signed by David  
 Sherman  
 Date: 2024.01.23 16:06:31  
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By: David Sherman  
 Assistant County Attorney

SEAL





**OFFICIAL FILE COPY  
CLERK OF THE BOARD  
OF COUNTY COMMISSIONERS  
MIAMI-DADE COUNTY, FLORIDA**

# MEMORANDUM

Agenda Item No. 11(A)(10)

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**TO:** Honorable Chairman Oliver G. Gilbert, III  
and Members, Board of County Commissioners

**DATE:** December 12, 2023

**FROM:** Geri Bonzon-Keenan  
County Attorney

**SUBJECT:** Resolution directing the  
County Mayor to provide  
recommendations with  
respect to composting  
operations in Miami-Dade  
County and to prepare a  
report to this Board

Resolution No. R-1158-23

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The accompanying resolution was prepared and placed on the agenda at the request of Prime Sponsor Commissioner Eileen Higgins and Co-Sponsors Commissioner Marleine Bastien, Senator René García and Commissioner Raquel A. Regalado.

  
Geri Bonzon-Keenan  
County Attorney

GBK/ks



## MEMORANDUM

(Revised)

**TO:** Honorable Chairman Oliver G. Gilbert, III  
and Members, Board of County Commissioners

**DATE:** December 12, 2023

**FROM:**   
Gen Bonzon-Keenan  
County Attorney

**SUBJECT:** Agenda Item No. 11(A)(10)

Please note any items checked.

- ☐ "3-Day Rule" for committees applicable if raised
- ☐ 6 weeks required between first reading and public hearing
- ☐ 4 weeks notification to municipal officials required prior to public hearing
- ☐ Decreases revenues or increases expenditures without balancing budget
- ☐ Budget required
- ☐ Statement of fiscal impact required
- ☐ Statement of social equity required
- ☐ Ordinance creating a new board requires detailed County Mayor's report for public hearing
- ☐ No committee review
- ☐ Applicable legislation requires more than a majority vote (i.e., 2/3's present \_\_\_\_, 2/3 membership \_\_\_\_, 3/5's \_\_\_\_, unanimous \_\_\_\_, CDMP 7 vote requirement per 2-116.1(3)(h) or (4)(c) \_\_\_\_, CDMP 2/3 vote requirement per 2-116.1(3)(h) or (4)(c) \_\_\_\_, or CDMP 9 vote requirement per 2-116.1(4)(c)(2) \_\_\_\_ to approve
- ☐ Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required



Approved \_\_\_\_\_ Mayor  
Veto \_\_\_\_\_  
Override \_\_\_\_\_

Agenda Item No. 11(A)(10)  
12-12-23

RESOLUTION NO. R-1158-23

RESOLUTION DIRECTING THE COUNTY MAYOR OR  
COUNTY MAYOR'S DESIGNEE TO PROVIDE  
RECOMMENDATIONS WITH RESPECT TO COMPOSTING  
OPERATIONS IN MIAMI-DADE COUNTY AND TO PREPARE  
A REPORT TO THIS BOARD

**WHEREAS**, composting is a practice that can transform organic waste into nutrient-rich soil amendments, and may reduce landfill usage and greenhouse gas emissions; and

**WHEREAS**, composting has been widely recognized for its numerous benefits, including soil enrichment, reduced reliance on chemical fertilizers, and reduced methane emissions from landfills; and

**WHEREAS**, this Board wishes to explore the possibilities for greater composting in Miami-Dade County; and

**WHEREAS**, commercial composting operations, which could be County operations or private operations, may provide additional opportunities and alternatives for the management of solid waste, and also may address certain environmental and climate change concerns; and

**WHEREAS**, commercial composting operations, like other businesses and uses of property, are subject to various regulatory requirements, including but not limited to local land use, zoning, and environmental regulations, which address matters such as compatibility with the surrounding neighborhood and the prevention of soil and water contamination; and

**WHEREAS**, various regulations and obligations related to solid waste, including but not limited to, those regulations in chapter 15 of the Code of Miami-Dade County, Florida (the "County Code"), may also be relevant; and

**WHEREAS**, this Board is committed to exploring solutions to the County's solid waste issues through sustainable and innovative approaches that prioritize environmental conservation, and long-term resource management; and

**WHEREAS**, this Board wishes for the County Mayor or County Mayor's designee to make recommendations as to where and how composting operations may be most appropriate and under what circumstances and conditions, together with related recommendations for proposed regulatory changes to facilitate such composting; and

**WHEREAS**, as part of the review and recommendations by the County Mayor or County Mayor's designee, the administration may wish to consider the experiences and insights of other local and state governmental entities in Florida or elsewhere in the United States; and

**WHEREAS**, these recommendations will include changes to our County Code as well as new policies to be implemented; and

**WHEREAS**, the goal of such recommendations should be to facilitate composting in a manner that is in the best interests of Miami-Dade County, its residents, and the environment,

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA**, that:

**Section 1.** This Board hereby directs the County Mayor or County Mayor's designee to provide recommendations as to where and how composting operations may be most appropriate and under what circumstances and conditions, together with related recommendations for proposed regulatory changes to facilitate such composting. The recommendations shall consider what changes to the County Code, implementing orders, County policies, or other sources of law or policy are required for such purpose. For such recommendations, the County Mayor or County Mayor's designee should consider, as appropriate, the experiences and insights of other local and state governmental entities in Florida or elsewhere in the United States.



**Section 2.** The County Mayor or County Mayor’s designee shall prepare a written report as to the matters in section 1, and within 90 days of the effective date of this resolution, shall place the completed report on an agenda of the full Board without committee review pursuant to rule 5.06(j) of the Board's Rules of Procedure.

The Prime Sponsor of the foregoing resolution is Commissioner Eileen Higgins, and the Co-Sponsors are Commissioner Marleine Bastien, Senator René García and Commissioner Raquel A. Regalado. It was offered by Commissioner **Anthony Rodriguez** , who moved its adoption. The motion was seconded by Commissioner **Raquel A. Regalado** and upon being put to a vote, the vote was as follows:

Oliver G. Gilbert, III, Chairman	<b>aye</b>		
Anthony Rodríguez, Vice Chairman	<b>aye</b>		
Marleine Bastien	<b>absent</b>	Juan Carlos Bermudez	<b>aye</b>
Kevin Marino Cabrera	<b>aye</b>	Sen. René García	<b>aye</b>
Roberto J. Gonzalez	<b>aye</b>	Keon Hardemon	<b>absent</b>
Danielle Cohen Higgins	<b>aye</b>	Eileen Higgins	<b>aye</b>
Kionne L. McGhee	<b>aye</b>	Raquel A. Regalado	<b>aye</b>
Micky Steinberg	<b>aye</b>		

The Chairperson thereupon declared this resolution duly passed and adopted this 12<sup>th</sup> day of December, 2023. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this resolution and the filing of this approval with the Clerk of the Board.



MIAMI-DADE COUNTY, FLORIDA  
BY ITS BOARD OF  
COUNTY COMMISSIONERS

JUAN FERNANDEZ-BARQUIN, CLERK

**Basia Pruna**

By: \_\_\_\_\_  
Deputy Clerk

Approved by County Attorney as  
to form and legal sufficiency.

A handwritten signature in dark ink, appearing to read "ASR", is written over a horizontal line.

Abbie Schwaderer-Raurell