

Memorandum



Date: February 8, 2025

To: Honorable Chairman Anthony Rodriguez
and Members, Board of County Commissioners

From: Daniella Levine Cava
Mayor

Subject: Supplemental Information Regarding Financial and Operational Considerations for the Future of Solid Waste - Directive 241676



Recommendation

This report is in response to Directive No. 241676, sponsored by Commissioner Oliver Gilbert and adopted by the Board of County Commissioners on September 13, 2024. This supplemental memo provides a comparative analysis of the financial impacts of two potential options for the future of the County's Solid Waste System, for your consideration: (1) constructing a Waste-to-Energy (WTE) facility; (2) continuing to utilize contracted landfill space. An examination of the financial implications highlights that while each option comes with long-term considerations, **utilizing contracted landfill space remains the most cost-effective and stable choice for ratepayers.**

Background

Average Household Fee Impact

Previously reported figures for building the waste-to-energy facility were based on an assumed interest rate of 3.5%. County staff and third-party financial experts now agree that new market conditions necessitate using a 4.5% interest rate for financial projections. Notably, Hillsborough County recently issued solid waste bonds at a total cost of 4.8%, making it the most comparable bond issuance to our project. It is important to note that interest rates may continue to fluctuate up or down and we will update any future analyses with the advisement of County and external experts.

Each waste management option carries different cost implications for households over time. Contracted landfill space currently offers the most cost-effective and predictable financial path, keeping household fees lower in the near and mid-term. A WTE facility provides a more localized and technologically advanced disposal option, but it would require significant upfront investment, leading to higher ratepayer fees when compared to contracted landfill space, particularly in years 4 to 16 where the gap between the option pricing is evident. The cost for each option is depicted below on an annual basis for 25 years.

Annual Household Fee

Year	(1) Build WTE Facility	(2) Contracted Hauling
1	\$697	\$697
2	\$707	\$707

3	\$718	\$718
4	\$803	\$800
5	\$833	\$820
6	\$876	\$841
7	\$907	\$855
8	\$949	\$877
9	\$994	\$899
10	\$1,015	\$923
11	\$1,066	\$968
12	\$1,054	\$994
13	\$1,041	\$1,021
14	\$1,065	\$1,050
15	\$1,089	\$1,079
16	\$1,115	\$1,109
17	\$1,141	\$1,141
18	\$1,168	\$1,174
19	\$1,196	\$1,208
20	\$1,226	\$1,243
21	\$1,256	\$1,279
22	\$1,288	\$1,317
23	\$1,321	\$1,356
24	\$1,355	\$1,397
25	\$1,391	\$1,439
TOTAL	\$26,271	\$25,912

Table 1 – Annual Household Fee Analysis

Assumptions:

Year 1 begins in FY 24-25 and reflects the current rate

20-year amortization

4.5% coupon rate

WTE option is based on an average of all identified sites

Contracted landfill space cost considerations include an increase of materials due to the closure of North Dade and South Dade landfills

To determine the average ratepayer annual fee impact for option 1 (WTE), staff identified the average cost and construction timeline for all the proposed WTE facility sites. It is important to consider that if a WTE facility would be approved for construction, contracted landfill space would be required until the WTE facility is completed. There would be a period of time that we would be paying for contracted landfill space for 100% of our waste disposal needs and concurrently paying construction interest/debt service on the approximately \$1.7B newly constructed WTE facility, which results in a negative impact on the ratepayer for those years of duplicative expenses.

For the first five years, the differences between the two options remain minimal, with impacts to ratepayers varying by under \$15 when comparing the two options. At year 6, the financial divergence becomes apparent. Ratepayer fees for WTE begin to rise sharply, reaching \$876, while contracted landfill space remains \$35 lower at \$841. This gap continues to grow, peaking in year 11, when WTE impacts to ratepayer fees reach \$1,066, and contracted landfill space remains more affordable at \$968, representing a \$98 gap.

Over the long term, the trends shift slightly. After the peak in year 11, the cost gap between WTE and contracted landfill space begins to shrink, taking a turn in the opposite direction in year 16. Beginning in year 16, contracted landfill space becomes the more expensive option consistently, peaking at year 25 at \$1,439 compared to the WTE cost at \$1,391. Overall, the total impact to ratepayers is less expensive over the course of 25 years for option two—contracted landfill space.

Cost Per Ton Analysis

The average cost per ton of waste disposal further highlights the financial impact of each option.

Annual Cost Per Ton

Year	(1) Build WTE Facility	(2) Contracted Landfill Hauling
1	\$68.84	\$68.84
2	\$70.84	\$70.84
3	\$73.30	\$72.89
4	\$96.96	\$96.16
5	\$101.93	\$98.74
6	\$110.66	\$101.39
7	\$115.00	\$101.50
8	\$122.34	\$104.23
9	\$129.52	\$107.05
10	\$131.37	\$109.94
11	\$138.78	\$118.84
12	\$132.24	\$122.10
13	\$126.05	\$125.45
14	\$128.17	\$128.91
15	\$130.38	\$132.46
16	\$132.69	\$136.12
17	\$135.11	\$139.88
18	\$137.64	\$143.75
19	\$140.28	\$147.74
20	\$143.03	\$151.84
21	\$145.91	\$156.06
22	\$148.90	\$160.40
23	\$152.03	\$164.87

24	\$155.29	\$169.48
25	\$158.68	\$174.21
TOTAL	\$3,125.94	\$3,103.69

Table 2 – Average Cost Per Ton Analysis

Contracted landfill space remains the most stable over time, making it the most predictable choice for financial planning. In year 1, both options start at the same cost of \$68.84 per ton. The differences become more pronounced over time.

By year 5, WTE costs have increased to \$101.93 per ton, whereas contracted landfill space remains lower at \$98.74 per ton. By year 10, WTE reaches \$131.37 per ton, and contracted landfill space increases to \$109.94 per ton, maintaining its position as a more affordable option.

By year 14, both options stabilize with a cost per ton of \$128.17 and \$128.91, respectively. At this point contracted landfill space becomes the more expensive option, with an apparent financial divergence. Despite this, contracted landfill space still offers the most cost savings and remains more affordable at a total aggregate cost of \$3,103.69 versus WTE's \$3,125.94. This analysis reinforces the idea that contracted landfill space offers the most consistent and predictable cost structure. While WTE stabilizes in its later years, its upfront costs make it a significant financial burden in the short term.

Additional Cost Considerations

Beyond the direct financial comparisons, additional factors must be considered when evaluating the feasibility of a WTE facility. One major concern is the cost of waste disposal during the years required to construct a WTE facility. During this period, waste would still need to be managed, leading to additional financial burdens that would ultimately be passed on to ratepayers. Moreover, any site selected for the WTE facility is anticipated to face legal challenges, environmental concerns, and public opposition. These complications could result in significant project delays and added costs, further increasing the financial uncertainty of these options. Additionally, inflation and market risks remain a major consideration, as the final cost of constructing a WTE facility is not yet determined. Bid prices could fluctuate substantially, leading to an even higher overall expenditure than currently projected. These factors collectively reinforce the unpredictability and financial risk associated with pursuing a WTE facility at this time.

Contracted landfill space, in contrast, provides an immediate and stable solution, offering cost predictability and ensuring ratepayer affordability in the short and medium term while allowing flexibility for future waste management strategies. It remains more stable compared to the other alternatives and does not require the substantial upfront investments associated with WTE.

Conclusion

Each option presents its own advantages and challenges. Building a WTE facility is costly in the short term but could provide long-term benefits as its costs stabilize. However, the initial financial impact on ratepayers is considerable and must be carefully weighed against other

fiscal priorities. Given the financial impact on ratepayers and the uncertainties surrounding construction, legal challenges, and inflationary pressures, **continuing to utilize contracted landfill space remains the most fiscally responsible option for the next 25 years.** This approach ensures rate stability, avoids unnecessary financial risks, and allows for the long-term evaluation of more sustainable waste management solutions. By opting for contracted landfill space, **the County can maintain affordability for residents while preserving flexibility to adapt to evolving environmental and technological advancements in waste management, shifting towards zero waste management strategies.**

In accordance with Ordinance No. 14-65, this report will be placed on the next available Board meeting agenda. If additional information is needed, please contact Aneisha Daniel, Director of the Department of Solid Waste Management, at Aneisha.Daniel@miamidade.gov.

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