



FY 2024-29 Capital Improvement Program Presentation

Bureau of Solid Waste
Baltimore City Department of
Public Works

January 5, 2023





Agenda

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Department of Public Works

Mission

We support the health, environment, and economy of our City and the region by providing customers with safe drinking water and keeping neighborhoods and waterways clean.



Vision

To be a strong proponent and protector of our environment and the health and vitality of our communities.



Organizational Chart

Office of the Director



Director
Jason W. Mitchell



Deputy Director
Richard Luna



**General Counsel and
Chief Compliance
Officer**
Darnell Ingram



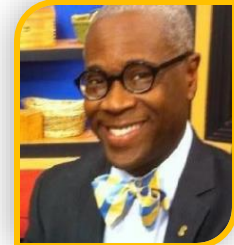
Chief of Staff
Audree Jones-Taylor



**Acting Bureau Head
for Solid Waste**
**Yvonne Moore-
Jackson**



**Bureau Head for Water
and Wastewater**
Yosef Kebede



**Chief, Equity and
Environmental Justice**
Marco Merrick



Less Waste, Better Baltimore

Purpose

A planning process completed in 2020 to help the City improve efficiencies and increase the capacity of the Bureau's future operations, both short and long-term.



Prepared for:
Baltimore City
Department of
Public Works



City of Baltimore

RECYCLING AND SOLID WASTE
MANAGEMENT MASTER PLAN

Final Master Plan

Task 9 Report

28 July 2020

Prepared by:

Geosyntec
consultants
Columbia, Maryland

Findings

Recommendations for the final “Less Waste, Better Baltimore” plan were based upon technical plans, stakeholder input, and research conducted during the planning process.



FY 2024 CIP Requests

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Project	Appropriation (millions)	FY Start
[517-010] Eastside Transfer Station	\$ 3.500	FY 23
[517-012] Quarantine Road Landfill Expansion	\$ 3.000	FY 23
[517-033] Solid Waste Regulatory Compliance	\$ 2.000	FY 23
[517-040] Eastern Sanitation Yard Renovation	\$ 2.925	FY 24
Total Funding Needed:	\$ 11.425	



Long-Term Capital Needs

Department of Public Works

Project	Appropriation (total amount in millions)	FY Start
[517-025] Mini Recycling Materials Recovery Facility	\$ 10.000	FY 28
[517-031] Aerated Static Pile Compost Facility	\$ 8.000	FY 26
[517-034] Inner Harbor Facility Yard Site Acquisition	\$ 7.500	FY 25
[517-039] Construction & Demolition Recycling Center	\$ 20.000	FY 25
Total Funding Needed:	\$ 45.500	



Recent CIP Accomplishments

Department of Public Works

Phase II Hydrogeological Report



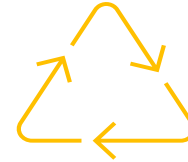
- › The Maryland Department of Environment approved Phase II of the Hydrogeological Report
- › This approval provided the Bureau with the ability to move onto the Phase Three Engineering Plans and Specifications Report.
- › Consultant prepared 90% draft design for Quarantine Road Landfill expansion and the currently the City reviewing design plans.
- › 60% QR relocation design submitted is in review

Analysis on closed and inactive landfills



- › Consultant completed 2 out of 4 phases of the feasibility study and is continuing subsurface geotechnical investigation to use inactive and closed landfill sites for transfer station and composting facility or mini-MRF.

Renovation of Solid Waste Facilities



- › Task proposal and contract between the Northeast Maryland Waste Disposal Authority was submitted to renovate solid waste facilities in accordance with OSHA requirements.
- › Vendor selected for Kane street renovation and submitted contract to NMDWDA to ask for RFP to renovate other facilities.

Improvements on Quarantine Road Landfill (QRL)



- › Improvements were completed on the QRL's landfill gas collection well network, leachate collection system, and to the geotechnical landfill liner system.
- › Engineering design and planning was completed and approved to upgrade the QRL's erosion and sediment control facilities and structures
- › QRL site grading, berm construction, soil stabilization, hydro-seeding completed



Quarantine Road Relocation

Department of Public Works



Project Highlights

Quarantine Road Landfill (QRL) is expected to reach capacity by FY 2027. This project aims to increase its capacity to 2048 by expanding over the Quarantine Road. It will involve relocating the existing road and utilities, which will be achieved in collaboration with DOP, DOT and BGE.



Project Finance

Current expansion costs are \$99.0 M, but resource and supply chain issues will likely influence the final construction cost.



Project Timeline / Roadmap

The initial expansion and first cell construction will begin in FY 24 and finish in FY 26. Construction bid for road relocation will begin in FY 2023.



Legend: Expansion Area Original Rd Realigned Rd



Quarantine Road Landfill: Compliance Projects

Department of Public Works



Project Highlights

Stormwater Management, Erosion and Sediment control and Leachate issues are a continuous in landfills that can result in contaminated stormwater discharge if they are not immediately addressed. The Bureau of Solid Waste requires CIP funding to procure an experienced on-call contractor to provide emergency SWM, E&S control, waste and leachate management services



Leachate seep at Cell 6 NW slope (inactive area)



Repaired leachate seep area at cell 6 North west slope (inactive area)



QRL cell 6 area (upper E slope) graded and hydro-seeded for soil stabilization as per MDE compliance requirement.



Riser replaced at Sediment basin 5 at Cell 6 North facing slope base.



Quarantine Road Landfill: Compliance Projects

Department of Public Works



Project Highlights

Daily covering of waste is mandatory at the waste disposal site to ensure the site is meeting the waste disposal permit requirement. Placing a fluff layer at the base of any new cell will protect the cell liners and meet the MDE disposal permit requirement. Bureau of Solid Waste needs sufficient budget to continue these activities and satisfy periodic MDE inspections.



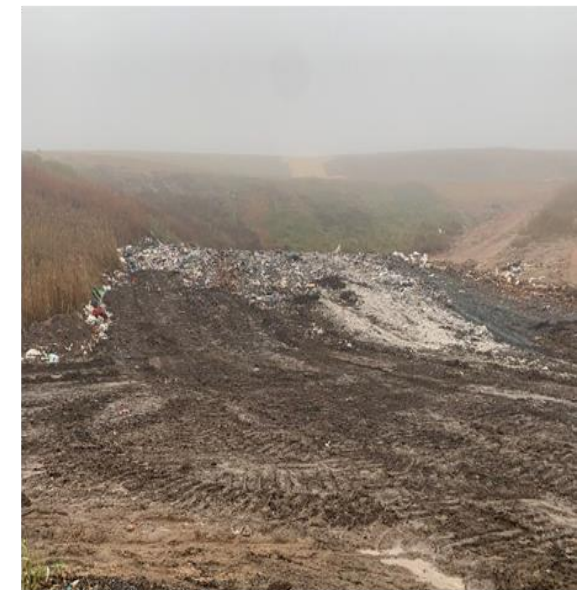
Waste grading to place daily cover at the Cell 2 area



Mattress disposed at the top of access ramp that BRESKO did not accept which need to cover with soil



Covering fluff layer on top of gravel above liner (Cell 6 N slope bottom)



New tipping face (started Mid Dec. 2022) along N facing slope, Cell 6



Waste Diversion: Mini MRFs

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Small-scale materials recovery facilities (MRFs) have the potential to create jobs, circulate dollars in the local economy, reduce material landfilled or incinerated, and increase local control over the sale and distribution of recyclable material. While we understand the need to work towards compliance in our existing operations, we believe that all waste diversion and zero waste efforts should be co-prioritized for funding with compliance issues.



The Baltimore Sustainability Plan has a goal to divert 90% of traditional recyclables, or approximately 84,200 tons per year, from the residential waste stream.



The Less Waste, Better Baltimore plan recommends constructing 16 decentralized mini-MRFs around the city to give the City more control over its recycling process, and to also reduce the cost incurred for sorting and processing recyclables.



Mini-MRFs can be housed in moderately-sized unused industrial properties throughout the city which will decrease travel time for collection crews and increase job accessibility to local residents.

The decentralized MRF approach would give the city the flexibility to sort recyclables more thoroughly, which could result in more materials getting recycled and an increased change to reach the 90% goal.



Waste Diversion: Composting

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The Baltimore Food Waste and Recovery Strategy (BFWRS) recommends creation of composting and anaerobic digestion (AD) capacity for processing 100% of the City's organic waste stream, support for the food waste diversion market by ensuring an adequate supply of organic waste is being diverted to compost and AD facilities, and creating a supportive culture for food waste reduction and diversion within City Government.



In 2019 Baltimore kicked-off the Food Matters program to reach the goal of reducing 50% of the city's commercial food waste by 2030 and 80% of residential food waste by 2040.

Since 2019, the Food Matters-Baltimore program has diverted organic waste from the landfill with food scrap drop off locations at two local farmer markets and 5 residential drop-off centers.

The farmer's markets collect scraps to feed local farmers' livestock, which is then sold at the market. The residential drop off centers collect bulk trash, recycling, electronics, and scrap metal, and, to date, over 60,000 pounds of food scraps for composting.

DPW and the Office of Sustainability continue to find the program successful following the conclusion of the NRDC Grant.



Project Updates

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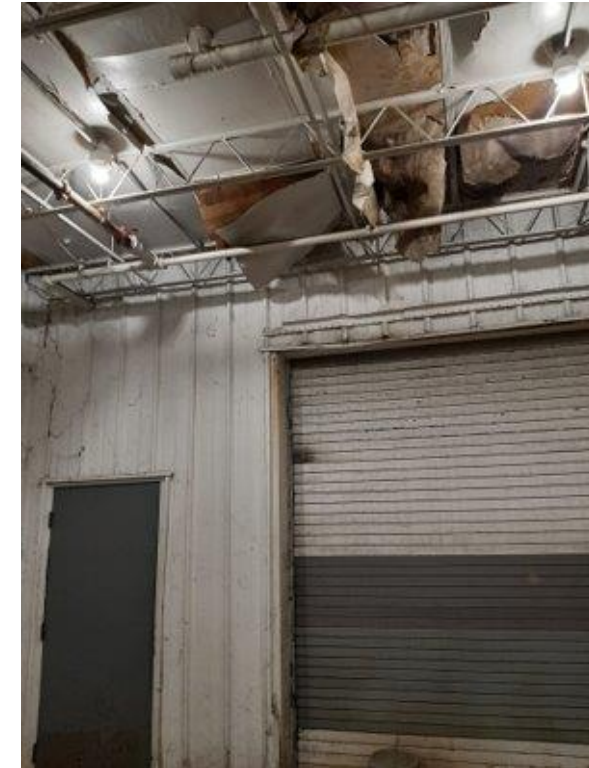


Eastside Transfer Station (Bowleys Lane):

- Geotechnical study to begin in February 2023. Results will recommend type and extent of structural foundation needs for a new facility.
- May co-locate a compost yard at the new transfer station at Bowleys. This would leverage an existing and funded site development to help win grant money for the compost yard.

Southeast Sanitation Yard (Kane St), Western Sanitation Yard (Reedbird), and Other Facility Health and Safety Improvements:

- Project assessment and design is being conducted through NMWDA. RFP has been advertised and have received a successful proposal for just over \$400,000.
- BSW has an MOU drafted that has been reviewed and accepted by NMWDA for work at Kane St. and Reedbird. The City is in the process of getting BOE approval.
- Bowleys, Sisson, and Quarantine Landfill have renovations planned but they are tied to specific capital projects.



Conclusion / Summary

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In the future, the Bureau hopes to receive capital funding for immediate needs as well as long-term capital needs. The completion of the Less Waste, Better Baltimore Plan recommended waste diversion and waste management strategies that will take time to assume full implementation.

In the meantime, the City's waste stream will continue to grow at an annual rate of 0.7% per year based on historical waste generation models. Investment in different strategies is necessary to provide the Department with the flexibility to manage the City's future waste needs.

The proposed FY 24 capital projects will support the Bureau's ability to:

- Continue to provide waste and recycling collection and disposal services;
- Quarantine Road Relocation and expansion of Quarantine Road landfill;
- Maintain regulatory compliance with State and Federal requirements;
- Create a healthy and safe work environment for employees; and
- Pursue waste diversion initiatives





Questions?

