

Worksession

MEMORANDUM

March 2, 2022

TO: Transportation & Environment Committee

FROM: Keith Levchenko, Senior Legislative Analyst

SUBJECT: **FY23-28 Capital Improvements Program – Recycling and Resource Management CIP¹**

Summary

- Total Six-Year CIP is \$49.5 million (a combination of Solid Waste Disposal Fund Bonds and Current Revenue)
- Three ongoing projects with no assumed changes in total project costs, scope, or timing
 - Full Upgrade of the Existing Recycling Center Complex
 - Gude Landfill Remediation
 - Transfer Station Fire Detection and Suppression System

Council Staff recommends approval of these projects as recommended by the County Executive

Meeting Participants

- Adriana Hochberg, Acting Director, Department of Environmental Protection (DEP)
- Patty Bubar, Deputy Director, DEP
- Willie Wainer, Chief, Recycling and Resource Management (RRM), DEP
- Anthony Skinner, Chief, Business Operations, Deputy Director Office, RRM, DEP
- Jeff Camera, Chief, Resource Conversion Section, RRM, DEP
- Jamie Foster, Sr. Engineer, Resource Conversation Section, RRM, DEP
- Rich Harris, Fiscal and Policy Analyst, Office of Management and Budget

Attachments to this Memorandum

- Excerpt from the County Executive’s FY23-28 Recommended Budget Capital Improvements Program – Recycling and Resource Management (©1-8)

¹ Key words: #GudeLandfillRemediation, DEP, Recycling and Resource Management

Summary

As shown in the following table, the Executive is recommending a six-year total of \$49.5 million in FY23-28 (a decrease of \$35.8 million or 41.9 percent from the Amended FY21-26 CIP) for three projects. No new projects are recommended. The six-year expenditure reduction is due to the projects progressing through the CIP. No changes in total project costs are assumed.

FY23-28 versus Amended FY21-26 Expenditures (in 000's)

	Total Cost	Thru Six-Year								Beyond		
		FY20	Total	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	6-Years
FY21-26 Amended	88,096	2,070	85,278	5,156	31,352	20,120	12,105	10,687	5,858			748
FY21-26 CE Rec	88,096		49,518	2,947	35,631	20,120	12,105	10,687	5,858	748	-	0
change from amended (\$,%)			(35,760)			-	-	-	-			(748)

The sources of funds for the RRM CIP are Solid Waste Disposal Fund Current Revenue and Revenue Bonds as shown in the following chart. There are no assumed changes in funding in any of the three projects. The differences in six-year totals shown below are the result of the projects moving through design and construction.

RRM CIP (in \$000s)

Funding Source	FY21-26	FY23-28
	Approved	Recommended
Solid Waste Current Revenue	27,440	2,022
Solid Waste Bonds	57,838	47,496
Total	85,278	49,518

Project Review

Full Upgrade of the Existing Recycling Center Complex (PDF on ©3)

	Total Cost	Six-Year Cost	FY21	FY22	FY23	FY24
	FY21-26 Latest Approved	20,350	20,350		11,900	8,450
FY23-28 CE Recommended	20,350	8,450		11,900	8,450	
change from approved	-	(11,900)			-	-
percent change from approved	0.0%	-58.5%			0.0%	

This \$20.35 million project was approved last year as an amendment to the FY21-26 CIP. The FY23-28 Recommended CIP assumes no cost increase nor change in scope or timing. The source of funds for the project is Solid Waste Disposal Fund² current revenue for the planning, design, and supervision and Solid Waste Disposal Fund Revenue Bonds for the construction/equipment costs.

Project design is expected to be finalized in July 2022 with construction bids going out in August/September and a contract award in November/December. Project completion is assumed in late FY23.

² The Solid Waste Disposal Fund is a self-supporting enterprise fund. Therefore, the costs associated with this project (both in Disposal Fund Current Revenue and debt service from the issuance of revenue bonds) do not affect the County's Spending Affordability Guidelines for General Obligation Bonds or General Current Revenue.

The project scope includes new equipment for the Materials Recovery Facility (MRF) that will substantially increase the processing capacity of the facility (from 80 tons per day to 200-240 tons per day). Minor modifications to the existing building are also included to increase storage capacity for both incoming and baled material. The criticality of this project was noted by the [Aiming for Zero Waste Task Force](#). For more details on the project and its justification, please see the [May 12, 2021 Council Staff Report](#) from last year’s CIP amendment process.

Council Staff recommends approval.

Gude Landfill Remediation Expenditure Schedule (PDF on ©4-5)

	Total Cost	Six-Year Cost	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	B6Y
FY21-26 Latest Approved	61,746	58,928	456	18,329	11,493	12,105	10,687	5,858			748
FY23-28 CE Recommended	61,746	40,891	2,787	18,068	11,493	12,105	10,687	5,858	748		
change from approved	-	(18,037)			-	-	-	-			
percent change from approved	0.0%	-30.6%			0.0%	0.0%	0.0%	n/a			n/a

This project provides for the planning and construction of a toupee cap (capping the top area) at the closed Gude Landfill to remediate low-level environmental contamination. The County and the Maryland Department of the Environment entered into a consent order in May 2013 involving landfill assessment and remediation. For more background on the project, please see the [April 21, 2020 Council Staff Report](#) from the FY21-26 CIP review process.

The recommended total project cost is \$61.7 million (the same as the Approved CIP). The source of funds is a mix of Solid Waste Disposal Fund Current Revenue and Revenue Bonds (no change from the Approved CIP).

The Recommended project assumes no cost increase or change in scope or completion date. The RFP process for the construction contract is currently underway with an award expected this May. The project is scheduled to begin construction in October/November 2022 and be completed in FY27.

Council Staff recommends approval.

Transfer Station Fire Detection and Suppression Systems (PDF on ©3-4)

	Total Cost	Six-Year Cost	FY21	FY22	FY23	FY24
FY21-26 Latest Approved	6,000	6,000	4,700	1,123	177	
FY23-28 CE Recommended	6,000	177	160	5,663	177	
change from approved	-	(5,823)			-	-
percent change from approved	0.0%	-97.1%			0.0%	

This project provides for the design and construction of new fire detection and suppression systems at the Transfer Station. The Recommended project assumes no cost increase or change in scope or timing. The project is funded with Solid Waste Disposal Fund Current Revenue.

The project was first approved as an amendment to the FY21-26 CIP in November 2020 to address fire safety concerns at the Transfer Station. For more information on the project need and scope, please see the [November 10, 2020 Council Staff Report](#).

The project began construction in FY21 and is now expected to be completed a few months earlier (June 2022) than assumed in the PDF (FY23). FY23 costs shown will still be needed to cover any outstanding testing and inspection fees.

Council Staff recommends approval.

Attachments



Recycling and Resource Management

PROGRAM DESCRIPTION AND OBJECTIVES

The principal objectives of Montgomery County's Recycling and Resource Management program are to: ensure that the solid waste generated in the County is managed in a safe, environmentally sound manner; encourage the reduction of waste generated by residents and businesses in the County; recycle as much as feasible of the resources contained in, and extractable from, solid waste; and minimize the use of landfilling. The major elements in the management of solid waste are to:

- continue implementation of the ban on all recyclable materials at all waste disposal facilities and encourage greater on-site management of grass clippings and yard trim by homeowners;
- operate the mass burn, Resource Recovery Facility (RRF) located in Dickerson;
- provide rail transport of solid waste from the Solid Waste Transfer Station to the RRF; and
- beneficially reuse or recycle at private facilities ash from the RRF and rubble delivered to the Transfer Station at private facilities, transport any non-processible waste, and bypass waste that cannot be handled at the RRF for disposal to a private out-of-County landfill.

HIGHLIGHTS

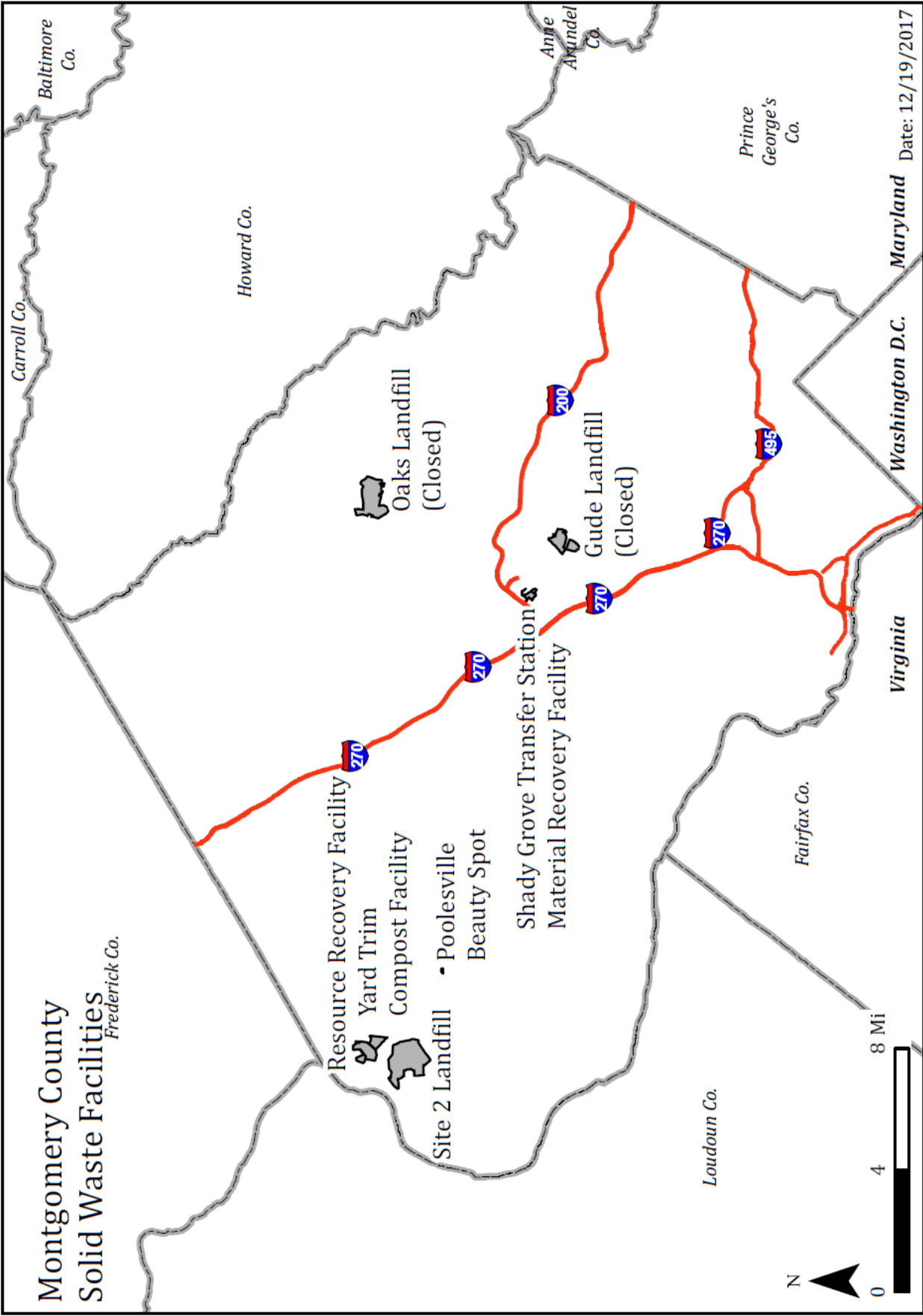
- Begin construction of upgrades to the Recycling Center in FY23, which will allow the County to process 100 percent of the material it generates rather than sending excess material out of the State for processing.
- Improve the capture of methane, a powerful greenhouse gas, from the decommissioned Gude Landfill, and install a toupee cap to prevent groundwater contamination.

PROGRAM CONTACTS

Contact Anthony Skinner of the Department of Environmental Protection at 240.777.6438 or Richard H. Harris of the Office of Management and Budget at 240.777.2796 for more information regarding this department's capital budget.

CAPITAL PROGRAM REVIEW

The FY23-28 Capital Program for Solid Waste Management contains three projects funded with \$49.5 million over six years, a reduction \$35.8 million, or 41.9 percent, from the FY21-26 Amended CIP, due to previously-approved funding for the Gude Landfill Remediation project shifting out of the six-year period.





Full Upgrade of Existing Recycling Center Complex

(P802201)

Category	Recycling and Resource Management	Date Last Modified	01/05/22
SubCategory	Recycling and Resource Management	Administering Agency	Environmental Protection
Planning Area	Rockville	Status	Final Design Stage

EXPENDITURE SCHEDULE (\$000s)

Cost Elements	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Planning, Design and Supervision	810	-	810	-	-	-	-	-	-	-	-
Construction	19,540	-	11,090	8,450	8,450	-	-	-	-	-	-
TOTAL EXPENDITURES	20,350	-	11,900	8,450	8,450	-	-	-	-	-	-

FUNDING SCHEDULE (\$000s)

Funding Source	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Current Revenue: Solid Waste Disposal	810	-	810	-	-	-	-	-	-	-	-
Revenue Bonds	19,540	-	11,090	8,450	8,450	-	-	-	-	-	-
TOTAL FUNDING SOURCES	20,350	-	11,900	8,450	8,450	-	-	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA (\$000s)

Appropriation FY 23 Request	8,450	Year First Appropriation	FY22
Appropriation FY 24 Request	-	Last FY's Cost Estimate	20,350
Cumulative Appropriation	11,900		
Expenditure / Encumbrances	-		
Unencumbered Balance	11,900		

PROJECT DESCRIPTION

This project will update the existing Material Recycling Center (MRF) with state of the art equipment to increase commingled processing capacity to 200 - 240 tons per day (TPD). This includes a minor modification of the existing MRF building to increase storage capacity for both incoming and baled material. Equipment will be substantially replaced because the existing equipment is incompatible with modern recycling processing technology. An updated facility will have higher operation uptime (90% rather than the current 83%) and produce higher quality product that can receive higher prices in the market.

Features of the renovated facility include removing glass at the beginning of sorting to reduce wear and tear on equipment, improved sorting screens, optical sorting, high efficiency electric motors, and reduced reliance on labor for sorting. An upgrade to the facility's electrical capacity may be added if it is determined that the current facility cannot handle the load needed after the renovation. This design will allow for the future addition of single stream processing equipment within the existing facility to receive and process

recyclables from other jurisdictions, if expansion to a regional concept is supported in an effort to improve the recycling program's cost-benefit ratio.

LOCATION

16103 Frederick Road, Derwood, MD

ESTIMATED SCHEDULE

The project will begin in Spring FY22 and is scheduled for completion in FY23.

PROJECT JUSTIFICATION

The current commingled processing system at the Recycling Center (MRF) was installed in 1991 and upgraded in 2002 to process 10 tons per hour (TPH) or 80 tons per day (TPD). Due to increased population, expanded material mix, and increased resident participation, the MRF currently receives 130 - 150 TPD of commingled material, almost double the current capacity. To keep up with the incoming volume, the MRF must export 40 - 45% of the commingled material received at an annual cost of approximately \$1.2 million.

After almost 30 years of operation, the majority of the current system components have operated beyond their useful life, causing frequent downtime and high repair and maintenance costs. Replacement parts are increasingly difficult to source for some equipment. This project's improvements will reduce operating costs, increase revenue from the sale of recyclables, increase processing efficiency, and continue to provide high quality recycling services to the County.

FISCAL NOTE

The Solid Waste Enterprise Fund is self-supporting through user fees, and revenue from the Solid Waste Enterprise Fund will be the source of repayment of the Solid Waste Revenue Bonds.

COORDINATION

Maryland Environmental Service, Department of Permitting Services. Special Capital Projects Legislation [Bill No. 23-21E] was adopted by Council June 29, 2021.



Gude Landfill Remediation

(P801801)

Category	Recycling and Resource Management	Date Last Modified	01/04/22
SubCategory	Recycling and Resource Management	Administering Agency	Environmental Protection
Planning Area	Upper Rock Creek Watershed	Status	Ongoing

EXPENDITURE SCHEDULE (\$000s)

Cost Elements	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Planning, Design and Supervision	6,955	2,619	678	3,658	932	905	877	854	90	-	-
Site Improvements and Utilities	192	96	96	-	-	-	-	-	-	-	-
Construction	54,599	72	17,294	37,233	10,561	11,200	9,810	5,004	658	-	-
TOTAL EXPENDITURES	61,746	2,787	18,068	40,891	11,493	12,105	10,687	5,858	748	-	-

FUNDING SCHEDULE (\$000s)

Funding Source	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Current Revenue: Solid Waste Disposal	22,700	2,787	18,068	1,845	1,845	-	-	-	-	-	-
Revenue Bonds	39,046	-	-	39,046	9,648	12,105	10,687	5,858	748	-	-
TOTAL FUNDING SOURCES	61,746	2,787	18,068	40,891	11,493	12,105	10,687	5,858	748	-	-

OPERATING BUDGET IMPACT (\$000s)

Impact Type	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28
Maintenance	1,431	-	-	-	-	711	720
Program-Staff	-	-	-	-	-	-	-
Program-Other	-	-	-	-	-	-	-
NET IMPACT	1,431	-	-	-	-	711	720
FULL TIME EQUIVALENT (FTE)		-	-	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA (\$000s)

Appropriation FY 23 Request	23,598	Year First Appropriation	FY18
Appropriation FY 24 Request	-	Last FY's Cost Estimate	61,746
Cumulative Appropriation	20,855		
Expenditure / Encumbrances	7,444		
Unencumbered Balance	13,411		

PROJECT DESCRIPTION

This project provides for the remediation of low-level environmental contamination at the Gude Landfill. The Maryland Department of the Environment (MDE) approved an Assessment of Corrective Measures (ACM) report for Gude Landfill in July 2016 which specifically outlines the approved Corrective Measure Alternative (CMA) for this remediation project. The MDE approved CMA will include toupee capping (regrading and capping the top of the landfill and selected slope areas with a synthetic liner and two feet of soil) and increased gas collection through the installation of additional gas extraction wells. These remediation measures will reduce infiltration of rainwater into the landfill resulting in the generation of less leachate, fewer leachate seeps, and better control of landfill gas migration.

LOCATION

600 E. Gude Drive, Rockville, Maryland

ESTIMATED SCHEDULE

The Gude Landfill Remediation project construction will begin in Fall FY23 and is scheduled to be completed in FY27.

PROJECT JUSTIFICATION

The County and MDE entered a consent order in May 2013 which outlined requirements for assessing low-level groundwater contamination, gas migration, and other problems at the Gude Landfill. The Consent Order included provisions requiring a Work Plan and schedule to be established for assessing potential risks to human health and the environment, and development of an ACM report and implementation schedule. After consultation with industry experts, community groups, MDE, and County government leadership, the Department of Environmental Protection's (DEP) initial proposal to MDE in 2014 addressed the low-level groundwater contamination at the site with installation of bioremediation wells on the property. MDE's assessment of this bioremediation corrective measure in April 2015 determined that additional corrective measures would need to be included in the bioremediation approach to address all of MDE's requirements. A revised ACM report was submitted to MDE in April 2016 addressing all MDE's comments and selecting corrective measures consisting of a toupee cap, additional landfill gas collection, and stormwater drainage improvements. The County has been mandated to perform work outlined in the consent order. Moving forward with the remediation of Gude Landfill, as required by MDE, will also address concerns raised by the adjacent community and allow planning for future reuses of the property.

FISCAL NOTE

Solid Waste (Disposal Fund) Revenue Bonds will be issued to support this project. A mid-FY21 amendment reduced Current Revenue: Solid Waste Disposal by \$6,000,000 and increased Revenue Bonds by \$6,000,000.

COORDINATION

Northeast Maryland Waste Disposal Authority (NMWDA), Maryland Department of the Environment (MDE), Department of Permitting Services, Health and Human Services, the Maryland-National Capital Park and Planning Commission, the U.S. Army Corps of Engineers, the Gude Landfill Concerned Citizens (GLCC), County social service agencies, and adjacent property owners. Special Capital Projects Legislation [Bill No. 16-19E] was adopted by Council on October 20, 2020.



Transfer Station Fire Detection and Suppression System

(P802101)

Category	Recycling and Resource Management	Date Last Modified	01/12/22
SubCategory	Recycling and Resource Management	Administering Agency	Environmental Protection
Planning Area	Gaithersburg and Vicinity	Status	Ongoing

EXPENDITURE SCHEDULE (\$000s)

Cost Elements	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Construction	6,000	160	5,663	177	177	-	-	-	-	-	-
TOTAL EXPENDITURES	6,000	160	5,663	177	177	-	-	-	-	-	-

FUNDING SCHEDULE (\$000s)

Funding Source	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
Current Revenue: Solid Waste Disposal	6,000	160	5,663	177	177	-	-	-	-	-	-
TOTAL FUNDING SOURCES	6,000	160	5,663	177	177	-	-	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA (\$000s)

Appropriation FY 23 Request	-	Year First Appropriation	FY22
Appropriation FY 24 Request	-	Last FY's Cost Estimate	6,000
Cumulative Appropriation	6,000		
Expenditure / Encumbrances	4,700		
Unencumbered Balance	1,300		

PROJECT DESCRIPTION

This project provides for the comprehensive design and installation of a new fire detection and suppression systems at the Shady Grove Processing and Transfer Facility. This project will include the installation of detection and suppression systems to replace the existing detection and suppression systems that are beyond their useful life. The project will also address other fire detection and suppression deficiencies and violations as identified by the County's Fire Department and Department of Permitting Services (DPS). The construction project will span approximately two years.

LOCATION

16101 Frederick Road, Derwood, Maryland

ESTIMATED SCHEDULE

The construction for the new fire detection and suppression systems began FY21 and is scheduled to be completed in FY23.

PROJECT JUSTIFICATION

On February 13, 2020, the Department of Environmental Protection (DEP) received a Notice of Violation (Case No. 418905) from the County's Department of Permitting Services (DPS). This Notice of Violation cited a NFPA1-System Restore Violation for Case No. 418905. The Department is currently working through the Northeast Waste Disposal Authority with contractors to complete a design for the fire detection and suppression systems to address the Notice of Violation and the concerns posed by the County's insurance provider (FM Global). Therefore, this project completion is essential to remain DPS compliant, to mitigate frequent fires, and to eliminate health and safety concerns associated with having a deficient fire detection and suppression systems for solid waste operations.

FISCAL NOTE

Design of this project was funded in the operating budget using \$1.0 million in funds appropriated in FY19 and encumbered for this purpose. A FY21 supplemental appropriation added \$4.7 million in Current Revenue: Solid Waste Disposal.

COORDINATION

Northeast Maryland Waste Disposal Authority (NMWDA), Maryland Department of the Environment (MDE), Department of Permitting Services, FM Global, Covanta Energy, and County social service agencies, and adjacent property owners.