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 recyclable materials from the refuse waste stream 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 while exploring alternatives to the RRF;
- 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

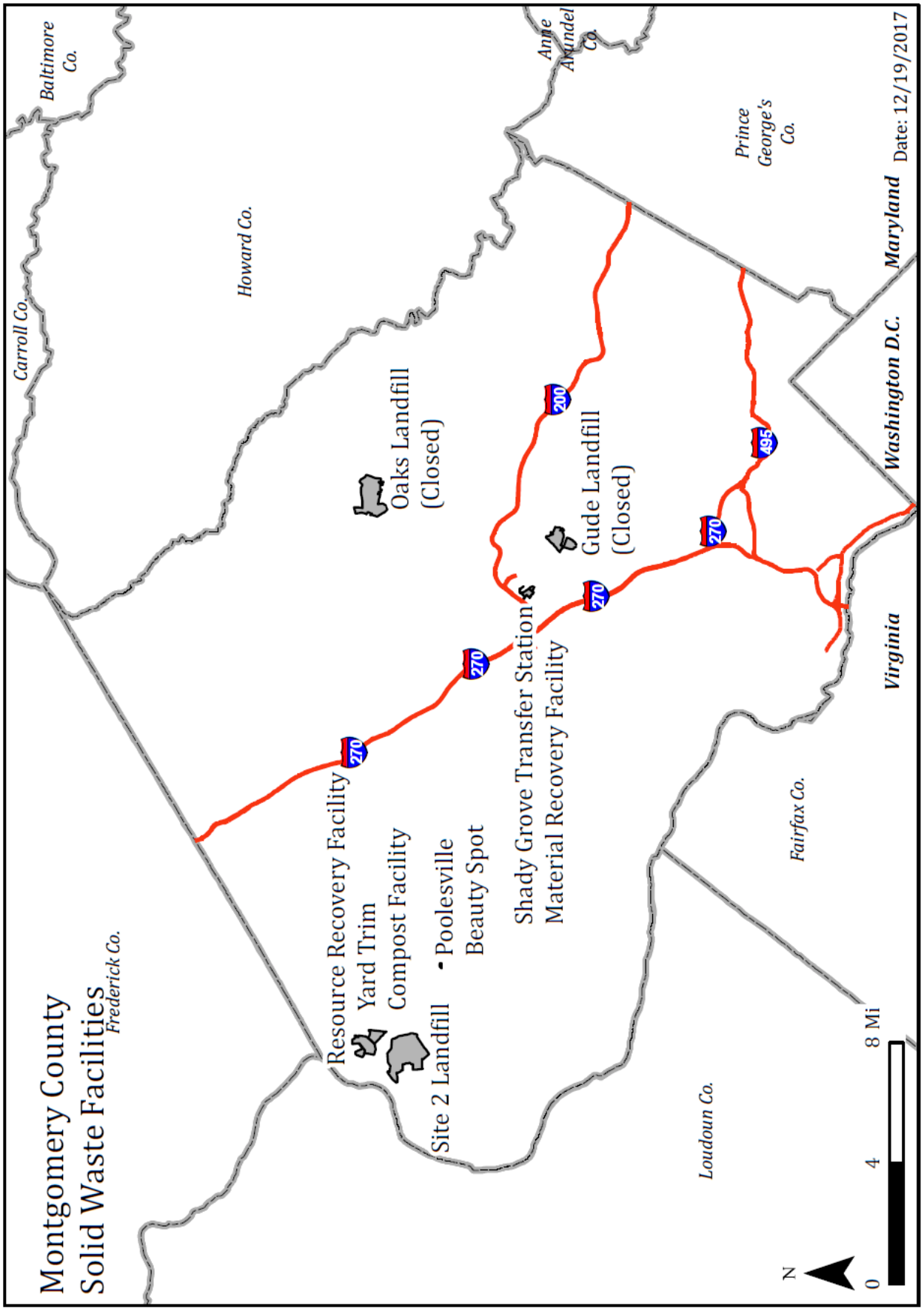
- Continue construction of upgrades to the Recycling Center, which will allow the County to process 100 percent of the material it generates rather than sending excess material out of State for processing.
- Improve the capture of methane, a powerful greenhouse gas, from the decommissioned Gude Landfill, and install a toupee cap to prevent groundwater contamination.
- Upgrade the leachate plant at the decommissioned Oaks Landfill which has reached the end of its useful life.

PROGRAM CONTACTS

Contact Vicky Wan of the Department of Environmental Protection at 240.777.7722 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 FY25-30 Capital Program for Solid Waste Management contains three projects funded with $41.4 million over six years, a reduction $15.9 million, or 27.8 percent, from the FY23-28 Amended CIP, primarily due to implementation of the Gude Landfill Remediation project prior to the six-year period, partially offset by funding for the new Oaks Landfill Leachate Pretreatment Plant Retrofitting project.


Montgomery County
Solid Waste Facilities
Frederick Co.
Carroll Co.
Baltimore Co.
Howard Co.
Anne Arundel Co.
Prince George's Co.
Washington D.C.
Maryland
Virginia
Fairfax Co.
Loudoun Co.
Resource Recovery Facility
Yard Trim
Compost Facility
Site 2 Landfill
Poolesville
Beauty Spot
Shady Grove Transfer Station
Material Recovery Facility
Oaks Landfill
(Closed)
Gude Landfill
(Closed)
270
200
495
N
0
4
8 Mi
Date: 12/19/2017

Full Upgrade of Existing Recycling Center Complex
(P802201)

Category	Recycling and Resource Management	Date Last Modified	01/08/24
SubCategory	Recycling and Resource Management	Administering Agency	Environmental Protection
Planning Area	Rockville	Status	Under Construction

EXPENDITURE SCHEDULE ($000s)

Cost Elements	Total	Thru FY23	Est FY24	Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Beyond 6 Years
Planning, Design and Supervision	3,380	160	820	2,400	760	1,180	460	-	-	-	-
Construction	24,250	-	6,442	17,808	7,758	5,550	4,500	-	-	-	-
TOTAL EXPENDITURES	27,630	160	7,262	20,208	8,518	6,730	4,960	-	-	-	-

FUNDING SCHEDULE ($000s)

Funding Source	Total	Thru FY23	Est FY24	Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Beyond 6 Years
Current Revenue: Solid Waste Disposal	810	160	650	-	-	-	-	-	-	-	-
Revenue Bonds	26,820	-	6,612	20,208	8,518	6,730	4,960	-	-	-	-
TOTAL FUNDING SOURCES	27,630	160	7,262	20,208	8,518	6,730	4,960	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 25 Request	-	Year First Appropriation	FY22
Appropriation FY 26 Request	-	Last FY's Cost Estimate	27,630
Cumulative Appropriation	27,630		
Expenditure / Encumbrances	527		
Unencumbered Balance	27,103		

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, Maryland

ESTIMATED SCHEDULE

Construction began in FY24 and is scheduled for completion in FY27.

PROJECT JUSTIFICATION

The current commingled processing system at the 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 in June 2021.

Gude Landfill Remediation
(P801801)

Category	Recycling and Resource Management	Date Last Modified	01/04/24
SubCategory	Recycling and Resource Management	Administering Agency	Environmental Protection
Planning Area	Upper Rock Creek Watershed	Status	Under Construction

EXPENDITURE SCHEDULE ($000s)

Cost Elements	Total	Thru FY23	Est FY24	Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Beyond 6 Years
Planning, Design and Supervision	6,955	3,094	2,040	1,821	877	854	90	-	-	-	-
Site Improvements and Utilities	192	129	63	-	-	-	-	-	-	-	-
Construction	54,599	14,469	24,658	15,472	9,810	5,004	658	-	-	-	-
TOTAL EXPENDITURES	61,746	17,692	26,761	17,293	10,687	5,858	748	-	-	-	-

FUNDING SCHEDULE ($000s)

Funding Source	Total	Thru FY23	Est FY24	Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Beyond 6 Years
Current Revenue: Solid Waste Disposal	22,700	17,692	5,008	-	-	-	-	-	-	-	-
Revenue Bonds	39,046	-	21,753	17,293	10,687	5,858	748	-	-	-	-
TOTAL FUNDING SOURCES	61,746	17,692	26,761	17,293	10,687	5,858	748	-	-	-	-

OPERATING BUDGET IMPACT ($000s)

Impact Type		Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30
Maintenance		2,871	-	-	711	720	720	720
NET IMPACT		2,871	-	-	711	720	720	720
FULL TIME EQUIVALENT (FTE)			-	-	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 25 Request	17,293	Year First Appropriation	FY18
Appropriation FY 26 Request	-	Last FY's Cost Estimate	61,746
Cumulative Appropriation	44,453		
Expenditure / Encumbrances	32,644		
Unencumbered Balance	11,809		

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 the 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 began in January 2023 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 of 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.

Oaks Landfill Leachate Pretreatment Plant Retrofitting

(P802505)

Category	Recycling and Resource Management	Date Last Modified	01/08/24
SubCategory	Recycling and Resource Management	Administering Agency	Environmental Protection
Planning Area	Gaithersburg and Vicinity	Status	Preliminary Design Stage

EXPENDITURE SCHEDULE ($000s)

Cost Elements	Total	Thru FY23	Est FY24	Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Beyond 6 Years
Construction	3,890	-	-	3,890	2,000	1,890	-	-	-	-	-
TOTAL EXPENDITURES	3,890	-	-	3,890	2,000	1,890	-	-	-	-	-

FUNDING SCHEDULE ($000s)

Funding Source	Total	Thru FY23	Est FY24	Total 6 Years	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Beyond 6 Years
Current Revenue: Solid Waste Disposal	3,890	-	-	3,890	2,000	1,890	-	-	-	-	-
TOTAL FUNDING SOURCES	3,890	-	-	3,890	2,000	1,890	-	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 25 Request	3,890	Year First Appropriation	
Appropriation FY 26 Request	-	Last FY's Cost Estimate	-
Cumulative Appropriation	-		
Expenditure / Encumbrances	-		
Unencumbered Balance	-		

PROJECT DESCRIPTION

The Oaks Landfill is approximately 545 acres with a waste disposal footprint of 170 acres. The Oaks Landfill Leachate Pretreatment started operations in 1995, 28 years ago, and has not undergone any renovations or retrofitting since the original construction. It is now in need of new and upgraded pretreament equipment as the existing equipment is at or beyond their intended useful life.

LOCATION

6001 Olney-Laytonville Road, Gaithersburg, MD 20882

ESTIMATED SCHEDULE

All design work, including permitting, will be completed in FY25. Construction will be completed in FY26.

PROJECT JUSTIFICATION

The Oaks landfill Leachate Pre-Treatment Plant still uses a 25-year-old processing system which is outdated and operating past its useful life. It also needs to be upgraded and retrofitted with new equipment to improve the wastewater treatment process and to accommodate the additional treatment capacity by expanding the existing oil/grit management facility to support the County's stormwater management maintenance.

This project is needed to protect public health and the environment through the pretreatment of landfill leachate that has the potential to negatively impact groundwater and surface water sources if not managed properly. The County is required to provide for post-closure care and maintenance of landfill facilities and their associated infrastructure, which includes the Leachate Pretreatment Plant.

FISCAL NOTE

Design for this project was funded in the FY23 and FY24 operating budgets.

COORDINATION

Maryland Department of the Environment (MDE), Washington Suburban Sanitary Commission, Department of Permitting Services, the Maryland National Capital Park and Planning Commission (MNCPPC) .