

Fund 40170: I-95 Refuse Disposal

Mission

The Fairfax County Solid Waste Management Program (SWMP) is dedicated to keeping Fairfax County clean by preventing pollution and other contamination associated with the improper disposal of refuse. This is achieved by providing environmentally sound and economically viable management of refuse and recyclables through the operation of the I-95 Landfill Complex in Lorton, Virginia. The primary activity performed is the landfilling of ash generated from the combustion of waste at the Energy/Resource Recovery Facility (E/RRF). The following activities are conducted at this location:

- The Covanta combustion process generates ash, which is landfilled on site by County employees. Ash from a similar Covanta facility serving the City of Alexandria, Arlington County, and the Noman Cole Plant, are disposed of at the I-95 Ash Landfill.
- Brush is ground into mulch for reuse.
- Leaves and grass are transported to composting facilities in Prince William and Loudoun Counties where it is processed into a soil amendment.
- Landfill gas generated at the closed landfill generates methane captured and processed for power production.
- Staff and equipment from the I-95 facility are used to respond to emergencies by providing debris removal during emergencies and disasters, including snow and ice control in winter months.
- Other programs conducted at the I-95 facility include operation of a Recycling and Disposal Center (RDC) for residents and small businesses, Household Hazardous Waste, and recycling of electronics, motor oil, antifreeze, cooking oil, latex paint, automotive batteries, and scrap metal.
- The SWMP manages environmental control programs for the closed portion of the landfill as required by federal and state regulations. Systems to control landfill gas and groundwater and stormwater impacts attributed to waste disposal are operated and maintained by County staff.

Focus

The County has operated the I-95 Landfill Complex for more than 25 years. It was previously owned and operated by the District of Columbia from 1970 to 1995. It has not accepted municipal waste since December 1995 and only accepts ash generated by the combustion of waste.



The ash landfill was designed in four phases and meets federal and state standards for the construction of new landfills, which requires a double liner with a leachate collection system for the prevention of groundwater degradation. Phases I and II have reached capacity and have been covered with an intermediate cover system. Phase III is currently being used for ash disposal and has at least five years of capacity remaining. Phase IV has not yet been constructed.

Covanta's suite of pollution control equipment includes a dolomitic lime system that chemically treats the ash to

reduce the potential of mobilizing metals that may leach from the ash after landfilling. The ash is tested twice per year using the Toxicity Characteristic Leaching Procedure (TCLP), as specified in federal regulations. During FY 2017, analysis of the ash by a certified laboratory found the ash to be non-hazardous, demonstrating that all parameters analyzed are within the limits for all regulated constituents.

This facility is responsible for the management of the closed portion of the municipal solid waste landfill including landfill gas control, groundwater monitoring and remediation, storm water management and leachate control. These activities ensure compliance with the facility's state-issued permit (SWP103) and applicable environmental regulations administered by the Virginia Department of Environmental Quality (VDEQ).

The FY 2021 Advertised Budget Plan proposed a \$1/ton rate increase, from \$26.50/ton to \$27.50/ton to fund the ash disposal operation. As a result of COVID-19 the proposed rate increase has been deferred to FY 2022 and the FY 2021 rate remains at \$26.50/ton. There are adequate fund balances in this fund to absorb this deferral without impact to operations. Covanta Fairfax, Inc. pays SWMP \$1.70 per ton to transport ash debris from the E/RRF facility to the landfill. The landfill's Post-Closure Reserve is required for a 30-year period after the ash landfill is closed as mandated by federal and state regulations. The FY 2021 Post-Closure Reserve is projected to be \$24.9 million or 53.3 percent of the required \$46.7 million. Increased maintenance needs require additional funding to ensure the landfill remains in compliance with its many permits.

Performance measures for Solid Waste are displayed at a program-wide level. Please refer to the Solid Waste Management Program Overview in Volume 2 of the FY 2021 Adopted Budget Plan for those items.

Pandemic Response and Impact

For the Solid Waste Management Program, major challenges include employee safety precautions and efforts to maintain social distancing. Upon the onset of this pandemic, the SWMP procured additional cleaning supplies and personal protection equipment (PPE) for employees. Standard operating procedures (SOPs) were revised to include enhanced PPE practices. The SWMP is exploring options for deploying two staff members per truck instead of three per truck to enhance social distancing. The yard waste program was temporarily suspended due to the staffing shortages; however, the collection rate has been reduced by \$15 in FY 2021 to account for this change. Additionally, the SWMP has limited the operating hours for citizens to drop off trash in an effort to limit in-person contact and promote public safety. The action plans by the SWMP will be continuously reevaluated and revised based on the evolving situation with the pandemic.

Organizational Chart



Budget and Staff Resources

Category	FY 2019 Actual	FY 2020 Adopted	FY 2020 Revised	FY 2021 Advertised	FY 2021 Adopted
FUNDING					
Expenditures:					
Personnel Services	\$3,592,591	\$4,201,485	\$4,401,485	\$4,318,022	\$4,177,195
Operating Expenses	953,759	2,702,000	2,996,212	2,000,000	2,000,000
Capital Equipment	864,562	225,000	693,267	2,300,000	2,300,000
Capital Projects	394,078	500,000	7,784,093	2,800,000	2,800,000
Total Expenditures	\$5,804,990	\$7,628,485	\$15,875,057	\$11,418,022	\$11,277,195
AUTHORIZED POSITIONS/FULL-TIME EQUIVALENT (FTE)					
Regular	41 / 41	41 / 41	42 / 42	42 / 42	42 / 42

FY 2021 Funding Adjustments

The following funding adjustments from the FY 2020 Adopted Budget Plan are necessary to support the FY 2021 program. Included are all adjustments recommended by the County Executive that were approved by the Board of Supervisors, as well as any additional Board of Supervisors' actions, as approved in the adoption of the Budget on May 12, 2020.

Other Post-Employment Benefits (\$24,290)

A decrease of \$24,290 in Personnel Services reflects required adjustments associated with providing Other Post-Employment Benefits (OPEBs) to retirees, including the Retiree Health Benefits Subsidy. For more information on Other Post-Employment Benefits, please refer to Fund 73030, OPEB Trust, in Volume 2 of the FY 2021 Adopted Budget Plan.

Operating Expenditures (\$702,000)

A decrease of \$702,000 in Operating Expenses is based on actual expenditure requirements from prior years and the fund's efforts to streamline costs and improve efficiencies.

Capital Equipment \$2,075,000

Funding of \$2,300,000 in Capital Equipment reflects an increase of \$2,075,000 over the FY 2020 Adopted Budget Plan. Of this amount, \$750,000 is for one horizontal grinder, \$500,000 is for one bulldozer, \$450,000 is for the replacement of one wheel-loader, \$420,000 is for one articulating dump truck, \$100,000 is for one small backhoe/loader, and \$80,000 is for two pick-up trucks. These items have exceeded their useful life and are required to be replaced based on the overall age and condition of the equipment.

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Capital Projects **\$2,800,000**
 Funding of \$2,800,000 is include in Capital Projects in FY 2021 to support capital improvement and environmental compliance projects at the I-95 Landfill Complex.

Changes to FY 2020 Adopted Budget Plan

The following funding adjustments reflect all approved changes in the FY 2020 Revised Budget Plan since passage of the FY 2020 Adopted Budget Plan. Included are all adjustments made as part of the FY 2019 Carryover Review, FY 2020 Third Quarter Review, and all other approved changes through April 30, 2020.

Carryover Adjustments **\$7,351,572**
 As part of the FY 2019 Carryover Review, the Board of Supervisors approved funding of \$7,351,572, including \$157,479 in encumbered funding, \$6,734,093 in unexpended Capital Projects, and \$460,000 in increased capital equipment to support the replacement of a service material handler, two mulch hoppers, and one new 6,500-gallon storage tank.

Position Adjustment **\$0**
 In order to properly align staff with workload requirements, 1/1.0 FTE position was transferred to Fund 40170, I-95 Refuse Disposal, from Fund 40140, Refuse Collection and Recycling Operations.

Third Quarter Adjustments **\$895,000**
 As part of the FY 2020 Third Quarter Review, the Board of Supervisors approved an additional \$895,000 to support higher than anticipated Fringe Benefit costs, Work Performed for Others (WPFO), and increased Capital Project requirements.

Position Detail

The FY 2021 Adopted Budget Plan includes the following positions:

I-95 REFUSE DISPOSAL – 42 Positions			
1	Engineer V	1	Lead Refuse Operator
1	PW Environmental Services Manager	9	Heavy Equipment Operators
3	PW Environmental Services Specialists	2	Motor Equipment Operators
1	Sr. Environmental Specialist	1	Welder
1	Constr/Mnt Project Manager II	1	Maintenance Supervisor
1	Senior Engineer III	1	Senior Maintenance Worker
1	Engineering Technician III	4	Maintenance Workers
3	Engineering Technicians II	1	Equipment Repairer
1	Engineering Technician I	1	Administrative Assistant IV
1	Safety Analyst	1	Administrative Assistant III
1	Financial Specialist II	1	Administrative Assistant II
4	Asst. Refuse Superintendents		

A Fund Statement and a Summary of Capital Projects are provided on the following pages. The Summary of Capital Projects may include some projects without a Total Project Estimate amount. These projects are considered "continuing" projects or projects for which funding is necessary on an ongoing basis (e.g., a contingency or planning project).

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FUND STATEMENT

Category	FY 2019 Actual	FY 2020 Adopted Budget Plan	FY 2020 Revised Budget Plan	FY 2021 Advertised Budget Plan	FY 2021 Adopted Budget Plan
Beginning Balance	\$33,020,825	\$27,058,670	\$37,576,946	\$32,204,139	\$31,309,139
Revenue:					
Interest on Investments	\$474,982	\$300,000	\$300,000	\$300,000	\$300,000
Refuse Disposal Revenue	9,664,252	9,293,250	9,293,250	10,230,000	9,861,250
Sale of Equipment	407,877	200,000	200,000	341,000	341,000
Total Revenue	\$10,547,111	\$9,793,250	\$9,793,250	\$10,871,000	\$10,502,250
Total Available	\$43,567,936	\$36,851,920	\$47,370,196	\$43,075,139	\$41,811,389
Expenditures:					
Personnel Services	\$3,592,591	\$4,201,485	\$4,401,485	\$4,318,022	\$4,177,195
Operating Expenses	953,759	2,702,000	2,996,212	2,000,000	2,000,000
Capital Equipment	864,562	225,000	693,267	2,300,000	2,300,000
Capital Projects	394,078	500,000	7,784,093	2,800,000	2,800,000
Total Expenditures	\$5,804,990	\$7,628,485	\$15,875,057	\$11,418,022	\$11,277,195
Transfers Out:					
General Fund (10001) ¹	\$186,000	\$186,000	\$186,000	\$186,000	\$186,000
Total Transfers Out	\$186,000	\$186,000	\$186,000	\$186,000	\$186,000
Total Disbursements	\$5,990,990	\$7,814,485	\$16,061,057	\$11,604,022	\$11,463,195
Ending Balance²	\$37,576,946	\$29,037,435	\$31,309,139	\$31,471,117	\$30,348,194
Reserves					
Capital Equipment Reserve ³	\$13,054,194	\$2,394,064	\$5,560,768	\$3,147,112	\$3,034,819
Environmental Reserve ⁴	0	2,032,643	1,137,643	2,517,689	2,427,856
Post-Closure Reserve ⁵	24,522,752	24,610,728	24,610,728	25,806,316	24,885,519
Unreserved Ending Balance	\$0	\$0	\$0	\$0	\$0
Disposal Fee/Ton⁶	\$26.50	\$26.50	\$26.50	\$27.50	\$26.50

¹ Funding in the amount of \$186,000 is transferred to the General Fund to partially offset central support services supported by the General Fund, which benefit Fund 40170. These indirect costs include support services such as Human Resources, Purchasing, Budget and other administrative services.

² Ending balance fluctuations are a result of operating and revenue requirements that change annually. Funding is carried forward each fiscal year to provide flexibility given the uncertainty of market conditions and expenditure requirements.

³ The Capital Equipment Reserve provides for the timely replacement of equipment required to operate the I-95 Ashfill. Funds are transferred from Ash Disposal Revenue to equipment reserve as are proceeds from the sale of equipment. The reserve requirement is based on a replacement schedule composed of yearly payments to the reserve, which are based on the useful life of the equipment and vehicles.

⁴ The Environmental Reserve assures that the County has funds to implement, or at least start to implement, unplanned actions to protect the environment or meet regulatory requirements. Specific examples of future environmental projects are likely to include: Landfill Gas Control Projects, Stormwater Management, Wastewater (Leachate) Management, and Groundwater protective measures.

⁵ The Post-Closure Reserve is required for a 30-year period after the ashfill closes and is mandated by federal and state regulations. The projected reserve of \$24.9 million for FY 2021 represents 53.3 percent of the estimated requirement of \$46.7 million and is insufficient to cover all identified costs. Actual post-closure requirement amounts can fluctuate based on inflation, changes in technology, or changes in regulations. Additional funds will be set aside in future years.

⁶ As a result of COVID-19, the proposed rate increase has been deferred to FY 2022 and the FY 2021 rate remains at \$26.50/ton. There are adequate fund balances in this fund to absorb this deferral without impact to operations.

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SUMMARY OF CAPITAL PROJECTS

Project	Total Project Estimate	FY 2019 Actual Expenditures	FY 2020 Revised Budget	FY 2021 Advertised Budget Plan	FY 2021 Adopted Budget Plan
I-95 Landfill Closure (SW-000019)	\$2,440,098	\$0.00	\$1,838,644.11	\$600,000	\$600,000
I-95 Landfill Environmental Compliance (SW-000016)	1,559,536	287,783.23	613,429.20	500,000	500,000
I-95 Landfill Leachate Facility (SW-000018)	4,310,478	46,132.85	217,838.15	300,000	300,000
I-95 Landfill Lot B Redesign (SW-000020)	1,750,000	0.00	1,250,000.00	500,000	500,000
I-95 Landfill New Service Road (SW-000027)	1,500,000	22,600.00	977,400.00	500,000	500,000
I-95 Methane Gas Recovery (SW-000014)	2,309,232	37,561.51	273,834.48	50,000	50,000
I-95 Operation Building Renovation (SW-000015)	498,952	0.00	412,947.55	50,000	50,000
I-95 Transfer/Materials Recovery Fac. (SW-000022)	2,500,000	0.00	2,200,000.00	300,000	300,000
Total	\$16,868,296	\$394,077.59	\$7,784,093.49	\$2,800,000	\$2,800,000