Solid Waste

Program Description

The Solid Waste Management Program provides the system for refuse collection, recycling, and disposal services for County businesses and residents.

Link to the Comprehensive Plan

Fairfax County's Comprehensive Plan, Public Facilities Element includes the countywide objectives 1-7, which apply to all facility types and the Solid Waste and Recycling objectives 36-38 shown below:

- Provide conveniently located solid waste management facilities and operations, while ensuring that these facilities are compatible with adjacent land uses.
- Provide an efficient, cost effective, and environmentally sound comprehensive solid waste management system that meets the current and future needs of the County.
- Provide a waste reduction and recycling program readily available to all, that meets the current and future needs of the County.

Source: Fairfax County Comprehensive Plan, 2017 Edition; Policy Plan - Public Facilities, Amended through 5-7-2024

Program Initiatives

The County Solid Waste Management Program operates several facilities: the Solid Waste Transfer Station at the I-66 Solid Waste Management Complex on West Ox Road, the I-95 Landfill Complex in Lorton, and the Newington Collection Operations Facility.

Both County and private hauler collection vehicles deposit their waste at the I-66 Solid Waste Transfer Station where it is consolidated into tractor trailers for transfer to the Reworld Fairfax, LLC facility in Lorton and other disposal facilities, such as the Prince William County Landfill. The I-66 facility also includes a closed municipal landfill and a recycling and disposal center for County residents and businesses.

The I-95 Landfill Complex contains a functioning ash landfill, a closed municipal waste landfill, and a recycling and disposal center providing services to residents and businesses. The I-95 Ash Landfill is used for the disposal of ash generated by Reworld's waste to energy facilities at the I-95 Landfill and in Alexandria. Additionally, ash generated from the combustion of biosolids (sewage sludge) at Fairfax County's Noman M. Cole, Jr. Water Recycling Facility is also deposited into the I-95 Ash Landfill.

The Newington Collection Operations Facility provides for refuse and recycling collection vehicles and ancillary equipment. The Newington Complex currently houses the County's collection fleet along with administrative facilities for personnel. Infrastructure costs are paid by refuse collection fees charged to approximately 45,600 residential County customers. About half of the County customers also receive curbside vacuum leaf collection service in the fall for an additional fee of $0.019 per $100 of assessed value of the home and property.

The County's current twenty-year Solid Waste Management Plan was adopted by the Board of Supervisors in 2004 and has been updated every 5-6 years since. The latest update was submitted to the Virginia Department of Environmental Quality in March 2025. This Plan is required by state regulation administered by the Virginia Department of Environmental Quality and provides a framework for implementing solid waste management programs and facilities and demonstrates how the county will manage waste and recyclables for a 20-year period.

Equity Initiatives

Equity Review and Initiatives

The Solid Waste Management system is vital for the entire community, ensuring waste collection and disposal is protective of the public and the environment. The goal is to enhance waste management services for all communities within the County, fostering a healthier and more equitable distribution of public resources and environmental benefits. This includes the timely and cost-effective renewal and repair of aging sanitary infrastructure, safely managing legacy environmental sites, and investing in sustainable technologies. Equity is at the core of the Waste Management system mission. By prioritizing vulnerable areas, the goal is to undo historical disparities and guarantee equal access to high-quality waste management services. Staff are dedicated to continually evaluating and improving practices to advance equity and environmental stewardship, ensuring no community is left behind and the most vulnerable residents are engaged in and benefit from the County's pursuit of environmental sustainability.

Current Project Descriptions

1. **I-66 Administrative Building Renovation (Springfield District):** $13,764,000 is estimated to be required through FY 2036 to fund renovations to the existing building and transfer facility at the I-66 Transfer Station over the next 5 years. The renovation work includes repair of the roof, repair of the pit structures, renovation of a leachate pumpstation, installation of solar infrastructure, e-vehicle truck chargers, design/installation of tunnel scales, and other related modifications necessary to meet present needs and building codes. FY 2027 funding of $1,250,000 has been included for this project.

2. **I-66 Environmental Compliance (Springfield District):** $5,172,000 is estimated to be required through FY 2036 to fund environmental management activities for the I-66 landfill which was closed in 1982. The work will include repairing areas which have settled due to decomposition of waste, operating and maintaining the landfill gas system that provides fuel for heating at a FCDOT/WMATA bus garage, conducting groundwater corrective action, and improving the storm water management system. There are also projects to remediate landfill gas migration. A groundwater treatment system is being designed to prevent off-site migration of impacted groundwater. Stormwater improvements are planned for the facility at its discharge locations. Funding of $1,855,000 has been included in FY 2027 for this project.

3. **I-66 Transport Study/Site Redevelopment (Springfield District):** $11,580,000 is estimated to be required through FY 2036 to provide the design, construction, reconstruction, and retrofit of the I-66 Transfer Station's existing traffic flow patterns, citizen's drop-off area, and the Household Hazardous Waste (HHW) Collections Facility. A new green island has been finished to separate residential and commercial traffic and improve the existing traffic flow. Traffic controls and new signage are being implemented to enhance overall safety and customer experience on site. The HHW facility handles most of the household hazardous waste processed within Fairfax County. The current facility is aging and in need of renovation and reconstruction to meet ever increasing HHW Collection Regulations and to provide safe disposal of substances collected. Initial phases include areas directly in front of the transfer building, which are complete, and a relocated commercial truck scale facility, which is currently in progress. Funding of $335,000 has been included in FY 2027 for this project.

4. **I-95 Landfill Capital Program (Mount Vernon District):** $20,025,000 is estimated to be required through FY 2036 for infrastructure improvements to the I-95 Operation facility that is attributable to refuse related operations. These improvements include Household Hazardous Waste Trailer replacement, the I-95 cameras program, bathroom construction to meet the State

and County regulations, as well as master planning, traffic signs, and accessories to improve the on-site traffic pattern. Funding of $775,000 has been included in FY 2027 for this project.

5. **I-95 Landfill Closure (Mount Vernon District):** $3,104,827 is estimated to be required though FY 2036 to meet all state and federal regulations for placing the synthetic cap on the Area Three Lined Landfill (ATLL) unit and repairing or reconstructing the cap on the Municipal Solid Waste (MSW) unit at the I-95 Landfill. Four phases of closure will occur in the ATLL unit and consist of capping the landfill with a flexible membrane liner and/or low permeability soil to prevent the water infiltration from run-on and other sources. Modifications are proposed to the capped areas of the MSW unit to accommodate modernization of the Residential Disposal and Recycling Center and to make more storage areas available at the site for recyclables and other beneficial uses. This is an ongoing effort as various areas of the landfill are filled to final grades. A new ash fill over the Lot C area was recently reopened. This area was previously temporarily capped and is needed to expand the available ash fill area. A future new landfill cell area, Phase IV, is currently in the design and permitting phase. Construction of Phase IV is still several years away. According to a study performed by a third-party analyst, the current cell capacity will last for the next ten years, and additional cell built out can be postponed. However, further budget review is deemed necessary. Funding of $200,000 has been included in FY 2027 for this project.

6. **I-95 Landfill Environmental Compliance (Mount Vernon District):** $2,575,000 is estimated to be required through FY 2036 for two environmental initiatives associated with the I-95 complex. The first initiative will provide for the continuation of ground water investigations and remediation efforts in accordance with the ground water Corrective Action Plan for the I-95 Landfill. Investigations and corrective action efforts may involve installation of ground water monitoring wells, injection of products intended to reduce concentrations of constituents of concern, and/or recover and treat ground water, among other alternatives. The second initiative will provide for Stormwater Improvements. Most of the existing storm water detention basins that manage stormwater flow at the I-95 landfill will be reconstructed or renovated with retrofits installed to improve stormwater flow and water quality discharge. Recently a major effort was completed to dredge and restore the detention basins on the site back to design conditions. This initiative includes assessment of the existing stormwater network, recommendations for improvements, design, regulatory support, construction, and construction management. These improvements are required to comply with Virginia Pollutant Discharge Elimination System permit requirements. This site has also been involved in activities related to EPA Chesapeake Bay requirements. This effort is ongoing and may involve further stormwater improvements and future permit requirements. Funding of $165,000 has been included in FY 2027 for this project.

I-95 Energy/Resource Recovery Facility

7. **I-95 Landfill Environmental Program (Mount Vernon District):** $2,646,000 is estimated to be required through FY 2036 for environment compliance improvement and repairs at I-95 operation site that is attributable to refuse related operations. These include monitor and repairs on the flares, well heads, leachate pumps, and piping and flow meters to ensure continued operations on sites. Also included is sampling equipment, provisions on groundwater monitoring contract, as well as the peripheral equipment, such as fencing and repairs, for the I-95 sites. Funding of $1,556,000 has been included in FY 2027 for this project.

8. **I-95 Landfill Lot B Redesign (Mount Vernon District):** $5,063,000 is estimated to be required through FY 2036 for design, construction, reconstruction, and retrofit of the I-95 landfill's existing Lot B area which is used for various residential solid waste drop-off activities. The area currently handles recyclables, solid waste, mulch/yard waste, household hazardous waste, white goods, and encompasses other site activities, such as vehicle fueling, washing, and maintenance. The goal of this project is to expand the paved area and to implement a covered structure within Lot B to further improve conditions for the residents, minimize operational nuisances, such as contact stormwater and wind-blown dust and litter, and to provide for new waste processing equipment and methods (baler, sorting system, etc.) to maximize recycling revenue and diversion rates. A site master planning effort is also underway which will help identify the needs for this and other projects. Funding of $420,000 has been included in FY 2027 for this project.

9. **I-95 Methane Gas Recovery (Mount Vernon District):** $6,154,000 is estimated to be required through FY 2036 for ongoing projects including refurbishment of the main gas flares and expansions of the gas collection systems due to migration. These efforts are required to maintain compliance with VADEQ regulations. Funding of $160,000 has been included in FY 2027 for this project.

10. **I-95 Operations Building Renovation (Mount Vernon District):** $18,360,000 is estimated to be required through FY 2036 for infrastructure improvements to the existing I-95 Landfill Operations facility. These improvements include replacing worn and leaking roofing, upgrading faulty HVAC controls, adding entry security features, improving the locker rooms, ADA compliance, rearranging interior walls/offices, and replacing flooring. Recent efforts have been completed for remediation of water damage, concerns associated with mold, and improvement to buildings windows. Funding of $160,000 has been included in FY 2027 for this project.

11. **I-95 Transfer/Materials Recovery Facility (Mount Vernon District):** $143,446 is estimated to be required through FY 2036 for the feasibility study and design of an enclosed facility to handle general waste and recycling efforts at the I-95 Complex. This Materials Recovery Facility (MRF) will be used to sort, screen, and package recyclables generated from the waste stream that have not been removed prior to general disposal. This facility will be located near or on the I-95 landfill and will require significant design and permitting efforts. The facility will be part of the long-term planning efforts in the 20-year Solid Waste Management Plan update and is anticipated to receive future funding.

12. **Newington Refuse Facility Enhancements (Mount Vernon District):** $11,339,000 is estimated to be required through FY 2036 for infrastructure improvements to the existing Newington Operations facility. These improvements include replacing roofing and maintaining concrete and pavement at the site. Recently completed projects include solar panels on the roof and E-vehicle commercial chargers for collection vehicles. Funding of $350,000 has been included in FY 2027 for this project.

13. **Solid Waste Storm Clean Ups (Countywide):** This is a continuing project that supports refuse collection and disposal services to citizens, communities, and County agencies through the Solid Waste General Fund programs consisting of Community Cleanups, Court/Board-directed Cleanups, Health Department Referrals, and Eviction Programs.

Project Cost Summaries

Solid Waste

($000's)

	Project Title Project Number	Source of Funds	Budgeted or Expended Through FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2027 - FY 2031	Total FY 2032 - FY 2036	Total
1	I-66 Administrative Building Renovation	X	***$7,049***	***$1,250***	$1,625	$1,740	$1,775	$325	$6,715		$13,764
	SW-000011										
2	I-66 Environmental Compliance	X	***$1,374***	***$1,855***	$130	$80	$130	$80	$2,275	$1,523	$5,172
	SW-000013										
3	I-66 Transport Study/Site Redevelopment	X	***$4,185***	***$335***	$1,010	$1,950	$4,100		$7,395		$11,580
	SW-000024										
4	I-95 Landfill Capital Program	X	***$1,745***	***$775***	$2,800	$2,835	$3,000	$2,600	$12,010	$6,270	$20,025
	SW-000033										
5	I-95 Landfill Closure	X	***$2,905***	***$200***					$200		$3,105
	SW-000019										
6	I-95 Landfill Environmental Compliance	X	***$2,410***	***$165***					$165		$2,575
	SW-000016										
7	I-95 Landfill Environmental Program	X	***$50***	***$1,556***	$130	$130	$130	$130	$2,076	$520	$2,646
	SW-000034										
8	I-95 Landfill Lot B Redesign	X	***$593***	***$420***	$3,000	$950	$100		$4,470		$5,063
	SW-000020										
9	I-95 Methane Gas Recovery	X	***$3,074***	***$160***	$390	$370	$390	$330	$1,640	$1,440	$6,154
	SW-000014										
10	I-95 Operations Building Renovation	X	***$2,000***	***$160***	$2,650	$2,650	$2,650	$2,650	$10,760	$5,600	$18,360
	SW-000015										

Project Cost Summaries

Solid Waste

($000's)

	Project Title Project Number	Source of Funds	Budgeted or Expended Through FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	Total FY 2027 - FY 2031	Total FY 2032 - FY 2036	Total
11	I-95 Transfer/Materials Recovery Facility	X	***$143***						$0		$143
	SW-000022										
12	Newington Refuse Facility Enhancements	X	***$3,339***	***$350***	$300	$300	$2,300	$2,250	$5,500	$2,500	$11,339
	SW-000001										
13	Solid Waste Storm Clean Ups	G	***C***		$75	$75	$75	$75	$300	$375	$675
	2G25-127-000										
	Total		***$28,867***	**$7,226**	**$12,110**	**$11,080**	**$14,650**	**$8,440**	**$53,506**	**$18,228**	**$100,601**

Notes: Numbers in bold italics represent funded amounts. A "C" in the 'Budgeted or Expended' column denotes a continuing project.

Key: Source of Funds

B	Bonds
F	Federal
G	General Fund
S	State
U	Undetermined
X	Other