

Solid Waste Management

LOB #359:

I-95 REFUSE DISPOSAL

Purpose

- The Fairfax County SWMP operates the I-95 Landfill Complex which provides for the disposal of ash from the E/RRF located at 9850 Furnace Road in Lorton, Virginia. The site also serves as a location for SWMP public disposal programs for residents and small businesses.
- Refuse collection vehicles from Fairfax County, private haulers, and other jurisdictions deliver waste to Covanta after being weighed at the scalehouse to determine the fee for the disposal of the refuse. The SWMP currently operates the scalehouse until the new agreement between Fairfax County and Covanta goes into effect in February 2017. Covanta will operate the scalehouse under the terms of the new agreement.
- This site also provides several other waste management programs for the public including Household Hazardous Waste (HHW), electronic waste recycling and brush and yard waste management.
- This facility is responsible for management of the closed portion of the municipal solid waste landfill including landfill gas control, groundwater monitoring and remediation, stormwater management and leachate control. These activities ensure compliance with the facility's state-issued permit (SWP103) and applicable environmental regulations administered by the VDEQ.

Description

The Fairfax County SWMP operates the I-95 Landfill Complex in Lorton, Virginia. The following activities are conducted at this location;

- Wastes generated by residents and businesses in Fairfax County are disposed of in the Energy/Resource Recovery Facility (E/RRF) at this location where wastes are combusted for energy production;
- Waste deliveries are weighed to determine the amount of waste sent for disposal. Users of the facility pay the waste disposal fee, based on the amount disposed of, which in turn is used to fund the SWMP; and
- The E/RRF combustion process generates ash which is landfilled on site by County employees. Ash from the E/RRF, a similar Covanta facility serving the City of Alexandria, Arlington County and the Noman M. Cole Jr. Pollution Control Plant, are disposed of at the I-95 Ash Landfill.

The following activities are also conducted at the I-95 Landfill Complex:

- Household Hazardous Waste Program;
- Electronics Recycling Program;
- Used Motor Oil, Antifreeze and Cooking Oil Recycling Program;
- Latex Paint Recycling Program;
- Automotive Battery Recycling Program;
- Scrap Metal/Appliance Recycling Program;
- Emergency response activities for debris management/removal during emergencies/disasters;
- Operation of the Recycling and Disposal Centers;
- Brush grinding operations that make mulch available to County residents at no charge; and

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- Operation of landfill gas and groundwater monitoring systems to meet environmental requirements.

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.

Benefits

The benefits of the County's refuse disposal system are:

- Dedicated solid waste disposal capacity for wastes generated by County residents and businesses;
- A solid waste disposal system where all users pay the same amount;
- Reduces the risk of annual price increases to dispose of waste;
- User fees generate revenue that is used to support the program which receives no financial support from the County's General Fund. The program is valued at about \$100 million/year and also pays the salaries and benefits of over 300 county employees;
- Eliminates the need to long haul trash out of the County, reducing traffic and air pollution impacts
- Utilizes advanced technology to dispose of waste rather than reliance on landfills;
- Obtain ground wood mulch at no charge; and,
- Equipment and staff used at this location respond to emergencies such as flooding, storm events and other natural or man-made disasters in the County. Staff coordinate with FRD and FCPD during emergency events to provide assistance such as roadway clearing and snow and ice control during winter weather events.

Mandates

There is no mandate requiring jurisdictions in Virginia to provide a disposal facility for the management of municipal solid waste generated within their borders. However, jurisdictions in Virginia are required to have 20-Year Solid Waste Management plans that identify where the jurisdiction will dispose of wastes generated within its borders for the 20-year term.

Fairfax County committed to managing its own wastes as a way to finance the system many decades prior to now. The Code of Virginia (§ 15.2-815 below) allows jurisdictions to require wastes generated within its borders to be disposed of at the disposal facility that it designates. Article 7 of the Fairfax County solid waste ordinance, Chapter 109.1, identifies disposal facilities designated for the disposal of wastes. As wastes are delivered to either of the county's two disposal facilities, fees are collected from the generator of the waste for the disposal service. These fees support the SWMP, including the salaries and benefits of over 300 full-time employees.

Code of Virginia § 15.2-815. Regulation of garbage, trash and refuse pickup and disposal services; contracting for such services in certain counties.

The board may adopt an ordinance requiring the delivery of all or any portion of the garbage, trash and refuse generated or disposed of within such county to waste disposal facilities located therein or to waste disposal facilities located outside of such county if the county has contracted for capacity at or service from such facilities.

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Trends and Challenges

Trends

- Over the past decade, waste generation rates have decreased due to the impacts of increased recycling and economic conditions that result in less waste being produced.
- New waste disposal technologies exist but have not yet been developed to the point where they can be used in highly-populated communities where reliability and longevity of solid waste systems are provided to ensure daily waste disposal capacity.
- Residents continue to desire increased opportunities to recycle as well as the community benefit services provided by the SWMP including household hazardous waste, electronics recycling and document shredding.
- Equipment and staff used at this location respond to emergencies such as flooding, storm events and other natural or man-made disasters in the County. Staff coordinate with Fairfax County Fire and Rescue and the Police Department during emergency events to provide assistance such as roadway clearing and snow and ice control during winter weather events; and
- Strong competition from the privately-owned waste disposal industry continues.

Challenges

- Increasing costs associated with maintenance and groundwater remediation and the ongoing maintenance and operations of landfill gas wells that capture methane gas related to the closed portion of the landfill will continue to be a challenge that is being addressed by several ongoing capital projects;
- Changing land use in the Lorton area creates challenges in matching operations within a developing residential community;
- Limited recyclables processing or organic waste recycling in the DC metro region. The northern Virginia community would benefit from additional recycling processing capacity; and
- Construct additional recycling/waste transfer/organics processing at the I-95 location. Community support, as well as public financing mechanisms, will need to be addressed.

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Resources

Category	FY 2014 Actual	FY 2015 Actual	FY 2016 Adopted
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FUNDING			
<u>Expenditures:</u>			
Compensation	\$3,324,166	\$3,611,402	\$3,822,075
Operating Expenses	3,435,295	3,608,614	3,787,316
Capital Equipment	1,119,495	2,084,932	100,000
Total Expenditures	\$7,878,956	\$9,304,948	\$7,709,391
<u>Transfers Out:</u>			
Transfer Out to General Fund	\$175,000	\$175,000	\$186,000
Total Transfers Out	\$175,000	\$175,000	\$186,000
Total Revenue	\$6,920,442	\$8,042,395	\$8,653,388
POSITIONS			
Authorized Positions/Full-Time Equivalents (FTEs)			
<u>Positions:</u>			
Regular	41 / 41	42 / 42	42 / 42
Total Positions	41 / 41	42 / 42	42 / 42

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Metrics

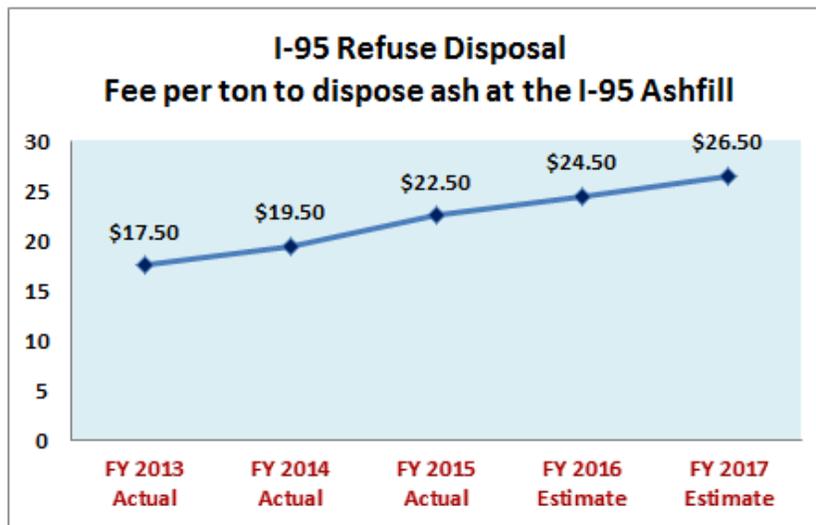
Metric Indicator	FY 2013 Actual	FY 2014 Actual	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Tons of ash disposed at the I-95 Landfill	299,110	320,449	302,814	319,850	305,000
Fee per ton to dispose ash at the I-95 Landfill	\$17.50	\$19.50	\$22.50	\$24.50	\$26.50
Number of satisfactory State DEQ ratings at the I-95 Landfill	4	5	4	4	4
State DEQ inspection rating - percent satisfactory	100%	100%	100%	100%	100%

I-95 Refuse Disposal – Ton of ash disposed at the I-95 Ashfill

The ash tonnage has remained relatively stable for the past several years at about 25 percent of the tons processed at both Fairfax and Alexandria Covanta facilities, as well as a small amount of ash from Noman Cole Wastewater Treatment Plant. However, based upon the new contract with Covanta Fairfax, there is the potential for an increase in ash from that facility. The estimates below project Covanta Fairfax increasing its merchant waste to bring the facility closer to its rated limit of approximately 1.1 million tons of waste per year.

I-95 Refuse Disposal – Fee to dispose ash at the I-95 Ashfill

SWMP expects that the ash disposal rate to increase to provide adequate funding for operations, capital projects, and develop acceptable post-closure reserves. This rate is competitive in the Washington, D.C. metropolitan area market.



I-95 Refuse Disposal – Virginia Department of Environmental Quality (VDEQ) Inspection-Percent Satisfactory

While we have experienced weather related operational challenges, the I-95 Landfill Complex has shown the full satisfaction from every VDEQ inspection ratings.