

Solid Waste

PROGRAM DESCRIPTION

The Division of Solid Waste Disposal and Resource Recovery and the Division of Solid Waste Collection and Recycling provide solid waste services for the County. Refuse collection and recycling services are available to all citizens of Fairfax County by either private contractors or County collection crews. Private contractors presently account for approximately 85 percent of refuse collected. The remaining 15 percent are collected by County collection crews or contractors working for the County. The County also provides refuse collection services to all County agencies, except schools. Additionally, the County provides leaf collection services to participating neighborhoods. In order to provide the County with a long-term solution to refuse disposal, an Energy/Resource Recovery Facility is operated by Covanta Fairfax at the I-95 Landfill Complex. This facility, which is privately owned and operated, began commercial operation on June 1, 1990, and has a design capacity of 3,000 tons per day (TPD).

LINK TO THE COMPREHENSIVE PLAN

Fairfax County's Comprehensive Plan has established a number of objectives and policies in order to:

- ✓ Provide conveniently located solid waste management facilities and operations, while ensuring 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 that meets the current and future needs of the County.
- ✓ Expand the I-66 Solid Waste Transfer Station, and consider the portion of the I-95 Landfill currently under closure procedures for adaptive reuse for active and passive recreational purposes.

Source: 2007 Edition of the Fairfax County Comprehensive Plan, as amended

CURRENT PROGRAM INITIATIVES

The County operates two permitted solid waste management facilities - the I-95 Sanitary Landfill and the I-66 Transfer Station - and has developed the Energy/Resource Recovery Facility. All three facilities are operated under permits issued by the Virginia Department of Environmental Quality (VDEQ).

The I-95 Landfill is the only sanitary landfill in the County and provides land disposal for ash originating not only in Fairfax County, but also in Arlington County and the Cities and Towns of Alexandria, Fairfax, Falls Church, Vienna, Herndon and Clifton.

The I-66 Transfer Station has been operational since 1983. Refuse deposited by collection vehicles is loaded into tractor-trailer trucks and transported to the I-95 Energy/Resource Recovery Facility or other appropriate locations for disposal.

The total capital cost of the Energy/Resource Recovery Facility was \$195,000,000, which was financed through the sale of revenue bonds and the owner's capital. CFI has constructed additional air pollution control equipment at the Energy/Resource Recovery Facility to comply with provisions of the Clean Air Act. Mercury, acid gases and nitrogen oxide removal systems are now operational. The capital cost for the air pollution systems was \$7.75 million, and was funded through bonds originally purchased for the facility and owner equity. The facility has also added an ash conditioning system through the introduction of dolomitic lime into the top and bottom ash. The system then mixes the ash to ensure a more consistent ash product for disposal into the ash landfill. Implementation of this system cost about a half-million dollars.

The Newington Refuse Collection Complex currently houses the County's collection fleet along with administrative facilities for personnel. This facility recently underwent energy retrofits to minimize energy use. Infrastructure costs are paid by refuse collection fees.

The County's twenty-year Solid Waste Management Plan was adopted by the Board of Supervisors in 2004. This Plan provides a framework for implementing solid waste management programs and facilities.

CURRENT PROJECT DESCRIPTIONS

1. **I-66 Transfer Station Expansion** (Springfield District). \$20,443,000 for the construction of the Citizens Disposal Facility (CDF). The site plan for this project has been approved and the building permit has been obtained. The CDF construction is expected to begin during FY 2008 and will be completed during FY 2009.
2. **I-66 Workers Facility** (Springfield District). \$6,573,000 for the construction of an updated employee facility. This facility will contain offices and meeting/training rooms. Miscellaneous repairs to the old portion of the original transfer station building and other on-site needs will also be accomplished. It is anticipated that the building construction will begin in FY 2009 and be completed by FY 2010.
3. **I-95 Landfill Vehicle Washing Facility** (Mt Vernon District): \$36,661 for the upgrade of the facility and equipment. This project is expected to be completed in FY 2008.
4. **I-95 Landfill Area Three Lined Landfill** (Mt Vernon District): \$15,800,000 is for Phases III and IV of the Area Three Lined Landfill Project. The construction work will include the installation of a double synthetic flexible membrane, leachate collection and detection system and related work. Construction of Phase III-A is expected to be completed in FY 2008. Phase III-B is anticipated to start in FY 2010 and to be completed in FY 2012. It is anticipated that construction of Phase IV will occur in the FY 2014-2017 timeframe.
5. **I-95 Landfill Leachate Facility** (Mt. Vernon District): \$1,900,000 for leachate collection/prereatment/treatment and storage facilities to process fluids collected in the leachate collection system installed at the MSW and ash disposal areas of the landfill. This is an ongoing project.
6. **I-95 Landfill Perimeter Fence** (Mt Vernon District): This project includes the construction of fencing along the perimeter of the I-95 Landfill and various shop maintenance facilities. This project is anticipated to be completed in FY 2008.



Aerial view of the I-95 Energy/Resource Recovery Facility.

7. **I-95 Landfill Paved Ditch Extension** (Mt Vernon District): \$250,000 for drainage improvements for the intermediate slopes of the I-95 Landfill to control erosion. This work involves placing armored ditches on side slope areas and stormwater pipes at bench crossings.
8. **I-95 Landfill Closure** (Mt Vernon District): \$8,000,000 to meet all state and federal regulations regarding the closure of the I-95 Landfill. This project will involve eight individual phases. Phase I to Phase IV will cover the MSW portion of the project. Four additional phases of closure will occur in the Area Three Lined Landfill (ATLL) unit and consist of capping the landfill with a flexible membrane liner material and/or low permeability soil to “seal” the Landfill from external sources. Phases I, II, III and IV of MSW portion have been completed, and portions of the ATLL are closed.
9. **I-95 Landfill Methane Gas Recovery** (Mt Vernon District): \$1,169,000 to capture methane gas generated in the I-95 Landfill by means of collection wells and pipes. The project is a multi-phase project. As an additional benefit, most of the recovered methane is being utilized to produce electricity at the Landfill, for sale to Dominion Virginia Power. A three mile pipeline that runs between the I-95 Landfill and the Noman M. Cole, Jr. Pollution Control Plant, to convey excess landfill gas to the treatment plant for use as a fuel, was completed during the summer of 1997. During 2005, the heating system at the maintenance shop at the I-95 Landfill was converted from the propane heaters to Landfill gas heaters. The project won a national award from Environmental Protection Agency (EPA).
10. **Newington Refuse Collection Facility** (Mt Vernon District): \$1,125,000 to fund infrastructure repairs to the existing building and pavement areas. The project is a multi-phase project over several years that will not expand the footprint of the existing site.

**PROJECT COST SUMMARIES
SOLID WASTE
(\$000's)**

Project Title/ Project Number	Source of Funds	Anticipated to be Expended Thru FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total FY2009-FY2013	Total FY2014-FY2018	Total Project Estimate
1. I-66 Transfer Station Expansion / 174002 through 174006	X	17,016	3,427					3,427		20,443
2. I-66 Workers Facility / 174002	X	0	2,573	2,000	2,000			6,573		6,573
3. I-95 Landfill Vehicle-Wash Facility / 186420	X	37						0		37
4. I-95 Landfill Area 3 Lined Landfill / 186435	X	C		2,500	2,500	2,300		7,300	8,500	15,800
5. I-95 Landfill Leachate Facility / 186440	X	C	400	500	500	500		1,900		1,900
6. I-95 Landfill Perimeter Fence / 186455	X	C						0		0
7. I-95 Landfill Paved Ditch Extension / 186470	X	C	63	63	63	61		250		250
8. I-95 Landfill Closure / 186650	X	C			5,000	1,000	1,000	7,000	1,000	8,000
9. I-95 Landfill Methane Gas Recovery / 186600	X	C	100	100	100	100	100	500	669	1,169
10. Newington Refuse Collection Facility / 171500	X	C	225	100	100	100	100	625	500	1,125
TOTAL		\$17,053	\$6,788	\$5,263	\$10,263	\$4,061	\$1,200	\$27,575	\$10,669	\$55,297

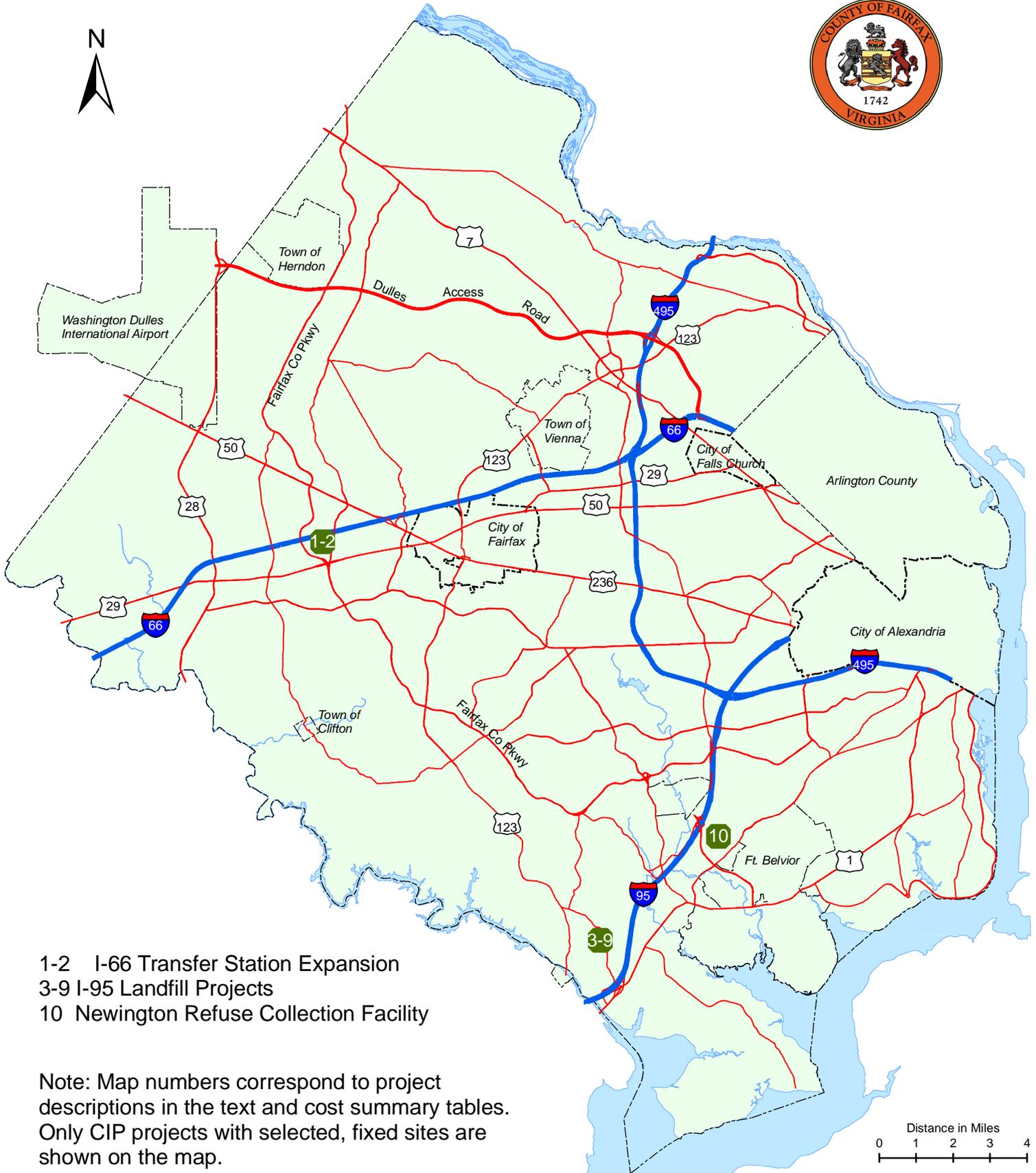
Key: Stage of Development	
	Feasibility Study or Design
	Land Acquisition
	Construction

Notes:
 Numbers in **bold italics** represent funded amounts.
 A "C" in the "Anticipated to be Expended Thru FY 2007" column denotes a Continuing Project.

 For some projects annual expenditures have not yet determined; however, all projects are considered continuing.

Key: Source of Funds	
B	Bonds
G	General Fund
S	State
F	Federal
X	Other
U	Undetermined

Solid Waste Project Locations



- 1-2 I-66 Transfer Station Expansion
- 3-9 I-95 Landfill Projects
- 10 Newington Refuse Collection Facility

Note: Map numbers correspond to project descriptions in the text and cost summary tables. Only CIP projects with selected, fixed sites are shown on the map.