ANNUAL REPORT ON THE ENVIRONMENT

CHAPTER V

WASTE MANAGEMENT

V. WASTE MANAGEMENT

A. ISSUES AND OVERVIEW

Unlike past years of this report, the issue of the amount of trash entering the I-95 Energy/Resource Recovery Facility (E/RRF) does not dominate the landscape. Rather, funding for public benefit programs is of concern. In the past, programs such as the household hazardous waste collection program, recycling education and administration, and other programs to benefit County residents were paid from profits earned on trash "tipping" fees. Fees to tip a load of trash at the County E/RRF or I-66 transfer station were $45/ton across the board. In an effort to increase the tonnage of waste entering the E/RRF so that the County would not fall below its contractually required minimum tonnage, tipping fees were lowered for haulers who would agree to deliver a specified amount of trash.

At the time that this action was taken, EQAC expressed concern that funds for other programs would be depleted rapidly, forcing the programs to be cut back or disbanded. Such is the case now. County staff is working to find ways to fund public benefit programs. For the time being, County General Fund money will supplement revenues from the disposal fees collected from hauling companies. However, a long-term solution is difficult to design. County staff considered an across-the-board fee; however, problems associated with collection of the fee, fair distribution of the equity among properties, and the timeframe for implementation caused it to be dropped from consideration.

In addition, the County is about to embark on an analysis and decision making process that will determine the future of waste management in the County for the next several decades. In 10 years, the E/RRF will revert to County ownership. Key decisions are needed regarding the future of the facility—including whether to continue a contractual relationship with an operator, take over operations, or discontinue operations altogether. A visionary strategy for waste management in the County can result.

B. PROGRAMS, PROJECTS, AND ANALYSES

1. Waste Disposal

a. Solid Waste

i. I-95 Landfill Ground and Surface Water Monitoring[1]

The I-95 landfill is located on Federal property under the control of the District of Columbia. It is near the D.C. Department of Corrections facility and juvenile detention center; however, both of these facilities receive water from the Fairfax

County Water Authority. In addition, Mills Branch underlies the landfill and drains to the Occoquan River.

Surface water at Mills Branch also is monitored for a number of parameters by the County. A spring drain collection system in combination with basin aerators has improved the stream water quality, according to DPWES. Waters collected from this point are sent to the Noman M. Cole, Jr. Pollution Control Plant (formerly the Lower Potomac Pollution Control Plant).

In September, 1995, the County embarked on an Assessment Monitoring Program for groundwater monitoring at the closed I-95 solid waste landfill. Groundwater at the landfill moves in a shallow, unconfined flow toward Mills Branch and is conveyed under the landfill in a subsurface culvert. At the southern boundary, groundwater flows to the Occoquan River.

The County received a permit amendment from the I-95 Landfill from the Virginia Department of Environmental Quality (VDEQ) in August 2000 to incorporate Groundwater Protection Standards and other facility modifications. Where a Federal Maximum Contaminant Limit (MCL) existed, the County proposed the MCL as the standard. Where an MCL did not exist, the County proposed alternate standards based on State-recommended levels. A second amendment was received in November 2000, to make technical corrections that were needed in several tables that contained incorrect information.

Groundwater sampling from 21 monitoring/piezometer wells took place in March and September, 2000. Samples for the assessment program are taken from a total of 16 of the 21 monitoring/piezometer wells—six located upgradient of the landfill and ten located downgradient of the landfill. Data from the sampling events are analyzed to determine if a statistically significant increase in contaminant concentrations exists. Several of the downgradient wells sampled in March 2000 exhibited a statistically significant increase for one or more parameters analyzed. During 2000, a number of volatile organic constituents and inorganic constituents were detected above the MCLs. The volatile organics included benzene, 1,2-dichloroethane, cis-1,2-dichloroethene, trichlorofluoromethane, tetrachloroethene, 1,2-dichloropropane, methylene chloride, vinyl chloride, and trichloroethene. The inorganics included chromium, lead, and nickel.[2]

The modification to the landfill's permit also allowed the facility to use tire chips for a protective barrier above Phase 2 of the Area Three Lined Landfill liner. Construction of Phase 2-A of the Area Three Unit began in the spring of 2000 and was completed in January 2001. This area, which is approximately 14 acres, will

supply the County with an additional four years of ash disposal capacity. The remainder of Phase 2, approximately 11 acres, will be constructed in 2004.

Using tire chips for the project was a success for the Solid Waste Disposal and Resource Recovery Division in several ways. First, the County used over 10,000 tons of tires (over a million passenger tires) in the protection layer. This productive use negated the use of sand normally used in the protection layer, saving the expense of the sand. Second, the VDEQ contributed nearly $22 per ton from the Tire End User Reimbursement Fund for the use of the tires, making the additional grinding economically feasible. When considered together, the savings for the project amounted to over $500,000. The liner will be covered with 18 inches of sand for leachate drainage and primary protection; however another layer of chipped tires will be used above the sand layer to facilitate further protection.

The landfill amendment also allowed for the construction of two asphalt pads at the landfill. The pads used screened combustor residue as the base material. The pads were constructed during the fall of 2000 and are now in use. Both have asphalt surfaces, and they serve as the impervious liner material required for closure. The combustor ash was placed before paving and serves to strengthen the pad as a rigid base. Combustor residue was only used from the E/RRF because it is screened for metal recovery. Initial tests conducted by the County indicated that the material hardened after approximately one week to 100% density, similar to concrete treated stone. A monetary savings of nearly $100,000 was also realized on this project due to the avoided cost of the stone. This project was highlighted in an article in the *Fairfax Journal*. Staff will be evaluating the performance and stability of these pads. The evaluation process may lead to alternative uses for the ash product from the E/RRF.

ii. I-95 Methane Gas Collection and Landfill Gas Emissions[3]

There are over 250 landfill gas extraction wells located at the I-95 Landfill, making it the largest landfill gas collection system of any facility in the State. Michigan Cogeneration Systems operates two facilities that generate 3,000 kW of electricity from landfill gas. These two plants have continued to operate at 98 percent availability since their start-up and operate 24-hours per day. Landfill gas also is sent to five enclosed flares onsite at the landfill.

In 1997, the County completed installation of a pipeline between the I-95 Landfill and the Noman M. Cole, Jr. Pollution Control Plant (NCPCP) that provides landfill gas as a fuel source for the NCPCP biomass incinerators afterburners, which control odors and eliminate volatile organic compounds.

Recently, regulations were finalized limiting emissions of non-methane organic compounds (NMOC) from municipal landfills. NMOC includes volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and odorous compounds. The County engaged Malcolm Pirnie to estimate NMOC emissions from the I-95 landfill. The results of the analysis using EPA Tier 2 sampling methodology indicate that NMOC emissions are less than 50 megagrams per year. As a result, the I-95 landfill is not expected to be considered a major source of air pollution. This finding reflects the effectiveness of both the existing landfill gas collection system and the final soil cover, which ranges in depth from 10 to 30 feet and prevents vertical migration of NMOC emissions.

iii. I-66 Landfill and Transfer Station Facility[4]

Groundwater monitoring continues at the I-66 Landfill. The wells that were upgraded in 1992 continue to function properly. While there is not regulatory requirement to monitor the groundwater at this site, the Division of Solid Waste Disposal and Resource Recovery samples the groundwater biannually. The Transfer Station was inspected by the State DEQ several times in 2000 and was found to be in compliance, with no deficiencies noted.

The I-66 Transfer Station provides waste collection and recycling facilities in the western end of the County. The Citizen's Recycling and Disposal Area continues to be popular with residents, and maintenance continues at the site.

b. Waste Water

i. Upper Occoquan Sewage Authority[5]

The Upper Occoquan Sewage Authority (UOSA) is located in Centreville, Virginia; it serves the western portions of Fairfax and Prince William Counties as well as the Cities of Manassas and Manassas Park. The Water Reclamation Plant includes primary-secondary treatment followed by these advanced waste treatment processes: chemical clarification, two-stage recarbonation with intermediate settling, multimedia filtration, granular activated carbon adsorption, post carbon filtration, breakpoint chlorination, and dechlorination. The plant's design treatment capacity is at the mid-expansion level of 32 million gallons per day (mgd). When expansion is complete, UOSA will have a capacity of 54 mgd. Completion of the expansion will occur sometime in 2003.

The plant operates under a Virginia Pollutant Discharge Elimination System

(VPDES) Permit, which is issued by the VDEQ. The permit limits and the 2000 plant performance are shown in Table V-1.

Table V-1. UOSA Permit Requirements and 2000 Performance

Parameter	Limit	Performance
Flow	32 mgd	24 mgd
Chemical oxygen demand	10.0 mg/L	8.9 mg/L
Turbidity	0.5 NTU	0.4 NTU
Total Suspended Solids	1.0 mg/L	0.4 mg/L
Total Phosphorus	0.1 mg/L	0.004 mg/L
Surfactants, mg/L	0.1 mg/L	0.002 mg/L
Total Kjeldahl Nitrogen	1.0 mg/L	0.5 mg/L
Disinfection Minimum Chlorine Residual	0.6 mg/L	0.6 mg/L
Dechlorination Chlorine Residual	Non detect	Non detect

Source: Upper Occoquan Sewage Authority

In 2000 both the plant maximum 30-day average flow and the average daily flows were below the design flow of 32 million gallons per day. The highest rolling 30-day flow was observed in April 2000 (28 million gallons per day). The maximum flow day during the months of February, March, April, September, and December 2000 exceeded the plant capacity. The excess flows were diverted to the Emergency Retention Ponds and subsequently treated during days of lower flows. UOSA continues to perform well within all of its permit limits.

UOSA produces and treats two types of residuals: biosolids from conventional treatment and lime solids from chemical treatment. Anaerobic digestion decomposes the organic residuals to relatively stable compounds. The digested residuals are conditioned with lime and ferric chloride and dewatered by recessed chamber filter presses (RCFPs). Thickened lime residuals are gravity thickened and dewatered on the RCFPs. The biosolids are then loaded into trailers and hauled off site under contract to be land applied or landfilled. All lime solids are landfilled on site in a permitted industrial (nonhazardous) landfill.

ii. Noman M. Cole, Jr. Pollution Control Plant

The NCPCP, located in Lorton, is a 54 million gallon per day (mgd) advanced wastewater treatment facility that incorporates preliminary, primary, secondary, and tertiary treatment processes to remove pollutants from wastewater generated

by residences and businesses in Fairfax County. The original plant, which was placed in operation in 1970 at a treatment capacity of 18 mgd, has undergone two capacity and process upgrades to meet more stringent water quality standards than in the past. The NCPCP receives approximately one-half of Fairfax County's domestic and commercial wastewater flow. After the plant treats the wastewater, it is discharged into Pohick Creek, a tributary of Gunston Cove and the Potomac River.

The NCPCP operates under a VPDES permit issued by the VDEQ. The plant is required to meet effluent discharge quality limits established by the DEQ to protect Pohick Creek and the Potomac River. Table V-2 presents the current NCPCP effluent monthly limitation and the facility's performance in 2000.

Construction to expand the NCPCP to 67 mgd began in 1997, with completion planned by 2002. This expansion includes process upgrades to remove ammonia to less than 1 mg/l and total nitrogen to less than 8 mg/l in order to meet Virginia Water Quality Standards for ammonia and Chesapeake Bay goals for total nitrogen. In addition, upgraded odor control systems, instrumentation and control systems, and a new septage receiving facility are included in this project.

Table V-2. NCPCP Permit Requirements and 2000 Performance[6]

Parameter	Limit	Performance (12/31/00)
Flow	54 mgd	42.48 mgd
$CBOD_5$	5 mg/l	<2 mg/l
Suspended Solids	6 mg/l	2.2 mg/l
Total Phosphorus	0.18 mg/l	0.13 mg/l
Chlorine Residual	Non Detect	None Detected
Dissolved Oxygen	6.0 mg/l (minimum)	8.7 mg/l
pH	6.0-9.0 (range)	7.2-7.5
Fecal Coliform	200/100ml	<1.03/100ml
Total Nitrogen	None (currently)	16 mg/l
Ammonia	306 or 552 dg/day (seasonal)	16.6 kg/day

Source: U.S. EPA, Permit Compliance System

iii. Blue Plains Sewage Treatment Plant

The Blue Plains Sewage Treatment Plant manages 300 mgd of wastewater for the region, including parts of Fairfax County. This flow makes Blue Plains the Nation's largest wastewater treatment facility. Blue Plains operates pursuant to a National Pollutant Elimination Discharge System (NPDES) permit issued by the

U.S. EPA. Table V-3 presents current Blue Plains effluent monthly limitation and the facility's performance in 2000.

The Blue Plains Regional Committee began the process of updating the Metropolitan Washington Council of Government's (COG's) Regional Wastewater Flow Forecast Model (RWFFM) in 2000. COG and its contractors, Metcalf & Eddy, Inc., are updating baseline year flows, conducting analysis of hydrogeological base conditions, and evaluating other baseline parameters. Recommended changes will be provided to the Committee, and revised input parameters will be used to development new wastewater projections for the region.

c. I-95 Energy/Resource Recovery Facility (E/RRF)[6]

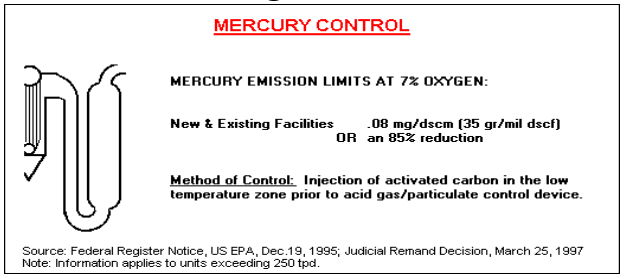
The I-95 E/RRF is operated by Odgen Martin Systems of Fairfax. In May 2000, the County and Ogden Martin signed a modification to the Service Agreement to reflect changes necessary for compliance with the Clean Air Act requirements. The new federal requirements are highlighted in the boxes to the right (Figures V-1 through V-5).

Table V-3. Blue Plains Permit Requirements and 2000 Performance[7]

Parameter	Limit	Performance (12/31/00)
Flow	300 mgd	288 mgd
$CBOD_5$	5.0 mg/l	2.97 mg/l
Suspended Solids	7.0 mg/l	4.3 mg/l
Total Phosphorus	0.18 mg/l	0.10 mg/l
Dissolved Oxygen	5.0 mg/l (minimum)	8.1 mg/l
pH	6.0 – 8.5 (range)	6.8
Fecal Coliform	200/100 ml	164/100 ml
Total Nitrogen	None (currently)	16 mg/l
Ammonia	1.0 mg/L	0.61 mg/L

Source: U.S. EPA, Permit Compliance System

Figure V-1



The agreement provides for the installation of several new air emission control devices to the facility. Specifically, a carbon injection system has been installed to

reduce mercury emissions and has been operating since November 1999.

The carbon injection system will also work to reduce dioxins. (Dioxins can be formed in municipal waste combustions due to the presence of chlorine and incomplete combustion of wastes.) Although dioxin levels currently are low at the E/RRF, new permit limits will be about 62 percent lower. The carbon injection system will reduce dioxins to the lowest extent possible for current technology.

Figure V-2

DIOXIN/FURAN CONTROL

ORGANIC EMISSION LIMITS

Dioxins and Furans are measured as total tetra-through-octa-chlorinated dibenzo-p-dioxins and dibenzofurans. The limits are:

New Facilites 13 ng/dscm (or 7 ng with less freq. testing)
Method of Control: GCP & SD/FF/CI

Existing Facilities 60 ng/dscm with ESP or 30 ng with FF
or 15 ng with less frequent testing -Esp or FF

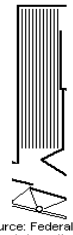
Method of Control: GCP & SD/FF/CI or SD/ESP/CI

Total CDD/CDF Approximately Equal To CDD/CDF TEQ x 50

Source: Federal Register Notice, US EPA, Dec.19, 1995; Judicial Remand Decision, March 25, 1997
Note: Information applies to units exceeding 250 tpd.

An aqueous ammonia injection system also was installed in will reduce the emission of nitrogen oxides. This system, commonly referred to as a selective catalytic reduction technique, will lower emissions by over 30 percent. Modifications also were made to the acid gas scrubber system to further reduce the sulfur dioxide emissions.

Figure V-3



NOx CONTROL

NITROGEN OXIDES (NOx) EMISSION LIMITS AT 7% OXYGEN:

New Facilities 150 ppmv
Existing Facilities 200-250 ppmv

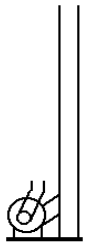
(does not apply to existing mass burn/refractory MWC's)

Method of Control: Selective noncatalytic reduction (injection of ammonia into primary combustion zone where temperature is between 1700 & 1900 deg. F.).

Source: Federal Register Notice, US EPA, Dec.19, 1995; Judicial Remand Decision, March 25, 1997
Note: Information applies to units exceeding 250 tpd.

Completely new continuous emissions monitoring devices were installed. These devices replaced older equipment and will monitor opacity, sulfur dioxide (SO_2), temperature, oxygen (O_2), carbon monoxide (CO), and oxides of nitrogen (NO_x). The E/RRF performs air emission testing on an annual basis, as part of its permit requirements with the VDEQ. This information is sent to the VDEQ, and the facility has always met its permit requirements, an achievement of which it can be proud.

Figure V-4



EMISSIONS MONITORING

Continuous emissions monitoring of Sulfur Dioxide, NOx, Opacity, CO, Load, and Temperature.

Annual stack testing for Particulates, Lead, Cadmium, Dioxins/Furans, HCL, and fugitive ash.

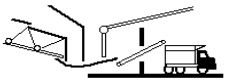
Stack opacity must be less than 10% (6-minute average)

Source: Federal Register Notice, US EPA, Dec.19, 1995; Judicial Remand Decision, March 25, 1997
Note: Information applies to units exceeding 250 tpd.

The facility also installed an ash

Figure V-5

ASH MANAGEMENT



FUGITIVE DUST EMISSIONS:*
No visible emissions except less than 5% of the time.

DISPOSAL OF ASH:

If Ash tests hazardous (using the RCRA Toxic Characteristics Leaching Procedure) it must be managed as a hazardous waste.

If it does not test hazardous it may be disposed in a municipal waste (non-hazardous) landfill.

Fly ash and bottom ash may be combined prior to testing. Combined ash does not generally test hazardous.

*Source: Federal Register Notice, US EPA, Dec.19, 1995; Judicial Remand Decision, March 25, 1997
Note: Information applies to units exceeding 250 tpd.

conditioning system to reduce dust from the ash product and to enhance the metal recovery from the ash.

Together, the capital improvement cost for these Clean Air Act improvements totaled nearly $7.75 million. The operating costs of these devices will also add approximately $1 per ton to the processing costs of the facility.

In 1994, the County switched from testing ash generated by the incineration process from a carbon dioxide (CO_2) Saturated Water Test to the Toxicity Characteristic Leaching Procedure (TCLP) in response to a Supreme Court decision stating that ash was not exempt from hazardous waste requirements. The TCLP tests require sampling over a two-week period, and analyses cost $80,000. The County last conducted ash testing in 1994, stating that the waste stream has not changed sufficiently to require additional testing. This is in compliance with existing regulations, which only require additional testing if the waste stream changes in a way that would affect the ash residuals. Ogden Martin does, however, conduct regular testing using a shorter list of constituents and abbreviated sampling period.

A few years ago, fees for tipping wastes at the E/RRF were reduced to $34/ton in an effort to increase the regular flow of trash to the unit. In 2000, County staff worked with large waste companies serving Fairfax to secure commitments to tip wastes at the lower fee. A commitment is required for all companies tipping more than 5,000 tons of waste per year. By the end of 2000, all large companies had signed these agreements. County staff attributes this participation to rising fuel costs associated with transportation of wastes to down-state disposal facilities. In FY 2002, the tipping fees will increase to $37.95/ton.

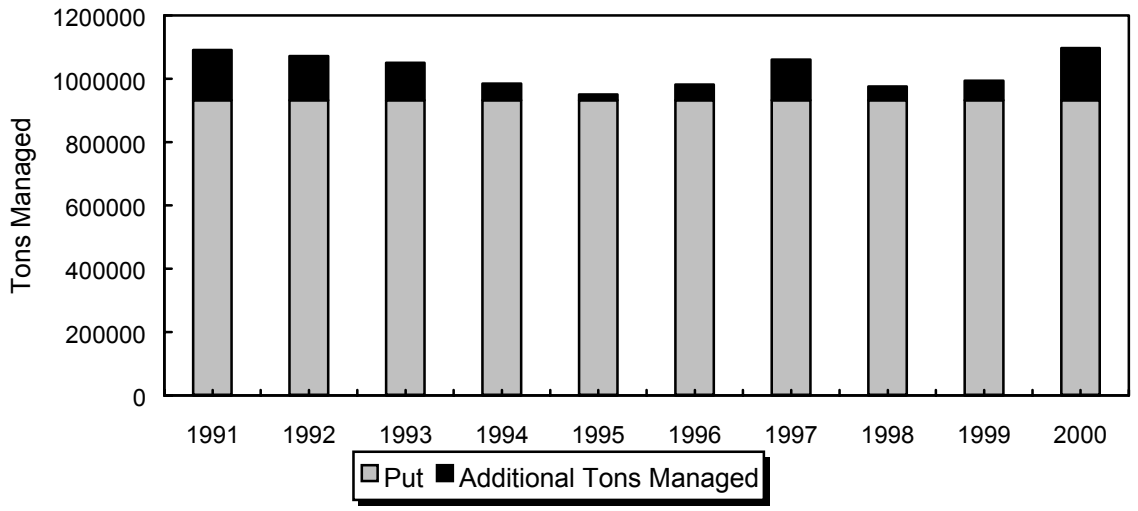
Fairfax County has a contractual agreement with Ogden Martin to provide 931,000 tons of solid waste per year to the Energy/Resource Recovery Facility (E/RRF, commonly referred to as the I-95 trash incinerator). Should the County fall below this minimum, referred to as the "put," penalties can be assessed. The penalty can equal the tipping fee plus the revenues lost due to lower production of electricity that is subsequently sold. Figure V-6 presents the total amount of trash managed each year between 1991 and 2000. The bottom of each bar shows the "put" quantity and the dark region at the top of each bar shows the quantity of waste managed above the "put" appears in black. As shown in Figure V-6, the quantity of waste managed above the put decreased to a low in 1995 and increased in 1996 and 1997 before decreasing again in 1998.

County staff is commended for its diligent work. To date, the County has remained above the minimum "put."

2. Waste Reduction/Recycling Programs[8]

In calendar year 2000, the County recycled 405,540 tons of materials. This computes to a 35.6 percent recycling rate. The following sections describe the recycling programs in the County.

Figure V-6. Historic Trends in Waste Quantities Managed at the E/RRF, 1991 - 2000



Source: Fairfax County Department of Public Works and Environmental Services

a. Residential Programs

i. Multimaterial Residential

Multimaterial residential recycling became mandatory in September, 1992 for all single family homes, residential townhouses, apartment complexes, condominium units, and residential duplexes with curbside collection. Multimaterial residential recycling became mandatory in 1993 for residential units with dumpster service.

Curbside collection of newspapers, glass containers, and metal food and beverage cans is required weekly. Additional voluntary collection of plastics, mixed paper, and cardboard may be offered by private haulers. For multifamily dwellings such as apartment buildings that maintain central collection areas in the complex, pick up of recyclables is not required on a weekly basis as long as the premises are maintained in a clean and sanitary condition. Multi-family complexes of more than 100 units are required to recycle newspapers.

Recycling amendments to the *Fairfax County Public Facilities Manual* became effective for new Site Plans submitted after September 1, 1993. A Recycling System Statement on the Site Plan cover sheet identifies properties required to recycle, so that appropriate facilities may be planned prior to building occupancy. These requirements do not apply to single family residential complexes that will have curbside collection of refuse and recyclables.

Most of the County's residential units receive trash and recyclable collection from approximately 30 private haulers. The Department of Public Works and Environmental Services provides refuse collection and a contractor provides recyclable collection for approximately 39,000 households. In December 2000, the County expanded the materials collected for curbside recycling to include mixed paper and cardboard. For those not serviced by the County or private haulers, refuse and recycling collection is available once a week at Solid Waste Reduction and Recycling Centers (SWRRCs, formerly called "Park Outs").

ii. Yard Debris

In 2000, the County managed 64,607 tons of yard debris and 37,873 tons of brush. Approximately 43,632 tons went to Loudoun Composing. To educate the public, the County has literature on managing yard debris at home and a video entitled *Essentials of Composting*, which is available from libraries and the County Recycling Office. The County also has information on backyard composting, recycling and mulching of grass clippings, and landscape alteration.

iii. Drop-Off Centers

Fairfax County operates eight Recycling Drop-off Centers (RDOCs), which collect glass and plastic bottles and jars, aluminum and steel food and beverage cans, newspapers, mixed paper, and cardboard. The number of RDOCs has decreased from the fourteen available in 1995, in part due to curbside collection. Due to overwhelming quantities of unrecyclable batteries deposited in the containers, collection of button batteries and nickel-cadmium batteries was discontinued in 1998.

iv. Reporting by Solid Waste Collectors

All waste collectors permitted in Fairfax County are required to report residential recycling tonnages on an annual basis to the County. Because haulers consider specific customer information to be proprietary, the County is not able to measure hauler participation rates effectively. For Calendar Year 2000, private haulers were requested to include tons of waste disposed and to calculate a recycling rate for their residential service as part of their annual recycling report. Since this information is not required by statute, compliance with this request was minimal. Since the County does not have information on the customer base served by any individual private hauler, the County is unable to determine per household participation rates for private haulers' customers.

b. Commercial Programs

i. Mandatory Commercial Recycling Programs

The commercial recycling program is mandatory based on thresholds. Those commercial properties generating 100 tons of waste annually or housing 200 office workers were required to recycle the principle recyclable material in the waste stream and to report annually to the County. The County's own agency recycling program uses the threshold system, but also includes additional sites based on collection logistics and market conditions.

ii. Voluntary Commercial Source Reduction Programs

The County has promoted source reduction within the private sector by using case studies to publicize the efforts and cost savings realized by businesses that have set up successful source reduction programs. Technical assistance is provided to the private sector to assist them in the development of voluntary and mandatory recycling and source reduction programs. Successful public/private partnership activities include the production of the *Business Recycling Makes Sen$e* video and participation in the County Chamber of Commerce's annual trade show, "Innovations". Each year, the Business Advisory Committee sponsors a booth and exhibit and, with assistance from County staff, develops and distributes information packets on reuse, source reduction, and buying recycled.

The effect of reuse on the waste generation rate can not be determined accurately at this time. To date, businesses have reported statistical data sporadically. An aggressive public awareness campaign could educate the public on the importance

of reporting reuse, thus enabling an accurate determination of its impacts.

c. County and Regional Agencies[9]

The Northern Virginia Waste Management Board (NVWMB) was created in 1989 to promote regional approaches and solutions to recycling and waste management issues. In addition to serving as an intergovernmental liaison, staff provides extensive legislative and regulatory support to local governments. Based on the NVWMB's recommendations, legislation was introduced into the 2001 General Assembly to establish a State-wide used oil and antifreeze management program and to allow localities by ordinance to prohibit trash trucks from parking anywhere except specially designated areas. Both measures passed and were signed into law by the Governor.

d. Public Education

The County maintains an automated recycling information line (703-324-5052) for citizen access to recycling opportunity information. In addition, County staff members are available for speaking engagements and participate in local events such as the Fairfax Fair and Fall for Fairfax. The County prepares public service announcements and programs for cable TV and produces flyers and brochures to educate the public. Nontraditional techniques also are in use, including development of multilingual materials and graphic icons. The County received pro bono assistance from such diverse organizations as the National Recycling Coalition and a local recycling business, ERI. They have assisted in the review of recycling public relations campaigns.

Fairfax County promotes reuse through a variety of mechanisms, including publications, videos, and special events for citizens and businesses. Reuse ideas are offered to residents through publications such as the *Thrift Shop List*. A source reduction video was produced to encourage people to practice reuse options, such as renting infrequently used equipment rather than purchasing it or repairing household goods for donation to charitable organizations.

C. LEGISLATIVE UPDATE

HB 681 Local recycling and waste disposal.
Authorizes localities to grant incentives to encourage recycling. Signed into law 4/2/00

HB 981 Solid waste management facilities.
Requires that applications for permit amendments or variances allowing certain

nonhazardous industrial waste facilities to expand contain the same information as is required for an application for a new solid waste management facility permit. Signed into law 4/12/00.

HB 1022 Financial assurance for waste facilities.
Prohibits the owner or operator of a solid waste facility from reliance on captive insurers, approved surplus line insurers and risk retention groups as a means of assuring that he or she will have the financial capacity to properly close and care for the site after closure. Signed into law 3/28/00.

HB 1023 Financial responsibility for solid waste management facilities.
Requires the Virginia Waste Management Board to include facilities receiving solid waste from a ship, barge or other vessel in regulations which ensure that, if a solid waste management facility is abandoned, the costs associated with protecting the public health and safety from the consequences of such abandonment may be recovered from the person abandoning the facility. Signed into law 3/28/00.

HB 1228 Landfill closure.
Requires disposal areas of landfills that are not equipped with liner and leachate control systems meeting the current requirements of Waste Management Board regulations to be closed by 2020. Signed into law 4/7/00.

HJ 118 Study; reduction of solid waste.
Establishes an 11-member joint subcommittee to examine strategies to reduce the amount of solid waste being deposited in Virginia's landfills. The joint subcommittee is to examine ways in which the State can encourage the use of alternative waste management practices in order to meet the goal of a 25 percent reduction in the amount of solid waste deposited in Virginia's landfills by 2005. Letter sent 2/11/00 from the House to the Secretary of Natural Resources

HJ 214 Memorializing Congress; importation of waste.
Urges Congress to enact legislation giving states and localities the power to control the importation of waste into their jurisdictions. Passed by House as amended by Senate, 2/25/00.

HJ 385 Importation of municipal solid waste.
Urges the Congress of the United States to enact the Solid Waste Interstate Transportation and Local Authority Act of 1999 (HR 1190) that gives state and local governments additional authority to regulate the importation of municipal solid waste into their jurisdictions. House bill passed by Senate, 2/23/00.

SB 317 Littering; illegal trash dumping.
Provides that an individual who litters illegally or dumps trash or garbage is subject to a fine of between $250 to $2,500 and a jail sentence of up to 12 months, either or both. Currently, a person who litters or dumps trash is subject to a Class 1 misdemeanor. Signed into law 3/6/00.

SJ 133 Study; reduction of solid waste.
Directs the Commission on the Future of Virginia's Environment to examine strategies to reduce the amount of solid waste being deposited in Virginia's landfills. The joint subcommittee is to examine ways in which the State can encourage the use of alternative waste management practices in order to meet the goal of a 25 percent reduction in the amount of solid waste deposited in Virginia's landfills by 2005 . Letter sent 3/6/00 from the House to the Commission on the Future of VA's Environment.

D. RECOMMENDATION

1. EQAC is strongly opposed to the use of surplus funding to subsidize tipping fees in the County. While we recognize that the County is concerned about the potential to fall below its contractual requirement to supply 930,750 tons of solid waste per year to the E/RRF, the current approach is not sustainable. Moreover, in coming years, this action may have negative impacts on recycling programs within the County and may lead to severe budget cuts for such programs.

LIST OF REFERENCES

[1] Unless otherwise noted, information for 2000 taken directly from e-mail to Noel Kaplan, Department of Planning and Zoning, from Joyce Doughty, Director, Division of Solid Waste Disposal and Resource Recovery, July 9, 2001. Additional summary information from previous editions of the *Annual Report on the Environment.*

[2] Fairfax County Department of Public Works and Environmental Services, *2000 Annual Groundwater Monitoring Report, I-95 Sanitary Landfill, Lorton, VA*, February 2001.

[3] Unless otherwise noted, information for 2000 taken directly from e-mail to Noel Kaplan, Department of Planning and Zoning, from Joyce Doughty, Director, Division of Solid Waste Disposal and Resource Recovery, July 9, 2001. Additional summary information from previous editions of the *Annual Report on the Environment.*

[4]Information for 2000 taken directly from e-mail to Noel Kaplan, Department of Planning and Zoning, from Joyce Doughty, Director, Division of Solid Waste Disposal and Resource Recovery, July 9, 2001. Additional summary information from previous editions of the *Annual Report on the Environment.*

[5] Data provided by UOSA staff, undated.

[6]All data in this section taken directly from Division of Solid Waste Disposal and Recovery, *Solid Waste Disposal Status for EQAC's 1999 Report*, unless otherwise noted.

[7] Source: U.S. EPA, Permit Compliance System, Water Discharge Permit Query system, (www.epa.gov/enviro/html/pcs_query_java.html). Search conducted September, 2001. Data are for December 31, 2000 and reflect average concentrations unless otherwise noted.

[8]Data taken directly from Memorandum to Noel Kaplan, Senior Environmental Planner, Department of Planning and Zoning, from Jerry A. Hubbard, Director, Division of Solid Waste Collection and Recycling dated July 6, 2001. Additional summary information from previous editions of the *Annual Report on the Environment.*

[9]Information taken directly from "Update of Northern Virginia Regional Commission Activities for the Fairfax County Environmental Quality Advisory Council," David Bulova, Director of Environmental Services, May 25, 2001.