

**REPORT OF THE  
DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Comprehensive Evaluation  
of Solid Waste Management  
in the Commonwealth**

**TO THE GOVERNOR AND  
THE GENERAL ASSEMBLY OF VIRGINIA**



**SENATE DOCUMENT NO. 3**

**COMMONWEALTH OF VIRGINIA  
RICHMOND  
2001**



## Introduction

On November 30, 1999, the Department of Environmental Quality provided the Honorable James S. Gilmore, III, Governor of Virginia, and the General Assembly with the "interim findings" of a Comprehensive Study of Solid Waste Management in Virginia. The Interim Report and this report have been prepared in accordance with the requirements of Chapters 584, 613, and 947 of The Acts of the Assembly of 1999, which specify the following:

*The Department of Environmental Quality shall undertake a comprehensive study of solid waste management in Virginia, including an analysis of and recommendations regarding solid waste disposal practices, projections on future landfill capacity needs, mechanisms to enhance waste reduction and recycling, and needed State and federal legislation to protect human health and the environment. The Department shall report its interim findings to the Governor and the General Assembly by December 1, 1999, and shall submit its final report to the Governor and the General Assembly by July 1, 2000.*

The Interim Report addressed four major issues:

1. MSW Landfill Capacity in Virginia. A determination of the available capacity of all active municipal solid waste (MSW) landfills in Virginia (Non-Subtitle D and Subtitle D) and a projection of the needed future capacity of MSW landfills based upon 1998 disposal rates.
2. An analysis of non-Subtitle D versus Subtitle D MSW Landfills in Virginia: An analysis of active Non-Subtitle D landfills and, where appropriate, a comparison with active Subtitle D landfills. An evaluation was made of the threat to human health and the environment, the average and range of costs associated with closure and corrective action, and the short term benefits of continued operation of non-Subtitle D landfills versus the long term costs and liabilities associated with closure and corrective action.
3. Waste Disposal Reduction Practices in Virginia and Other States. A review and summary of the waste disposal reduction practices in Virginia and other states, and a summary of the most widely used and apparently effective technologies and options to enhance waste reduction and recycling.
4. Alternatives To Landfills. An evaluation of alternatives to landfilling wastes and comparison of the alternatives to landfills on a cost-to-benefit or economic standpoint.

Tables summarizing the information in the Interim Report can be found in Attachment A. The Final Report augments the Interim Report by:

1. Reviewing the changes made to the Virginia Waste Management Act by the 1999 and 2000 sessions of the General Assembly and the Department's implementation of those changes.
2. Reviewing other initiatives undertaken by Department to enhance solid waste management in the Commonwealth.
3. Discussing the Department's plans for assessing and requiring the closure of Non-Subtitle D (HB 1205) landfills.
4. Evaluating additional ways that waste management in Virginia can be improved, including issues raised during the 2000 session of the General Assembly.

### Size of the Regulated Community

The Department regulates the number of solid waste management facilities shown in Tables 1 and 2 below.

Table 1. ACTIVE FACILITIES – 5/30/00

Facility Type	PUBLIC	PRIVATE	TOTALS
Construction/Demolition/Debris Landfill	3	19	22
Energy Recovery Facility	3	3	6
Industrial Landfill	2	28	30
Materials Recovery Facility	5	25	30
MSW Composting Facility	1	0	1
MSW Incineration-RDF Facility	1	0	1
Other Type of Facility	1	4	5
Regulated Medical Waste Treatment	1	7	8
Regulated Medical Waste Storage Only	1	2	3
Sanitary Landfill	57	10	67
Transfer Station	50	10	60
Yard Waste Composting Facility	10	3	13
<b>TOTALS</b>	<b>135</b>	<b>111</b>	<b>246</b>

TABLE 2. INACTIVE AND CLOSED FACILITIES SUBJECT TO CLOSURE OR POST-CLOSURE CARE REQUIREMENTS – 5/30/00

Facility Type	PUBLIC	PRIVATE	TOTALS
Construction/Demolition/Debris Landfill	22	43	65
Energy Recovery Facility	3	0	3
Industrial Landfill	9	65	74
Inert or Never Active	1	8	9
Materials Recovery Facility	1	7	8
MSW Incineration-RDF Facility	6	4	10
Other Type of Facility	4	6	10
Regulated Medical Waste Treatment	0	3	3
Regulated Medical Waste Storage Only	0	1	1
Sanitary Landfill	201	39	240
Transfer Station	8	4	12
Yard Waste Composting Facility	2	3	5
<b>TOTALS:</b>	<b>257</b>	<b>183</b>	<b>440</b>

The numbers in Table 2 do not include those facilities that have been permitted but never active, and those facilities whose permits have been absorbed into another permit. In addition, Table 1 and Table 2 do not include the following: Sites covered by Emergency Permits, Gas Management Facilities, or Experimental Facilities.

### Resources of the Department of Environmental Quality

Implementation of DEQ's solid waste management program resides primarily in the Waste Program Coordination Division and the Offices of Compliance Monitoring within DEQ's six regional offices. In the Central Office, the majority of personnel active in the solid waste program are responsible for permitting solid waste management facilities, inspection coordination, compliance assistance, regulation and guidance development, and database management. The six regional offices are responsible for inspecting facilities and enforcing program requirements. The Office of Enforcement Coordination provides enforcement support to the Regional Offices. Recycling and waste minimization programs reside in the Office of Pollution Prevention and Compliance Assistance and the Office of Environmental Enhancement, respectively. Other Divisions/Offices of the Department furnish administrative, planning, and supervisory support to the solid waste management program as well as to other programs of the Department.

The Department's current staffing level is 805 full time equivalents (FTE) positions. Of the presently authorized positions, approximately 51 FTEs (including the 19 new positions appropriated by the 1999 General Assembly) are devoted to the solid waste management program as shown below:

Table 3. Staffing Levels for the Solid Waste Management Program in Virginia

Elements of Solid Waste Management Program	Current Full-Time Positions
Program Administration	2.5
Permitting, Closures and Corrective Action	16.0
Inspections, Compliance and Enforcement	25.5
Program Development	4.0
Recycling and Waste Minimization	4.0
<b>TOTAL</b>	<b>52.0</b>

**Solid Waste Managed in Virginia**

In 1999, a total of 20.9 million tons of solid waste (13.4 million tons of municipal solid waste) were managed in the Commonwealth. This amount is up from 17.8 million tons of solid waste (12 million tons of municipal solid waste) in 1998. Of the 1999 amounts, 4.7 million tons of solid waste (4.1 million tons of municipal solid waste) were from outside Virginia. Four jurisdictions account for 91.25% of all waste sent from out-of-state sources to Virginia: Maryland (30.14%); New York (28.59%); Washington, D.C. (22.05%); and North Carolina (10.46%). In 1998, 4.6 million tons of solid waste (3.9 million tons of municipal solid waste) originated outside Virginia. The reported amounts of solid waste received at Virginia facilities during 1998 and 1999 are summarized in Attachment B.

**Initiatives to Improve Virginia's Solid Waste Management Program**

**1999 Solid Waste Legislation**

Several legislative actions during the 1999 session of the Virginia General Assembly modified the Virginia Waste Management Act in significant ways. Changes were made to permitting requirements, financial assurance requirements and other operational provisions. The following summaries describe the major changes and the Department's implementation activities.

§10.1-1408.1.B.6

Summary: A new subsection was added requiring an applicant for a new or expanding municipal solid waste landfill to guarantee that sufficient disposal capacity will be available for localities in the Commonwealth to comply with their solid waste management plans. The applicant must certify that localities will be able to contract for and reserve disposal capacity in the landfill. (HB2557/SB1309/SB865)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed provisions related to this section will be added in amendment 3 to Virginia Solid Waste Management Regulations.

§10.1-1408.1.B.7

Summary: A new subsection was added requiring an applicant for a new or expanding municipal solid waste landfill to provide certification from the host community that an agreement has been reached addressing financial compensation to the locality, daily travel routes and traffic volumes, daily disposal limits, and the anticipated service area of the facility. When requested by the host community, the applicant shall pay the full cost of at least one full-time employee to monitor and inspect waste transportation and disposal practices. Also, when requested by the host locality, the applicant shall conduct split air and waste sampling with the host community, and the applicant shall pay the costs associated with the testing. (HB2557/SB1309/SB865)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 3.

§ 10.1-1408.1.B.8

Summary: A new subsection provides that, if an applicant is a locally owned and operated landfill, the application must include information on the anticipated daily travel routes and traffic volumes, daily disposal limit and service area of the facility, rather than meeting the provisions above. (HB2557/SB1309/SB865)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 3.

§10.1-1408.1.D.1 & 2

Summary: An existing section was amended to require the Director to make a series of determinations prior to approving a permit for new or expanding solid waste management facility. The director must determine that the proposed expansion protects human health, safety and the environment; that there is a need for the additional capacity; there is sufficient infrastructure to safely handle the waste flow; that the increase is consistent with any state or local disposal limits; that the public interest will be served by the permit; and that the additional capacity is consistent with local solid waste management plans.

Also, the section was amended to require the Director to determine that the proposed facility poses no substantial danger to human health or the environment when evaluating an application for a non-hazardous industrial waste facility that accepts only waste generated by the owner of the facility. (The amended provisions for industrial facilities are consistent with pre-1999 requirements). (HB2557/ SB1309/SB865 and HB2555/SB 1201)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 3.

§10.1-1408.1.P

Summary: A new section requires permits for new or expanding municipal solid waste landfills to include provisions guaranteeing capacity to localities that choose to contract with the facility. (HB 2557/ SB1309/SB865)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 3.

§10.1-1408.1.Q

Summary: A new section prohibits solid waste management facilities from accepting waste for incineration or disposal from vehicles with four or more axles unless the transporter provides certification that the waste is free of substances not permitted for that facility. (HB2557/SB1309/SB865)

Implementation: The Department was enjoined by the U.S. District Court from enforcing these provisions of the statute. The Commonwealth has appealed this ruling.



### § 10.1-1408.3

Summary: A new section requires capping the amount of municipal solid waste received at any landfill at an average of 2,000 tons per day or the documented average based upon the actual amount received in 1998, whichever is greater. Average daily disposal rates are to be calculated based on disposal over a seven-day period. The new section excludes solid waste removed from a substandard landfill and transferred to a Subtitle D landfill from the cap if such arrangements were made prior to 1/1/99. Further, it provides that any landfill which has been in operation for less than two years as of 12/31/98 shall be capped at actual average daily disposal volumes during any quarter of 1998, not to exceed 2,400 tons. The statute sections are not to be interpreted as allowing any landfill to exceed daily disposal volume restrictions contained in state or local permits, regulations, agreements, or other instruments. (HB2555/SB1309)

Implementation: The Department was enjoined from enforcing the provisions of the statute by the U.S. District Court. The Commonwealth has appealed this ruling.

### §10.1-1408.4

Summary: A new section requires the Director, prior to granting a permit approving site suitability for a new municipal solid waste landfill, to determine in writing that a proposed site is suitable. The Director must consider: (i) a site-specific report prepared by VDOT addressing the adequacy of transportation infrastructure and the impact on local traffic and safety; (ii) the potential impact on parks and recreational areas, public water supplies, marine resources, wetlands, historic sites, fish & wildlife, water quality and tourism, and; (iii) the geologic suitability of the site. Applicants are to provide information to assist the Director in making this determination. Also, it adds requirements prohibiting the construction of a new municipal solid waste landfill: (1) in a 100-year flood plain; (2) in a tidal or nontidal wetland contiguous to a surface water body; (3) within five miles upgradient of any existing public water supply intake or reservoir; (4) in an area vulnerable to flooding because of dam failure; (5) over a sinkhole or less than 100 ft above a solution cavern; (6) in any park or recreational area, wildlife management area, or area designated as the critical habitat or any endangered species; or (7) over an active fault. (HB2557/SB1309/SB865)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed siting provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 3.

#### §10.1-1408.5

Summary: A requirement was added prohibiting the issuance of a permit for a new or expanding a municipal solid waste landfill sited in a wetland. It exempts expansions under specific circumstances and does not apply to landfills impacting less than 1.25 acres of non-tidal wetlands. The statute requires quarterly monitoring for all solid waste landfills that accept municipal solid waste, that were constructed on a wetland, that have a potential hydrologic connection to a wetland, or are within a mile of a wetland. The Director can waive these requirements if he determines that less frequent monitoring is necessary. It does not apply to landfills accepting only ash. (HB2471)

Implementation: The Department has developed guidance dated July 23, 1999 to address the provisions of this section. Detailed provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 3.

#### 10.1-1410.2

Summary: New requirements were included that the owner/operator of a landfill must ensure that the landfill is properly closed in accordance with the Board's regulations and that appropriate post-closure care and post-closure monitoring are provided, including financial assurances. The Director can extend the post-closure monitoring period beyond that specified in the regulations, which is currently 30 years. The closure and post-closure plans must be approved by the Director; whereas, a professional engineer could certify that the plans are in accordance with the Board's regulations prior to the passage of this legislation. HB2557/SB1309/SB865)

Implementation: All landfills received written notification of these requirements. Detailed provisions related to this section will be added into the Virginia Solid Waste Management Regulations in Amendment 2.

#### §10.1-1413.2

Summary: This section established the Virginia Landfill Clean-up and Closure Fund. The Fund may be used for grants to localities for the proper final closure of substandard landfills that are owned by the locality or are located in the locality's jurisdiction and have been abandoned. The DEQ is required to prioritize landfills in need of grants based on the greatest threat to human health and the environment and is authorized to release funds for up to \$100,000 per site. The Governor may approve higher amounts. (HB2557/SB1309/SB865)

Implementation: The DEQ has completed a draft prioritization of these landfills. See Appendix B.

§10.1-1454.1

Summary: Regulations governing the transportation of solid waste on state water were required by the 1998 General Assembly. The 1999 General Assembly added additional requirements. Containers are required to be tested at least twice a year and be accompanied by certification that they are watertight. Containers must be manifested to assure that the waste in each container is suitable for the destination facility. Containers must not be stacked more than two high and must be secured to the barge. No facility can accept waste from a barge until the regulations are finalized. (HB2430)

Implementation: Proposed regulation were presented to the Virginia Waste Management Board on August 26, 1999 and will be released for public comment once executive review has been completed. The Federal District Court has enjoined DEQ from enforcing the provisions limiting containers to a height of no more than two containers. The Commonwealth has appealed this ruling.

§10.1-1454.2

Summary: New requirements were added prohibiting the transportation of solid waste or regulated medical waste upon the York River, James River, and the Rappahannock River to the fullest extent consistent with the Constitution of the United States. (HB2556/SB1308)

Implementation: The Federal District Court enjoined the Department from enforcing these provisions. The Commonwealth has appealed this ruling.

§10.1-1454.3

Summary: New requirements direct the Waste Management Board to promulgate regulations governing the commercial transport of municipal solid waste and regulated medical waste by truck. The regulations are to include the design and construction of the containers and trailers so as to prevent the escape of wastes and liquids, and must require truck owners to demonstrate financial responsibility for any damage that may occur. Regulations are to govern any tractor truck, semi-trailer combination with four or more axles. The statute makes it a Class 1 misdemeanor to violate of these regulations. (HB2557/SB1309/SB865)

Implementation: The Federal District Court enjoined the Department from enforcing these provisions. The Commonwealth has appealed this ruling.

Enactment Clauses to HB 2557/SB1309/SB865

Permit moratorium: Prohibits the Director from issuing permits for new or expanding landfills from the effective date of the legislation through July 1, 2000.

The General Assembly requested that this Comprehensive Evaluation of the Management of Solid Waste in Virginia be prepared by the Department.

#### Enactment Clause HB2555/SB1201

The clause provided that the requirements of §10.1-1408.1.D 1&2 (relating to new permitting requirements) do not apply to facilities that had submitted a notice of intent to apply for a permit on or before November 13, 1998.

#### Enactment Clauses to HB2556/SB1308

This clause directed that a study be completed by Virginia Department of Transportation of impact of the barge ban on highway safety.

Implementation: this study was printed as Senate Document 22 during the 2000 session of the General Assembly.

#### Litigation Related to 1999 Solid Waste Legislation

Waste Management Holdings, Inc., Hale Intermodal Marine Company, Weanack Land Limited Partners, Charles City County, and Brunswick Waste Management Facility filed suit against the Commonwealth alleging that portions of the 1999 legislation violated the Commerce Clause, the Equal Protection Clause, and the Contracts Clause of the U.S. Constitution, and/or were preempted by federal law. The U.S. District Court for the Eastern District of Virginia ruled that the following provisions violated the Commerce Clause: the daily disposal caps, the waste load certifications, the regulation of solid waste trucks, the ban on barges transporting solid waste and the prohibition against stacking containers more than two-high on those barges. The Commonwealth has appealed this ruling. The provisions overturned by the court are not being implemented pending the outcome of that appeal.

#### **Strengthening Financial Assurance Provisions**

All solid waste management facilities are required to provide some assurances that adequate financial resources will be available to close the facility should it be abandoned. During 1999 and 2000, the General Assembly evaluated existing financial assurance requirements and made several recommendations. Some concern was expressed regarding coverage of third-party damages that might be caused by a landfill and the availability of adequate funding for closure for those landfills using a test of financial strength (rather than a funding reserve) to meet financial assurance requirements.

## HJ 585

The 1999 General Assembly passed House Joint Resolution 585 to establish a subcommittee to examine the financial assurance requirements for solid waste management facilities. This committee concluded that the requirements should be strengthened and their recommendations were included in HB 249.

## HB 249

HB 249 would strengthen existing financial assurance requirements by: (1) requiring those facilities using a test of financial capability to meet financial assurance requirements to also maintain an escrow account for closure costs, (2) requiring landfill operators to maintain insurance to address any damages to third parties, (3) including costs of responding to any pollution event in the amount covered by financial assurances, and (4) revoking captive insurance as a mechanism for meeting financial assurance requirements. While DEQ had authority to make these changes without a legislative change, passage of the legislation would have expedited the implementation of any new requirements. The legislation was continued to the 2001 session of the General Assembly and DEQ was asked to consider these issues as it promulgates amendments to the Financial Assurance Regulation.

DEQ's Implementation: DEQ is in the process of amending the Financial Assurance Regulation. The issues raised by HB 249 were discussed with the Technical Advisory Committee for the Financial Assurance Regulation. Members were asked how they currently address damages to third parties from landfill operations or pollution incidents, whether sovereign immunity barred claims against landfills owned by local governments, and how best to obtain accurate information on the preparedness of landfill owners for meeting closure costs. DEQ is finalizing its evaluation of this information and will present a proposal to the Virginia Waste Management Board in this summer. Following the Board's approval, the proposed amendments will be made available for public comment.

## HB 1022

HB 1022 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 will have the financial capacity to properly close and provide 30 years of post-closure care for the site. This bill was passed during the 2000 General Assembly and will strengthen the Financial Assurance Regulations by requiring insurers to be licensed pursuant to Chapter 10 (§ 38.2-1000 *et seq.*) of Title 38.2.

Implementation: DEQ is incorporating these provisions into the Financial Assurance Regulation. A proposal will be submitted to the Waste Management Board this summer.

## HB 1023:

HB 1023 requires the Virginia Waste Management Board to require Financial Assurance for transfer stations and barge off-loading facilities. These regulations 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. This bill was passed in the 2000 General Assembly and expands the universe of solid waste management facilities required to provide financial assurance to include barge receiving facilities and transfer stations.

Implementation: DEQ is incorporating these provisions into the Financial Assurance Regulations. A proposal will be submitted to the Waste Management Board this summer.

### **Closure Schedule for Non-Subtitle D Municipal Solid Waste Landfills**

With the promulgation of the Virginia Solid Waste Management Regulations (VSWMR) in 1988, solid waste management facilities in Virginia became subject to extensive new requirements. Under the 1988 regulations, owners and operators of permitted solid waste management facilities were required to comply with the new requirements by July 1, 1992. The regulations required that existing landfills (including sanitary, industrial and construction, demolition and debris (CDD) landfills) could only place waste over areas that met the liner and leachate collection requirements of the regulations. This included operation of both vertically (i.e., increases in the height of the landfill) and horizontally (i.e., increases in the lateral extent of the landfill) expanded cells. In 1991, state legislation was enacted which allowed local governments that owned or operated a permitted solid waste landfill an extension until January 1, 1994 to comply with the liner and leachate collection system requirements of the VSMR. In 1992, state legislation gave the Department of Waste Management the ability to extend this compliance date beyond January 1, 1994 provided that the landfill posed no threat to public health or the environment.

The Environmental Protection Agency (EPA) promulgated new standards for municipal solid waste landfills on October 9, 1991. These new standards, contained in 40 CFR 258, were authorized by Subtitle D of the Resource Conservation and Recovery Act (RCRA) and became effective on October 9, 1993. These standards affected all new and existing landfills, however, the liner and leachate collection system requirements only applied to new municipal solid waste landfills or lateral expansions of municipal solid waste landfills. Under the Federal criteria, existing municipal solid waste landfills could continue to operate vertically within the landfill footprint as of October 9, 1993 without meeting the new design criteria for liners and leachate collection.

On March 15, 1993, Amendment 1 of the VSWMR was enacted aligning Virginia's regulatory requirements for design of new and expanded facilities with federal

requirements. During the 1993 legislative session, Va. Code Section 10.1408.1.N. was enacted (commonly referred to as House Bill 1205). The above legislation allowed landfills that were permitted prior to March 15, 1993 (the effective date of Amendment 1 of the VSWMR) to continue to operate vertically within the landfill footprint as of October 9, 1993.

The 2000 General Assembly passed HB 1282 to require the VDEQ to prioritize HB 1205 landfills for closure based on threat to human health and the environment and to ensure closure of these landfills by 2020. No municipal solid waste landfill will be allowed to accept waste in any disposal area after 2020 unless the disposal area is equipped with a liner system approved by the VDEQ pursuant to permit issued after October 9, 1993. The Department has developed a methodology and preliminary closure schedule that will be the subject of a public comment period and public hearings before being finalized. This preliminary closure schedule will be released in mid-July of 2000.

DEQ is evaluating each HB1205 landfill using a model to assess threats to human health and the environment based upon the likelihood that a potential receptor (human, animal, plant) could be impacted by releases from the landfill via air, soil, surface water, or ground water. This model includes risk factors such as the existence of engineering controls (liners, leachate collection), proximity to pathways for release, and whether or not there had been any releases documented. DEQ will propose closure dates for landfills (or portions of landfills) rated as high or medium; landfills rated as a low threat will be allowed to operate until the statutory deadline of 2020. This information will be provided to each landfill and will be made available for public comment. The Department will also conduct public meetings around the state. After evaluating comments from the public and from the landfills, DEQ will adopt final closure dates for each of these landfills.

### **Ten-Year Permit Review**

Pursuant to Section 10.1-1408.1.E. of the Virginia Waste Management Act, the Director must, at least once every ten years, review and issue written findings on permitted solid waste facilities. This review must address the compliance history of each facility, changes in key personnel, and any material changes in the technical limitations, standards or regulations on which the permit was based. If the Director finds that repeated violations by the permittee or changes in key personnel would make the continued operation of the facility a risk to human health or the environment, the Director must amend or revoke or amend the permit. In addition, the Director may amend the permit to include any additional appropriate changes when the technical limitations, standards, or regulations on which the original permit was based have been changed by statute or regulation or when the conditions that would allow the director to revoke a permit exist. The Department is developing a procedure for completing these reviews and anticipates completion of the reviews for all facilities permitted prior to July 1, 1991 by July 1, 2001.

### **Pollution Prevention**

DEQ is investing significant effort in pollution prevention to reduce the cost of clean up and compliance, to promote technology innovations, to obtain better and cheaper environmental performance, and to support community revitalization with fast-track clean-up of contaminated sites.

Virginia's Innovations in Pollution Prevention (VIP2) is Governor Gilmore's initiative to improve the environmental quality of the Commonwealth. The target of this program is to help Virginia business and government go beyond regulatory compliance, establish a sustainable economy of clean, efficient technologies and move toward a long term voluntary goal of zero discharge. The Department of Environmental Quality's Division of Pollution Prevention and Compliance Assistance is working in concert with other state and local agencies to actualize the potential of VIP2.

VIP2 consists of seven components 1) The Environmental Excellence Program promotes the implementation of environmental management systems in business, industry and government; 2) a peer based Mentoring Network increases access to information related to pollution prevention and compliance; 3) Environmental Technology will be sought for a cleaner, more efficient Virginia; 4) there will be Financial Incentives for investments in pollution prevention; 5) integration of voluntary pollution prevention opportunities into environmental programs; 6) expanded pollution prevention technical assistance for Virginia facilities; and 7) implementation of Environmental Education activities for Virginia public school programs. The focus of these components will be to raise the environmental awareness of the public through pollution prevention outreach, increase regulatory compliance and reduce all forms of waste while avoiding media transfer. To maintain this focus, DEQ will continue to develop and revise the program elements as needed.

Currently, the Office of Pollution Prevention and Compliance Assistance is focusing on solid waste prevention and reduction. DEQ is working with Tangier Island, Virginia on utilizing prevention, recycling, and reuse to reduce disposal rates. Because of the unique circumstances that face an island in solid waste disposal, the Tangier project is affording the Pollution Prevention Program the opportunity to look at innovative pollution prevention opportunities. DEQ has recently become a partner in EPA's Waste Wise Program. The Waste Wise Program is a free, voluntary partnership program that helps organizations minimize solid waste. DEQ will not only reduce its solid waste generation rate, but will also promote the program statewide as a tool for solid waste reduction.

### **Increased Compliance Inspections and Investigations**

The 1999 Appropriations Act provided nineteen additional FTEs for the oversight of landfills. Of these nineteen positions, ten are being used to increase landfill inspections, three will be used to review ground water monitoring reports, two are being used for solid waste permitting activities such as review of gas remediation plans and closure plans, two are being used to develop amendments to the solid waste management



regulations and provide technical and regulatory guidance to program staff and the public, and one is being used to increase waste reduction efforts.

DEQ is using these new positions to increase our oversight of landfills. In the past DEQ inspected sanitary landfills quarterly; however, since February 1999, it has been inspecting on a much more frequent basis based upon the size of the facility. DEQ's goal is to inspect each landfill at least monthly with larger landfills being inspected on a weekly basis.

### **Programs To Improve Compliance with Waste Disposal and Transportation Requirements**

DEQ, in conjunction with the Virginia State Police (VSP), has participated in multi-state efforts to conduct "Trashnet" activities designed to inspect waste trucks for safety and environmental violations. In February 1999 and April 2000, DEQ and the VSP coordinated with the environmental and law enforcement agencies of other South Eastern states to conduct a multi-state Trashnet. These efforts concentrated on motor carrier safety compliance of waste hauling vehicles. During the April 2000 event, 23 of 38 trucks were found to be in violation of motor carrier safety requirements. DEQ is also monitoring incoming waste at high volume facilities on a near weekly basis. In addition, DEQ has participated in several training and outreach sessions for the regulated community. DEQ, along with the Virginia Hospital and Healthcare Association and representatives of the waste industry, conducted a series of seminars designed to educate healthcare and waste industry workers on waste disposal practices and identification and management of Regulated Medical Waste (RMW). DEQ has provided guest speakers on the topics of RMW and hazardous waste for the Virginia Risk Control Institute and several other organizations. DEQ has also provided outreach to groups such as the Organic Waste Management and Composting Committee of the Virginia Recycling Association and the Northern Virginia Planning District Commission Waste Board.

### **Regulation of Vessels Transporting Solid Waste**

DEQ has worked with a Technical Advisory Committee to develop regulations governing barges and other vessels transporting solid waste upon state waters. These regulations govern how the waste is handled on the vessel and at the off-loading site. In addition requirements for financial assurance from off-loading sites will be added to the pending amendments of the Financial Assurance Regulations.

### **Solid Waste Planning**

Virginia's comprehensive waste management program includes several key elements using planning for effective solid waste management to assure future capacity, recycling and waste reduction by households and business. The solid waste management planning, recycling and waste reduction efforts involve the state government, local

governments and waste facility operators to provide adequate and safe solid waste disposal options for the millions of tons of solid waste Virginian generate each year.

Regulations For The Development of Solid Waste Management Plans assign local governments the responsibility for waste planning, require recycling at the statutory prescribed rate and authorizes programs to encourage waste reduction. All localities have developed waste management plans that have been approved by the Department. More than eighty regional plans have taken a variety of approaches to assuring future capacity, from directing waste to particular facilities to having a menu of disposal facilities available and to improve the information available for solid waste planning.

The Department is in the process of amending these regulations to further encourage recycling and waste reduction, minimizes the volume of waste going to landfills, and improve the information available for solid waste management planning. These regulations are in development with the assistance of a citizen Technical Advisory Committee. DEQ is considering strengthening the regulations to ensure that solid waste planning is a continuing effort and that the plans are up-to-date and as accurate as possible. Instead of a five-year update cycle, DEQ is considering provisions requiring the modification of the plan as circumstances change through a formal process. Based upon the 1999 Solid Waste Legislation, permits cannot be approved for new or expanded solid waste management facilities if the permitted activity is not in accordance with an approved plan. Also, the requirements for the annual waste reports from solid waste facility owners and operators will be incorporated into these regulations to emphasize their importance to the planning function and the requirements would be expanded to ensure accurate information on recycling activities. The committee is considering a new formulation for the recycling rate calculation, including which waste types are to be included in the calculation. Finally, the Virginia Waste Management Act's hierarchy for waste management will be more fully incorporated into these regulations. That hierarchy includes:

1. Source reduction;
2. Reuse;
3. Recycling;
4. Resource recovery (waste-to-energy);
5. Incineration; and
6. Landfilling.

The regulations under development embrace this hierarchy and strive to encourage it by providing preferential treatment of plan amendments that promote the values of the hierarchy.

### **Amendments to the Virginia Solid Waste Management Regulations**

DEQ has initiated amendments to the regulations dealing with solid waste management. Proposed Amendment 2 to the solid waste management regulations should be finalized

by the end of the year and includes several measures the General Assembly adopted in the 1999 session as well as some changes identified through the public comment process.

Proposed changes would increase the stringency of landfill siting criteria and permit issuance criteria, increase ground water monitoring at landfills, and prohibit or discourage siting of landfills in sensitive areas. Some administrative relief is provided for composting facilities by allowing the composting of up to 700 tons per quarter of feedstock under the provisions of a permit-by-rule. This should encourage composting in Virginia as a means to divert compostable material from landfill disposal while. The permit-by-rule procedure is an expedited permitting process that reduces the time and expense of permitting facilities while maintaining environmental protection, financial assurances and other requirements.

Another major improvement being proposed is in the area of ground water monitoring. At present, when a facility triggers a statistically significant increase (SSI) under the assessment monitoring program, the facility's permit must be amended to establish ground water protection standards (GPS). This is classified as a major permit amendment and can take a year or more for the department to process. Once the GPS's are in place, the facility will stay in the assessment monitoring program until a GPS is statistically exceeded. If that occurs, the facility must characterize the nature of the release by adding additional wells and initiate an assessment of corrective measures that could be undertaken to remediate the plume of contamination. This process is currently considered a major permit amendment that can take up to one year. Proposed Amendment 2 streamlines these two actions by eliminating the requirement that the permit be amended to establish ground water protection standards, which will reduce the time between detection of contamination and completion of corrective action measures.

Changes are also being proposed to expedite implementation of corrective action measures. These provisions would allow for presumptive remedies that may be implemented by the owner without prior approval of the Director. Presumptive remedies are remedial measures that are known to be beneficial corrective actions. The Director must still determine that the remedy has been effective.

### **Recommendations for Future Action**

The General Assembly adopted several measures to strengthen Virginia's solid waste management program. DEQ developed guidance for the implementation of these provisions; however, three of the major provisions were enjoined by the U.S. District Court for the Eastern District of Virginia. These provisions would have placed a limit on the maximum daily volume a landfill may receive, regulated large transport trucks hauling solid waste, and banned the barging of waste on three Virginia rivers.

If the District Court decision is upheld by higher courts, the Department will continue to support any future state or federal legislation which will give the Virginia Waste

Management Board the authority to develop sound solid waste management criteria, to set reasonable volume restrictions at municipal waste facilities, to reduce or eliminate hazards to the public health and safety, to eliminate public nuisances, and to ensure compliance with applicable environmental protection and transportation safety laws. Among the goals of future legislation, the following should be considered.

- Measures to ensure that the maximum daily volumes of solid waste received at a facility does not cause or contribute to any violation of the solid waste management, air quality control, water quality control or other environmental protection laws of the commonwealth.
- Measures to ensure that maximum daily volume of waste received at a facility does not cause any public nuisance from odors, noises, attraction of vermin, dust, or truck traffic.

Virginia has acted responsibly to provide environmentally safe disposal facilities for the municipal waste we generate by adopting tough standards for waste storage, treatment, and disposal facilities. Virginia localities are recycling 25 percent or more of the waste generated annually, and local governments are committing funds and effort to plan for proper waste management and to assure adequate waste disposal capacity. The unintended consequence of these responsible actions has been that Virginia has become the second largest importer of municipal solid waste from other states. To help deal with this problem, the Commonwealth needs federal legislation giving communities a voice in deciding whether it is appropriate or safe for trash from other states to come into their community for disposal.

Virginia has made every effort to protect its communities from the burdens associated with the large volume of waste they are receiving, but the Commonwealth must have federal legislation in order to implement an effective solution. In numerous decisions dating back to 1978, the U.S. Supreme Court has ruled that the transport and disposal of municipal waste is interstate commerce protected by the Constitution and that states do not have the authority to limit the flow of waste across state lines, until Congress grants them the authority. States do, however, have the authority and the responsibility to protect their citizens against the threats posed by improper or sub-standard waste management practices. States like Virginia, who have made the hard choices to plan for and manage their solid waste properly, to ensure the waste stream is diverted to appropriate facilities, to build recycling programs and to promote waste reduction to take care of the waste they generates, should have some choice when it comes to trash imports. All the political and financial capital that Virginians have invested in this issue could be lost without federal legislation. Clearly, no state can resolve this issue on its own.

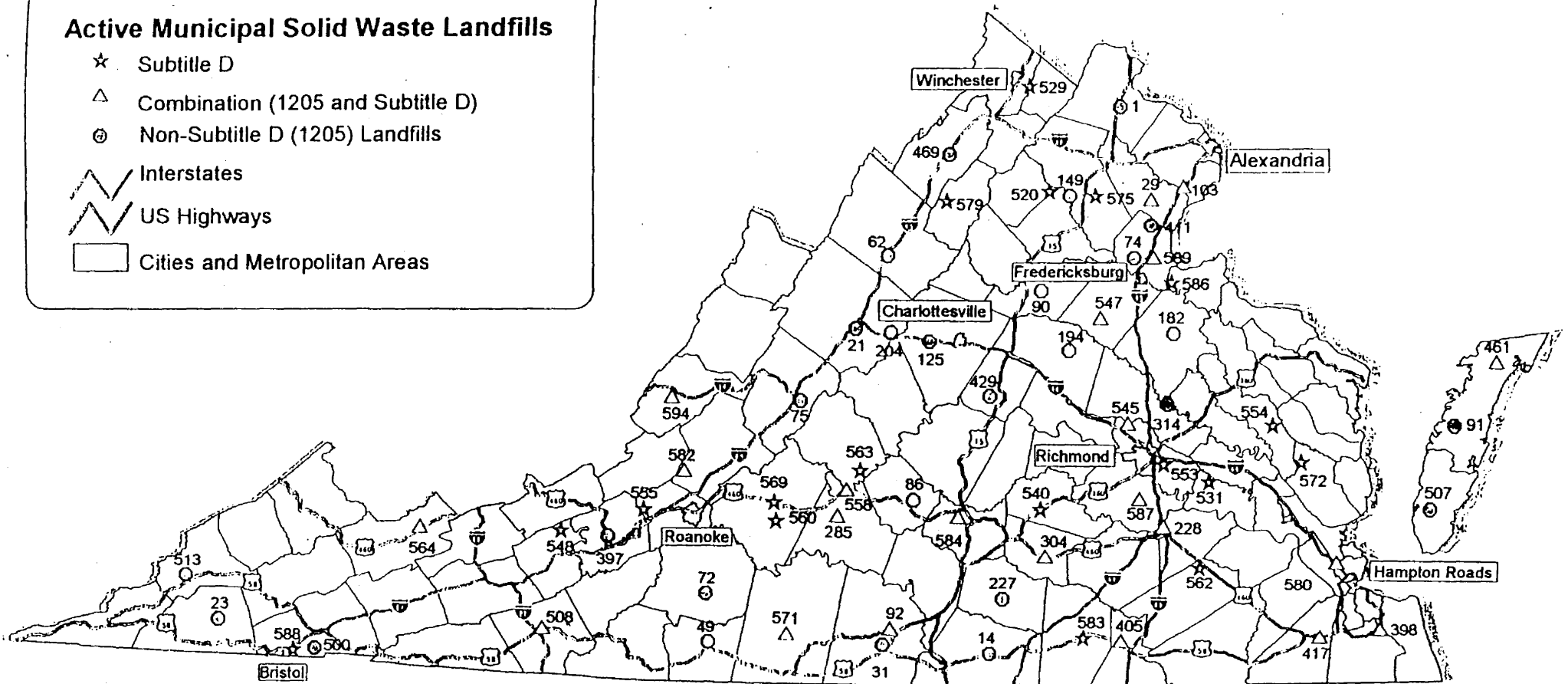
ATTACHMENT A

INFORMATION FROM COMPREHENSIVE EVALUATION OF SOLID WASTE  
MANAGEMENT IN THE COMMONWEALTH - INTERIM REPORT

# Figure 1-1 Virginia Solid Waste Management Study

## Active Municipal Solid Waste Landfills

- ★ Subtitle D
- △ Combination (1205 and Subtitle D)
- ⊙ Non-Subtitle D (1205) Landfills
- Interstates
- US Highways
- Cities and Metropolitan Areas



Developed through a collaboration of VDEQ through the Virginia Economic Development Partnership



Norfolk District  
U.S. Army Corps of Engineers



Commonwealth of Virginia  
Department of Environmental Quality



DATE CREATED: 1 November 1999

Table 3-2 Cubic Yards of Permitted Disposal Capacity Available as of 1998

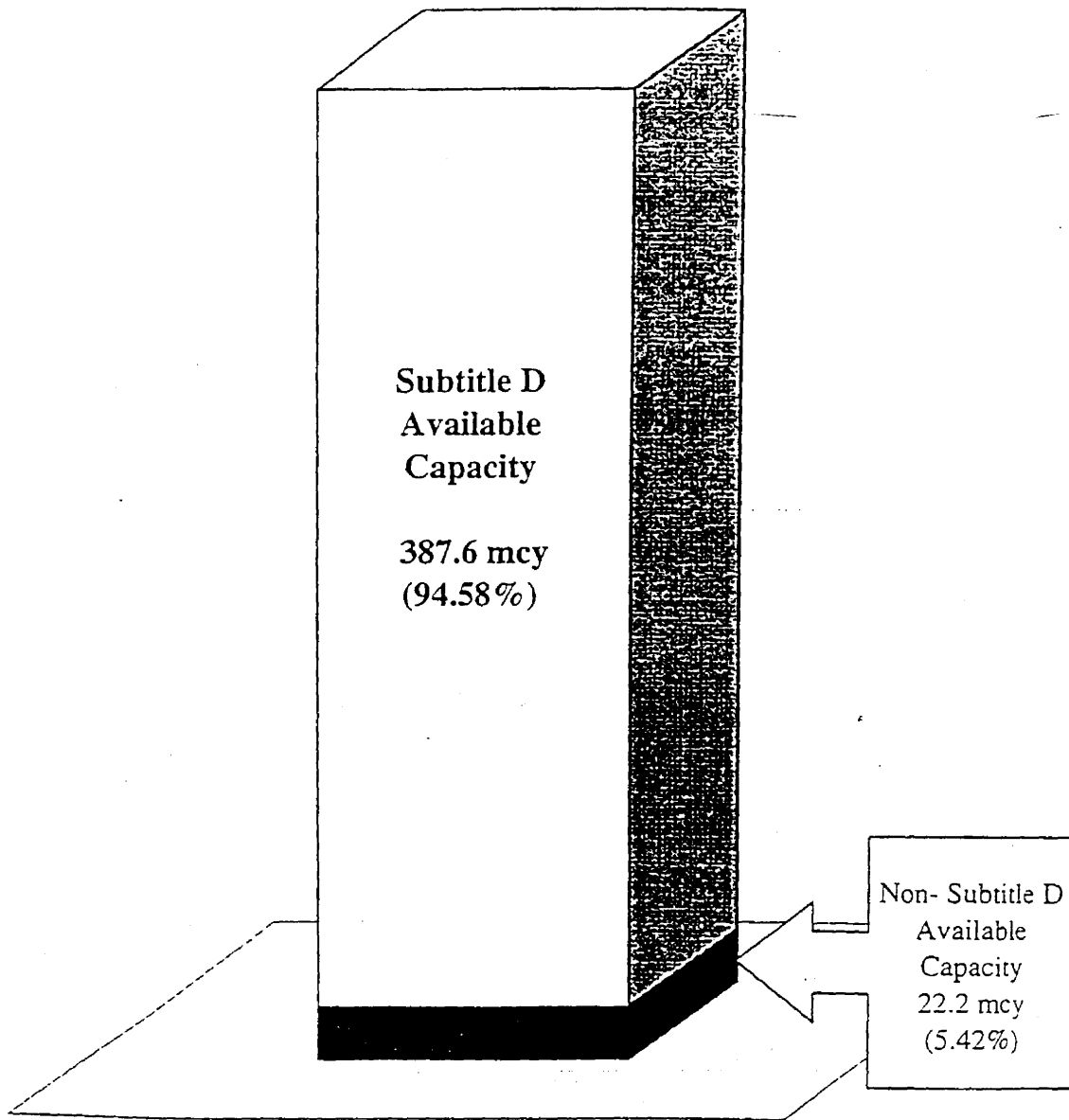
Type of Facility	Number of Landfills	Permitted Disposal Capacity ( in Cubic Yards)		Range of Available Capacity (1998)	
		Total Available	Average Available	LOW	HIGH
Subtitle D	18	275,084,797	15,282,489	250,000	44,000,000
Combination	22	117,286,851	5,331,221	116,000	49,000,000
Non-subtitle D (1205)	27	17,429,698	645,544	0	2,700,000
	<b>TOTAL</b>	<b>409,801,346</b>			

Note: Combination facilities contain an estimated 112,511,000 cubic yards of Subtitle D space.

Sources include DEQ database, landfill surveys, and calculations based on closure dates and annual waste volumes.

Figure 3-2 Percent of Available MSW Landfill Capacity in Subtitle D and Non-Subtitle D Facilities, 1998

Total Available Capacity= 409.8 mcy



■ Non-Subtitle D Facilities    □ Subtitle D Facilities



**Table 3-3 Waste Disposed in Virginia MSW Landfills - Tons per Year (1998)**

Type of Facility	Number of Landfills	Total Tons/Year Waste Disposed	Average Tons/Year Waste Disposed	Range of Tons/Year Waste Landfilled	
				LOW	HIGH
Subtitle D	18	6,219,713	345,540	1,477	1,271,987
Combination	22	4,215,949	191,634	6,932	1,007,754
Non-subtitle D (1205)	27	953,468	35,314	314	122,408
<b>TOTAL</b>	<b>67</b>	<b>11,389,129</b>	<b>169,987</b>		

**Table 3-4 Waste Disposed in Virginia MSW Landfills - Cubic Yards per Year (1998)**

Type of Facility	Number of Landfills	Total CY/Year Waste Disposed	Average CY/Year Waste Disposed	Range of CY/Year Waste Landfilled	
				LOW	HIGH
Subtitle D	18	12,439,426	691,079	2,954	2,543,974
Combination	22	8,431,897	383,268	13,864	2,015,507
Non-subtitle D (1205)	27	1,906,935	70,627	none	70,628
<b>TOTAL</b>	<b>67</b>	<b>22,778,259</b>	<b>339,974</b>		

Note: The cubic yards above were obtained by multiplying the tons of Table 3-3 by 2, or a conversion factor of 1 ton = 2 cubic yards of waste. Actual compaction ratios in landfills will vary.

Figure 3-3 Projected Landfill Capacity  
For Non- Subtitle D and Subtitle D Facilities in Virginia

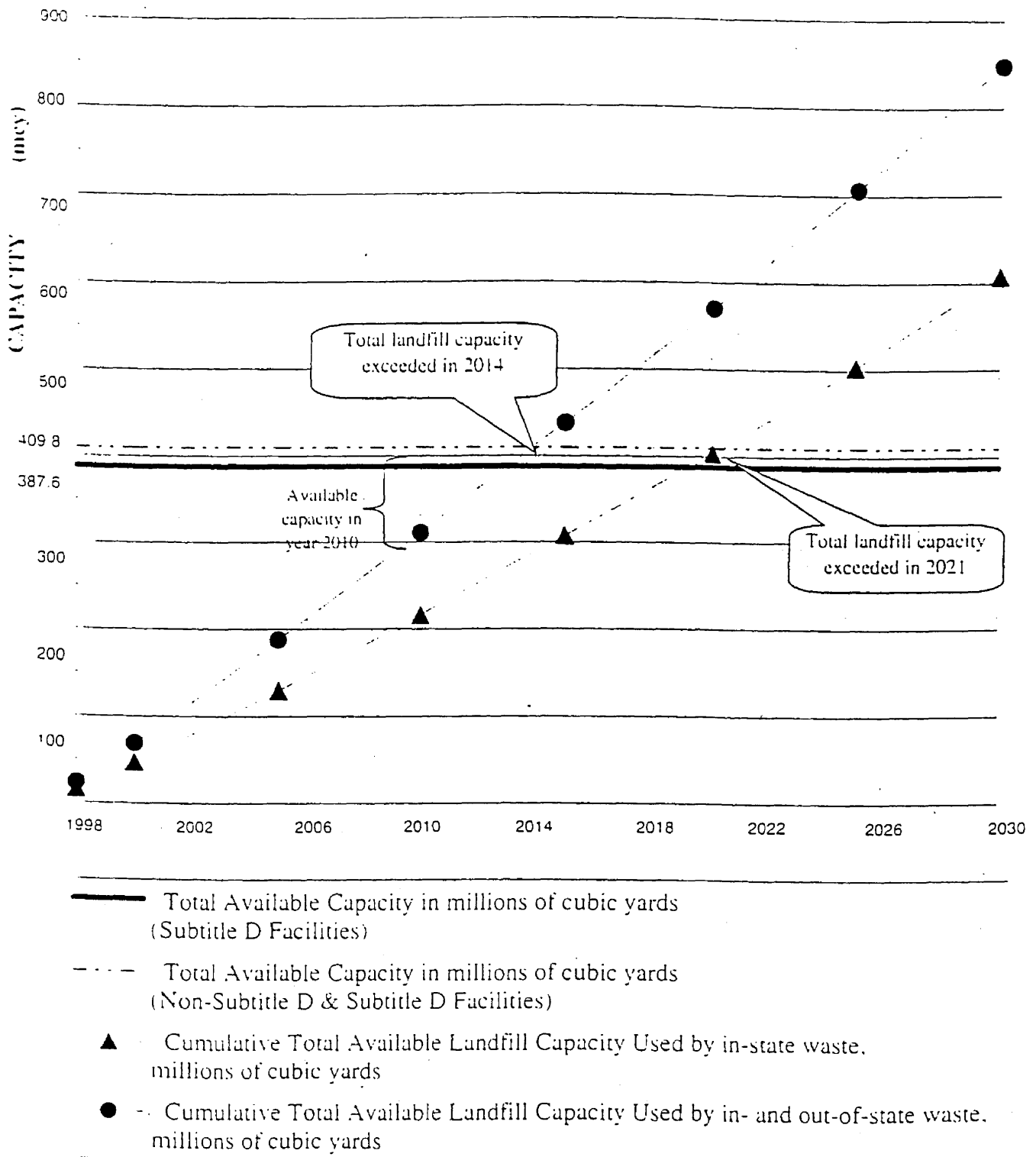


Table 3-5 Total Landfill Capacity - Non-Subtitle D and Subtitle D Facilities

Year	Population	Average Annual Population Growth Rate <sup>(a.)</sup>	Cummulative Total Available Landfill Capacity Used			Total Available Capacity	
			Values in millions of cubic yards			Values in millions of cubic yards	
			In-state waste <sup>(b.)</sup>	Out-of-state waste <sup>(c.)</sup>	In- and Out-of-state waste <sup>(d.)</sup>	Subtitle D Facilities	Non-Subtitle D & Subtitle D Facilities
Dec-98	6,791,300	1.13	15.50	7.28	22.78	387.60	409.80
Dec-00	6,992,045	1.48	47.19	21.84	69.03	387.60	409.80
Dec-05	7,372,858	1.00	129.42	58.23	187.64	387.60	409.80
Dec-10	7,737,597	1.08	216.04	94.62	310.66	387.60	409.80
Dec-15	8,137,497	0.99	307.21	131.01	438.23	387.60	409.80
Dec-20	8,522,732	0.95	402.87	167.40	570.27	387.60	409.80
Dec-25	8,907,948	0.90	503.00	203.80	706.79	387.60	409.80
Dec-30	9,293,174	0.86	607.59	240.19	847.78	387.60	409.80

NOTE: Original VDEQ data was in tons, and was converted to cubic yards based on conversion factor of 2 (0.5 ton=1 cy)

- a. Derived from population estimates. Weldon Cooper Center for Public Service, University of Virginia (retrieved 7 September 1999).
- b. 1998 value of in-state flows multiplied by the growth factor to project annual flow generated from in-state sources.
- c. Total landfill capacity filled by out-of-state waste. Out-of-state waste is assumed to remain constant at the 1998 level in this analysis.
- d. Landfill capacity filled by in- and out-of-state waste. These cumulative values are derived by adding the two previous columns.

Table 6-2. Synopsis of 1997 EPA Data of States' General Solid Waste Management Conditions

State	Number of Landfills	Landfill Capacity (years)	Disposal Rate (% by weight)	Recycling Rate (% by weight)	Combustion Rate (% by weight)	Permanent IIIW Programs	Yard Waste Ban (yes/no)	Pay-As-You-Throw Programs*
Virginia	80	>10	47	35	30	11	N	1-25
California	289	>10	83	26	2	40	N	26-100
Connecticut	3	5-10	17	23	60	2	Y	1-25
Georgia	101	5-10	66	33	1	0	Y	1-25
Indiana	51	>10	69	23	8	10	Y	101-200
Kentucky	24	19#	85	18	0	0	N	0
Maryland	26	5-10	54	27	19	1	Y	1-25
New Jersey	12	<5	34	43	23	3	Y	101-200
New York	33	<5	34	32	16	13	N	1-25
North Carolina	65	5-10	76	22	2	7	Y	101-200
Ohio	51	5-10	83	15	2	1	Y	101-200
Oregon	54	>10	60	29	11	2	N	101-200
Pennsylvania	47	>10	66	20	20	3	Y	101-200
South Carolina	30	>10	71	27	2	0	Y	1-25
Tennessee	77	5-10	59	40	1	0	N	0
West Virginia	22	>10	87	13	0	0	Y	1-25
Wisconsin	51	5-10	56	40	4	4	Y	200+

Source: MSW Factbook, Ver. 4.0, Office of Solid Waste, USEPA, Washington, DC, 1997.

\*: Source: Waste Age Magazine, May 1999

#: 1999 VADEQ survey information

Table 6-1 Summary of State's Individual Practices and Policies

STATE	Goal ( percent) / year	Tax Credit/ Incentive	Procurement Preference	Recycled Newsprint	Tire Recycl./ L.F Ban	Bottle Deposit
Virginia	25 / 1995	Yes	Yes	Yes	Yes/Whole	No
California	50 / 2000	Yes	Yes	Yes	Yes/Whole	No
Connecticut	40 / 2000	Yes	Yes	Yes	Yes/No	Yes
Georgia	25 / 1996	Yes	Yes	No	Yes/Whole	No
Indiana	50 / 2001	Yes	Yes	No	Yes/Whole	No
Kentucky	25 / 1997	Yes	Yes	No	Yes/Whole	No
Maryland	20 / 1994 <sup>2</sup>	Yes	Yes	Yes	Yes/Yes	No
New Jersey	50 / 1996	Yes	Yes	No	No/No	No
New York	50 / 1997	No	Yes	No	Yes/No	Yes
North Carolina	40 / 2001	Yes	No	Yes	Yes/Whole	No
Ohio	25 / 2000 <sup>1</sup>	Yes	Yes	No	Yes/Yes	No
Oregon	50 / 2000	Yes	Yes	Yes	Yes/Whole	Yes
Pennsylvania	25 / 1997	Yes	Yes	No	Yes/No	No
South Carolina	30 / 1997	Yes	Yes	No	Yes/Whole	No
Tennessee	25 / 1996	No	No	No	Yes/Whole	No
West Virginia	25 / 1995	No	Yes	Yes	Yes/Yes	No
Wisconsin	Not Avail.	Yes	Yes	Yes	Yes/Whole	No

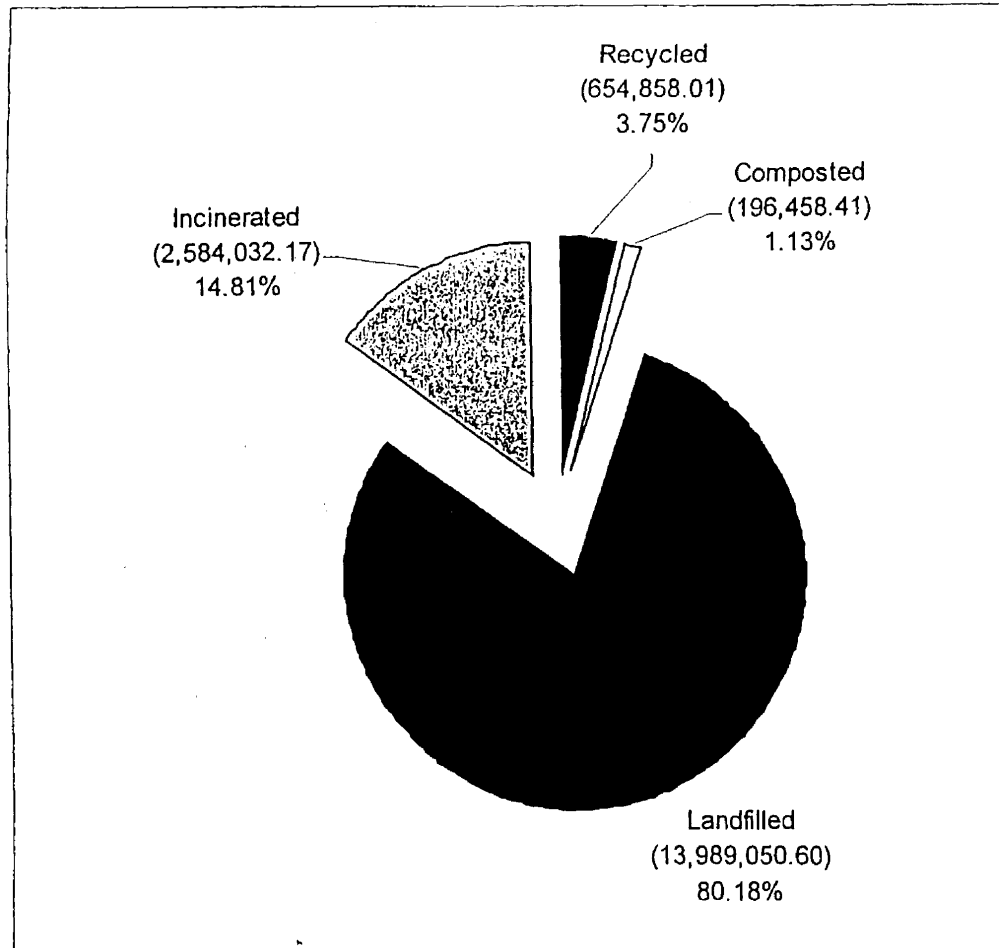
Source: USEPA, 1997

1. For residential/commercial only. Ohio has alternatively assessed target options.
2. Maryland Recycling Advisory Group recommended 50 percent by 2005 goal.

ATTACHMENT B

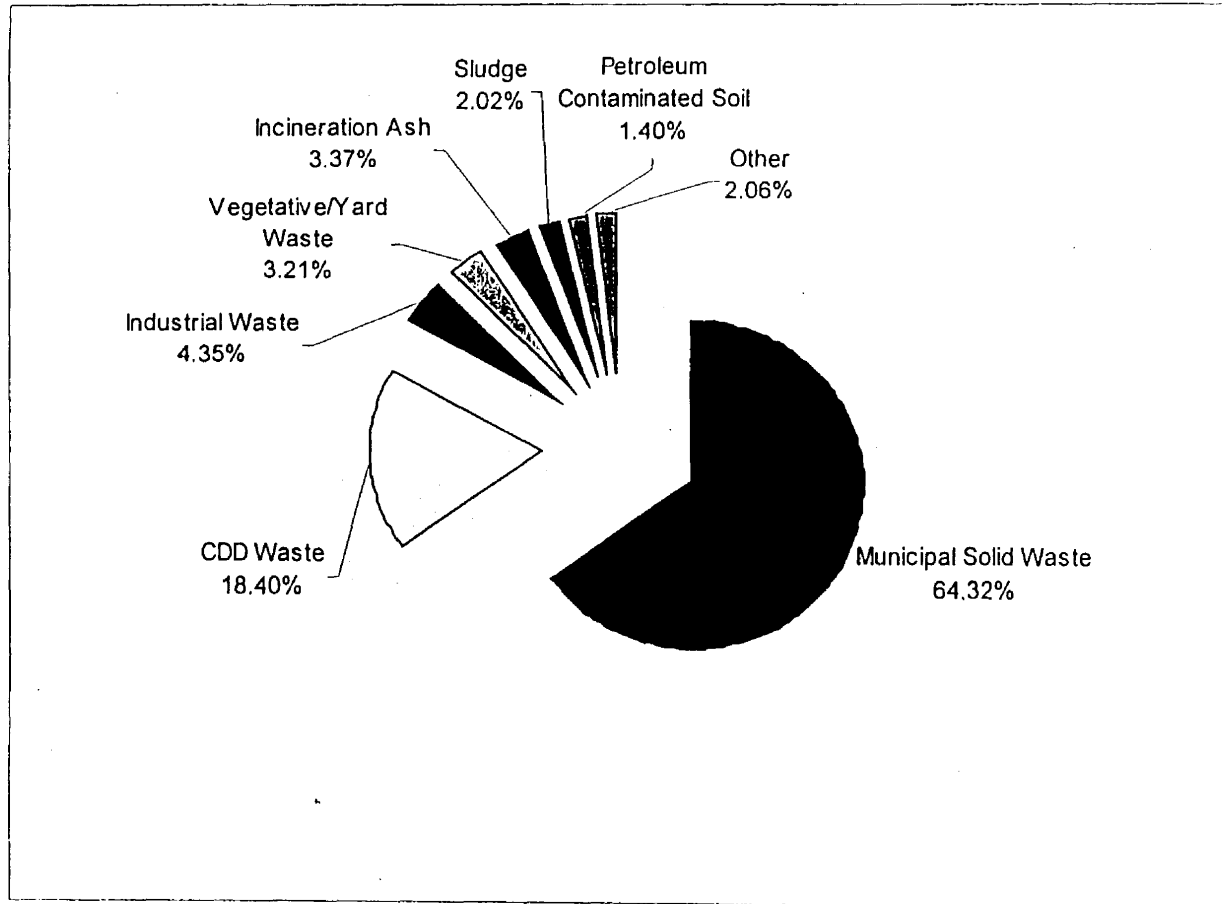
SOLID WASTE MANAGED IN THE COMMONWEALTH – 1999

Figure 1. Solid Waste Management in Virginia's Permitted Facilities – 1999



Units of weight are in tons. Material stored on site is not represented in this table as it comprises only 0.13% of the total waste stream managed in 1999. Not all recycling facilities are required to report. As a result, more accurate recycling information is reported by localities. According to the most recent data submitted by localities (1995), the average state-wide recycling rate was approximately 35% of solid waste generated in Virginia localities.

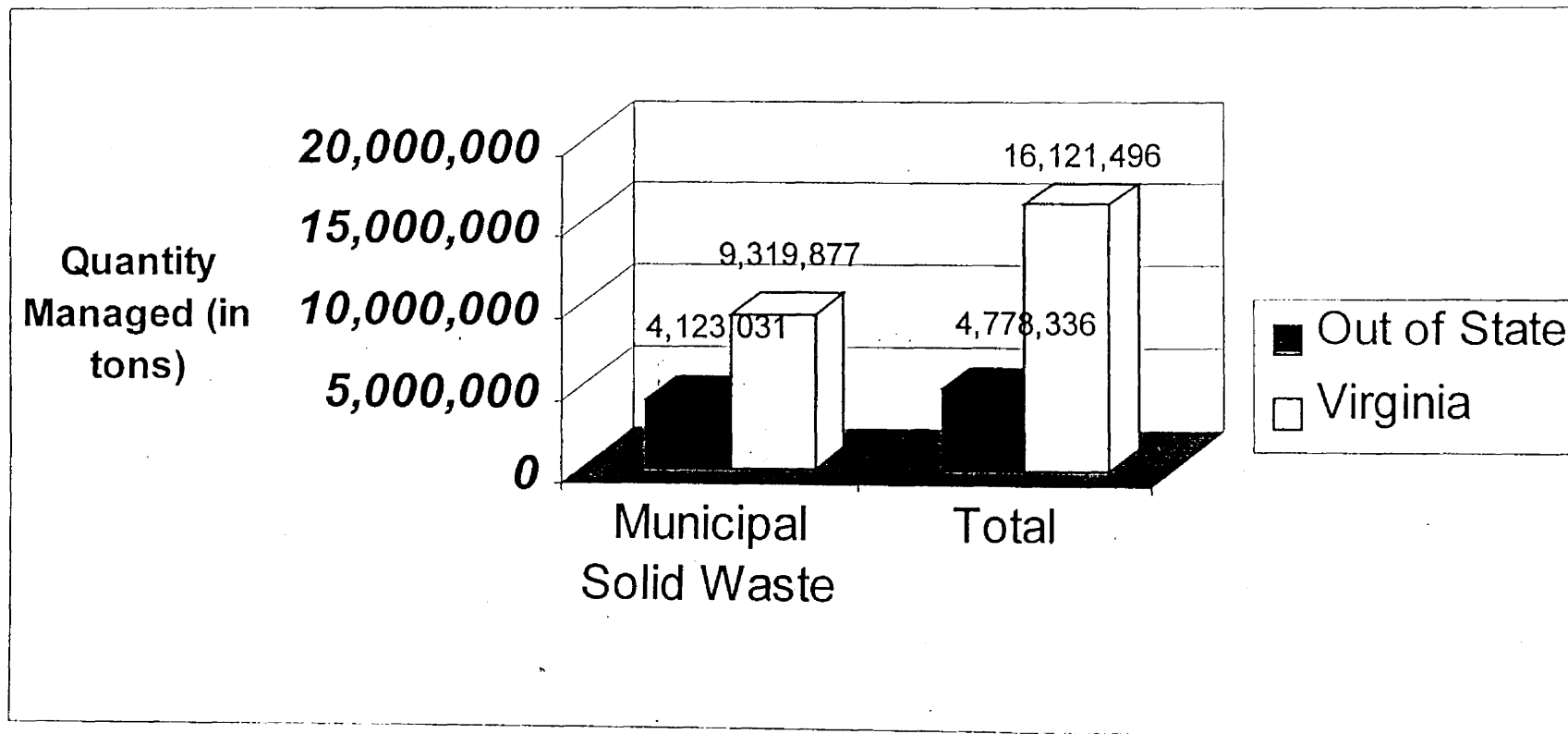
**Figure 2. Composition of the Solid Waste Stream in 1999**



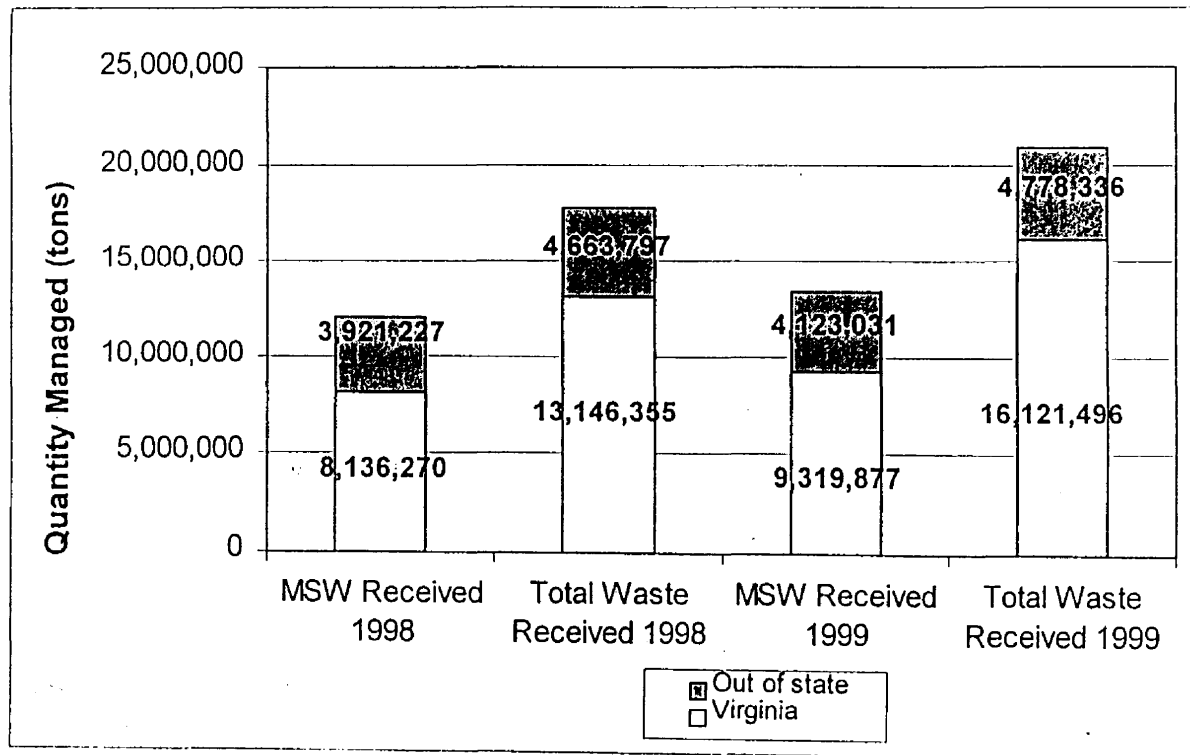
Note: This chart does not include waste streams comprising less than 1% of the total waste stream. This includes Regulated Medical Waste (0.10%), White Goods (0.17%), Friable Asbestos (0.18%), and Tires (0.40%).



**Figure 3. Quantity of Solid Wastes Managed in Virginia in 1999**



**Figure 4. 1998 Versus 1999 MSW and Total Waste Received**



ATTACHMENT C  
PRIORITIZATION OF HB 1205 LANDFILLS

**Table 2. Summary of Results**

**DEQ - Prioritization of HB1205 Landfills**

No.	Site Name - Locality (Regional Office)	Soil	Individual Priority Score			Priority Average	Proposed Closure Date	Combined Site?
			Air	Groundwater	Surfacewater			
91	Accomack Co LF - Bobtown South, Accomack (TRO)	Medium	High	High	Medium	High	2005	<input type="checkbox"/>
86	Appomattox Co SLF, Appomattox (WCRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
21	Augusta Co Svc Auth, Augusta (VRO)	Medium	High	High	Low	High	2005	<input type="checkbox"/>
580	Big Bethel Landfill, Hampton (TRO)	Medium	Medium	Medium	High	High	2005	<input checked="" type="checkbox"/>
182	Caroline Co LF, Caroline (NRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
125	Charlottesville - Albemarle - Ivy, Albemarle (VRO)	Medium	High	High	Low	High	2005	<input type="checkbox"/>
149	Fauquier Co LF, Fauquier (NRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
92	Halifax Co SLF, Halifax (PRO)	Medium	Medium	High	Medium	High	2005	<input checked="" type="checkbox"/>
314	Hanover Co LF - 301, Hanover (PRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
29	Independent Hill LF, Prince William (NRO)	Medium	Medium	Medium	High	High	2005	<input checked="" type="checkbox"/>
227	Lunenburg Co SLF, Lunenburg (PRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
49	Martinsville LF, Martinsville (WCRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
14	Mecklenburg Co LF, Mecklenburg (PRO)	Medium	Medium	High	Medium	High	2005	<input type="checkbox"/>
90	Orange Co LF, Orange (NRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
228	Petersburg City LF, Petersburg (PRO)	Medium	High	Medium	High	High	2005	<input checked="" type="checkbox"/>
75	Rockbridge Co SLF - Buena Vista, Rockbridge (VRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
469	Shenandoah Co SLF, Shenandoah (VRO)	Medium	Medium	High	Medium	High	2005	<input type="checkbox"/>
587	Shoosmith Sanitary Landfill, Chesterfield (PRO)	Medium	Medium	Medium	High	High	2005	<input checked="" type="checkbox"/>
31	South Boston SLF, South Boston (PRO)	Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
417	SPSA Regional LF, Suffolk (TRO)	Medium	Medium	Medium	High	High	2005	<input checked="" type="checkbox"/>

**Table 2. Summary of Results (cont.)**

**DEQ - Prioritization of HB1205 Landfills**

No.	Site Name	Locality (Regional Office)	Individual Pathway Scores				Pathway Average	Projected Closure Date	Compliance Status
			Soil	Air	Groundwater	Surfacewater			
74	Stafford Co LF, Stafford (NRO)		Medium	Medium	Medium	High	High	2005	<input type="checkbox"/>
398	Va Beach LF #2 - Mt Trshmr II, Virginia Beach (TRO)		Medium	Medium	High	Medium	High	2005	<input checked="" type="checkbox"/>
204	Waynesboro City LF, Waynesboro (VRO)		Medium	High	High	High	High	2005	<input type="checkbox"/>
429	Fluvanna Co SLF, Fluvanna (VRO)		Medium	Medium	High	Low	Medium	2010	<input type="checkbox"/>
72	Franklin Co LF, Franklin (WCRO)		Medium	Medium	High	Low	Medium	2010	<input type="checkbox"/>
405	Greensville Co LF, Greensville (PRO)		Medium	Medium	High	Low	Medium	2010	<input checked="" type="checkbox"/>
1	Loudoun Co SLF, Loudoun (NRO)		Medium	Low	High	Medium	Medium	2010	<input type="checkbox"/>
194	Louisa Co SLF, Louisa (VRO)		Medium	Medium	High	Low	Medium	2010	<input type="checkbox"/>
397	Mid-county LF - Montgomery Co, Montgomery (WCRO)		Medium	Medium	High	Low	Medium	2010	<input type="checkbox"/>
507	Northampton Co LF - Oyster Site, Northampton (TRO)		Medium	Low	Medium	High	Medium	2010	<input type="checkbox"/>
62	Rockingham Co SLF, Rockingham (VRO)		Medium	Medium	High	Low	Medium	2010	<input type="checkbox"/>
545	Springfield Road Landfill, Henrico (PRO)		Medium	Low	High	Medium	Medium	2010	<input checked="" type="checkbox"/>
461	Accomack Co LF #2, Accomack (TRO)		Medium	Low	High	Low	Low	2020	<input checked="" type="checkbox"/>
498	Bristol City LF, Bristol (SWRO)		Medium	Low	High	Low	Low	2020	<input type="checkbox"/>
589	Rappahanock Regional Solid Waste Management Board, Stafford (NR)		Medium	Low	Low	High	Low	2020	<input checked="" type="checkbox"/>
23	Scott Co LF, Scott (SWRO)		Medium	Low	High	Low	Low	2020	<input type="checkbox"/>
513	Wise Co LF, Wise (SWRO)		Medium	Low	Medium	Medium	Low	2020	<input type="checkbox"/>

Hanover Co LF and Charlottesville-Ablemarle-ivy have both entered into enforceable orders with DEQ establishing closure dates. Hanover Co Lf will stop accepting waste by 12/31/02 and Charlottesville-Ablemarle-ivy will stop accepting waste by 9/1/01.

