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ELEMENTS OF VIRGINIA'S SOLID WASTE MANAGEMENT PROGRAM

CHAPTER 1: INTRODUCTION

Virginia's Solid Waste Management Program has been in existence since 1971. The program's mission and policy are to protect human health and the environment, while at the same time efficiently conserving, managing, and planning for the waste that is generated.¹ The existing solid waste management structure is governed by a series of laws, regulations, and guidance, augmented by a series of reports. Thus, Virginia's solid waste program does not rely on a single unified document as a "State Solid Waste Plan." Instead, solid waste planning is directed and coordinated in accordance with a suite of legal requirements and official documents under a blend of state, regional, and local planning authorities and responsibilities. In this document, the Virginia Department of Environmental Quality ("DEQ") has established goals and objectives for solid waste over approximately the next twenty years. Further, the purpose of this text is to explain Virginia's existing solid waste planning and management structure, programs, and public participation.

Background

In 2004, the Virginia Waste Management Board requested that DEQ research the topic of statewide solid waste planning. The Board relies on Va. Code § 10.1-1402 for its authority to supervise and control waste management and to keep state waste plans current. Two DEQ documents detail the history of solid waste management at the agency: (1) a report by DEQ's Policy group -- Report on the Management of Municipal Solid Waste in the Commonwealth of Virginia (1998) ("1998 Policy Report"); and (2) a DEQ/U.S. Army Corps of Engineers Interim Report -- Comprehensive Evaluation of Solid Waste Management in the Commonwealth (1999) ("1999 DEQ/ACOE Interim Report"). Each of these reports was produced to detail Virginia's Solid Waste Management Program for the Governor and the General Assembly, and text from each report was updated to produce this report.

Virginia's State Solid Waste Plan was written under Subtitle D of RCRA.² To qualify for federal funding, each plan was required to outline steps the state would take to ensure that the solid waste within its borders was managed in an environmentally sound manner, and that resources were conserved and recovered where possible. Key components of these plans involved: (1) using the technical criteria provided by the U.S. Environmental Protection Agency ("EPA") to identify inappropriately managed facilities, termed "open dumps", which had to be closed or upgraded, and (2) developing a regulatory scheme that would ensure facilities operate properly.

At the early stages, the EPA's role with respect to state plans was limited to setting the minimum regulatory requirements that states had to follow in designing their plans, approving plans that complied with these requirements, and administering a grant program for states with approved plans. Those states that undertook development and implementation of EPA-approved plans were eligible for federal technical and financial assistance. These requirements were first set forth in the late 1970's, in 40 CFR 256.

¹ See Va. Code §10.1-1183 (state code).

² The Resource Conservation and Recovery Act, 42 U.S.C. § 6900, et seq. (federal code).

Virginia submitted a state solid waste plan for EPA's approval in 1979, but before the plan could be approved, EPA had redirected available plan funding to other priorities, and EPA never completed formal approval of the 1979 plan. In 2005, given that funds are no longer available, EPA has dispensed with the approval of new solid waste plans.

Goals and Objectives for this Document

DEQ's goals and objectives for this document are to:

1. Explain Virginia's existing solid waste management and public participation structure.
2. Set out current management priorities for 20 years.
3. Provide a readily usable format with links to existing DEQ and external website information. The electronic format conserves paper and is automatically updated as websites are revised.

CHAPTER 2: EXISTING PLANNING & MANAGEMENT STRUCTURE

Under Va. Code § 10.1-1411 (Regional and Local Solid Waste Management Plans), each locality is required to develop a comprehensive solid waste management plan and to ensure that at least 25 percent of its generated waste is recycled. This legislation has the most significant impact on diverting waste from landfills.³ In its own strategic plan, EPA has set an even higher target – to increase recycling to 35 percent of municipal solid waste (“MSW”) nationally by 2008.⁴

In accordance with a policy of the Board adopted in the late 1980's, Virginia observes integrated waste planning in accordance with a hierarchy of waste management. An "integrated waste management plan" is a governmental plan that considers all elements of waste management during generation, collection, transportation, treatment, storage, disposal, and litter control and selects the appropriate methods of providing necessary control and services for effective and efficient management of all wastes.

Coupled with integrated waste planning is the promotion of a waste management hierarchy consisting of (top to bottom): Planning; Source Reduction; [Reuse](#); Reclamation; Resource Recovery; [Incineration](#); and Landfilling.⁵ In Virginia, therefore, an "integrated waste management plan" must provide for source reduction, reuse, and recycling in each local and regional solid waste plan, while outlining adequate waste program funding and management.⁶

All of Virginia's cities, counties, and towns are covered under regional or local solid waste plans. Many localities have joined together to form service authorities, or regions, which operate under one plan. The regulations expanding upon the statutory requirement for local plans and the mandatory minimum recycling rate are the Regulations for the Development of Solid

³1999 DEQ/ACOE Interim Report at p. 6-7.

⁴ 2003-2008 EPA [Strategic Plan](#): Directions for the Future, p. 59 (2003).

⁵ See Solid Waste Management Regulations, 9 VAC 20-80-30 (state regulation).

⁶ See Regulations for the Development of Solid Waste Management Plans, 9 VAC 20-130-10 (state regulation).

Waste Management Plans, [9 VAC 20-130](#) (“the Planning Regulations”). Mandatory local/regional solid waste plan requirements in the Planning Regulations at 9 VAC 20-130-120 include: (1) an integrated waste management strategy; (2) a schedule for implementation and objectives; (3) funding needs and sources; (4) a public education strategy; (5) information on source reduction, reuse, recycling, and private/public partnerships; (6) adoption of a 25% recycling rate and the method of calculation; (7) a record of all known disposal sites—closed, inactive and active; (8) adoption of a method to monitor amounts of solid waste produced—by type, to be reported to DEQ.

Resources for Existing Planning and Management Structure:

Regulatory [history](#) ; specific waste [laws](#), [regulations](#), and [guidance](#); solid waste [generation](#) (EPA) and [management](#) (Virginia 2004). [Recycling in Virginia](#) (Virginia Recycling Rate [Report](#)). Solid Waste Managed in Virginia During Calendar Year 2004, [current trends](#) in treatment, storage, and disposal; [report](#) in full (2004).⁷

CHAPTER 3: EXISTING DEQ SOLID WASTE PROGRAM

Virginia’s existing solid waste program is administered by the Waste Division of DEQ and the regional offices. Within the Waste Division and the regional offices are functions relating to permitting, compliance, enforcement, regulatory development, and information management, expanded upon below. The Waste Division coordinates closely with the smaller but specialized staff in the Division of Environmental Enhancement to emphasize implementation of the waste management hierarchy and to ensure the programs encourage the upper and middle (recycling) portions of this hierarchy.

Coordination of solid waste personnel is spread across the offices of Waste Programs, Waste Permitting, Financial Assurance, and through the program function of Compliance Coordination. Seven DEQ regional offices are involved in permitting, compliance, inspection and enforcement aspects of solid waste management. Enforcement personnel in the regional offices are coordinated through the Division of Enforcement in the DEQ Central Office.

EPA Approval of the Solid Waste Program

The DEQ solid waste program is an EPA-approved program. Recognizing the advantages of the programmatic flexibility that came with federal program approval, the former Department of Waste Management took active steps to revise its 1988 Solid Waste Management Regulations to conform them to the federal Solid Waste Disposal Facility Criteria. On February 3, 1993, the EPA gave partial approval for DEQ’s solid waste permit issuance program. On January 8, 1993, the Virginia Waste Management Board adopted Amendment 1 to the Virginia Solid Waste Management Regulations, with an effective date March 15, 1993. This amendment addressed the changes that would ensure compliance with of the federal criteria for MSW facilities (40 CFR 258).

⁷ This report is sometimes called the “Solid Waste Information and Assessment Report,” or “SWIA,” after the title of the statute directing its preparation, Va. Code § 10.1-1413.1.

The Financial Assurance Regulations for Solid Waste Facilities, 9 VAC 20-70, were promulgated by the Virginia Waste Management Board on May 19, 1987, with an effective date of July 22, 1987. Based on the statutory mandate at that time, these regulations only applied to privately-owned facilities. In order to obtain full EPA approval of the Virginia solid waste program, the statute, as well as the regulations, required changes, including applicability to both private and public facilities. The necessary legislative changes were made during the 1993 session of the General Assembly, while the regulatory changes were put into effect with the adoption of Amendment 1 of the Financial Assurance Regulations, effective January 7, 1998. Amendment 2 of the Regulations, effective November 21, 2001 included among other requirements, a change in the name of the Regulations to the Financial Assurance Regulations for Solid Waste Disposal, Transfer and Treatment Facilities. EPA approved the DEQ's Financial Assurance Program for Municipal Solid Waste facilities in 2003.

Permits

By statute, Va. Code § 10.1-1408.1, no person may operate any sanitary landfill or other facility for the disposal, treatment or storage of nonhazardous solid waste without a permit from DEQ. All permits require a certification from the local government that the location and operation of the facility are consistent with all applicable ordinances. Solid waste management facilities are either issued a "full" Part B permit, or for certain types of operations, the facility may qualify for a permit-by-rule. Permits-by-rule are used for facilities that require less regulatory oversight, and parties certify that the facility is constructed in accordance with regulatory standards.

A party seeking to establish or modify a solid waste management facility, or amend a full permit first submits a "notice of intent" to DEQ. For new facilities or those that are undergoing an expansion or capacity increase, the regulations detail alternate paths to demonstrate need for additional capacity in the notice of intent.⁸ The next permitting phase, called the Part A, must include information demonstrating the facility is consistent with the local solid waste management plan and information that the public interest would be served by a new or expanded facility, along with geographic, geotechnical, and hydrogeological information on the suitability of the proposed site.

Once DEQ has received all the information that is required to issue a permit, including the facility design and operations manual, groundwater monitoring, and closure/post-closure care plans in a Part B application, DEQ performs a technical review of the documentation submitted. Based on the information received and its own verification of the data, DEQ drafts a permit and advertises the availability of the draft permit in the local newspapers and holds a public hearing in the locality. Major permit amendments are handled in the same manner. From investigation and evaluation of comments by local government and interested persons, DEQ determines whether or not the proposed facility protects present and future human health and safety and the environment ([§10.1-1408.1D](#)). Other questions addressed in this determination are: whether the additional waste capacity is needed, if the proposed increase in waste disposal is consistent with local or state daily disposal limits, if the public interest is served by the proposed activity, if the action is consistent with the regional and local solid waste management plans, and if sufficient infrastructure will exist to safely handle the waste.

⁸ See Solid Waste Management Regulations, [9 VAC 20-80-500.B.9](#) (a and b). (state regulation).

DEQ holds a public hearing within the county, city, or town of facility location before the final permit determination is made. If the permit is issued, the operator may begin construction. When the construction is complete, DEQ inspects the facility to ensure that the facility has been constructed in accordance with the approved design plans. The operator may then start accepting waste. (See the following link for more information on Virginia's [solid waste permitting](#)).

Facilities

Section 10.1-1413.1 of the Code of Virginia requires DEQ to prepare a report by June 30 of each year describing the amount of solid waste disposed of in the Commonwealth during the preceding calendar year. Active [facilities](#) that have solid waste management permits (excluding “captive” waste management facilities) are required to provide DEQ with information to prepare this report. Information was received from 204 permitted facilities for the most recent report, entitled Solid Waste Managed in Virginia During Calendar Year 2004.

Compliance and Enforcement

All active and inactive solid waste management facilities are inspected quarterly to verify compliance with operating permits and the regulations. Closed facilities, subject to post-closure care requirements, are inspected annually for compliance with post-closure care plans and the regulations. Post-closure care is required for facilities that close with waste in place, such as landfills, and include monitoring groundwater, decomposition gases, and final cover maintenance.

DEQ inspections determine compliance by observing facility operations, reviewing operating records, and interviewing facility personnel. DEQ briefs facility personnel with preliminary findings and identifies any non-compliance issues requiring immediate attention. An inspection report is issued within 30 days that documents findings and describes required facility actions.

If a facility is in full compliance, a “no-deficiency” letter is issued. If non-compliance issues are identified, actions are initiated based on their severity. In increasing order, DEQ options include issuing a deficiency letter, warning letter, or notice of violation with referral for enforcement action. Reports outline factual findings and observations during the inspection, citing applicable statutory or regulatory provisions.

Deficiency and warning letters are used for low or medium severity violations that may be resolved through informal enforcement actions; return to compliance is verified by routine follow-up inspection. Additional or more frequent inspections may be necessary in special cases.

Notices of Violation (“NOVs”) are a prelude to initiating Enforcement actions. An NOV requires the facility to contact DEQ within ten days if they dispute any inspection compliance issue identified, but its language preserves the facility’s rights for review under the Virginia Administrative Process Act. Facilities may offer additional evidence or information to support their position or inform DEQ of any corrective actions initiated or scheduled to return to compliance. DEQ will meet with facility representatives to discuss compliance and enforcement resolution. Resolution generally mandates execution of a consent order (or equivalent) formalizing a compliance schedule for corrective action with possible assessment of a civil charge.

Enforcement resolution is usually a negotiated process through mutual consent via DEQ issued orders, without involving litigation. Enforcement Orders are designed to compel compliance through non-adversarial means. When non-adversarial methods fail or are inappropriate, enforcement actions can be pursued through a number of mechanisms, including 1186 Special Order proceedings, Emergency Orders, Administrative Orders, and Litigation.

DEQ's Enforcement Manual establishes the protocols for this process. The [manual](#) may be viewed in its entirety.

Regulations and Guidance Development

Waste regulations are developed under the Virginia Administrative Process Act. Depending on the nature of the regulatory action, these procedures include a public notice and meeting, review by the Board, public comment and hearing, adoption by the Board, and review by the Department of Planning and Budget and the Governor's office, before their ultimate publication in the Virginia Register. (See the following link for more information on [regulation development](#)). Guidance is written to clarify waste regulations or procedures, as needed. Guidance is reviewed and approved by the Waste Division Director.

Information Management

DEQ maintains a Comprehensive Environmental Database System ("CEDS") as an integrated function to track permitting, compliance and enforcement information, and other agency actions. CEDS is designed to archive and associate waste, water, and air information at permitted DEQ facilities, including solid waste management facilities and landfills. Data is entered into CEDS to enhance regulatory oversight, generate solid waste inspection reports, track facility permitting activities, archive design and operation specifications, maintain environmental monitoring data and financial assurance information, and record enforcement actions.

Data may be extracted as needed to support program planning and administration, program quality assurance/quality control, legislative and policy actions, or be made available upon request to the general public or the regulated industry having interests in solid waste management issues. Currently, CEDS is not directly accessible by the general public. However, extracted information is periodically uploaded to the DEQ website summarizing [solid waste permitting activities](#) and [landfill website information](#).

Additional databases may be developed and maintained for special projects, such as the Solid Waste Information and Assessment Program ("SWIA"), Ten Year Permit Review, House Bill 1205 Closure Prioritizations, [List of Jurisdictions Allowing Treatment or Disposal of Solid Waste Prohibited or Restricted by Virginia Law or Regulation](#), and local solid waste management plans. Links to many of these websites are listed in the Resources section in Chapter 5, below. Although summary report information or lists are available to the public at these websites, the complete database information may not be directly accessible outside of DEQ.

Coordination with other Programs

In solid waste management planning, the Waste Division coordinates most closely with the recycling and pollution prevention functions of the Division of Environmental Enhancement to encourage the upper and middle levels of the waste management hierarchy. This coordination includes whether or not local governments are meeting the 25% recycling rate, as required by statute, for local plan review. Other aspects of coordination include tire pile clean up, litter prevention, the eligibility of facilities for reduced annual fees, based on their participation in the DEQ's Virginia Environmental Excellence Program, and DEQ's management of special types of wastes, such as waste electronic devices, batteries, used oil, and mercury containing devices. DEQ coordinates with other agencies as well, such as the Virginia Department of Historic Resources, Virginia Department of Health, Virginia Economic Development Partnership, and the U.S. Fish and Wildlife Service, among others.

EPA regulation [40 CFR 256.50](#) specifies coordination requirements between existing State and Federal programs. The DEQ Waste Division coordinates with all of these programs as needed.

CHAPTER 4: PUBLIC PARTICIPATION

Before a notice of intent for siting and constructing a new sanitary landfill is filed, the applicant first must include a description of steps taken to include comments of local area residents (9 VAC 20-80-500.B.5). The land use must meet local zoning approval. Citizens involvement in local government planning and zoning decisions and at these early stages of landfill applications are the most effective ways of ensuring sound landfill or other waste facility development.

The owner/operator must publish a notice for two consecutive weeks (once per week) in a major local newspaper of general circulation. The notice must announce at least one public meeting to identify issues of concern and to facilitate communication between the applicant and the affected persons in the community. The notice shall be published at least 14 days before the meeting date. These public comment steps are to be completed by the applicant before the notice of intent for construction is filed with DEQ (9 VAC 20-80-500.B.5).

In addition to the above preliminary requirements for sanitary landfills, the permit applicant for *all* solid waste management facilities and modifications (other than those qualifying for permit by rule) must file a Notice of Intent with DEQ (9 VAC 20-80-500.B). Also, no new facility applications or amendments (for non-captive industrial landfills) will be considered complete, without the local governing body's certification in accord with 9 VAC 20-80-500.B.3. Applications for new sanitary landfills and existing landfill expansion require certification that a host agreement has been reached with the locality, unless the locality would be the owner or operator of the facility, either independently or as a member of an authority (9 VAC 20-80-500.B.7).

Once the application is technically complete, DEQ can develop a draft permit. DEQ publishes a notice of the availability of the draft permit for public viewing in a local newspaper of general circulation. The contents of the public notice(s) are specified at 9 VAC 20-80-500.E. The notice announces a public comment period of at least 45 days (see 9 VAC 20-80-500.E.2 and E.3). Also, the notice is to announce a public hearing on the draft permit to be held at least 30

days after publication, but not less than 15 days before the close of the comment period. (9 VAC 20-80-500.E.3.).

DEQ makes the final decision on whether to permit or deny the proposed action within 30 days following the close of the comment period. The final decision is sent to the applicant and all who commented during the public participation period (9 VAC 20-80-500.E.4 and E.5.).

DEQ has compiled the public participation procedures mandated in the regulations across the Waste programs. Public participation procedures for landfill application amendments and for nonlandfill solid waste facilities are detailed in the resources below. Also, the development of solid waste regulations and plans must address specific public participation procedures, as detailed in the resources listed below.

Resources on Existing Public Participation Procedures:

[Permitting, Compliance and Enforcement](#), [Writing of Regulations](#), [Planning Outreach website](#), [Public Notices website](#), Public Participation [Procedures](#) in DEQ's Waste Division

CHAPTER 5: PLANNING FOR FUTURE & IMPLEMENTATION

DEQ's priorities in planning for continued and future management are highlighted in this chapter. Priorities in planning for solid waste management over the next 20 years include: (1) public participation and community involvement; (2) continued incorporation of waste management hierarchy in program procedures and policies, with emphasis on upper hierarchy levels; (3) continued oversight for care of former landfills; (4) enhancement of the solid waste ten-year permit review process (revocation/amendment authority under Va. Code § 10.1-1408.1.E and 9 VAC 20-80-600); and (5) promotion of Brownfields redevelopment of former solid waste facilities. To varying degrees, the existing solid waste program has addressed each of these priorities.

On its website, DEQ provides a five-step plan to help residents and local governments obtain information about sites that may have been used for waste disposal in the past. DEQ is dedicated to implementing a system that provides as much information as possible to people who need it the most: property owners, local building and zoning officials, and developers. The five steps of DEQ's plan are: (1) A web-site list of known or potential past disposal [sites](#), which DEQ will continue to update as additional information becomes available; (2) partnering with localities to develop a system to exchange information about potential environmental issues; (3) advice for home buyers to evaluate when purchasing property located near past disposal areas; (4) identification of DEQ programs, ranging from assessment to restoration to address disposal sites; and (5) additional activities to update and expand the five-step plan.

DEQ may adopt an updated version of the 1979 draft plan (see Appendices B and C). A formal update would be subject to a public hearing and formal public participation steps.

In 2004, DEQ convened a Community Involvement Task Force, whose focus was to improve public participation and community involvement across the spectrum of DEQ activities. Our environmental partners recognized the need for an opportunity for citizen representatives from the neighborhoods surrounding Virginia's landfills meet regularly with the Director of the

Waste Division to exchange ideas about solid waste management. This group is very interested in a statewide approach to solid waste management planning. DEQ will work with the Board to improve opportunities for public participation and community involvement.

In line with Virginia's policy to encourage its citizens to conserve waste at the source, DEQ will continue to promote waste conservation and recycling above the creation of new landfills. On the ten-year anniversary of permit issuance, each solid waste permit is reviewed to ensure that it remains current with today's laws and regulations. DEQ will explore opportunities to call in permits for appropriate amendments. When the landfills ultimately close, DEQ will work to ensure that the land is returned to safe and productive use in the community. This environmental stewardship includes: (1) publicly accessible data; (2) guidance for post-closure care; and (3) the promotion of Brownfields redevelopment of former solid waste facilities to return them to other economic uses.

Resources on 20-Year Goals:

[Get Involved](#); Upper & Middle-Hierarchy Management [Programs](#) ([reuse](#), [source reduction](#), [pollution prevention](#)); Post-Closure Care (draft [guidance](#)); [Ten-Year Permit Review](#); [Brownfields](#); 5 Step Plan

APPENDICES:

- A. Links to Core Program [Reports](#) (e.g. [ACOE](#) & [HB1205](#)) and [Regulations](#)
- B. [1979 Virginia Plan](#)
- C. [Information Available](#) to Meet 40 CFR 256 requirements.
- D. [Reference Documents](#)