

8. IMPLEMENTATION ISSUES

In this chapter, issues related to the implementation of the preferred solid waste management system and the Central Virginia Solid Waste Management Plan are explored. Specific recommendations and policy concerns are proposed for consideration and for future updates of the Plan.

For discussion purposes, implementation issues are aggregated into the following categories: institutional; legal and regulatory; funding options; Plan implementation and maintenance; and monitoring program for evaluation of the Plan and recycling programs.

8.1 INSTITUTIONAL ISSUES

The following institutional issues are examined related to Plan implementation: regional versus local recycling programs; ownership of solid waste management facilities; and various management options for waste collection and transfer operations. In addition, barriers to the implementation of the Plan are discussed and specific recommendations are proposed.

8.1.1 Local Versus Regional Programs

A significant issue is the appropriate level (regional or local) of recycling programs to implement the preferred regional waste management system.

Jurisdiction Programs: Individual jurisdictions may contract their recycling programs out to private waste management firms or provide the service directly. If each individual locality were to contract out its program, the costs of the combined individual programs would be similar to those for a regionally operated program, since larger waste haulers would be able to provide economies of scale benefits. Some of the smaller, more rural localities might have trouble contracting out some of these services due to the relatively small quantities generated.

The major advantage of local programs is that an individual jurisdiction may tailor a program to their specific needs. This flexibility allows local programs to have a different focus and achieve a different rate of recycling.

Authority (Regional) Programs: Under a regional program, a single regional entity (CVWMA) provides or contracts with private waste management firms for the provision of some recycling programs within localities. Although this approach may eliminate some of the customization available to locally sponsored programs, some flexibility still exists to tailor regional programs to meet local preferences and needs. These programs are offered as a menu of choices that the jurisdiction may either opt in or out of providing flexibility to the local government.

Regional programs provide opportunities for economies of scale that smaller local programs may not offer. Capital-intensive facilities, such as recycling drop-off centers and material recovery facilities, may thus be less expensive on a per ton basis. Economies of scale are also evident in processing equipment, collection equipment, operating personnel, and marketing.

However, an advantage of a regionally sponsored recycling program is that the risks from marketing and program implementation are shared by all localities. The volatility of the recycling markets makes revenue streams for recycled materials highly unpredictable. Working

under the umbrella of a single agency, such as the CVWMA, the region gains a better posture for marketing of recyclable materials. Commodity revenues are greater for larger quantities. Furthermore, market stability can be enhanced with consistently large quantities of recycled materials available for purchasing.

Recommendation: The existing system where CVWMA provides a menu of choices to participating jurisdictions appears to be functioning well. This, coupled with local jurisdiction's use of customized programs that they have developed with individual contractors has been very successful in achieving state recycling mandates. No changes are proposed to the current system.

8.1.2 Ownership Of Facilities

An important institutional issue pertains to the ownership of solid waste management facilities. Specifically, this issue focuses on the relative merits of public versus private ownership and local versus authority ownership.

Public Ownership: If solid waste management facilities are publicly owned, the public entity bears all the operational risks and costs with the objective of providing a waste management service at a low cost to the public. Public ownership provides some certainty about future costs and availability of service.

One way to avoid some of the disadvantages of public ownership is public-ownership with private contracted operations, such as the arrangement the City of Richmond and several of the Counties use for their transfer stations/convenience centers. A service contract with a private operator could be on terms acceptable to the jurisdiction and provides competition in selecting the best provider. Some of the operating risks such as liability, fuel costs and market risk are transferred to the private sector.

Private Ownership: Private ownership or public/private contracting, particularly for landfill facilities, is a trend that is expected to continue in the CVWMA area. This option transfers many risks to the private sector, although some risks to local governments remain.

There are several disadvantages of private ownership including higher financing cost; profit must be included in the project and the financial stability of the contractor. The government has little control over the marketplace, financial soundness or the operations of a privately owned facility. Therefore, in the case of a solid waste facility such as a landfill, government cannot be certain about the availability of future disposal capacity and tipping fees.

Recommendation: Based on the preferred regional solid waste management system discussed in Chapter 7, the issue of ownership of facilities needs to be addressed in three critical areas of the Plan: recycling; transfer operations; and, landfill disposal.

1. Recycling Facilities: The evolution of recycling programs and lack of publicly owned facilities generally have worked toward private ownership of recycling facilities, except for small publicly-owned recycling drop-off centers. Therefore, the continued involvement of the private sector in recycling programs should help implement the preferred system, with the private sector providing necessary equipment and processing centers. Should this situation change and the private sector either become uneconomical, operate outside jurisdictional needs or capacity becomes an issue, the public sector may need to provide its own material recovery facilities.

These could be coupled with other existing waste operations such as drop off sites or transfer stations or they could be constructed on publicly owned property. Examples of this are Hanover County's yard waste composting center and CSB paper processing facility.

2. Transfer Facilities: With reliance on the private sector to provide waste collection and disposal services and the increasing closure of public landfills, it will be increasingly necessary to provide transfer facilities to consolidate and transfer solid waste to out of jurisdiction landfills. Several of these facilities exist and it is anticipated that others may be constructed on the site of closed public landfills or other publicly/privately owned property.

3. Landfill Facilities: Existing public landfills will be closed during the planning period and more reliance on private landfill facilities within and in proximity to the CVWMA service area will occur. This increased reliance on private landfills raises uncertainties about the future availability and costs for landfilling in these private facilities. Therefore, it is highly recommended that the CVWMA and its jurisdictions secure public disposal capacity in private and/or public landfills to meet these future needs as soon as possible.

8.1.3 Collection and Transfer Operations

The following basic options for collection and transfer of waste are currently used to some degree in the service area and are recommended for continuation under the preferred regional waste management system: free market; franchise operations; and public operation.

Free Market: Jurisdictions within the CVWMA have historically relied upon the free market for collection and disposal of much of the service area's waste. Approximately 18 percent of the MSW generated in the service area is municipally collected. The current economic recession is placing considerable pressure on local jurisdictions with municipal operations to explore privatization of their residential waste collection and disposal programs.

The free market system is expected to provide incentives for higher quality collection services and lower costs down through competition. The rate charged to the consumer for these services is related to the frequency and type of collection service and transfer/disposal costs. Concern exists about the validity of this assumption for all areas of the region.

Any savings these firms may realize in lower tipping fees due to the decrease in the amount of waste delivered to landfills resulting from source reduction and recycling programs may not be passed on to the consumer. If this were to be the case, the average consumer being served in these areas would see no savings from his/her recycling activity

8.1.3.1 Franchise Operations. Franchise operations are either direct or indirect.

1. Direct Franchise: Direct franchising is used in other states to reduce the overall cost of residential waste collection by the locality. Under this mechanism, an exclusive right is awarded through a competitive bidding system to one hauler to provide residential collection services within a specified area for a specified duration and rate. The private hauler is required to bill customers directly for services at the bid rate. The jurisdiction monitors the hauler's performance.

The private hauler is responsible for landfill disposal of the collected refuse at a location of its choice or one directed by the locality. The locality can require that the private hauler provide for

collection of recyclables, which would increase recycling participation rates for curbside services.

Direct franchise collection is intended to provide for more rational competition between private haulers. It addresses the problem of having dozens of private haulers competing for the business of individual households in the same neighborhoods, resulting in inefficient collection routes, duplication of services, and repetitive collection truck traffic.

Although localities have authority to do direct franchising, no jurisdiction or solid waste authority within the Commonwealth has or is likely to implement such a system.

2. **Indirect Franchise:** The other franchise option is indirect franchise through government contract. This method is the most common method of privatization of public operated residential refuse collection programs within the CVWMA service area.

This option is similar to the direct franchise option, except that exclusive right for collection service in the entire locality is given to one firm through a competitive procurement process. In contracts of this type, the locality can direct the hauler to deliver the refuse to its own publicly owned landfill, to a designated transfer station site under control of that jurisdiction, or in the case of large waste management companies, to one of that company's landfills. Delivery of residential MSW to a transfer facility usually necessitates the need for separate contract with a regional private landfill owner for subsequent transfer and disposal of the collected waste.

8.1.3.2 Public Operation. Some municipal governments in the CVWMA service area initiated their own residential waste collection services years ago since private refuse hauling companies were not available to provide this service. All localities have the choice to operate their own program or contract for these services.

Recommendation: The existing system is functioning well, and no significant changes are proposed. Improvements may be possible however and CVWMA, working closely with local governments will investigate the private residential waste hauling practices in the CVWMA's service area and develop specific options for consideration by local governments.

8.2 LEGAL AND REGULATORY ISSUES

The following legal and regulatory issues were identified for examination: waste stream flow control; voluntary versus mandatory recycling; material bans; and waste prohibitions.

8.2.1 Waste Stream Flow Control

Flow control is a means to regulate by local ordinance the delivery to designated waste management facilities of waste generated or disposed of in that jurisdiction. Section 15-28.01 of the Code of Virginia permits local governments to adopt ordinances requiring flow control, if a public hearing is held and it is found that (1) private or regional disposal facilities are either unavailable, inadequate, unreliable, or not economically feasible to meet current and future waste disposal needs, and (2) flow control is needed for financial considerations. (This flow control does not apply to recyclable materials, either source-separated or separated from the mixed waste stream, or to construction debris to be disposed of in a landfill.) In addition, localities within the CVWMA have been given enabling the authority to implement flow control to require waste to be sent to resource recovery facilities.

The primary reason for flow control is financial (i.e., protect public investment). It allows localities to borrow money for a solid waste management facility, since it reduces risk and uncertainty. It may also help municipalities to contract for waste disposal to ensure waste flow is delivered.

In 1992, Congress directed the Environmental Protection Agency to develop and submit a report to Congress on Solid Waste Flow Control as a means of municipal solid waste management. The EPA found that flow controls played a limited role in the solid waste market as a whole. However, Flow Control authority played the largest role in financing and funding of waste-to-energy facilities. The EPA found in 1995, that 58 percent of the waste-to-energy market was supported by flow control. The EPA also found that flow controls provided for an administratively effective mechanism for local governments to plan for and fund their solid waste management systems. Allowing local governments to control the disposition of locally generated municipal solid waste allows planners to more accurately determine how much waste has to be managed and how effective local waste management plans are, further explaining flow control as an effective tool for planning and management.

In 1994 the Supreme Court, in the case of *Carbone Inc. v. Town of Clarkstown, New York* (No. 92-1402), found that municipal solid waste is interstate commerce, thus state and local flow control mandates violated the commerce clause of the U.S. Constitution, which states that only Congress can enact such provisions.

The preferred regional waste management system does not rely on flow control to be implemented due to the reliance on the private sector for waste management services and the competitive nature of disposal options. As long as a competitive situation for waste disposal exists, then flow control is not necessary

8.2.2 Voluntary Versus Mandatory Recycling

The success of any recycling program, whether mandatory or voluntary, relies heavily on the public's participation. Mandatory recycling programs may result in participation rates that are significantly higher than voluntary programs but there likely will be a correspondingly increased cost to the jurisdiction.

Supporters of voluntary programs argue that mandatory programs can infringe on people's rights, or at a minimum be needlessly strict, especially if recycling services are not convenient. Voluntary programs can be enhanced through economic incentives, such as user charges that consider the quantity of waste disposed (pay-as-you-throw). Such charges would be difficult to implement in the region due to the large portion of the waste stream collected by private waste haulers.

Enabling legislation exists to require separation of recyclable materials. The decision to implement mandatory programs is usually driven by limited disposal capacity; however, it may also be enacted to demonstrate a locality's commitment to recycling.

A mandatory program can also assure more stable and reliable materials flow than a voluntary program. However, a mandatory program can also result in saturated local material markets if markets are unstable or relatively undeveloped.

The enforcement of mandatory programs is also an issue. Generally, enforcement ranges from non-existent to a fully strict and actively enforced program. The higher the level and intensity of enforcement the greater the costs and administrative burden would be to local government.

8.2.2.1 Material Bans

One method to reduce the amount of MSW or toxic materials entering the waste stream is through material bans (this could be considered in this category of mandatory recycling programs). Currently in Virginia, no enabling legislation exists to allow localities to ban specific items from retail sale or use within their jurisdiction for the specific purpose of reducing MSW.

Bans have been enacted elsewhere in the United States at the statewide level and, where enabling legislation exists, at the local government level to reduce those waste materials which are perceived to be undesirable. Examples of these types of bans include plastic packaging, CRTs, disposable diapers, multiple packaging for individual products, foam plastic, and non-degradable items.

Another candidate for prohibition are yard wastes. The preferred regional waste management system calls for a voluntary yard waste program.

Section 15.1-11.5.1 of the Code of Virginia permits local governments to ban leaves and grass, but not other organics, from all landfills within their respective jurisdictions. (Local governments that own landfills have the right to ban any waste from those landfills.)

Recommendations: Based on the needs of the preferred regional waste management system, the following recommendations are presented:

The nature of mandatory programs supports the continued implementation of voluntary programs. If these programs become unsuccessful and/or if higher participation rates are needed to meet State mandates, then mandatory programs may be considered. However, it is important that all efforts should be made to adequately educate the public about recycling programs, make these programs conveniently available, and to consider appropriate incentives to promote recycling and reduction/reuse before relying on mandatory programs. This option is available to any jurisdiction that believes it is necessary.

Materials bans are beyond the limited scope of the regional planning effort and are not necessary to the successful implementation of the preferred regional waste management system.

The effectiveness of regional voluntary yard waste recycling programs is such that there does not appear to be a need for the prohibition of such wastes at landfill facilities at this time.

8.3 FUNDING ISSUES

Funding of the preferred regional waste management system rests primarily with the local governments and the customers who pay for commercial services. The major funding issues involve the increasing demand for local government to have available waste disposal, residential service, and recycling.

In identifying and assessing funding options available for recycling and other solid waste management programs, taxes, user charges, bonds, and miscellaneous sources of revenue were

considered. CVWMA member jurisdictions fund the recycling and solid waste programs in a variety of ways including user fees, taxes and litter grants.

8.4 CVWMA FUNDING

CVWMA's administration and general operating expenses are currently funded through per capita assessments of the participating localities. Individual programs are funded by participating localities based on contractually based fees for the services. It is assumed that funding for major capital projects (none are proposed in the preferred regional waste management plan) would be through revenue bonds, either issued by the Authority or a local government.

Local funding of CVWMA has proven adequate and state recycling mandates are being met so no change is proposed to the funding mechanism. Local jurisdictions will fund these programs by whatever means they determine best meets their needs.

8.5 PLAN MAINTENANCE AND AMENDMENTS

With adoption of the Plan, a framework for maintaining, updating, and amending the Plan needs to be established. This section presents a recommended institutional structure and key elements for this framework.

8.5.1 Policy Objectives

The following policy objectives were used as guidelines in developing the specific recommendations for the institutional framework and process:

- Local governments within the regional multi-jurisdictional and agency framework must be able to meet their obligations under Section 10.1-1411 of the Virginia Waste Management Act and Regulations for Solid Waste Management Planning, Amendment 1 (9 VAC 10-130-10 et seq.); and,
- The core strategies and actions of the adopted Plan should be implemented as agreed upon by participating local governments and PDCs; and,
- Plan consistency requirements for public solid waste management facilities and services should be as minimal and unobtrusive as possible; and,
- The Plan should be kept current, based on the best information available, and should accurately reflect changing conditions and public policy; and,
- The on-going planning process should facilitate and encourage effective public participation and input from elected officials.

8.5.2 Institutional Framework

The CVWMA would ensure the Plan is maintained and updated, including the establishment and maintenance of a database for monitoring performance.

In addition to its CVWMA project planning and programmatic responsibilities, the TAC would continue to provide technical assistance to the Authority's Board and staff on Plan development, maintenance, and implementation issues. The Citizen Advisory Committee would continue to provide a formal mechanism for citizen input.

8.5.3 Local Government Support and Commitment

Regional success in continuing to meet State and regional recycling goals through the implementation of the Central Virginia Solid Waste Management Plan is directly tied to the level of commitment and support from local governments.

8.5.4 Plan Maintenance

Plan maintenance refers to those activities required to monitor and evaluate progress in implementing the Plan and meeting recycling objectives. It includes the maintaining and updating of the solid waste system database and preparation of plan amendments and updates.

The CVWMA would ensure that all plan maintenance activities and the preparation of all plan updates and amendments are performed.

The CVWMA staff and its TAC would be actively involved in plan maintenance activities and the preparation of plan updates and amendments. The CVWMA and TAC would have specific responsibility for ensuring implementation of the adopted Plan through a consistency review process. The CVWMA and its staff would be responsible for specific project and operational planning and the evaluation of the authority's programs as they relate to meeting the objectives of the Plan. Local jurisdictions would be responsible for operational planning and the evaluation of programs and activities that the jurisdiction operates apart from the CVWMA.

8.6 IMPLEMENTATION MILESTONES

Implementation of the Plan over the 20-year planning period will require periodic review and examination. These events will occur at regularly scheduled intervals. Also, additional review will be performed should any extraordinary events occur. It is intended that these reviews will enable the CVWMA Board of Directors and staff to keep abreast of trends in solid waste management and in modifications to strategies and programs as they affect operations of the CVWMA. All periodic reviews will be the responsibility of the CVWMA staff, with assistance and input from others as appropriate.

Annual Reviews:

- DEQ regulations require annual computation and reporting of recycling rates. Data will be calculated by staff and reported to the Technical Advisory Committee for review and input. Once their comments are received, staff will make an annual report to the full CVWMA Board of Directors. It is expected that this will occur at the Board of Director's April meeting.
- At the conclusion of each session of the General Assembly, staff will prepare a report on the actions of the General Assembly, as those actions pertain to the issue of solid waste management. This report will be submitted to the Technical Advisory Committee at its August meeting. After review by the TAC, a report with any suggested actions will be

submitted to the CVWMA Board of Directors for its approval.

Five-Year Review:

- At the conclusion of each five-year period after DEQ's notification of the acceptance of the Plan, CVWMA staff will initiate a voluntary review of waste disposal capacities. That review will examine the waste generation estimates for the next five years, as determined by the latest and most reliable waste generation rates and will compare this with the capacity of the landfills currently in use by CVWMA contractors and prepare a report. The purpose of this report is to verify that adequate landfill space for the next five years will remain available to the members of the Authority, as well as to give an indication of potential need to identify additional landfill capacity or alternative solid waste disposal techniques.

Periodic Review:

- The United States Department of Commerce conducts a full census every 10 years. As soon as the initial results of the census are available, staff will work with the Richmond Regional and Crater PDCs to compare the results of the census with the population projections contained in this Plan. The new census numbers will then be used in subsequent reviews as the population data for preparing solid waste quantity estimates. Should a review of the census counts prove at considerable variation to the estimates contained within the adopted Plan, staff would prepare an interim document to project future solids waste volumes for comparison with landfill capacities.
- Over the life of the Plan, it is possible that additional members may be added to the CVWMA. Should this occur, staff would prepare an analysis of the waste generation quantities from the prospective member to provide assurance that the waste disposal resources available to CVWMA are sufficient to provide adequate service to the potential member.

8.7 AMENDMENTS TO THE APPROVED PLAN

The Solid Waste Management Plan will become of record when the Plan is approved by the Central Virginia Waste Management Authority Board of Directors, adopted by the two Planning District Commissions and has been reviewed and approved by the (Virginia) Department of Environmental Quality. The Plan is intended to cover the 20-year period from 2004 through 2024.

In the future, there may arise a need to amend the Plan. Amendments would be needed for items not shown in the adopted plan, such as changes in the physical features of the solid waste management system, changes in technologies and techniques for the disposal of solid waste, or the boundary of the Central Virginia Waste Management Authority area. DEQ regulations have divided amendments to an approved plan into two classifications: major and minor. The process for all amendments is set forth in DEQ regulations (9 VAC 20-130-175 and 9 VAC 20-130-220).

8.7.1 Major Amendments, Including Changes to Boundary

Major Amendments to an Approved Solid Waste Management Plan as defined by Amendment 1, 9VAC 20-130-175 include:

1. Any new addition, deletion, or cessation of any solid waste management facility or any new increase in landfill capacity; or,
2. Any changes that moves toward implementation of a solid waste management strategy that is lower (e.g. from recycling to landfilling) in the solid waste hierarchy; or,
3. Any change to membership, that is, a change to the boundary of the Central Virginia Waste Management Authority area, in the approved area.

Requests for major amendments for items 1) and 2) above may be initiated by CVMWA, the TAC, or by member jurisdictions. CVWMA staff, in consultation with the CVWMA Technical Advisory Committee, will prepare a staff report on the proposed amendment. The proposed amendment in summary form will be advertised and the written staff report made available to the public for review and inspection at the CVWMA offices, as well as the offices of each Planning District Commission.

A formal public hearing by the CVWMA Board of Directors will be held, at which time members of the public may make their comments known. After due consideration of comments received, the CVWMA Board shall take action. If the Board approves the amendment, then, the amendment will be sent to the two Planning District Commissions. It would be necessary for all three bodies, the CVWMA Board and the two PDCs, to approve a proposed amendment before any further action would be taken on it. Once all three bodies have approved the amendment, it would be submitted to the DEQ for its review and approval. Once approved by the DEQ, the amendment would become a permanent part of the adopted plan and go into effect.

Requests for a major amendment to change membership, that is, to change the boundary, of the Central Virginia Solid Waste Planning Area, may be made by any member of the CVWMA or by any governing body wishing to join the Planning Area. The process for amending a Regional Planning Area is delineated in 9 VAC 20-130-220.

8.7.2 Minor Amendments

Minor amendments are limited to changes that move toward implementation of a waste management strategy that is higher in the waste management hierarchy (e.g., from landfilling to recycling) and any nonsubstantive administrative change.

For any proposed minor amendment, CVWMA, in consultation with the Technical Advisory Committee, shall prepare a report for the Board of Directors. The proposed amendment shall be placed on the agenda of a regular meeting of the CVWMA Board of Directors. At its discretion, the Board may elect to receive comments from the public during its discussion of the agenda item.