

**REPORT OF THE COMMISSION TO STUDY AND
ADVISE UPON THE DISPOSAL OF SOLID WASTES
TO
THE GOVERNOR
AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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**COMMONWEALTH OF VIRGINIA
Department of Purchases and Supply
Richmond
1977**

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Richmond, Virginia
March 1976**

TO: Honorable Mills E. Godwin, Jr., Governor of Virginia
and

The General Assembly of Virginia

INTRODUCTION

At its 1973 Session, the General Assembly of Virginia enacted legislation establishing a permanent Commission to Study and Advise Upon the Disposal of Solid Wastes in Chapter 327 of the Acts of Assembly.

The Commission was directed to "study all problems incident to the causes, collection and disposal of solid wastes". In addition to its general responsibilities, the Commission also has specific issues directed to it from time to time by the General Assembly. The members of the Commission are as follows: Dr. Robert F. Testin, Director of Environmental Planning, Reynolds Metals Company, Richmond; William M. Beck, Jr., Professor of Engineering, Old Dominion University, Norfolk; Callis H. Atkins, former chief sanitary engineer, U. S. Public Health Service Ruckersville; Delegate Richard M. Bagley, Hampton; Senator A. Joe Canada, Jr., Virginia Beach; Ernest C. Edwards, Jr., Director, Engineering Services, Mecklenburg Electric Cooperative and Manager, Buggs Island Telephone Cooperative, Chase City; Joseph M. Guiffre, Guiffre Distributing Company, Alexandria; Delegate Joan S. Jones, Lynchburg; J. D. Pennewell, Environmental Research, Wolf Research Corporation, Chincoteague; Delegate James M. Thomson, Alexandria; Senator Stanley C. Walker, Norfolk; and Senator L. Douglas Wilder, Richmond. Jonathan Murdoch-Kitt and Susan T. Gill of Division of Legislative Services served as staff to the Commission.

In carrying out its general and specific charges during the past

year, the full Commission met six times. In addition, there were numerous meetings of Commission subcommittees during the year.

This report is a summary of the Commission activities during the year 1975.

DELIBERATIONS OF THE COMMISSION

Public Hearings

On February 24, 1975 a series of public hearings was announced by the Solid Waste Commission. The news release accompanying this announcement stated "the Commission is considering the following subjects upon which they would like to receive testimony: regional solid waste management systems, beverage container legislation — "bottle bill", recycling and resource recovery, financing solid waste handling, hazardous wastes, and litter."

During the Spring and Summer of 1975 public hearings were held in Alexandria, Lynchburg, Richmond, South Boston, Virginia Beach, Wise, Abingdon, and Wytheville.

During these hearings approximately 26 hours of testimony were heard from approximately 175 citizens throughout the Commonwealth.

Because of the interest in the beverage container issue, a majority of the testimony received by the Commission during these hearings related to that issue. These views were carefully noted and are taken into consideration in the Commission Report on this issue (Senate Document No. 16, 1976).

Other more broadly based issues were also brought to the attention of the Commission during these hearings. These included the question of financing solid waste handling systems that will comply with state law. Such systems are, today, being funded in large part by federal matching grant programs, which may be terminated in the near future.

A number of localities expressed concern about their ability to finance solid waste disposal systems to comply with state law.

Also, a number of speakers expressed the need to develop approaches to solid waste management that would conserve resources and energy. These approaches would include, but would not be limited to, the development of large-scale resource and energy recovery systems, as well as approaches to minimize the amount of material ending up in the solid waste stream.

Some speakers also raised the question of conflict between various environmental agencies which adds to the solid wastes problem. A specific example is the prohibition on brush burning in southwestern Virginia, which greatly aggravates local landfill problems.

A general concern among counties and municipal public officials is the availability of suitable land within reasonable hauling distances for sanitary landfills.

Extensive testimony was given on the per capita cost (or per county cost) of solid waste collection, transportation, and ultimate disposal. Also, a number of citizens testified as to the need for a regional approach to solid waste management problems.

The testimony taken and the views expressed during these extensive hearings will be used by the Commission in helping to formulate long-term plans, policies, and recommendations.

BEVERAGE CONTAINERS

The Commission established a sub-committee under its Vice-Chairman, Mr. William Beck to investigate all aspects of the questions associated with the imposition of taxes, deposits, or otherwise restricting cans and bottles used to package beer and soft drinks.

The Commission was specifically requested by the 1974 General Assembly (Chapter 451 of the 1974 Acts of the Assembly) to study and report on the issues contained in Senate Bills No. 30 and 174 (requiring deposits on beverage containers) and report back to the Governor and the General Assembly, not later than November 1, 1975.

A bill introduced in the 1975 Session of the General Assembly that would tax beverage containers (House Bill No. 1017) was also referred to the Commission with a report date of November 1, 1975.

The Commission, in the course of its deliberations, has also examined alternatives to deposit legislation, such as the Washington Model Litter Control Act and federal legislation sponsored by Senator Hatfield. These two alternatives were considered as they related to the two bills, which the Commission was directed to address.

The full Commission report on beverage containers is included in Senate Document No. 16, 1976. The conclusions from this report formed the basis for seven pieces of legislation for the 1976 General Assembly.

HAZARDOUS WASTES

Because of the potentially serious nature of the hazardous wastes problem, the Commission, in its 1975 report, issued a series of recommendations on this subject.

The recommendations from the 1975 Commission Report served as the basis for two pieces of legislation introduced into the 1976

General Assembly.

Specifically, legislation was introduced to provide a program by which the Department of Health, through the Bureau of Solid Wastes and Vector Control, could begin to conduct inventory, both qualitatively and quantitatively of the solid wastes produced by industry and institutions within the Commonwealth.

Legislation was also introduced to create a Hazardous Wastes Advisory Council, which is similar to the Poison Control Center, and would provide the Director of the Bureau of Solid Wastes and Vector Control with the opportunity of calling upon the expertise of members of the Council to assist in the immediate handling and ultimate disposal of hazardous wastes.

The Commission believes that this legislation is but a first step in a much broader approach to this problem. The Commission reaffirms the entire program for hazardous wastes and control recommended in its 1975 report.

COMPREHENSIVE STATE-WIDE SOLID WASTE MANAGEMENT PLANS

A major objective of the Commission is to review the concept of a state-wide solid waste management plan and to advise the Governor and the General Assembly upon the feasibility of such a comprehensive plan for the Commonwealth of Virginia.

A comprehensive state-wide solid waste management plan is multidimensional. It includes: 1) Municipal, industrial, commercial and agricultural solid waste collection, transportation, disposal and/or recovery, 2) Recognizing the differences in urban, suburban and rural environments, 3) The public versus the private sector in providing solid waste management services, 4) Perhaps most important, methods of financing any plan that is ultimately implemented, 5) Special problems such as the disposal of toxic or hazardous wastes, and 6) Interim and long-range solutions to these problems.

These key elements of a state-wide plan are now being reviewed by the Commission and a more detailed discussion is included as an appendix to this report.

The Commission has been in contact with six other states that have implemented state-wide resource recovery and/or solid waste management plans. A delegation from the Commission recently visited two states, Wisconsin and Connecticut, that have established a state resource recovery authority for the purpose of implementing a state-wide solid waste management plan. In both states the Directors of the Authorities and their Staffs provided an in-depth review of the approach and a progress report on the implementation of the state-wide plan.

PLANS FOR 1976

During 1976 the Commission will devote its activities to a review of the feasibility of establishing a comprehensive state-wide solid waste management program for the Commonwealth of Virginia.

Currently, plans are being made for a solid waste management seminar to be held in Virginia with selected invitees from other states that have implemented state-wide plans. The objective of this seminar would be to obtain a candid exchange of views, which would assist these other states in overcoming any difficulties they may be encountering with the implementation of their approach and to provide input to the Solid Wastes Commission for the development of an approach for Virginia.

It is anticipated that Commission recommendations relating to a comprehensive state-wide solid waste management plan will be incorporated in the next annual report of the Commission to Study and Advise Upon the Disposal of Solid Wastes.

Respectively submitted.

Robert F. Testin, Chairman

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COMPREHENSIVE STATEWIDE SOLID WASTE PLANS

A Review of Certain Key Elements

Introduction

A comprehensive statewide solid waste management plan is multidimensional. It includes: (1) Municipal, industrial, commercial and agricultural solid wastes collection, transportation, disposal and/or recovery. (2) Recognizing the differences in urban, suburban and rural environments. (3) The public versus the private sector in providing solid waste management services. (4) Perhaps most important, methods of financing any plan that is ultimately implemented. (5) Special problems such as the disposal of toxic or hazardous wastes, and (6) Interim and long-range solutions to these problems.

Because of the complexity in dealing with the above items in a comprehensive manner and in the interest of brevity, we will attempt here only to flag those key elements that must be considered in each of the above areas.

Solid Waste Collection, Transportation and

Disposal and/or Resource Recovery

Solid waste collection and transportation systems are a major expense item, taking from 50% to 90% of each dollar spent in solid waste management. The packer truck is the standard collection vehicle and its use should be an integral part of any state program since it reduces hauling costs and reduces the probability of litter from uncovered trucks.

Solid waste disposal sites must be identified and approved by an authorized state agency. The law must ensure that those failing to meet minimum standards can be closed. Sites for landfills, incinerators and/or resource recovery systems are often controversial and their availability should be ensured through state law for localities that are unable to obtain a satisfactory site on their own. The question of land availability is discussed further in the section on rural versus urban solid waste management problems.

The above considerations have been directed primarily toward household and commercial wastes that are normally handled by public or private solid waste collection and disposal agencies. The same criteria can apply to industrial and agricultural operations except that an individual company or other operation generating the solid waste is made responsible for its collection, transportation and disposal in a state-approved manner. There are currently no regulations in Virginia, other than local laws, governing storage and collection.

Resource recovery systems should be encouraged in any comprehensive state law but should not be mandated unless their construction makes technical and economic sense. Since resource recovery systems often are more capital intensive than other disposal methods, it is possible to encourage their construction through availability of loan guarantees and implementation or regional solid waste management plans. Both of these aspects are discussed in later sections.

The Urban Versus Rural Question

Cities, suburban areas and rural areas have different solid waste management problems requiring different approaches for a solution. These differences must be recognized in any comprehensive solid waste management plan.

For example, collection and transportation in cities and populated suburbs should be done at the household level on a twice weekly basis to interrupt the breeding cycle of flies. Household collection in rural areas is generally an impossibility. For rural areas the state could insist that local communities install and service "green box" repositories for household wastes and ensure that these repositories are within a reasonable driving distance (e.g., five to ten miles) of every residence in the state. Even this may be impractical in sparsely populated areas of Virginia. The gradations from twice weekly household collection to none at all can be set up on the basis of population density and a comprehensive statewide solid waste management plan should include this element.

Another element of the rural versus urban question (or perhaps urban versus suburban) is that sites for landfills, incinerators or even transfer stations are difficult and costly to obtain in the middle of a city. Suburban or rural areas surrounding a city are often reluctant to provide land for facilities that would handle a neighboring city's trash.

A carrot and stick approach involving availability of state monies (or loan guarantees) to operate a regional solid waste disposal facility, together with the use of state authority to ensure a site when all other alternatives fail can help alleviate this problem. Further discussion is given on this aspect in the section on financing.

Public Versus Private Operation of Solid Waste Facilities

The question of who should operate solid waste collection and disposal systems is an extremely controversial one in many areas. Private refuse companies believe that they have the capability to provide refuse removal and disposal services more efficiently and more cheaply than local governments. In broad general terms, it is possible that many, particularly rural and suburban areas will not attract a satisfactory private collector and the local government will have to provide the service. On the other hand, large, sophisticated resource recovery plants would, in all probability, require technical expertise not normally available to city governments. In other circumstances, the public and private sector will be competing for

the same business. Statewide solid waste management plans should recognize that local governments and private companies will often be competing for solid waste business. It is probably in the best interest of the state to promote this competition and provide, in the law, for either public or private handling of solid waste.

Financing

Of the many financing problems inherent in solid waste management, there are probably two that stand out and must be dealt with in any comprehensive state plan.

The cost of refuse disposal in rural areas is extremely expensive on a per ton basis, particularly where low population densities and/or difficult terrain make even the servicing of "green boxes" very expensive.

Since rural areas may not have sufficient budgets to permit handling of their solid waste in a state-approved manner, a shifting of funds involving state aid to localities with unusually high expenses is desirable. Such aid could take the form of a payment, out of general revenues, of a certain number of dollars per capita to a given locality, up to a maximum dollar figure. These maximums could be selected to aid the rural areas, while permitting urban and suburban areas with a more favorable tax base and higher population density to pay for most of their own solid waste costs.

The second financing question involves the capital costs for either upgraded solid waste disposal facilities or new approaches such as resource recovery. The latter can be extremely expensive, running to several million dollars even for a moderately sized city. The former can be a major financial blow to rural areas that are required to upgrade their facilities to meet more stringent state standards. It is probable that some form of state loan, loan guarantee, or even the establishment of a statewide authority or utility empowered to issue bonds is desirable. The availability of such financing could be tied to a regional solid waste management plan, if desired, to ensure that the most efficient method of handling wastes in a given area is achieved. The availability of such monies or guarantees from the state can also be instrumental in obtaining disposal sites or transfer stations as discussed above.

Hazardous Wastes and Other Special Problems

There are a number of special problems in the field of solid waste management that require individual attention. Hazardous waste is one of these. Provision must be made in state law to ensure that any solid waste deemed to proper authority (e.g., a state Health Department) to be hazardous is handled according to a pre-established set of rules. Occasionally, a hazardous waste incident may be unique and will require expert advice before the problem can be solved. The establishment of hazardous waste handling procedures should be part of state law.

Other special problems such as the generation of manures from animal feed lots, wastes from logging operations, residues from fish

processors, etc. may be handled under the general requirement that commercial, agricultural or industrial operations are responsible for disposing of their own trash in an approved manner. Alternatively, certain problems may require a separate regulation depending upon its severity in an individual state. In any event the existence of hazardous waste and other special problems should be recognized in state law and methods established to deal with them.

Conclusions

It is not believed that any state has a comprehensive solid waste management plan incorporating all or even most of the elements discussed above. There is a need for Virginia to take a leadership role in tackling the entire problem in a comprehensive coordinated manner.