

September 21, 1972

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IMPLEMENTATION PROGRAMS FOR STATE SOLID WASTE MANAGEMENT

PLANS: KENTUCKY AND MARYLAND AS PROTOTYPES

A Thesis

Presented to

the Graduate Council of
The University of Tennessee

In Partial Fulfillment

of the Requirements for the Degree
Master of Science in Planning

by

Dennis A. Joyce

December 1972

ACKNOWLEDGEMENTS

This author would like to express his gratitude first, to his adviser, Mr. A. J. Gray, who provided the time, expertise and guidance necessary for this thesis. With his contagiously optimistic convictions on the potential of state government, this author is especially appreciative of Mr. Gray's insights as a teacher.

Very much appreciated also was the help of Mr. Charles M. Kenealy and his staff at the Maryland Division of Solid Wastes and Mr. Samuel Johnson and his staff at the Kentucky Division of Solid Waste Disposal for their generous sharing of time and information.

Finally, a very special thanks to the author's wife, Rory M. Joyce, whose contributions were exceeded only by her empathy and patience.

ABSTRACT

Solid wastes management responsibility has traditionally been delegated by the states to their political subdivisions. Through the state planning grant provisions of the Federal Solid Waste Disposal Act of 1965, many states are responding to the solid wastes problem that is taxing the capabilities of their local governments. In confronting the solid wastes problem within their borders, many states are re-evaluating their traditional roles.

This thesis is concerned with the response of Kentucky and Maryland to the Solid Waste Disposal Act of 1965. It is the purpose of this thesis to help to better understand the state solid wastes planning and plan implementation program experiences of Kentucky and Maryland, and how these experiences may be used to help in similar efforts by other states.

Library research provided the basis for the first five chapters of this thesis and personal interviews were conducted with key personnel in Kentucky and Maryland to provide the basis for analysis and comparison in Chapter IV.

From the evaluation of this information, it was concluded that there are aspects of solid wastes management, especially disposal, that might well be provided by the states. In addition, state concern for effective solid wastes management has resulted in an innovative and aggressive response in Maryland, which may provide a National example for a statewide program.

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CHAPTER I

INTRODUCTION

Purpose of This Thesis

Local governments in the United States have traditionally been given the legislative authority and responsibility by the states to provide solid wastes collection, handling, and disposal services. There has been, however, a recent re-evaluation by some states which suggests an alternative to this traditional approach.

The catalyst for this development has been, to a great extent, the Federal Solid Waste Disposal Act of 1965. The planning grant provisions of the Act provided both the incentives and funds to permit the participating states to make their first substantial investigation into the solid wastes problem within their borders. In the process of planning a solution to their problem, some states are expected to implement an innovative program that departs from traditional remedies.

Kentucky and Maryland were among the first recipients of the state planning grants provided by the Solid Waste Disposal Act of 1965. Having completed the plan preparation process, these states have begun the implementation phase of their comprehensive solid wastes management plans. To achieve the goals formulated in their respective plans requires the designated states' solid wastes agencies to establish both policies and programs to implement the plan.

It is expected by this author that other states nearing the plan implementation phase of their comprehensive solid wastes management

planning process will closely scrutinize the respective plan implementation programs of Kentucky and Maryland. Since there is no required, or "one best" state plan implementation program, Kentucky and Maryland will provide interested states an opportunity to benefit from experiences gained in their prototype situations.

The purpose of this thesis is, therefore, to analyze those factors affecting the Kentucky and Maryland comprehensive solid wastes management plan implementation programs that are vital for achieving goals formulated in their respective State plans.

Methodology

The principle method employed for investigating this topic has been library research initiated in the latter months of 1971. These efforts revealed a limited and fragmented body of literature pertaining to state solid wastes planning and program implementation. Accordingly, analytical options available to this author have been limited, thereby necessitating the establishment of subjective criteria to guide this study.

Recurring throughout the consulted literature were three general factors which appeared critical for a state solid wastes plan implementation program to achieve formulated goals. These factors listed below, have been established as the basis for comparing and analyzing the plan implementation programs of Kentucky and Maryland.

1. Delegated legislative and/or gubernatorial responsibility and authority to the designated state agency for achieving goals formulated in the state plan;

2. Resources made available to the designated state agency;
and,

3. Adequacy of the program and policy orientation of the designated state agency to achieve goals formulated in the state plan.

Personal correspondence and interviews, and telephone interviews have been conducted during the spring and summer of 1972 to clarify and supplement data previously obtained from library research. These interviews have also been necessary to elicit relatively recent unpublished information on plan implementation programs in Kentucky and Maryland.

Statement Regarding Thesis

Including this introductory chapter, there are seven chapters in this thesis. Chapter II examines the local, state, and Federal governmental levels where planning for solutions to the solid wastes problem occurs. Since interstate metropolitan planning for solid wastes is essentially a hybrid of local and state efforts, no attempt will be made to examine these institutions. Chapter III examines the Solid Waste Disposal Act of 1965 with regard to its provisions and administration. The Kentucky and Maryland responses to the Solid Waste Disposal Act of 1965 are examined in Chapters IV and V, respectively. Chapter VI is devoted specifically to analyzing and comparing the Kentucky and Maryland solid wastes plan implementation programs. The final chapter deals with the conclusions reached in the course of this investigation, and attempts to provide some recommendations for improving state solid wastes plan implementation programs.

For the purpose of this thesis, the terms solid wastes and solid waste are interchangeable to reflect the preferences of Kentucky and Maryland. In either usage, solid wastes or solid waste refer to useless, unused, unwanted, or discarded materials rather than wastes in a gaseous or liquid state.

Justification for This Thesis

State solid wastes planning was virtually non-existent prior to the Solid Waste Disposal Act of 1965. The subsequent impact of the planning grant provisions of the Act on participating state and interstate solid wastes planning agencies has been significant in terms of funds and personnel. For example, it is estimated by H. L. Hickman, Jr., of the United States Environmental Protection Agency that by the end of 1972 over 80 percent of the Nation's population will reside in areas having acceptable comprehensive state and/or interstate solid wastes management plans.¹

The increased state and Federal awareness of the need for state and interstate solid wastes planning is reflected in the funds allocated to this endeavor. For example, Hickman has stated that:

State planning budgets for 1966, the first year of Federal support, approximated \$500,000. In fiscal year 1970, budgets for solid waste planning at the State and interstate level exceeded \$2 million. In addition, we estimate that in fiscal year 1970 program activities other than planning functions exceeded \$3 million.²

¹U. S. Environmental Protection Agency, State and Interstate Solid Waste Planning, A Case Study of Federal-State Partnership (Washington: Government Printing Office, 1971), p. 4.

²Ibid., pp. 17-18.

The increased funding for state and interstate solid wastes planning has resulted in a substantial increase in the number of planning personnel engaged in solid wastes management. Hickman estimated that in 1966 only " . . . between 10 and 15 people in the entire United States were involved in the process of planning for solid waste management at the State level."³ By 1970, however, Hickman reported that " . . . over 200 people, professional and support staff were involved in planning at the State and interstate level."⁴

In summary, the increased recognition given the solid wastes problem has afforded state planners a new functional area of responsibility. With this development, it is the purpose of this thesis to help to better understand the state solid wastes planning and plan implementation program experiences of Kentucky and Maryland, and how these experiences may be used to help in similar efforts by other states.

³Ibid., p. 17.

⁴Ibid.

CHAPTER II

TRADITIONAL GOVERNMENTAL ROLES IN MANAGING SOLID WASTES AND THEIR IMPACT ON STATE SOLID WASTES PLANNING

The management of solid wastes prior to the Solid Waste Disposal Act of 1965 involved the local, state, and Federal levels of government. The traditional response generally followed was: operational responsibility for solid wastes management at the local level; legislative and health regulation responsibilities at the state level; and, Federal responsibility when solid wastes problems presented an interstate health threat. A review of each governmental level's planning response to the solid wastes problem prior to the 1965 Act will help to clarify the need for innovative institutional approaches, and the directions these approaches take.

Local Governments

As previously noted, local governments have traditionally had the legislative authority and responsibility for solid wastes collection, processing, and disposal. In most states, this has been a municipal enterprise, although private enterprise commonly engages in collection services and salvage operations. Local governments have recently been frustrated in effectively managing solid wastes by circumstances which they only partly control or refuse to confront. Limited financial and technical resources, marginal political leadership, fixed political boundaries, and the growing volumes of solid wastes have combined to

create a solid wastes problem on a scale which is taxing the capabilities of even the most well run communities.

While the solid wastes problem is severe in areas of isolated local governments, the dilemma facing local governments in metropolitan areas has become critical due to the multiplicity of governmental units concerned with segments of the same solid wastes problem. All too frequently, local governments have independently pursued their own interests without regard to intermunicipal cooperation. This tendency has led, usually, to technologically and economically inadequate solid wastes management systems when, and where, such systems exist.

National Survey of Community Solid Waste Practices. The inability of local governments to effectively manage solid wastes was documented by the National Survey of Community Solid Waste Practices conducted in the late 1960's. The magnitude of local governmental expenditures for solid wastes management ranks behind only school and road maintenance expenditures as an increasingly expensive item in the municipal budget. Yet, on the average, the National Survey reported that:

. . . almost \$5.40 per person was budgeted by communities for collection activities. An additional \$1.40 was budgeted by communities for disposal activities, giving a total per capita expenditure of \$6.80 for both collection and disposal. Thus the total amount budgeted by municipalities is approximately \$1.6 billion per year. But this figure does not include expenditures related to solid waste management which are of a nonbudgeted nature. This means, for example, that any monies expended for capital improvements and construction that are supported by bond issues and retired out of the general municipal budget are not included. It has been estimated that expenditures of this type would add about \$100 to \$120

million to the expenditure for municipal solid waste management, giving a grand total of over \$1.7 billion per year.¹

Considering the magnitude of the revenues expended by local governments for solid wastes management, the conditions reported in the Survey were disproportionate in terms of actual benefits derived by the public. For example, with regard to collection practices, the Survey indicated that " . . . approximately 12 percent of the residential population receives no formalized collection service, and that another 11 percent receives only partial service."² With regard to land disposal sites for solid wastes, the Survey showed that:

This country has over 12,000 land disposal sites being utilized by collection services, operation of which 94 percent are unacceptable and represent disease potential, threat of pollution, and land blight.³

Incineration as a form of solid wastes reduction was also found deficient by the Survey. For example:

There are approximately 300 incinerators in this country, 70 percent of which are without adequate air pollution control devices. Many produce residues and quench waters that are released into the environment without adequate treatment and control.⁴

Responding to the results of the Survey, Richard D. Vaughan, former Chief of the Federal Solid Waste Program made the following remarks to outline what resources would be needed to effectively manage

¹U. S. Department of Health, Education, and Welfare, Public Health Service, The National Solid Wastes Survey An Interim Report, by Ralph J. Black et al. (Cincinnati: Consumer Protection and Environmental Health Service, Environmental Control Administration, 1968), p. 49.

²Ibid., p. 43.

³Ibid., p. 44.

⁴Ibid., p. 45.

solid wastes in the United States. Mr. Vaughan stated that:

In order to provide complete collection of household, commercial, and industrial waste materials, and, moreover, to upgrade the frequency of collection of these materials, it is estimated that an additional 12 percent of our total expenditures, or \$540 million a year, must be allocated for operating expenses; this would entail an additional \$20 million a year in capital expenditures for trucks and other equipment. Similarly, to upgrade our land disposal operations, an additional \$80 million per year is needed in operating funds, while a total of \$240 million, or almost \$50 million a year for the next five years, is required for capital expenditures. Thus, an additional \$130 million per year is required to upgrade our current land disposal operations.⁵

In addition, Mr. Vaughan stated that in order to provide adequate incinerator operations, an additional \$45 million per year for five years will be required.⁶ In summarizing the results of the Survey, Mr. Vaughan concluded that the total funds needed for adequate solid wastes management practices Nationally were:

\$835 million per year for five years required to upgrade existing collection and disposal practices in this country to a satisfactory level. This total is in addition to the estimated \$4.5 billion spent annually for solid waste management. To these figures must also be added each year 4 to 6 percent of the previous year's total expenditures to allow for costs due to population growth and increased per capita generation of solid waste. This additional expenditure represents an increase of approximately 18.5 percent over the present funding level, which is not doing the job.⁷

Judging from the results of the Survey, managing solid wastes is taxing both the financial and managerial resources of local government. Thus, the states and the Federal government are introduced into

⁵Ibid., p. 50.

⁶Ibid., p. 51.

⁷Ibid.

the problem solving process as potential sources for generating the leadership and resources needed, while insuring the proper allocation of resources to achieve the greatest level of solid wastes management consistent with cost.

State Government

The role of the states in solid wastes management prior to the Solid Waste Disposal Act of 1965 was virtually nonexistent. While possessing the ability to improve solid wastes management practices within their borders, most states confined their efforts to legislative and public health regulating activities. Since most states made no effort to investigate the nature and magnitude of their solid wastes problem, they were generally unable to respond to the deficiencies of their political subdivisions in managing solid wastes.

A 1963 Public Health Service Survey revealed the lethargy of the states in solid wastes related affairs. The Survey noted that while 43 states unquestionably considered themselves to have a role in the solid wastes field, only 25 states gave themselves any responsibility by specific legislative authority.⁸ In addition, the same Survey noted that only 16 states had a specific state program directed at solid wastes.⁹ By 1964, however, a follow-up Public Health Service Survey indicated a decrease in state involvement in solid wastes since the

⁸U. S. Department of Health, Education, and Welfare, Solid Waste Handling in Metropolitan Areas (Washington: Government Printing Office, 1964), p. 29.

⁹Ibid., p. 30.

1963 Survey. The 1964 Survey noted that only 12 states " . . . had identifiable solid waste activities while 21 indicated no program at all."¹⁰

The frustration of local governments in managing solid wastes came to the attention of state governments at a time when growing public, and subsequent political interest in the environment prompted greater state response in the mid-1960's. Coupled with the stimulus provided by the Solid Waste Disposal Act of 1965, the states began to view the solid wastes problem in a broader context. Realizing the importance of their powers to set standards, enforce laws, and provide financial and technical assistance to local governments to insure compliance with state laws and policies, some states began to recognize the need for a greater state role in managing solid wastes. The nature and magnitude of the solid wastes problem was, however, beyond the limited and fragmented response of individual states and the Federal government began to establish a role for itself in managing solid wastes.

The Federal Government

Direct Federal involvement in solid wastes began in the early 1960's under the auspices of the Public Health Service. A small scale operation, consisting of from two to five people, conducted research on sanitary landfill and composting as the sole Federal thrust. This limited Federal effort was later extended to " . . . technical assistance,

¹⁰U. S. Congress, Senate, Senator Muskie speaking for the Clean Air Act Amendment and Solid Waste Disposal Act, Report to Accompany S. 306, S. Rept. 192, 89th Cong., 1st sess., May 14, 1965, p. 7.

guidance, and consultation of solid waste handling and disposal to State and local government agencies. . . ."11

It was not until the enactment of the Solid Waste Disposal Act of 1965 that the first significant role for direct Federal assistance to state and local governments in solid wastes related affairs was established. The effectiveness of the Solid Waste Disposal Act of 1965, however, has been minimized to a great extent at the state and local levels of government by other Federal programs providing solid wastes assistance grants. While these other Federal programs have been welcomed by local governments, their effect on state and local planning has, in some situations, been detrimental. This phenomenon is most pronounced when such Federal assistance programs by-pass the states and go directly to the local government. The result is that the legislative, operational, and financial resources of this important level of government are not brought to bear on the problem of managing solid wastes. In this context, the state can assume the role of logical leader and coordinator of local governmental activities in solid wastes management.

The Impact of Federal Grants on Solid Wastes Planning

The number of Federal solid wastes planning grant programs available to local governments is relatively large. Under these circumstances, the potential for inefficiency and substandard operation of solid wastes management systems is significant. The Federal Bureau of

¹¹U. S. Environmental Protection Agency, Initiating a National Effort to Improve Solid Waste Management (Washington: Government Printing Office, 1971), p. 11.

the Budget, for example, reported that in 1971 the following Federal agencies provided either financial or technical assistance to local governments in the planning and development of solid wastes management related activities. These Federal agencies were:

- *Environmental Protection Agency with
 - 'Solid Waste Demonstration Grants
 - 'Solid Waste Research Grants
- *Department of Housing and Urban Development with
 - 'Public facility loans
 - 'Public works planning financing advances
 - 'Comprehensive planning assistance
 - 'Advance acquisition of land
- *Department of Health, Education, and Welfare with
 - 'Comprehensive areawide health planning assistance
- *
 - Department of Interior with
 - 'Waste treatment facilities financing
- *Department of Agriculture with
 - 'Rural waste disposal facilities financing
- *Department of Commerce with
 - 'Public works and economic development facilities financing
 - 'Economic development district planning assistance and financing
- *Appalachian Regional Commission with
 - 'Health facilities construction financing
 - 'Mining area restoration financing¹²

In addition, Vigh and Kuryla have noted that the following Federal agencies have a direct impact on solid wastes planning within the states through their land holdings:

- *The U. S. Department of Agriculture Forest Service regulates the development and use of all ultimate solid waste disposal sites within national forests

¹²Kentucky, State Department of Health, Division of Solid Waste Disposal, General Planning for Solid Waste Services, by Charles Vigh and Timothy Kuryla, October, 1971, pp. 30-31.

*The Department of Defense regulates the disposal of solid waste at military installations

*The Atomic Energy Commission. . . .¹³

Despite the active leadership demonstrated by the Federal government in solid wastes management, the vast number of Federal programs available to local governments presents an opportunity to the states for relating the resources of the Federal government with the needs of local governments. Inherent in successfully employing the plethora of Federal programs available to local governments is the need to develop a state plan and program for statewide solid wastes management which articulates a state point of view under which local governments can orient their solid wastes management systems. This is particularly relevant when a Federal program imposes functional planning requirements on local governments as a prerequisite for Federal assistance in solid wastes management.

Summary

In reviewing the governmental levels involved with solid wastes management, the need for each is important. The state, however, seems to be a pivotal institution, well located to coordinate the needs of local governments with the resources of the Federal government.

In planning a solution to the solid wastes problem, the state can play an important role by giving positive direction in formulating goals and establishing policies necessary for a sound planning effort. Moreover, the states can actively engage in solid wastes management by

¹³Ibid., p. 31.

setting standards, enforcing laws, and providing the technical and financial assistance needed by local governments to insure compliance with the state plan for rationally and economically managing solid wastes on a systematic statewide basis.

CHAPTER III

THE SOLID WASTE DISPOSAL ACT OF 1965

Recognition of the solid wastes problem by the Federal government came at a time of public, and subsequent political interest in the environment during the mid-1960's. Previous Congressional action to deal with air and water pollution was the precedent for the Federal interest in solid wastes as a public health problem. The Federal recognition was accelerated by the inability of state and local governments to effectively manage solid wastes, resulting in a serious threat in some areas to the quality of the environment and individual health.

Federal support for solid wastes legislation was articulated at the National level by President Johnson, who stated in a February, 1965 special message to Congress that:

Continuing technological progress and improvement in methods of manufacture, packaging and marketing of consumer products has resulted in an ever-mounting increase of discarded material. We need to seek better solutions to the disposal of these wastes.¹

In the same special message, President Johnson appealed for legislation that would:

Assist the States in developing comprehensive programs for some form of solid waste disposal. Provide for research and demonstration projects leading to more effective methods of disposing of or salvaging solid waste.²

¹U. S. President Lyndon B. Johnson, Public Papers of the Presidents of the United States (Washington: Government Printing Office, 1966), p. 163.

²Ibid.

Federal Environmental Legislation

Federal legislation in environmental affairs in the 1960's was highlighted by the Clean Air Act of 1963 and its 1965 Amendment which included the Solid Waste Disposal Act of 1965; and the Water Quality Act of 1965. Congressional recognition of the solid wastes problem was not as compelling as its concern for air and water pollution problems. Accordingly, the Solid Waste Disposal Act of 1965 has been described by Bruch as being " . . . tacked on as an amendment to the Clean Air Act of 1965 and followed several earlier legislative attempts to bring about a Federal commitment to this area."³

It has been explained that Congressional ambivalence was due, at least in part, to the nature of solid wastes which is not conducive to regulation at the National level as are water and air pollution. It has also been noted that:

There is no medium such as air or water that naturally carries solid waste across political boundaries, affecting the people at large. Most solid wastes are deposited on land locally, and their disposition remains a local problem. Nevertheless, the people at large are affected in other ways.⁴

Despite opposition, the Solid Waste Disposal Act of 1965 (PL 89-272) was passed by the Congress on October 20, 1965. The Act, as signed into law by President Johnson, called for " . . . a national

³U. S. Department of Commerce, National Bureau of Standards, Voluntary Private Behavior as a Means to Reduce Consumer Health Hazards and Environmental Pollution, by Carl W. Bruch (Washington: Central Research Library Document Collection, PB 189 389, 1969), p. 132.

⁴U. S. Environmental Protection Agency, Initiating a National Effort to Improve Solid Waste Management (Washington: Government Printing Office, 1971), p. 3.

program for meaningful health management of municipal, industrial, and agricultural refuse."⁵

Provisions of the Act

The intent of the Congress in enacting the Solid Waste Disposal Act of 1965 was to define a Federal assistance role to the states, interstate, and local governments within the overall National interest of effectively managing solid wastes. The Act was not intended to preempt the rights and responsibilities of State and local governments in solid wastes related affairs. According to Hickman of the U. S. Environmental Protection Agency, the position of Congress was prompted by the realization that:

. . . although the collection and disposal of solid waste was primarily the function of State, regional and local government, solid waste management problems were of such national scope and concern that certain Federal action was necessary.⁶

Consequently, the Federal government was committed at the National level to promoting research and development programs to benefit state, interstate, and local levels of government. This effort was to be accompanied by direct technical and financial assistance for planning, developing, and implementing solid wastes management systems at these levels of government.

⁵Bruch, Voluntary Private Behavior, p. 132.

⁶U. S. Environmental Protection Agency, State and Interstate Solid Waste Planning A Case Study of Federal - State Partnership, by H. L. Hickman, Jr. (Washington: Government Printing Office, 1971), p. 5.

Briefly, the key provisions of the Solid Waste Disposal Act of 1965 were:

- (1) to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid-waste disposal, including studies directed towards the conservation of natural resources by reducing the amount of wastes and un-salvageable materials and by recovery and utilization of potential resources in solid wastes; and
- (2) to provide technical and financial assistance to State and local governments and interstate agencies in the planning, development and conduct of solid waste disposal programs.⁷

Federal Administration of the Act

Under the provisions of the Act, two Federal departments were given responsibility for its administration. Principle responsibility was vested in the Department of Health, Education, and Welfare with secondary responsibilities given to the Department of the Interior.

The Congress by the Act directed the Secretary of Health, Education, and Welfare to commence research in solid waste management, as well as to encourage cooperation and the promotion of assistance to other public and private agencies engaged in solid wastes related activities. The Secretary was also mandated to " . . . initiate, encourage, and support a national program aimed at discovering and evaluating better methods of coping with the solid waste problem."⁸

⁷Solid Waste Disposal Act, Title II of Public Law 89-272, 89th Cong. S. 306, October 20, 1965 (Washington: Government Printing Office, 1966).

⁸U. S. Department of Health, Education, and Welfare, Solid Waste Reduction/Salvage Plant An Interim Report, City of Madison Pilot Plant Demonstration Project (Washington: Government Printing Office, 1968), Preface, by Richard D. Vaughan.

In order to discharge his responsibilities, the Congress authorized the Secretary of Health, Education, and Welfare to:

(1) conduct and support research on the nature and scope of the problem, on methods of more safely and efficiently collecting and disposing of solid wastes, and on techniques for recovering from solid wastes potentially valuable materials and energy; (2) to provide training and financial and technical assistance to local and State agencies so that they can survey their needs in the solid waste area and plan for the development and staffing of programs capable of meeting those needs now and in the years to come; and (3) to encourage and support projects that may demonstrate new and improved methods of solid waste collection, handling, and disposal.⁹

Functional responsibility for administering the Solid Waste Disposal Act of 1965 within the Department of Health, Education, and Welfare has been delegated to a number of Federal agencies. The initial Federal agency responsible for administering the Act was the Office of Solid Wastes. Subsequent Federal agencies have been: the Solid Waste Program; the Bureau of Solid Waste Management; and, most recently, the Office of Solid Waste Management Programs within the Environmental Protection Agency. With the creation of the Environmental Protection Agency, the Office of Solid Waste Management programs has continued the activities of its predecessors in administering solid waste demonstration projects, technical assistance activities, and special studies. The major emphasis of activities was, however, shifted to helping states and local governments improve their management and administrative practices to more effectively employ available technology recently developed for solid wastes management.

⁹Ibid.

With secondary responsibility under the provisions of the Solid Waste Disposal Act of 1965, the Department of Interior, through its Bureau of Mines, was given responsibility for solid wastes resulting from " . . . the extraction, processing, and using of minerals from fossil fuels, where waste generation or reuse may be controlled by the extracting, processing or using facility. . . ." ¹⁰ In addition, the Department of the Interior's Federal Water Quality Administration supported " . . . limited research related to solid waste generation, utilization, and sanitary landfill, directed toward environmental water quality control." ¹¹

National Survey of Community Solid Waste Practices

Although not specifically mandated by the Solid Waste Disposal Act of 1965, the National Survey of Community Solid Waste Practices has become one of the most significant results of the Act. The National Survey was developed after participating state and local governments in the planning grant program realized they did not have the expertise for preparing and conducting the basic data gathering activities preparatory to developing their comprehensive solid wastes management plans. Consequently, development of the National Survey resulted from joint State - Federal proposals recommended by the Conference of State Sanitary Engineers in 1966. The National Survey was then prepared by the Federal Solid Wastes Program on the basis of pertinent data needed for

¹⁰Bruch, Voluntary Private Behavior, p. 133.

¹¹William E. Small, Third Pollution (New York: Praeger, 1970), p. 132.

statewide surveys. Essentially, the National Survey was designed to provide the following data:

. . . information on the location, types, and amounts of solid wastes being collected and their ultimate disposition. In addition to providing a waste inventory, the Survey indicates the resources (man-power, equipment, monies, facilities, etc.) required to carry out collection, reduction, and disposal activities. An evaluation of existing transfer, reduction, or disposal sites and facilities is also provided.¹²

The significance of the National Survey was not only in its assistance to states in preparing their comprehensive solid wastes management plans, but also as a National inventory. In this context, Leo Weaver remarked that the Survey provided the " . . . first comprehensive effort to obtain data with sufficient coverage and accuracy to permit evaluation of solid wastes management practices on a national basis."¹³

Federal Funding

The authorized appropriations for the Solid Waste Disposal Act of 1965 were to be divided approximately 65-35 between the Department of Health, Education, and Welfare and the Department of the Interior when both Departments were receiving their maximum allowable appropriations.¹⁴

¹²U. S. Environmental Protection Agency, Initiating a National Effort, p. 72.

¹³U. S. Environmental Protection Agency, Planning for Solid Waste Management, Symposium of State and Interstate Planning Agencies, September 9-11, 1969, "Data for Solid Waste Planning: What is Past is Prologue," by Leo Weaver (Washington: Government Printing Office, 1971), p. 31.

¹⁴Charles B. Kenahan, "Solid Wastes - Resources Out of Place," Environmental Science and Technology, V (July, 1971), 393.

The Department of Health, Education, and Welfare was authorized an appropriation totaling \$79.5 million for the fiscal years 1966 to 1970. The total appropriation was computed on annual appropriations rising " . . . from not more than \$10 million in fiscal 1966 to not more than \$32.5 million in fiscal 1969."¹⁵ The following table depicts annual trants and appropriations provided by Congress under the Solid Waste Disposal Act of 1965 (Table I).

It has been reported, however, that despite the authorized \$30 million annual ceiling provided in the Act for the Departments of Health, Education, and Welfare and the Interior, actual appropriations have been about one-half the amount authorized.¹⁶

Federal Grants for State Planning

The Solid Waste Disposal Act of 1965 provided grant support in several areas of solid wastes concern. These were:

- (1) grant support for local and State projects to demonstrate new and improved waste disposal technology; (2) grant support for the development of area-wide solid waste management systems to end fragmentation of responsibilities among small communities; (3) grant support for State surveys of solid waste handling needs and the development of statewide plans for meeting needs; (4) research, both direct and grant-supported, to establish the basis for new approaches to solid waste handling; (5) training programs, both direct and grant-supported, to alleviate critical shortages of trained personnel; (6) technical assistance to local and state governments with solid waste problems.¹⁷

¹⁵American Chemical Society, Committee on Chemistry and Public Affairs, Subcommittee on Environmental Improvement, Cleaning Our Environment: The Chemical Basis for Action, a report (Washington: American Chemical Society, 1969), p. 166.

¹⁶"Congress Enacts Resource Recovery Act Authorizing \$463 Million for 3 Years," Air/Water Pollution Report, VII (October 19, 1970), 418.

¹⁷U. S. Department of Health, Education, and Welfare, Public Health Service, Systems Analysis of Regional Solid Waste Handling, by Norman

TABLE I
HEW EXPENDITURES FOR SOLID WASTE MANAGEMENT, FISCAL 1966-1971
(Thousands of Dollars)

	Fiscal Year 1966	Fiscal Year 1967	Fiscal Year 1968	Fiscal Year 1969	Fiscal Year 1970	Fiscal Year 1971
GRANTS						
Research	853	1,677	2,261	2,444	1,944	1,944
Training	150	350	443	486	490	490
Demonstrations	1,989	5,000	4,747	5,134	4,650	4,650
Planning	400	997	1,467	1,858	1,500	1,300
DIRECT OPERATIONS	942	4,168	4,442	5,194	6,691	6,969
(Contracts)	(381)	(1,295)	(1,100)	(1,383)	(2,000)	(2,352)
TOTAL	4,334	12,192	13,357	15,116	15,275	15,336

SOURCE: U. S. Environmental Protection Agency, Initiating a National Effort to Improve Solid Waste Management (Washington: Government Printing Office, 1971), p. 26.

Of particular interest in this thesis is the planning grant provision of the Act for comprehensive state solid waste management planning. Under the Act, matching grants of up to 50 percent are made available to state and interstate agencies to develop their plans as a guiding document in developing a comprehensive solid wastes management program. Actual disbursement of funds by participating states, however, has been " . . . survey (60%), planning (10%), and other activities (30%), such as public relations and development of legislation."¹⁸ By the end of fiscal year 1966, fifteen states were participating in the program, while at the completion of fiscal year 1970, the number of participating state and interstate agencies had risen to 50.

Federal Requirements for State Solid Wastes Planning

From the participating states, the Federal government expected two fundamental products: " . . . first, a plan (and report) for the State's management of its solid wastes; second, development of an agency for the managing function."¹⁹ The second requirement for developing a functional agency was generally achieved by the governor designating a sole state agency to be responsible for state and/or interstate planning. The designated state agency was then expected to demonstrate that:

Morse and Edwin W. Roth, PHS Pubn. No. 2065 (Washington: Government Printing Office, 1970), pp. 7-8.

¹⁸U. S. Environmental Protection Agency, Initiating a National Effort, p. 63.

¹⁹U. S. Environmental Protection Agency, Kentucky Solid Waste Management Plan, Status Report 1970 (Washington: Government Printing Office, 1971), p: iii.

. . . information concerning all aspects of the solid waste disposal problem--including those of urban, rural, industrial and agricultural origin--gathered during a grant-supported survey will be sufficiently detailed and comprehensive to form the basis for a feasible and orderly plan of solid waste management.²⁰

Upon successfully satisfying the statewide survey requirement, the designated state solid wastes agency became eligible for the Federal Planning grant to begin plan development. Since state solid wastes planning was a relatively new and unusual endeavor, Federal administrative guidelines advocated that a state plan for solid wastes management should be:

. . . a written document outlining the activities that the State intends to undertake during the life-span of the plan. Moreover, it should be both a technical and policy statement containing objectives for solution of solid waste management problems, coupled with a set of directions for achieving those objectives. This statement should then be framed within a time context and order of priorities.²¹

By establishing guidelines for solid wastes management plans at the state level, the Federal government sought to produce a document that would serve the states the following functions:

(1) provide an internal technical and policy guideline for carrying out the purpose of the State solid waste management agency; (2) provide a State-directed framework of standards for local and regional solid waste management planning and implementation; (3) provide a legislative support document for furthering the improved management of solid wastes in the State.²²

²⁰Office of Science and Technology, Solid Waste Management, A Comprehensive Assessment of Solid Waste Problems, Practices and Needs, prepared by Ad Hoc Group for Office of Science and Technology (Washington: Government Printing Office, 1969), p. 105.

²¹U. S. Department of Health, Education, and Welfare, Developing a State Solid Waste Management Plan, by Richard O. Toftner (Washington: Government Printing Office, 1970), p. 2.

²²Ibid.

The impact of the Solid Waste Disposal Act of 1965 and its supporting administrative guidelines on the states of Kentucky and Maryland will be examined in Chapters IV and V.

Summary

Federal concern for solid wastes as a potential threat to environmental and public health followed a precedent established by earlier Federal legislation to deal with air and water pollution problems confronting state and local governments. In enacting the Solid Waste Disposal Act of 1965, the Congress did not intend to pre-empt State and local responsibilities, but rather to provide the direction and resources necessary for the state and local governments to effectively manage solid wastes throughout the Nation. Moreover, the Act was the catalyst for participating state governments to investigate and correct the solid wastes problem within their borders.

Federal responsibility for administering the provisions of the Solid Waste Disposal Act of 1965 was vested primarily in the Departments of Health, Education, and Welfare and the Interior. Having evolved through a number of Federal agencies, the Environmental Protection Agency's Office of Solid Waste Management Programs presently is the functional Federal agency for administering the provisions of the Act. Although Congress had authorized \$30 million as an annual ceiling, actual appropriations for program activities have been about half that amount. Regardless of Federal funding levels, the significant impact of the Solid Waste Disposal Act of 1965 has been the stimulus and

resources it has given to the 50 participating state and interstate planning agencies for planning the effective management of solid wastes.

CHAPTER IV

STATE SOLID WASTES PLANNING IN KENTUCKY

Prior to the Federal Solid Waste Disposal Act of 1965, there was no formal state program for managing solid wastes in Kentucky. In June 1966, however, Governor Breathitt issued an executive order to the Kentucky State Department of Health to comply with the state planning grant provisions of the Federal Act. At this time, functional responsibility for state solid wastes management was delegated to the newly created Solid Waste Project located within the State Department of Health's Division of Environmental Health. Subsequently, Kentucky became one of the first recipients of a Federal planning grant that was matched with Commonwealth funds to begin development of a comprehensive state solid wastes management plan and program.

Response to the Solid Waste Disposal Act of 1965

Upon receiving the Federal planning grant in October 1966, the Kentucky Solid Waste Project evolved into the Solid Waste Program. With increased resources, the Kentucky Solid Waste Program was able to initiate functional activities to provide the basis for state solid wastes management in Kentucky. Chronologically, the first area of endeavor was to gradually establish functional and operational capabilities for state solid wastes management within state government. Although many of these activities were routinely administrative, the novelty of the state effort required considerable staff time and resources

for coordinating activities among state agencies and local governments.

Having established an organizational capability in state government, the Kentucky Solid Waste Program was able to orient its activities in a functional direction. By analyzing and evaluating the duties and responsibilities of other state agencies engaged in solid wastes related activities, the Program sought to coordinate management efforts and maximize available state resources with minimum duplication among state agencies.¹ Also, the Program initiated a technical assistance project aimed at solid wastes disposal site operators for improving the safety of their facilities, while simultaneously commencing a program of issuing permits to public and private disposal sites.²

In the summer of 1967, the Kentucky Solid Waste Program participated in the National Survey of Community Solid Waste Practices. Participation in the Survey enabled the Program to accurately identify and define, with reliable data, the solid wastes problem in Kentucky. From the data derived in the Survey, the Program was able to develop the comprehensive plan and program for managing solid wastes in the Commonwealth. Moreover, the Survey revealed the seriousness of the solid wastes problem in Kentucky, and the need for a strong and immediate state response.

¹Kentucky, State Department of Health, Division of Environmental Health, Solid Waste Program, Comprehensive Solid Waste Management Program for Kentucky, June, 1970, p. 27.

²Ibid., p. 32.

General Nature of Kentucky's Solid Wastes Problems

The results of the National Survey of Community Solid Waste Practices revealed three general areas of serious solid wastes management problems in Kentucky. These areas were: public education; land disposal practices; and, fragmentation of state responsibilities for solid wastes management.

Foremost in effectively managing solid wastes is the need to educate the public of the threat posed by improper solid wastes disposal practices. In this regard, the Survey suggested the ignorance of many Kentuckians is a contributing factor for many of the Commonwealth's solid wastes management problems. For example, the Survey noted that:

Even now, numerous well educated people across the Commonwealth are opposed to the use of sanitary landfills as a means for the ultimate disposal of waste. Those who listen to these individuals have become fearful that sanitary landfills will destroy their water supplies or ruin valuable farm land. Yet, open dumps of all types are scattered across the Commonwealth. The attitude is still widely held, even by concerned individuals, that it is far better to carry the waste out into the country and dump it where it will not harm the community.³

A second general area of concern in the effective management of solid wastes in Kentucky lies in improper land disposal practices. The Survey noted, for example, that in many areas of Kentucky solid wastes management was virtually non-existent with almost primitive disposal practices. Of the 224 disposal sites reported during the Survey, only 21 were recognized as sanitary landfills.⁴ According to the Survey, the typical land disposal site in the Commonwealth was a hillside dump with the following discrepancies:

³Ibid., p. 26.

⁴Ibid.

. . . over 90 percent of the sites surveyed had uncontrolled blowing paper, and over 75 percent were routinely burned. More importantly, almost 20 percent of the disposal sites found in the Commonwealth interfered with the ground water table.⁵

The third serious problem area facing the Commonwealth in effectively managing solid wastes was that of fragmented state responsibility. For example, three state agencies provided solid wastes disposal facilities for state use. The following state agencies and their responsibilities were:

- * The Department of Finance provides services to the majority of state agencies
- * The Department of Parks maintains the Commonwealth's park system
- * The Department of Highways maintains the more than 25,000 miles of state highways⁶

While state responsibility for solid wastes disposal is limited to three agencies for meeting state needs, the regulation and enforcement of solid wastes practices throughout Kentucky was more complex. For example, the Survey noted the following fragmentation of state responsibility by reporting that:

. . . seven agencies of State government directly control solid waste disposal practices; four more have related environmental control regulatory capabilities; two have regulatory powers important to solid waste management; and normal law enforcement agencies, both State and local are charged with the enforcement of State solid waste laws and regulations.⁷

⁵Ibid.

⁶Ibid., p. 25.

⁷Ibid., p. 76.

Also of significance as a deterrent to effective solid wastes management in Kentucky is the geographical environment. The Commonwealth has approximately 40,000 square miles of highly complex terrain, 90 percent of which is crop, pasture, and state or Federal forest land.⁸ Coupled with these characteristics is a generally small and dispersed population living in small communities with limited technical and financial resources to adequately manage solid wastes.

Kentucky Solid Waste Disposal Act of 1968

Based largely on the stimulus of the Federal Solid Waste Disposal Act of 1965, the efforts of the Kentucky Solid Waste Project, and Program, and the results of the National Survey of Community Solid Waste Practices, the Kentucky General Assembly passed the Kentucky Solid Waste Disposal Act in February 1968. Through the Act, the General Assembly further established the Commonwealth's commitment to effectively managing solid wastes. The Act also enunciated the General Assembly's policy for a statewide program that would:

. . . provide for the disposal of solid waste in a manner that will protect the public health and welfare, prevent the spread of disease and creation of nuisances, conserve our natural resources, and enhance the beauty and quality of our environment.⁹

In achieving these broad goals, the Kentucky Solid Waste Disposal Act of 1968 gave the Kentucky State Department of Health the following

⁸Kentucky, State Department of Health, Division of Solid Waste Disposal, General Planning for Solid Waste Services, by Charles Vigh and Timothy Kuryla, October, 1971, p. 3.

⁹Solid Waste Program, Comprehensive Solid Waste, p. 81.

responsibilities to promote effective solid wastes management. These responsibilities were:

- 'To develop a comprehensive program for the safe and sanitary disposition of solid waste throughout the Commonwealth
- 'To advise, consult, and cooperate with other agencies of the Commonwealth, other states and the Federal government and with affected groups and industries in the formulation and carrying out of the solid waste disposal program.¹⁰

Although the State Department of Health has been given the ultimate responsibility for solid wastes management under the provisions of the Kentucky Solid Waste Disposal Act of 1968, the Department upgraded its Solid Waste Program to the Kentucky Division of Solid Waste Disposal to discharge functional activities. The Division continued the activities of the Solid Waste Program, but was given additional responsibilities. As the state's functional solid wastes management agency, the Division became responsible for:

. . . statewide, regional, and local planning; demonstration projects; and research and construction loans and grants provided by all agencies of the Federal government for solid waste related projects.¹¹

The Division of Solid Wastes has three functional sections:

(1) Administrative Program; (2) Field Operations Program; (3) Research and Planning Program.¹²

The functional activities encompassed by the Administrative Program of the Division of Solid Waste Disposal include all administrative

¹⁰Kentucky, State Department of Health, Division of Solid Waste Disposal, An Industrial Solid Waste Management Program for Kentucky, July, 1971, p. 74.

¹¹Vigh and Kuryla, General Planning, p. 32.

¹²Division of Solid Waste Disposal, Industrial Solid Waste, p. 85.

functions related to handling and processing information. The Administrative Program also has responsibility for the development of new activities requiring additional information, and the initiation of public hearings or litigation to enforce regulatory functions. Other activities of the Administrative Program include record keeping, departmental communications, personnel, materials procurement, and legal functions.¹³

The Field Operations Program is designed to administer the majority of the Division of Solid Waste Disposal's regulations, except for legal action. In addition, technical assistance, directly related to solid waste handling is also administered by the Field Operations Program. Other functions include permit issuance, plan application and evaluation, facility and site inspection, development, and technical assistance.¹⁴

The third functional Program within the Division of Solid Waste Disposal is that of Research and Planning. This section prepares the information generated in the development of new solid wastes management activities requiring additional information. The other functional activities of the Research and Planning Program include local government solid wastes plan development assistance; routine interagency coordination activities; Federal program coordination; research on solid wastes topics; publication development; and, public information on education programs preparation.¹⁵

¹³Ibid.

¹⁴Ibid., pp. 85-86.

¹⁵Ibid., p. 86.

Comprehensive Solid Waste Management Plan for Kentucky

Data for the Comprehensive Solid Waste Management Plan for Kentucky was developed by the staff of the Division of Solid Waste Disposal and compiled by Spindletop Research of Lexington. Completed in June 1970, the plan was designed to " . . . serve as the guideline document for administering the Comprehensive Solid Waste Management Program established by the Kentucky General Assembly. . . ."¹⁶

The Kentucky plan is essentially a management tool and has been designed for five year application with annual revisions to be made upon the appraisal of previous year results. Under this arrangement, manpower requirements within the Division of Solid Waste Disposal are re-allocated with respect to activity accomplishments, new activity requirements, manpower capabilities, and fiscal considerations.¹⁷

In developing the State Comprehensive Solid Waste Management Plan, the Kentucky Solid Waste Program and Division of Solid Waste Disposal formulated six goals to be achieved by the functional programs and activities embodied in the five year plan period.¹⁸ These goals were:

- * To develop an administrative framework, including both federal and Commonwealth requirements for all programs within the Commonwealth related to the Solid Waste Disposal Act (Public Law 89-272) and such other federal legislation as may hereafter be enacted to assist in the proper disposal or conversion of solid waste

¹⁶ Solid Waste Program, Comprehensive Solid Waste, p. 79.

¹⁷ Ibid.

¹⁸ Ibid., p. 82.

- * To identify the nature and extent of problems relating to solid waste as they become apparent or are brought to the attention of the Commonwealth by any of its citizens
- * To coordinate with appropriate State agencies in order to clarify the nature and extent of identified problems, establish agency responsibilities, and initiate remedial and preventive action programs required to control or eliminate the problem situations
- * To develop and enforce regulations for the proper disposal of solid waste. Such regulations will incorporate the significant regulatory measures of those other agencies concerned with the protection of the public health and welfare and the natural environment.
- * To obtain on a regular basis
 - Information on agency enforcement of State solid waste laws and regulations
 - Information on solid waste management practices throughout Kentucky
 - Additional information significant to the Kentucky Comprehensive Solid Waste Management Program
 - Maintain this information in a systematic and orderly manner
 - Prepare reports and public information documents on the development of the Comprehensive Solid Waste Management Program
- * To provide technical assistance to
 - Individuals
 - Private organizations
 - Public bodies
 - Local agencies
 - Regional agencies
 - State agenciesthrough
 - direct consultation
 - published information
 - information programs
 - educational training sessions
 in order to obtain the widest possible dissemination of regulatory and technical information essential for the proper disposal of solid waste throughout the Commonwealth.¹⁹

¹⁹Ibid., pp. 82-83.

Planning for Solid Wastes Management

Planning for solid wastes management occurs primarily at the state level of government and in some Area Development Districts, and municipalities. The Kentucky Program Development Office (KPDO) serves as the State clearinghouse for the Comprehensive Solid Waste Management Plan to insure compatibility with other state agency plans and proposals, and local governments requesting Federal funds for solid wastes management assistance. As the Governor's agency for statewide and sub-state regional coordination, the principle responsibility of the KPDO in state solid wastes management is to coordinate the Plan and Program of the Division of Solid Waste Disposal with the 15 Area Development Districts of Kentucky.

Responsibility for solid wastes management at the local level of government rests primarily with municipalities and Urban Service or Garbage Disposal Districts. Since the Kentucky Revised Statutes do not specify solid wastes management service as a county function, the counties of Kentucky are limited to providing solid wastes management services only by being part of an Urban Services or Garbage Disposal District.

Consequently, the Kentucky Division of Solid Waste Disposal is placing great reliance on the ability of the 15 Area Development Districts of the Commonwealth to voluntarily bring together the counties and municipalities within each District and initiate efforts to provide effective solid wastes management programs in compliance with state laws and the state plan. Thus, the KPDO and the Division of Solid Waste Disposal have launched coordinated information and technical assistance programs to the Districts as the basis for establishing the need for

each District to provide area-wide solid wastes management systems.²⁰

To improve planning capabilities for solid wastes management within each Area Development District, the Division of Solid Waste Disposal and the KPDO have prepared Operational Solid Waste Management Systems Development Guidelines. The purpose of these Guidelines is to provide:

. . . recommended procedures for developing and operating solid waste collection and disposal systems that will provide useful information for community systems or for large regional systems.²¹

The Area Development Districts are considered the keystone for overall establishment of effective solid wastes management systems within the Commonwealth. It is also contended by the Division of Solid Waste Disposal and the KPDO that the Districts will provide regional solid wastes management planning efforts that will yield certain economies of scale. It is well to note, however, that there is no state law requiring the Districts to plan for or provide solid wastes management systems. Moreover, the Districts are voluntarily supported by local governments and the development of operational solid wastes management systems will rely chiefly upon " . . . a variety of inter-laced agreements among the communities and counties."²² Since neither the Kentucky Division of Solid Waste Disposal nor any other state agency provides operational solid wastes management services to local governments,

²⁰Samuel Johnson, Director, Kentucky Division of Solid Waste Disposal, personal Interview, August 11, 1972.

²¹Solid Waste Program, Comprehensive Solid Waste, pp. 82-83.

²²Ibid., p. 9.

implementation of the state solid wastes plan becomes a tenuous endeavor that will be more closely examined in Chapter VI.

Summary

Responding to the stimulus of the Solid Waste Disposal Act of 1965, Kentucky has developed an operational state solid wastes management agency with plan and program designed to manage solid wastes within the Commonwealth. While having gubernatorial and General Assembly support, the Division of Solid Waste Disposal and its predecessors have been faced with a task that has taxed their capabilities. Thus, reliance is being placed on the 15 Area Development Districts to provide the institutional vehicle for managing solid wastes at the local levels of government throughout Kentucky.

CHAPTER V

STATE SOLID WASTES PLANNING IN MARYLAND

Response to the Solid Waste Disposal Act of 1965

The State of Maryland, prior to the Federal Solid Waste Disposal Act of 1965, had no formal solid wastes management program. With the enactment of the Solid Waste Disposal Act of 1965, however, Maryland was among the first states to participate in the planning grant program provided by the Act. To comply with the provisions of the Act, Governor Tawes, in December 1965, designated the Maryland Department of Health as the responsible state agency for developing a statewide program that would effectively manage solid wastes.

In early 1966, the Maryland General Assembly mandated the Department of Health to conduct a statewide survey to ascertain the nature and magnitude of the solid wastes problem in Maryland by surveying every solid wastes disposal site in the state. It is noteworthy that the survey mandated by the General Assembly was state initiated and supported without Federal grant assistance. The results of the statewide survey indicated that the solid wastes problem in Maryland was sufficient to warrant an immediate state response. Thus, the Division of Solid Wastes was created within the Maryland Department of Health as the state's first functional agency for managing solid wastes.

In January 1967, the Division of Solid Wastes initiated a state solid wastes planning program upon receipt of Federal funds provided by the state planning grant provisions of the Solid Waste Disposal Act of

1965 to match state funds for solid wastes planning. With the state initiated statewide survey of the Maryland solid wastes problem completed by the Division of Solid Wastes, efforts were oriented toward the review of engineering and advisory proposals to upgrade open dumps and unsanitary disposal practices that had been identified in the state survey. Additionally, the Division began a program of issuing permits to disposal site operators that were in compliance with state laws.

In 1968, the Maryland Division of Solid Wastes participated in the National Survey of Community Solid Waste Practices. Participation in the National Survey enabled the Division to re-evaluate the findings of the state survey in 1966 and record the nature of the Maryland solid wastes problem in a format consistent with a National reporting scheme to facilitate data analysis. Participating in the National Survey also assisted the Division in developing a state plan and course of action to effectively manage solid wastes in Maryland.

General Nature of the Maryland Solid Wastes Problem

Maryland has apparently had a relatively enlightened attitude toward the sanitary disposal of solid wastes. Being a prosperous state has also enabled the local governments of Maryland to provide generally effective solid wastes management programs. In comparison with Kentucky, the results of the National Survey indicated that Maryland's solid wastes disposal practices were fairly adequate. Two problem areas were identified, usually in rural counties, where an estimated 34 percent of the disposal sites were located in marshlands, tidelands, and flood plains, thus creating a potential water pollution problem. In addition,

most disposal sites in rural counties were not manned to provide supervised operations.¹

Although improper solid wastes practices are limited, the Maryland Division of Solid Wastes is striving to achieve statewide excellence, consistent with costs. Maryland is a rapidly urbanizing state with increasing demands to provide urban services in formerly rural areas. Subsequently, there has been a heavy demand on state and county governments to provide the resources needed to satisfy present and future needs. The National Survey, for example, noted that:

Approximately one fifth of rural communities have no planning for solid wastes management and eleven percent of urban communities lack planning efforts. Regional planning is practically nonexistent with the exception of the two Maryland standard metropolitan statistical areas (Baltimore and the counties adjacent to Washington, D. C.).²

Additional needs confronting Maryland for improved solid wastes management were identified in the National Survey. These were: to improve the monitoring of solid wastes management programs conducted by local health authorities; improving the compilation and reporting of solid wastes information by local health authorities; improving training programs for personnel engaged in solid wastes activities; and, the development of better methods to analyze the effectiveness of solid wastes management plans and programs.³

¹Maryland, State Department of Health and Mental Hygiene, Environmental Health Administration, Division of Solid Wastes, Solid Wastes Management Plan for Maryland, n.d., pp. VIII-1.

²Ibid.

³Ibid., pp. VIII-1, VIII-3.

Maryland Legislation for Solid Wastes Management

To confront its solid wastes problem, the Division of Solid Wastes, the Maryland Environmental Service, the 23 counties and Baltimore City have initiated planning efforts in compliance with state laws, to insure effective solid wastes management in Maryland.

Maryland does not have a comprehensive solid wastes disposal act comparable to the Kentucky Solid Waste Disposal Act of 1968. The basic Maryland legislation pertaining to state solid wastes management dates back to the 1957 Health Laws of Maryland. Under this legislation, Article 43 authorized the Maryland Board of Health to require that all solid wastes plans be filed under rules and regulations established by the Board of Health. Additional Sections of Article 43 authorized the Board to establish minimum regulations concerning the submission of plans requesting Board approval for the installation, alteration, and extension of solid wastes disposal systems.⁴

In 1970, however, the Maryland General Assembly significantly up-dated state laws pertaining to state solid wastes management by revising Article 43 of the Maryland Annotated Code. The following extracts of legislation enacted by the General Assembly in 1970 demonstrate Maryland's concern for a state role in solid wastes management. These recently enacted laws are:

1. Senate Bill 382 - Provides for the creation of a body politic and corporate to be known as the "Maryland Environmental Service" to provide statewide wastes purification services. The law gives the Maryland Environmental Service the authority to plan, integrate, establish geographic service

⁴Ibid., p. IV-1.

regions in cooperation with affected municipalities based on comprehensive state-county solid wastes management plans. The Service may also acquire, design, construct, reconstruct, rehabilitate, improve, operate, maintain and repair solid wastes disposal projects pursuant either to an order from the Secretary of Health or Secretary of Natural Resources.

2. Senate Bill 541 - Provides for the planning, acquisition, establishment, construction, operations and financing of solid wastes acceptance facilities by sanitary districts.
3. Senate Bill 542 - Provides for the financing from the Sanitary Facilities Fund of planning for solid wastes disposal systems and solid wastes acceptance facilities and authorizes such planning activities to be financed jointly by the State Department of Health and Mental Hygiene and any county or Baltimore City. . . .
4. Senate Bill 543 - Requires the closing and covering of landfill refuse disposal systems in a manner which prevents erosion, health and safety hazards, nuisances, and pollution and the posting of bonds by private operators of landfills to ensure that they will be closed in the required manner. The bond is in the amount of \$1,000 per acre, but in no event may the bond be less than \$25,000. Duration of the bond is for five years after a landfill has been closed unless released earlier by the Department.
5. Senate Bill 544 - Amends Article 43, Section 387C to include solid wastes disposal systems and requires each county to prepare, adopt and submit a comprehensive plan dealing with solid wastes acceptance and disposal facilities not later than January 1, 1974. The plans will contain delineations of areas having acceptable solid wastes management systems, those where systems will be feasible and required within a specified time period and others in which the establishment of solid wastes disposal systems probably will never be feasible.
6. House Bill 506 - Requires that the Health Department shall not issue a landfill permit unless an affirmative statement is received from the county governing body concerned that issuance of a permit is not opposed.⁵

⁵ Ibid., pp. IV-1 - IV-2.

In sum, the legislation enacted in 1970 by the Maryland General Assembly has given the state a vital role in solid wastes management, with appropriate powers to insure compliance with state laws. Administration and organization of state solid wastes planning activities in Maryland is thus considered.

State Organization for Solid Wastes Management

The Maryland State Department of Health and Mental Hygiene has the ultimate responsibility for managing solid wastes within the state. Commensurate with this responsibility are appropriate powers to regulate public and private solid wastes disposal facilities. Other responsibilities of the Department of Health and Mental Hygiene include approving plans for solid wastes disposal sites, while assisting local governments to plan for these facilities by providing grants and loans.⁶

The functional state agency for solid wastes management is the Maryland Division of Solid Wastes. Located within the Maryland State Department of Health and Mental Hygiene's Environmental Health Administration, the Division of Solid Wastes administers the State Solid Wastes Management Plan and Program. The Division has three functional Sections for discharging its responsibilities. These Sections are: Planning and Program Evaluation; Hazardous Wastes and Special Projects; and a combined Section for Technical Advice and Assistance, and Monitoring and Surveillance.⁷ The activities of the Division of Solid Wastes also

⁶Elizabeth H. Haskell, Managing the Environment: Nine States Look for New Answers (Washington: Smithsonian Institution, 1971), p. 349.

⁷Charles M. Kenealy, Chief, Maryland Division of Solid Wastes, personal interview, August 22, 1972.

include program planning, coordination and review of county plans, regulation of solid wastes management practices, and the insurance of compliance with state laws pertaining to solid wastes.

The most recent state organization to be created by the General Assembly for the management of solid wastes is the Maryland Environmental Service (MES). Administratively, the MES is located within the Maryland State Department of Natural Resources. The Secretary of the Department of Natural Resources, pending gubernatorial concurrence, appoints the MES' board of directors to serve at his pleasure. With regard to all corporate functions, however, the MES is independent from all state agencies, and has powers similar to a statewide sanitary district. According to Haskell, the powers of the MES include the ability to provide liquid and solid wastes treatment works on a wholesale basis to Maryland's local subdivisions and industries upon request, with limited collection services.⁸

Thus, the state role in Maryland for developing policies and regulating solid wastes management practices is delegated by the Department of Health and Mental Hygiene to its Division of Solid Wastes. On the other hand, the state role for implementing and operating solid wastes disposal systems is the responsibility of the Maryland Environmental Service (MES). The functional planning activities of the MES will be discussed in greater detail later in this chapter.

⁸Haskell, Managing the Environment, p. 340.

Solid Wastes Management Plan for Maryland

The Solid Wastes Management Plan for Maryland was prepared by the staff of the Division of Solid Wastes. Actual development of the plan began at the time of the Division's creation, and was completed in August 1971. The overall intention of the Maryland Solid Wastes Management Plan is to:

. . . anticipate and resolve the various problems related to solid wastes in an economical, effective, and efficient manner. The plan is designed to assist all agencies, governmental units, and groups concerned with solid wastes problems within the State, whether they be urban, rural, public, private, industrial, commercial or agricultural.⁹

The data base for the Maryland Solid Wastes Management Plan was the 1966 statewide survey mandated by the General Assembly and the 1968 National Survey of Community Solid Waste Practices. Additional information was contributed by members of the Division's staff. In analyzing the data gathered, the Division of Solid Wastes formulated the following goals for achieving the effective management of solid wastes on a statewide basis throughout Maryland. These goals were:

Planning - To develop regional and county solid wastes management plans. . . .

Local Control Programs - To prepare guidelines and standards and to give assistance to political subdivisions in developing adequate refuse management programs. . . .

Operations - To develop a comprehensive solid wastes data management system. . . .

Source of Wastes - To undertake a cooperative study of these wastes with local government officials, health authorities and industrialists. . . .

⁹Division of Solid Wastes, Solid Wastes Plan, p. I-1.

Disposal Sites - To give technical advice and assistance to local governments in their efforts to convert existing unsatisfactory land disposal sites to sanitary landfills or to close them properly and establish new sanitary landfills. . . .

Special Wastes - To give technical advice and assistance to local governments in developing and establishing practical and economic systems for collecting and disposing of special wastes. . . .

Collection of Wastes - To provide technical assistance and guidance to local governments in an effort to determine the overall adequacy of solid wastes collection systems in the state. . . .

Research Studies and Operational Techniques - To establish a communications system to keep local governments informed of new developments and techniques in the management of solid waste. . . .

Training - To develop course outlines, training aids and teaching techniques for the use of local governments in training of operators of solid wastes disposal systems. . . .

County Plans - To give technical advice and assistance to county governing bodies in the preparation of comprehensive wastes management plans. . . .

Planning and Program Evaluation - To develop guidelines and standards for evaluating the overall effectiveness of solid wastes management personnel, plans and programs. . . .¹⁰

Planning for Solid Wastes Management

Planning for solid wastes management in Maryland occurs principally at the State and county levels of government with the Maryland Department of State Planning serving as the state clearinghouse for the Maryland Solid Wastes Management Plan to insure compatability with other state agency plans and proposals.¹¹ In addition to the program planning conducted by the Division of Solid Wastes, the Maryland

¹⁰ Ibid., pp. X-1 - X-6.

¹¹ Ibid., p. I-2.

Environmental Service (MES) engages in functional planning for operational liquid and solid wastes purification and disposal systems to public and private instrumentalities. For the purpose of this thesis, however, only MES planning for solid wastes will be considered.

The MES was mandated by the Maryland General Assembly in 1970 when it was created to conduct regional planning for solid wastes management. Concurrently in 1970, the General Assembly directed the 23 counties and Baltimore City to prepare a solid wastes plan by January 1, 1974. Rather than the MES and the individual counties and Baltimore City separately preparing solid wastes plans, the MES has entered into contract negotiations with these political entities to agree on joint solid wastes planning. According to Thomas D. McKewen, Director of the MES:

In most, if not all, areas of the state, counties and MES will jointly fund and direct a solid waste planning effort which will satisfy statutory requirements for both regional and individual county plans.¹²

MES' regional plans are designed for five year application with planning regions following county boundaries. Since the MES does not have control over local land use decisions for its capital facilities, Haskell has noted that once the MES has developed a five year regional plan, it must be approved by the local jurisdictions affected by the plan. She further noted the following procedure for approving a developed MES plan:

¹²Thomas D. McKewen, "Wholesaling Environmental Services," Environmental Science and Technology, VI (April, 1972), 327.

A public hearing is required at this time to allow for citizen comment. In the event the plan does not gain the approval of all the counties affected within 120 days after it is submitted, the plan may then be approved or modified by a joint resolution of the General Assembly.¹³

At present, 21 counties and Baltimore City are jointly preparing their solid wastes management plans with the MES.¹⁴ This arrangement is intended to maximize the effectiveness of state solid wastes management since the counties provide an existing framework for regional MES disposal systems.

County planning for solid wastes in Maryland has been greatly facilitated by the provisions for financing through the state appropriated Sanitary Facilities Fund. Under this system, the Department of Health and Mental Hygiene allocates appropriated state funds on the basis of a county's wealth to insure uniform solid wastes planning throughout the state. This system also insures that the counties will observe the policies and laws of Maryland requiring solid wastes planning. With the exception of Baltimore City, it is interesting to note that the sole responsibility left to Maryland's municipalities in solid wastes affairs is to manage and monitor only those solid wastes systems within their borders.¹⁵

¹³Haskell, Managing the Environment, p. 341.

¹⁴Raymond J. Karpen, Head, Planning and Program Evaluation Section, Maryland Division of Solid Wastes, personal interview, August 22, 1972.

¹⁵Ibid., p. IV-2.

Summary

Since 1966, Maryland has initiated an aggressive state program to effectively manage solid wastes. Development of the Solid Wastes Management Plan for Maryland by the Division of Solid Wastes has been accompanied by strong legislative support in providing the laws and resources necessary to achieve goals formulated in the plan. Having a relatively good record for providing sanitary disposal of solid wastes has enabled Maryland to devote its resources to meeting future needs in rapidly urbanizing counties rather than correcting flagrant abuses. State responsibility for managing solid wastes is vested in the Division of Solid Wastes for developing policies and regulations to manage solid wastes practices; and, the Maryland Environmental Service implements operational solid wastes disposal systems.

CHAPTER VI

ANALYSIS AND COMPARISON OF KENTUCKY AND MARYLAND SOLID WASTES MANAGEMENT PLAN IMPLEMENTATION PROGRAMS

I. INTRODUCTION

It is the purpose of this thesis to help to better understand the state solid wastes planning and implementation program experiences of Kentucky and Maryland, and how these experiences may be used to help in similar efforts by other states. With this consideration, three criteria were established to guide this thesis in analyzing and comparing the Kentucky and Maryland experiences. These criteria were:

1. Delegated legislative and/or gubernatorial responsibility and authority to the designated state agency for achieving goals formulated in the state plan;
2. Resources made available to the designated state agency; and,
3. Adequacy of the program and policy orientation of the designated state agency to achieve goals formulated in the state plan.

Due to the geographic, demographic, cultural, and economic differences between Kentucky and Maryland, these criteria are intended to provide a relative, rather than absolute, evaluation of each state's ability to carry out plan implementation programs. Thus, no attempt will be made to suggest that one program is superior to the other. Each state is dealing with the solid wastes problem within a framework of different powers and traditions, peculiar to each state. In this

context, Kentucky and Maryland's plan implementation programs for solid wastes management will be analyzed and compared.

II. PLAN IMPLEMENTATION ANALYSIS - KENTUCKY

Preliminary to analyzing the plan implementation program of Kentucky, it is pertinent to review the goals formulated in the Comprehensive Solid Waste Management Plan for Kentucky. In brief, the following six goals were formulated:

1. To develop an administrative framework to assist in the proper disposal or conversion of solid waste.
2. To identify the nature and extent of problems related to solid waste.
3. To develop an information program.
4. To provide technical assistance.
5. To coordinate with appropriate state agencies the initiation of remedial and preventive action programs.
6. To develop and enforce regulations for the proper disposal of solid wastes.

Criterion One

The first criterion established for analyzing the state solid wastes plan implementation program of Kentucky is the legislative and gubernatorial responsibility and authority delegated to the designated state solid wastes management agencies. Since 1966, there have been three Kentucky agencies: the Solid Waste Project; Solid Waste Program; and, Division of Solid Waste Disposal, responsible for formulating and

achieving goals specified in the Comprehensive Solid Waste Management Plan for Kentucky. In analyzing the responsibility and authority delegated by the General Assembly and Governors of Kentucky since 1965, only two specific events stand out. First, Governor Breathitt's executive order of June 1966 for the Kentucky State Department of Health to comply with the provisions of the Solid Waste Disposal Act of 1965. The second was the Kentucky Solid Waste Disposal Act of 1968 enacted by the General Assembly. The only other indications of gubernatorial and legislative support have been the biennial appropriations by the General Assembly to the designated state solid wastes agencies.

It appears, however, that the formulated goals of the Comprehensive Solid Waste Management Plan for Kentucky are well within the purview of delegated responsibility and authority. It is well to note, however, that the formulation and achievement of such pragmatic goals will not necessarily result in the effective management of solid wastes throughout Kentucky. Thus, while the Kentucky Division of Solid Waste Disposal may achieve formulated goals, the enunciated policy of the General Assembly in 1968 may remain unmet. It will be recalled from Chapter IV, that in enacting the Kentucky Solid Waste Disposal Act of 1968, the General Assembly mandated a state program that would:

. . . provide for the disposal of solid waste in a manner that will protect the public health and welfare, prevent the spread of disease and creation of nuisances, conserve our natural resources, and enhance the beauty and quality of our environment.¹

¹Kentucky, State Department of Health, Division of Environmental Health, Solid Waste Program, Comprehensive Solid Waste Management Program for Kentucky, June, 1970, p. 81.

The 1968 policy of the General Assembly is extremely ambitious as a long run aspiration, especially in view of the solid wastes problem confronting Kentucky. The policy does, however, indicate that the goals of the Kentucky plan need revision now that an operational capability at the state level has produced some short run achievements. Moreover, it is also indicative that the General Assembly's 1968 policy may require increased authority for the Division of Solid Waste Disposal to achieve this policy goal in the future.

In summarizing the analysis of the responsibility and authority provided by the Governors and General Assembly of Kentucky since 1965, only two specific events stand out. Governor Breathitt's executive order of 1966 to initiate a state solid wastes management effort, and the Kentucky Solid Waste Disposal Act of 1968 enacted by the General Assembly. The chief limitation, under this criterion, lies in the tremendous responsibility given the Division of Solid Waste Disposal for managing a serious solid wastes problem. There has been sufficient authority, thusfar, for Kentucky to achieve success in two areas of state solid wastes management. First, many of the most serious practices have been abated; and, the Commonwealth has developed a viable and capable solid wastes agency and program. It is concluded, therefore, that the designated Kentucky solid wastes agencies have maximized their delegated authority to achieve the pragmatic goals formulated in the Comprehensive Solid Waste Management Plan for Kentucky.

Criterion Two

The second criterion, resources appropriated to the designated Kentucky solid wastes management agencies, is an adjunct of the first criterion. Kentucky is not a wealthy state, nor has Federal funding for state solid wastes management activities approached the limits authorized by Congress in enacting the Solid Waste Disposal Act of 1965. Yet, the Kentucky Solid Waste Project and Solid Waste Program have both endured periods of modest state funding to match Federal grants in establishing a viable state effort. On this basis, the significance of the resources appropriated to the state agencies for solid wastes management lies in the increased biennial appropriations by the Commonwealth to far surpass Federal grant support.

The financial commitment of the Commonwealth for a stronger state role has been demonstrated by significant increases in the budget of the designated state agencies. As opposed to the initial \$15,000 appropriated by Kentucky in 1966 to match \$15,000 in Federal grant support for solid wastes management, the annual budget of the Division of Solid Waste Disposal is currently \$260,540. The Commonwealth appropriated \$190,540 and the remaining \$70,000 came from Federal grants.²

There is usually never enough money to satisfy most state agencies, and the Kentucky Division of Solid Waste Disposal is no exception. But, in discussing the resource needs of the Division, the

²Rufus Miller, Chief, Administration Program, Kentucky Division of Solid Waste Disposal, personal interview, August 11, 1972.

greatest need articulated was for a full-time attorney on the Division staff to facilitate and expedite the enforcement and prosecution of regulations promulgated by the Division's Field Operations Program.³

It is concluded, therefore, that with regard to the second criterion, appropriated resources of the designated state agency, the Kentucky Division of Solid Waste Disposal is presently receiving sufficient resources to achieve goals formulated in the Comprehensive Solid Wastes Management Plan for Kentucky. Since regulation is a major tool for achieving goals in Kentucky, increased manpower in this area will be needed to allow the Division to broaden its activities into planning for future statewide needs.

Criterion Three

An analysis of the third criterion, adequacy of the program and policy orientation of the designated Kentucky solid wastes agencies to achieve goals formulated in the state solid wastes plan encompasses an evaluation of the following three functional areas that are emphasized:

1. Public education and information programs;
2. Development and enforcement of regulations governing solid wastes practices; and,
3. Technical assistance to personnel engaged in solid wastes management.

The National Survey of Community Solid Waste Practices identified serious solid wastes management problems confronting the Commonwealth.

³Jerry Hurst, Chief, Field Operations Program, Kentucky Division of Solid Waste Disposal, personal interview, August 11, 1972.

Consequently, considerable staff time and resources have been used by the designated state agencies to correct the most flagrant abuses, and to up-grade statewide solid wastes practices. In confronting the solid wastes problem in Kentucky, a key endeavor was the initiation of a continuing public education program to build a public attitude that will give support to future solid wastes management efforts throughout the Commonwealth. The Division of Solid Waste Disposal has embarked on an effort to provide educational endeavors in four areas:

1. Establishment of a strong environmental health and resources protection curriculum in Kentucky schools.
2. Strengthening and expanding public information activities.
3. Developing a training program on solid waste operations and regulations for state and local health departments.
4. Developing an information and training program for the staff of state agencies and Area Development Districts.⁴

The second functional areas of concern, representing the major effort of the Division, has been the development and enforcement of regulations governing solid wastes practices in Kentucky. The Kentucky Solid Waste Disposal Act of 1968 increased the regulatory authority of the Division of Solid Waste Disposal. Prior to the Kentucky Act of 1968, the designated state agencies emphasized direct technical assistance and permit issuance to solid wastes disposal site operators. Direct regulatory activities have, generally, been performed by local

⁴Kentucky, Solid Waste Program, Comprehensive Solid Waste Program, pp. 73-74.

sanitarians and law enforcement officials within the Commonwealth.⁵ With enactment of the Kentucky Solid Waste Disposal Act of 1968, however, authority and resources were provided to the designated state agency to expand both its own regulatory and enforcement capabilities.

The authority to develop regulations for effective statewide solid wastes management is somewhat tenuous without the capability to enforce them. Although the Division of Solid Waste Disposal's Field Operations Program is designed to enforce Division regulations, except for legal action, the Division is still unable to provide all needed regulatory personnel. In addition, without a staff attorney, the Division is dependent upon the Kentucky State Department of Health's Office of Legal Services to prosecute violators of the Division's regulations, and the Kentucky Attorney General for all criminal litigation. Subsequently, there has been a considerable backlog in prosecuting violations, and a need to augment its regulatory and enforcement capabilities.

To provide adequate and complete regulatory and enforcement activities over solid wastes management practices within the Commonwealth, the Division of Solid Waste Disposal has opted to train sanitarians at the local governmental level. The 15 Area Development Districts of Kentucky encompass all 120 counties. With a health department in each county, the Area Development Districts are expected, by the Division of Solid Waste Disposal, to serve as an area-wide forum for local sanitarians to coordinate their regulatory activities with Division personnel to

⁵Ibid., pp. 45-46.

insure proper solid wastes practices at the local level.

The regulatory activities of local sanitarians are further supplemented by Comprehensive Health Planning Councils which have been formed in each District.⁶ The Health Councils review and recommend programs to improve all health related services within a District, and are expected by the Division of Solid Waste Disposal to initiate local governmental activities that will provide proper solid wastes management practices.⁷ Since the Area Development Districts are voluntary in composition, it remains to be seen if the reliance being placed upon them by the Division will be justified as the activities of the Health Councils evolve.

The third functional area of Division concern, is to provide technical assistance to individuals, private organizations, local governments, regional planning organizations, and state agencies.⁸ This function is performed by the Kentucky Division of Solid Waste Disposal's Field Operations Program. The term, technical assistance, as used in the Comprehensive Solid Waste Management Plan for Kentucky, refers to:

. . . the physical acts of providing technical and educational information on solid waste disposal problems, improved solid waste collection and disposal practices, and solid waste disposal regulations. . . .⁹

Generally, technical assistance programs conducted by the Division's Field Operations Program, are aimed at local governments and

⁶ Ibid., p. 29.

⁷ Ibid.

⁸ Ibid., p. 81.

⁹ Ibid.

private industries within the Commonwealth for the development of disposal facilities to accept conventional and some special solid wastes. In the case of private industry, however, assistance is provided only upon request or when serious problems arise. Specific technical assistance programs conducted by the Division's Field Operations Program fall into the following areas:

Regional and Local Planning Assistance - provide solid waste collection and disposal system planning and development assistance to Regional Comprehensive Health Planning Councils, local governments, and other planning and development organizations. Such assistance might include: formation of garbage and refuse districts including service area determination; plan preparation; and, site selection. . . .

Information and Technical Assistance - provide guidance and technical information on solid waste and assist the several State agencies, regional organizations, local governments, and private organizations to obtain information and technical assistance from sources - both public and private - which can assist the improvement of both regulatory and operational solid waste management in Kentucky. . . .

Permit Application Conference - conduct planning conferences with solid waste disposal site applicants to clarify applications and site development requirements and regulations for operations. . . .¹⁰

The educational aspects of the Field Operations Program's technical assistance effort are oriented toward operating personnel directly involved in solid wastes management. Specific areas of educational assistance and training include:

Federal Program Assistance - provide public and private groups with information on the availability of Federal assistance in areas related to solid waste management and assist these groups in the preparation of applications to the appropriate Federal agencies which can provide the needed assistance. . . .

¹⁰ Ibid., pp. 90-91

Administrative Service Training - routinely participate in regional and local health training programs conducted by the Division of Administrative Services, Kentucky State Department of Health, as a mechanism for training local health officials. . . .

Public Official Training - have training programs developed for members of boards, commissions, agencies, and elected officials on both the State and local level on topics related to the improvement of solid waste disposal practices. . . .

State Agency Training - conduct training programs for State agencies, regional organizations, and local governments on improved techniques for providing solid waste services. . . .¹¹

Development of technical assistance programs is necessarily a continuing endeavor that requires periodic revision. Regardless of the adequacy and sophistication achieved in Commonwealth solid wastes management practices, state of the art technology changes will require full time Division attention. Thus, in analyzing the technical assistance endeavors of the Division, it appears the effort is essential and has accomplished tangible results. The greatest reservation remains, however, that the Division of Solid Waste Disposal's reliance on the 15 Area Development Districts and their Comprehensive Health Planning Councils as the focal point for state actions, will require substantial reconsideration. This problem will be discussed later in this chapter.

To summarize briefly the program and policy orientation of the Kentucky State solid waste agencies, there are two key points. First, the pragmatic goals formulated in the Comprehensive Solid Waste Management Plan for Kentucky are attributable to the serious solid wastes problem confronting Kentucky, coupled with moderate gubernatorial and

¹¹ Ibid., pp. 102-103.

legislative support; and, the emphasis placed on remedial, educational, regulatory, and technical assistance activities by the designated state agencies has precluded any significant planning endeavors for long-term statewide solid wastes management.

III. PLAN IMPLEMENTATION ANALYSIS - MARYLAND

Before beginning to analyze the Maryland Solid Wastes Management Plan implementation program, it is pertinent to review the goals that were formulated in the Solid Wastes Management Plan for Maryland. To facilitate this analysis, however, this author has taken the liberty to consolidate and divide these goals into two broad segments: goals, and, operational objectives. The goals are:

1. To develop regional and county solid wastes management plans.
2. To develop a statewide comprehensive solid wastes management system.
3. To define guidelines and standards for evaluating the overall effectiveness of solid wastes management, personnel, plans, and programs.
4. To develop a communications system to keep local governments informed of new solid wastes management technology.
5. To develop guidelines and standards for assisting local governments in establishing adequate refuse management programs.

The following goals, which have been consolidated from the Solid Wastes Management Plan for Maryland for the purpose of this analysis, are considered as operational objectives.

1. To provide technical assistance to local governments in improving solid wastes collection, disposal, and management practices.
2. To provide technical assistance to counties in developing their comprehensive solid wastes management plans.
3. To provide educational curricula for training personnel engaged in solid wastes management.
4. To undertake cooperative studies with local government officials, health authorities, and industrialists for managing special wastes.

The Maryland Division of Solid Wastes and the Maryland Environmental Service (MES) combine to provide a dual state effort for solid wastes management. Essentially, the Division of Solid Wastes is responsible for policy development, technical assistance, and the regulation of solid wastes management practices in Maryland. The MES, however, is responsible for implementing operational solid wastes disposal systems where they are requested, or when local governments are unwilling or unable to comply with state laws and Division of Solid Wastes' regulations. Since there is a dual responsibility for solid wastes management in Maryland, the Maryland Division of Solid Wastes' plan implementation program will be analyzed as the Maryland counterpart of the Kentucky Division of Solid Waste Disposal. The Maryland Environmental Service, however, will be examined separately, later in this chapter.

Criterion One

The first criterion to be considered in this three part analysis, is the legislative and gubernatorial responsibility and authority

delegated to the Maryland Division of Solid Wastes for achieving goals formulated in the Solid Wastes Management Plan for Maryland. The Maryland General Assembly, since 1966, has demonstrated its support for a state role in effectively managing solid wastes on three different occasions.

First, the General Assembly mandated a statewide survey of Maryland to identify the nature and magnitude of the solid wastes problem. Second, in 1967, upon completion of the statewide survey, the General Assembly revised Article 43 of the Maryland Health Laws to require that all solid wastes plans be filed with the Maryland Board of Health. The General Assembly, at this time, also authorized the Maryland Board of Health to establish minimum regulations concerning the submission of plans with requests for Board approval to install, alter, and extend solid wastes disposal systems. Third, in 1970, through a series of legislative enactments, the Maryland General Assembly further strengthened a state role in solid wastes management. The highpoint of the 1970 revisions to Article 43 of the Maryland Health Laws was the creation of the Maryland Environmental Service. Also of great significance to the responsibility and authority delegated to the Maryland Division of Solid Wastes were the following enactments and their provisions.

1. Senate Bill 542 provided for a Sanitary Facilities Fund to help finance the planning of solid wastes management systems, with joint financing provided by the State Department of Health and Mental Hygiene and the 23 counties of Maryland and Baltimore City.

2. Senate Bill 543 provided for performance bonding of all privately owned sanitary landfills in the amount of \$1,000 per acre, with a minimum bond of \$25,000 to insure proper operation of these facilities.

3. Senate Bill 544 required each county and Baltimore City to prepare, adopt, and submit a comprehensive plan for solid wastes management by January 1, 1974.

These three legislative enactments by the Maryland General Assembly complemented the enthusiasm exhibited by Maryland Governors Tawes, Agnew, and Mandel since 1965. Commencing with Governor Tawes' executive order in December 1965 for the Maryland Department of Health to comply with the provisions of the Solid Waste Disposal Act of 1965, there has been a steady gubernatorial commitment.

In 1967, newly elected Governor Agnew authorized a feasibility study for a statewide wastes acceptance service that was to become the predecessor of the Maryland Environmental Service. Moreover, during Governor Agnew's administration in 1968, a \$129 million bond issue was approved by the General Assembly that was applied to the improvement of environmental conditions in the state. By 1970, the groundwork prepared by Governors Tawes and Agnew was climaxed during the early days of the newly elected Mandel administration. With the enthusiastic support of Governor Mandel, the Maryland Environmental Service was created along with the enactment of previously mentioned legislation.¹²

¹²Elizabeth H. Haskell, Managing the Environment: Nine States Look for New Answers (Washington: Smithsonian Institution, 1971), p. 336.

With the support of the Maryland governors and the General Assembly since 1965, the Maryland Division of Solid Wastes is beginning to manage the Maryland solid wastes problem. By 1974, when the county and Baltimore City solid wastes plans have been developed, adopted, and approved, the state should have achieved most, if not all, of its formulated goals. At that time, the Maryland Division of Solid Wastes should be in a position to anticipate and subsequently manage solid wastes problems in the state, rather than reacting to them. Maryland has formulated ambitious goals, but the responsibility and authority delegated to the Division of Solid Wastes seem commensurate in terms of support and legislation.

Criterion Two

The second criterion for this analysis is the resources appropriated to the Maryland Division of Solid Wastes. The initial state appropriation was \$30,318 to match \$29,467 of Federal funds in January 1967 to commence a statewide solid wastes planning effort by the Maryland Division of Solid Wastes. With the 1966 statewide survey mandated by the General Assembly completed, the Division was not burdened with expending its resources and time investigating and correcting flagrant solid wastes management abuses. Moreover, the Division was able to orient its functional activities toward planning and management rather than remedial and regulatory activities. Table II reflects the State - Federal funding provided the Maryland Division of Solid Wastes.

As noted in Kentucky, there is usually never too much money for a state agency, but the Maryland Division of Solid Wastes appears

TABLE II
STATE AND FEDERAL FUNDING OF MARYLAND DIVISION OF SOLID WASTES,
FISCAL YEARS 1967-1973

	Fiscal Year 1967	Fiscal Years 1968-1969	Fiscal Years 1970-1971	Fiscal Years 1972-1973
State	\$30,318	\$ 69,414	\$ 99,932	\$192,929
Federal	\$29,467	\$ 67,514	\$ 49,966	\$ 65,000
TOTAL	\$59,785	\$136,928	\$149,898	\$257,929

SOURCE: Raymond J. Karpen, Head, Planning and Program Evaluation Section, Maryland Division of Solid Wastes, personal interview, August 22, 1972.

sufficiently endowed with resources to perform the tasks necessary to achieve goals formulated in the Comprehensive Solid Wastes Management Plan for Maryland. The greatest resource need indicated by the Division was for a staff planner. At present, the Division is dependent upon the planning staff of the State Department of Health and Mental Hygiene and Department of State Planning to provide professional planning assistance.¹³ Thus, it is concluded that with regard to the second criterion, the resources appropriated to the Maryland Division of Solid Wastes are sufficient to achieve the goals formulated in the Solid Waste Management Plan for Maryland.

Criterion Three

The third criterion for this analysis is the program and policy orientation of the Maryland Division of Solid Wastes to achieve goals formulated in the Comprehensive Solid Wastes Management Plan. Encompassed in this analysis is an evaluation of the following three functional areas that have been emphasized in Maryland:

1. Monitoring of solid wastes management practices throughout Maryland.
2. Planning and review of county plans to insure compliance with the state plan.
3. Technical assistance and research in the management of special wastes.

¹³Charles M. Kenealy, Chief, Maryland Division of Solid Wastes, personal interview, August 22, 1972.

While three areas of functional concern are emphasized in Maryland, the first area noted, monitoring of solid wastes practices throughout Maryland, is intended to maintain and up-grade the quality of solid wastes practices throughout the state. By monitoring the solid wastes management programs being conducted by local health authorities, the Division of Solid Wastes is also striving to improve the compilation and reporting of solid wastes information by local personnel. This endeavor entails several of the operational objectives formulated as goals in the Solid Wastes Management Plan for Maryland. These operational objectives include training programs for local personnel and the development of better methods to analyze the effectiveness of local solid wastes management plans and programs.

The second functional area of Division concern is planning and plan review. Primary emphasis, at present, is on reviewing the drafts of county plans as they are submitted for approval. In accordance with Senate Bill 544, enacted by the Maryland General Assembly in 1970, each of Maryland's 23 counties and Baltimore City are required " . . . to prepare, adopt and submit a comprehensive plan dealing with solid wastes acceptance and disposal facilities not later than January 1, 1974."¹⁴

These plans are required to contain:

. . . delineations of areas having acceptable solid wastes management systems, those where systems will be feasible and required within a specified time period and others in which

¹⁴Maryland, State Department of Health and Mental Hygiene, Environmental Health Administration, Division of Solid Wastes, Solid Wastes Management Plan for Maryland, n.d., p. IV-2.

the establishment of solid wastes disposal systems probably will never be feasible.¹⁵

One of the objectives of the Maryland Division of Solid Wastes is to attain 100 percent participation among local communities, incorporated municipalities, and counties in regional planning. Mandatory county planning has provided a basis for achieving this end. Moreover, the functional aim of the Division in reviewing the county plans is to insure compliance with state law and Division regulations, while establishing a standard format and uniform presentation of data " . . . so that individual plans may be readily collated into a detailed, comprehensive state plan."¹⁶

The third functional area of Division concern is to provide technical assistance and research into the management of special wastes and problem areas of solid wastes management. With the counties and Baltimore City combining with the Maryland Environmental Service to provide wastes disposal facilities for conventional solid wastes, the Division is able to devote its time and resources to the area of special wastes. At present, special wastes being subjected to Division scrutiny include: used tires; junked cars; waste motor oil; sewage solids; chemical wastes; agricultural wastes; and, solid wastes generated by watercraft.

In conclusion, the three major areas of Division concern indicate an advanced level of state solid wastes management. Having established a workable state program and relatively adequate statewide climate for

¹⁵Ibid.

¹⁶Ibid., pp. IX-2.

effective and sanitary solid wastes management practices, the Division is able to devote its resources to management and planning in what this author would consider the second phase of state solid waste management programs where reaction to a solid wastes problem is replaced by anticipation and management.

IV. COMPARISON OF KENTUCKY AND MARYLAND

In evaluating the findings of the three criteria analysis of Kentucky and Maryland, several points emerge which characterize each state's solid wastes plan implementation program.

Criterion One

With regard to the first criterion, adequacy of authority, the designated state agencies for solid wastes management in Kentucky have received moderate support in terms of delegated gubernatorial and legislative responsibility and authority needed to achieve the pragmatic goals formulated in the Comprehensive Solid Wastes Management Plan. However, the formulated goals of Kentucky need upward revision if the effective statewide management of solid wastes is to be achieved.

Maryland, on the other hand, has had strong legislative and gubernatorial support in providing the responsibility and authority necessary for achieving goals formulated in the Solid Wastes Management Plan for Maryland. With a dual state capability provided by the Division of Solid Wastes and the Maryland Environmental Service, Maryland has been able to make great progress toward the achievement of formulated goals and may be able to effectively manage solid wastes throughout the state by January 1, 1974.

Criterion Two

The state resources appropriated to both the Kentucky Division of Solid Waste Disposal and the Maryland Division of Solid Wastes are, at present, virtually equal. Although Kentucky is receiving slightly more Federal grant support, this is balanced by Maryland providing slightly more state funds. The disparity in state achievements lies partially in resource availability between Kentucky and Maryland, but the predominant cause, in this author's opinion, is the magnitude of the solid wastes problem confronting Kentucky, and subsequent policy and program orientation adopted in Kentucky. In sum, however, the resources provided to both designated state agencies in Kentucky and Maryland, generally, have been adequate. The greatest difference in State support between Kentucky and Maryland occurred in the period, 1966 - 1969, when Maryland's annual operating budget for the Division of Solid Wastes was approximately twice that of the designated Kentucky solid wastes agencies.

Criterion Three

This criterion, program and policy orientation of the designated state agencies to achieve goals formulated in their respective state plans, exhibits the greatest difference between Kentucky and Maryland's solid wastes plan implementation programs.

Kentucky is a relatively large state in comparison with Maryland. Coupled with a greater solid wastes problem, Kentucky has had to expend considerable amounts of staff time and resources for regulatory personnel in travel costs alone. In addition, by emphasizing remedial, regulatory,

and technical assistance programs to upgrade the overall standard of solid wastes practices in the Commonwealth, very little significant long term planning is conducted.

In comparison, Maryland has a relatively high standard for statewide solid wastes practices. Subsequently, the Maryland Division of Solid Wastes has been able to pursue, what this author considers to be, the second phase of a state solid wastes management program with emphasis on management and planning rather than remedial and regulatory functions.

State Impact on Local Systems

In Kentucky, the available instruments for plan and program implementation necessitate a reaction to solid wastes management practices at the local governmental level by both the public and private sector. The Kentucky Division of Solid Waste Disposal does not have the legislative power to provide positive inducements for local governments to plan, construct, and operate sanitary and effective solid wastes management systems. Moreover, statutory and fiscal limitations in Kentucky require the Division to place great reliance on the voluntary cooperation of the 15 Area Development Districts and local governments for developing the institutional vehicles needed to provide solid wastes management systems that can and will comply with the Division's plan and regulations.¹⁷

¹⁷William Holland, Chief, Research and Planning Program, Kentucky Division of Solid Waste Disposal, telephone interview, August 16, 1972.

Essentially, the Kentucky strategy is to develop capable institutions at the local governmental level to provide solid wastes management systems. This strategy is based upon two options: voluntary local agreements between political subdivisions under the provisions of the Kentucky Interlocal Cooperation Act of 1962; and, the creation of Garbage Disposal Districts and/or Urban Services Districts. In either instance, the 15 Area Development Districts are being encouraged by the Kentucky Division of Solid Waste Disposal and the Kentucky Program Development Office to provide the stimulus for regional or area-wide solid wastes management systems by employing either of these two institutional devices.

The Kentucky Division of Solid Waste Disposal and Maryland Division of Solid Wastes follow a similar approach in organization and philosophy. Aside from the solid wastes problem confronting each state, and the extent of gubernatorial and legislative support, the key difference lies in Maryland's ability to guarantee compliance with its solid wastes plan and regulations. Rather than relying on the voluntary compliance of local governments to provide sanitary and effective solid wastes management programs, the state has the Maryland Environmental Service in its arsenal of implementing devices to insure local governmental compliance. Thus, the implementing institution for operational solid wastes management systems in Maryland, the Maryland Environmental Service is considered.

V. THE MARYLAND ENVIRONMENTAL SERVICE (MES)

The MES combines with the Maryland Division of Solid Wastes to provide a managerial rather than regulatory emphasis to solid wastes practices in the state. More importantly, the MES provides Maryland with the option of the state actually constructing and operating solid wastes management facilities that were previously the sole responsibility of local governments. With a combination operational and managerial capability, Maryland is able to optimize solid wastes management practices, as opposed to the regulatory approach in Kentucky which can only provide a minimum level of compliance. In addition, having the MES allows the state to guarantee compliance with its statutes, regulations, and plans for solid wastes management. There are three ways in which the MES can be deployed:

1. Joint MES - County Planning;
2. Mandatory response to a request; and,
3. Mandatory response to a directive.¹⁸

Joint MES - County Planning

By statute, the 24 political subdivisions of Maryland, 23 counties and Baltimore City, were required to prepare and adopt solid wastes management plans by January 1, 1974. Concurrently, the MES was statutorily mandated by the General Assembly to prepare regional solid wastes plans for the state. At present, 21 counties and Baltimore City are

¹⁸Thomas D. McKewen, "Wholesaling Environmental Services," Environmental Science and Technology, VI (April, 1972), 327.

jointly preparing solid wastes plans. Following county and Baltimore City boundary lines, the MES has delineated six solid wastes planning regions in Maryland. These regions are composed entirely of participating counties and Baltimore City, and demonstrate considerable flexibility. For example, Frederick County is a planning region unto itself, while five counties and Baltimore City are included in a single planning region for the Baltimore metropolitan area. Since all but two counties are preparing joint plans with the MES, the remaining planning regions are four county in composition, with the exception of the three county region in extreme western Maryland.¹⁹

The MES regional solid wastes plans specify the solid wastes facilities requirements for a projected five year period. In addition to estimating the five year wastes facilities needs of the region, the MES regional plans are also intended to:

. . . designate those new and existing facilities or portions of them that will be built, expanded and operated by municipalities or industries and which will be provided by the State.²⁰

Once the regional MES five year plans are adopted by participating political subdivisions, the following activities are begun:

Service Districts will then be designated to serve for financial and operational matters, and the Service will proceed to acquire, extend and construct those facilities as were set for the region or district. Once MES builds a system, no competing system can be built.²¹

¹⁹Wilfred H. Shields, Chief, Solid Waste Services, Maryland Environmental Service, telephone interview, May 2, 1972.

²⁰Haskell, Managing the Environment, p. 341.

²¹Ibid., p. 342.

Mandatory Response to a Request

The MES can also provide its services upon the request of a Maryland industry or municipality. At such a time, the MES must negotiate a contract with the requesting party. In a mandatory response to a request situation, the MES has a certain amount of flexibility. For example, in providing its services, the MES does not necessarily have to operate an entire wastes disposal system. It can provide limited services, such as financing the construction of a new facility or only providing design or actual construction work for the requesting party.²²

Mandatory Response to a Directive

With regard to solid wastes practices in violation of state law, the Secretary of Health and Mental Hygiene can direct the MES to do what is necessary to provide solid wastes services in compliance with state law. This can be accomplished by the MES through the following remedies: expansion of existing disposal facilities; construction of new disposal facilities; or, operating existing facilities in a sanitary manner. Under any of these circumstances, the MES is required to contract its services and charge full costs. If a satisfactory contract cannot be negotiated between the MES and the violating party, there is one recourse:

If the two concerned parties cannot agree to charges or other aspects of the contract, the Public Service Commission, upon petition from either party, will solve the predicament by binding arbitration.²³

²²Ibid., p. 345.

²³Ibid., p. 344.

Fiscal Resources of the MES

As a public corporation, the MES charges its customers for its services to reflect the costs and overhead incurred by the MES. The MES will continue to receive state appropriations until 1974 when it is expected to become self-sufficient. To finance its capital facilities and activities, the MES has two options: first, financing provided by the State of Maryland's general obligation bonds. The second option, MES revenue bonds, is expected to be the most common method. By issuing MES revenue bonds on its own initiative, the MES should have a significant financial advantage over other types of revenue bonds, since the MES bonds have a guarantee. According to state law, the Maryland Comptroller is directed to:

. . . divert five types of state shared revenues up to the amount local governments have contracted to pay MES, if a locality fails to meet conditions of the contract. The types of state shared revenues are the racing tax, the state corporate income surtax, the recordation tax, the tax on amusements and the license tax. These funds amount to 20%, in some cases, of a local government's revenues. An industry or other person must pay his bill for contracted services, or the amount becomes a lien against his property.²⁴

Advantages of the MES

The great advantage of the MES from the point of view of planning and managing a statewide solid wastes management system, is the fact that local governments in Maryland have the option of providing their own systems in compliance with state laws, or employing the MES. Since there is a choice involved, the MES will have to prove itself as a

²⁴Ibid., pp. 346-347.

desirable alternative for many local governments. As an innovative state organization, the MES is expected to provide the following advantages over local governmental operations of solid wastes management systems.

1. Economies of scale in planning, constructing, operating, and maintaining solid wastes management systems.
2. Cheaper and more efficient operations.
3. Better financing, since bonded indebtedness of the MES will not accrue to State or local indebtedness.
4. Achieve certain political economies of scale on the locating of disposal facilities.

With these potential advantages, it seems likely that in the future the MES will ultimately provide a statewide service to all governmental units. In effect, the capability provided by the MES may result in the complete shifting to the State of local responsibilities for solid wastes disposal.

In conclusion, Maryland has recognized the traditional role of the state to provide essential services. Moreover, the Maryland approach to the solid wastes problem appears to be a response to a recognized statewide problem of urbanization. The state recognized needs unmet by local governments and responded with an innovative and effective program. The Kentucky approach to the solid wastes problem, in contrast to Maryland, relies on the traditional state response in a rural environment by emphasizing regulatory activities and technical assistance.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

I. CONCLUSIONS

In reviewing the previous chapter of this thesis, several conclusions have been reached pertaining to governmental efforts for managing solid wastes. As the stimulus for the states to initiate solid wastes management activities, the Federal Solid Waste Disposal Act of 1965 has had a significant effect in terms of creating a climate of greater awareness for positive action at all governmental levels, and specific tangible accomplishments by the States. In this context, some conclusions are offered on the roles of the Federal, state, and local governments in solid wastes management for now and in the future.

Federal Role

Unquestionably, the Federal leadership in solid wastes management demonstrated by the Solid Waste Disposal Act of 1965 was timely and necessary. The primary benefits resulting from the Act are, generally, in five areas.

1. The Act gave recognition to solid wastes as a serious National environmental problem and has helped to broaden Federal concern for a problem which had previously been limited to regulatory actions.

2. Federal grant support provided by the Act enabled many state and interstate governments to initiate programs for solid wastes management that would not have been conducted without Federal assistance.

3. The Act indirectly resulted in the National Survey of Community Solid Waste Practices. The National Survey was able to identify, with reliable data, the nature and magnitude of the solid wastes problem throughout the Nation.

4. The state's identification of solid wastes problems within their borders has resulted in the creation of viable state agencies for the statewide management of solid wastes.

5. State concern for effective solid wastes management has resulted in an innovative and aggressive response to solid wastes management in Maryland, which may provide a National example for a statewide program.

Despite the many benefits provided by the Solid Waste Disposal Act of 1965, this initial Federal legislation in solid wastes has had many shortcomings which have diminished the overall effectiveness of the Act as a stimulus to the effective Nationwide management of solid wastes. Many provisions of the Act were compromised to gain Congressional enactment. A minority report of the House Committee on Interstate and Foreign Commerce indicated that Federal involvement in solid wastes related affairs was unnecessary. Subsequent compromises appear to have limited the Act in at least three areas:

1. There were no Federal standards to measure the adequacy of solid wastes management systems.

2. Unlike Federal abatement provisions in Federal air and water pollution legislation, the Act provided no Federal enforcement provisions to correct improper interstate solid wastes practices.

3. No Federal grants were provided in the Act for the construction of solid wastes disposal facilities.

Future Federal Role

Since its enactment in 1965, the Federal Solid Waste Disposal Act of 1965 has been amended by the Resource Recovery Act of 1970. The 1970 legislation has remedied several of the limitations embodied in the 1965 Act. The 1970 Act provides Federal grant assistance for the construction of solid wastes disposal facilities, and research and demonstration grants for developing improved solid wastes disposal technology.

In a personal interview conducted with Tennessee State Representative Tom Jensen, who is also Chairman of the National Legislative Conference Task Force on Natural Resources, Representative Jensen provided several insights on the direction of possible future changes in Federal solid wastes legislation.¹ In his comments, he suggested that the National Legislative Conference recommend a greater state role in two areas of future Federal solid wastes legislation. The first would be increased Federal grant support for a broad solid wastes disposal program rather than categorical grants for specific program items. This would give the states greater flexibility in responding to specific local solid wastes management problems. The second would be for a greater state policy-making role in joint state - Federal formulation of overall National goals for solid wastes management.

¹Tom Jensen, Tennessee State Representative, Chairman, National Legislative Conference Task Force on Natural Resources, personal interview, August 29, 1972.

This investigation indicates that a continuing Federal role is a necessary component for National Solid wastes management. Federal assistance, however, will be most efficacious when it is coordinated with the designated state agency for solid wastes management. Such cooperation will help to insure the optimum distribution of grants to the political subdivisions of the state to carry out the state plan which provides for a systematic and logical approach to solid wastes management.

State Role

The stimulus provided by the Federal Solid Waste Disposal Act of 1965, political pressures for improved environmental quality, and the inability of local governments to effectively manage solid wastes have combined to produce a greater state role in solid wastes management. In examining the Kentucky and Maryland responses to the Solid Waste Disposal Act of 1965, it has been noted that Maryland has developed an aggressive and innovative state program that is unique among the states. Kentucky, on the other hand, has responded with a more conservative but evolving approach that probably typifies the traditional and more common state approach presently being taken by states participating in the Federal planning grant program.

In analyzing the Kentucky and Maryland responses to their respective solid wastes problems, it appears that a state solid wastes program is conducted in two general phases. The first phase is to develop an operational state capability such as to initiate remedial activities necessary to mount a management program that will produce the necessary political support. In the second phase, with greater

political support and more resources, the emphasis of the designated state solid wastes agency shifts to the management and planning of future solid wastes management needs within the state. This might encompass the following three endeavors:

1. Identify areas of the state having satisfactory sanitary landfills, their capacity, and life expectancy. In those areas of the state without satisfactory sanitary landfill operations, provide the necessary assistance to up-grade these facilities.

2. Identify areas of the state where urbanization is projected to occur and conduct the necessary studies to provide a basis for meeting disposal needs in these areas.

3. Identify those sites within projected growth areas where sanitary landfills are geologically acceptable. In addition, efforts should be initiated to acquire these areas or provide the necessary land use controls to make them socially acceptable and compatible with projected adjoining land uses.

Thus, the first phase is a reaction to a neglected problem, while in the second phase, the state anticipates and subsequently manages the solid wastes problem. On the basis of analyzing both Kentucky and Maryland's plan implementation programs, it appears that Kentucky is still evolving through the first phase of solid wastes management while Maryland is entering the second phase. Complete Maryland entry into the second phase should be accomplished by January 1, 1974, when MES and county plans are to be implemented.

The nature and magnitude of the solid wastes problem has severely taxed the ability of local governments to effectively provide

adequate management systems. As the states become increasingly involved in remedying the solid wastes problem within their borders, the need for a change in both institutions and traditions is recognized, especially in the State of Maryland. While some states, such as Kentucky, view voluntary regional organizations, special districts, and inter-local agreements as the most feasible institutional device for providing solid wastes management systems, a trend has emerged that suggests local governmental approaches are not always desirable, and in fact may not be able to cope with the problem. On the other hand, a more forceful view has emerged with the creation of the MES as an appropriate state institution for helping to solve the Maryland solid wastes problem. Both Kentucky and Maryland, however, have realized the need for a strong state role in solid wastes management.

In brief, the states can provide many of the following advantages in solid wastes management over local governments:

1. The ability to achieve economies of scale in the planning, constructing, maintaining, and operating of solid wastes management systems.
2. The ability to achieve political economies of scale by taking local politics out of location decisions.
3. The ability to optimize major decisions transcending local governments, and leave to local governments purely local decisions such as collection and handling practices.
4. The ability to achieve area and statewide compliance with plans, regulations, and laws for solid wastes management by creating appropriate implementation vehicles.

In summarizing the role of the states in solid wastes management, the states appear to be a pivotal key. Regardless of the level of state involvement, its minimum role should at least encompass the coordination of Federal resources with the needs of local governments in accordance with a state plan to insure systematic and effective solid wastes management practices statewide.

Local Governments

The National Survey of Community Solid Wastes Practices revealed the inability of most local governments to effectively discharge their traditional responsibilities for managing solid wastes. Their efforts have been frustrated by insufficient financial and technical resources. In addition, direct Federal assistance to local governments for solid wastes management results in uncoordinated and inefficient facilities when they are not operated on an area-wide or regional basis. The complexity and expense of providing effective solid wastes management systems in many areas underscore the need for regional or area-wide approaches that will provide maximum service at minimum cost.

Kentucky provides a convenient example of a state developing a statewide program that maintains the traditional emphasis on local governments in an area-wide context. The Kentucky strategy, which uses the 15 Area Development Districts, may have its merits in some situations. The effectiveness of a system, however, which separates planning and implementation is yet to be proven. Certainly, the voluntary nature of the Kentucky strategy is a major weakness. In addition, if special districts are employed as an area-wide institution, they represent an

additional layer of government which, without its governing body being directly elected from the area could be politically unresponsive and thus limit statewide efforts to manage solid wastes.

The Maryland program is an example of direct and effective statewide solid wastes management. By having the MES, Maryland offers recalcitrant political subdivisions and the private sector the choice of providing their own solid wastes management systems in compliance with the directives of the state, or the option of the state assuming the responsibilities that it has traditionally delegated to local governments.

In conclusion, a state participating in the planning grant program may come to realize that in passing from phase one, development of operational capabilities, to phase two, planning and management activities, of their evolving state programs many local, regional, or area-wide governments may be unwilling or unable to comply with state directives governing solid wastes management practices. At such a time, the state may have to seriously consider the Maryland example and initiate an operational state capability through an institutional device comparable to the MES that can guarantee compliance with the directives of the state to provide for the public health and environmental well-being.

II. RECOMMENDATIONS

This investigation seems to indicate that Maryland has the most advanced state institutional arrangement for effectively managing solid wastes. This is based on the assumption that the ability to

confront a solid wastes problem and discharge a statewide management program is present in Maryland. While the Maryland example, especially with regard to the MES, is not yet politically feasible in many states, there are several devices available to the Maryland Division of Solid Wastes which should be considered by interested states. Three devices which have considerably improved the efficacy of the Maryland solid wastes plan implementation program are:

1. Mandatory county planning;
2. The Sanitary Facilities Fund; and,
3. Performance bonding of all private wastes disposal facilities.

None of these devices appear politically volatile and should be stressed as necessary to those states considering the revision of state laws for solid wastes management. Moreover, as the states become increasingly involved in solid wastes management, they must come to accept the fact that Federal guidelines and grant support cannot always sustain and guide a state effort in a manner appropriate to the individual state. The states, therefore, will have to provide the legislative, institutional, and fiscal resources that are necessary and appropriate for operating a solid wastes management program that suits its own needs. Specifically, the states that stress active participation by their political subdivisions must also provide the incentives and resources necessary for compliance with the directives of the state. As noted in Maryland, mandatory county planning for solid wastes management is facilitated by the availability of the Sanitary Facilities Fund to provide the counties with the necessary resources. With regard to performance bonding of all private sanitary landfills, this device provides

considerable state control over the private sector. Additionally, the state must be prepared to assume operation or close down local governmental facilities in violation of state directives. As the demand for disposal facilities increases in urbanizing areas, private sanitary landfills can be a relatively lucrative business venture. Perhaps the minimum \$25,000 Maryland performance bond is inappropriate for other states, but the point remains that interested states should establish a bonding level which is appropriate and will insure proper operation and closing of these facilities by concerned and competent owners.

With regard to area-wide and regional endeavors to facilitate solid wastes management, it is advocated by this author that the integrity of existing political subdivision boundaries be retained rather than creating arbitrary area-wide or regional institutions on a voluntary basis. Voluntary institutions, such as Area Development Districts, without political accountability and the power to implement plans and programs are a poor substitute for legitimate political subdivisions of the state, such as the counties. It may be advantageous for some states to reconsider the potential of the counties as logical building blocks for area-wide efforts that also have political accountability. In those states with weak and/or poor counties, such as Kentucky, Area Development Districts may be necessary and desirable if and when state requirements for solid wastes planning are beyond the capabilities of individual counties. Under such circumstances, there must be political accountability to insure responsive activities. In this manner, counties or cooperative efforts among counties can be encouraged and given the

incentives to plan for solid wastes management in compliance with the directives of the state.

Traditionally the states have provided legislative and certain regulatory functions with regard to urban services. This role seems to be a continuation of traditions prevalent in confronting problems of the agrarian society in the 19th century. However, as has been pointed out repeatedly the states are the only regional governments we have. The states have proven administrative and financial resources to deal with problems affecting large areas. This research suggests that there are aspects of solid wastes management, especially disposal, that might be well provided by the states.

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