The New Federal Role in Solid Waste Management: The Resource Conservation and Recovery Act of 1976

William L. Kovacs* and John F. Klucsik**

I. INTRODUCTION

Prior to the enactment of the Resource Conservation and Recovery Act of 1976,[1] solid waste management, which includes both the collection and disposal of refuse, was primarily a state or local issue. Although a number of federal statutes affected solid waste management and particularly refuse disposal, there was no coherent federal scheme from which these jurisdictions could obtain guidance. The lack of such a scheme produced confusion within both the public and private sectors of the economy. This confusion over federal policy was an underlying cause of the absence of planning and investment necessary to solve the problems created by increasing quantities of waste. Finally, government, industry, and environmental groups urged the federal government to establish a consistent policy under which these problems could be solved. The Resource Conservation and Recovery Act of 1976 was the congressional response to the solid waste management problem. This law established the first comprehensive federal policy for waste management.

This Article will discuss how the new federal policy addresses solid waste management. We will first discuss the difficulties

* Former Chief Counsel for the United States House of Representatives Subcommittee on Transportation and Commerce; J.D., Ohio State University College of Law; Member of Bars of Pennsylvania and District of Columbia; Presently with Liebert, Short, FitzPatrick & Levin in Philadelphia.

** Special Assistant to the United States House of Representatives Subcommittee on Transportation and Commerce; M.B.A., Lehigh University. The views contained in this article are those of the authors and are not the views of the Subcommittee on Transportation and Commerce.

1. Pub. L. No. 94-580, 90 Stat. 2795 (codified at 42 U.S.C.A. §§ 6901-6987 (West Supp. 1977)).

caused by the poorly planned disposal of solid waste. Second, we shall consider the federal, state and local laws relating to waste management in existence prior to 1976. Next we will discuss the legislative history of the Resource Conservation and Recovery Act; the difference in policy regarding non-hazardous municipal refuse and hazardous chemical or industrial wastes; the use of federal purchasing power to stimulate the use of materials recovered from waste; and the relationship between the solid waste management plans for federal facilities and state and local waste management plans. Finally, we will discuss the existing impediments to comprehensive waste management.

II. THE SOLID WASTE PROBLEM

The challenge of properly managing the nation's solid wastes was summed up by the mayor of one of our major cities a few years ago when he said: "Everyone wants us to pick up their trash, but no one wants us to put it down."[2] The first step toward meeting the challenge of environmentally sound waste management is to recognize that solid waste is more than just trash. The second step is to understand why "nobody wants us to put it down."

Solid waste was defined under the federal Solid Waste Disposal Act of 1965[3] as "garbage, refuse, and other discarded solid materials, including solid-waste materials resulting from industrial, commercial, and agricultural operations, and from community activities, but does not include solids or dissolved material in domestic sewage or other significant pollutants in water resources."[4] That definition was expanded in 1976 to include "sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities."[5] This expanded meaning is the one to be used in this Article. Although solid waste management includes "the collection, source separation, storage, transportation, transfer, proces-

2. *Symposium on Resource Conservation and Recovery, House Subcomm. on Transportation and Commerce of the House Comm. on Interstate and Foreign Commerce*, 94th Cong., 2d Sess. 6 (1976).

3. 42 U.S.C. §§ 3251-3259 (1970).

4. *Id.* § 3252(4).

5. Resource Conservation and Recovery Act of 1976 § 1004(27), 42 U.S.C.A. § 6903(27) (West Supp. 1977).

sing, treatment, and disposal of solid waste,"[6] we will not discuss collection since federal involvement in this aspect of solid waste management is, as a practical matter, limited.[7]

One of the major problems of solid waste management, and one which has received considerable federal attention, is simply the volume of waste being created. The total annual volume of solid waste from mining, agricultural, municipal, industrial, and sewage treatment activities is at least 2.8 billion tons and could be as much as 4 billion tons.[8] The volume of solid waste is not only large, it is rapidly increasing. Although the total volume of waste is increasing at a rate five times greater than the country's population growth, our population centers are facing an even more rapid increase. The volume of municipal solid waste,[9] the fourth largest[10] and most difficult category of waste to manage, is increasing by eight per cent annually.[11] In practical terms the statistics mean that over the past 50 years, the amount of waste discarded per person has doubled. In urban areas, where approximately 74 percent of the total population now lives, solid waste has doubled in volume within the last 20 years.[12] During those 20 years federal environmental protection legislation designed primarily to regulate emissions into the air and water have eliminated two popular methods of solid waste

6. *Id.* § 1004(28), 42 U.S.C.A. § 6903(28).

7. However, under the research and development provisions of the Resource Conservation and Recovery Act of 1976, *id.* §§ 8001-8007, 42 U.S.C.A. §§ 6981-6987, the Environmental Protection Agency (EPA) is granted general authority to conduct research in improved methods of waste management, including collection. *Id.* § 8001(a), 42 U.S.C.A. § 6981(a).

8. *Hearings on H.R. 5487 and H.R. 406 before the Subcomm. on Transportation and Commerce of the House Comm. on Interstate and Foreign Commerce*, 94th Cong., 2d Sess. 758 (1975); STAFF OF HOUSE SUBCOMM. ON TRANSPORTATION AND COMMERCE OF THE HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, 94TH CONG., 2D SESS., MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, at 3 (Comm. Print No. 20 1976).

9. *Id.* at 5. Municipal solid waste is distinguished from other wastes by both origin and content. Municipal solid waste was estimated in 1971 to be approximately 80 percent organic material, 9.7 percent glass, 9.5 percent metal, and 1.4 percent miscellaneous materials. The total volume of these wastes which constitute materials discarded by consumers, rather than industrial or commercial wastes, is approximately 135 million tons annually, according to 1973 estimates.

10. *Id.* at 4.

11. HOUSE COMM. ON GOVERNMENT OPERATIONS, SOLID WASTE—MATERIALS AND ENERGY RECOVERY, H.R. REP. NO. 1319, 94th Cong., 2d Sess. 3 (1976).

12. SOLID WASTE MANAGEMENT TASK FORCE OF THE NATIONAL LEAGUE OF CITIES AND THE U.S. CONFERENCE OF MAYORS, CITIES AND THE NATION'S DISPOSAL CRISIS 1 (1973).

disposal: incineration and ocean dumping.[13] The increase in waste volume, in conjunction with the decrease in the number of acceptable disposal methods, has resulted in approximately 90 percent of this country's waste being disposed of on the land.[14] This fact means that nearly one-half of all major cities will exhaust their landfill capacity within five years.[15] Many, including Jersey City, New Jersey, Kansas City, Missouri, and Boston, Massachusetts, have already exhausted present landfill capacity within their corporate limits.[16] Many metropolitan suburbs, counties and even small towns are in a similar situation.

As local landfill capacity is exhausted, the cost of solid waste disposal increases. The present average acquisition cost per landfill acre is $13,260, an average increase of 55 percent over the past five years.[17] In the next five to ten years the cost of land disposal for most municipalities can be expected to continue to increase with the increasing scarcity of available landfill sites.[18] In addition, as communities resort to using outlying disposal sites, the costs of handling and transporting waste between the collection areas and the disposal sites will increase.[19] By 1985 the typical community will have experienced direct cost increases of between 20 and 30 percent for solid waste disposal.[20] On a per ton basis, the cost of solid waste disposal could rise from the current national average of $5 per ton to $12 per ton for disposal alone.[21] Applying the present $27 per ton cost for collection and disposal to our present waste volume, the annual national cost for solid waste management is about $7.8 billion, the third largest local expenditure funded from local revenues.[22] If the 1985 projection of $50 per ton turns out to be correct, the impact of waste management costs on local gov-

13. H.R. REP. NO. 1319, 94th Cong., 2d Sess. 2 (1976).

14. FENN, HANLEY & DEGEARE, USE OF THE WATER BALANCE METHOD FOR PREDICTING LEACHATE GENERATION FROM SOLID WASTE DISPOSAL SITES 1 (U.S. Environmental Protection Agency, SW-168, 1975).

15. CITIES AND THE NATION'S DISPOSAL CRISIS, *supra* note 12, at 1.

16. MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, *supra* note 8, at 1.

17. *Id.* at 12.

18. U.S. ENVIRONMENTAL PROTECTION AGENCY, THIRD REPORT TO CONGRESS: RESOURCE RECOVERY AND WASTE REDUCTION 18 (1975).

19. *Id.*

20. *Id.*

21. *Id.*

22. CITIES AND THE NATION'S DISPOSAL CRISIS, *supra* note 12, at 3, 32.

ernment will be devastating.[23]

In addition to problems created by increasing volume and disposal cost, present solid waste management methods often yield inadequate protection of public health, public safety and environmental quality. Of the more than 18,500 identified land disposal sites, only 5,600 are estimated to be in compliance with state health, safety, or solid waste disposal regulations.[24] The Environmental Protection Agency has reported that only five percent of all disposal sites meet generally accepted environmental standards.[25]

The major impact of waste disposal at sites with little or no pollution control is on public health and the environment. A common occurrence at poorly designed or operated disposal sites is fire. Burning garbage dumps produce both highly visible and odiferous clouds of particulates and incompletely burned gases.[26] These pollutants have also been cited as a contributing source of human respiratory disease.[27]

Present disposal methods also result in water pollution. Direct pollution of surface water is most common where the disposal site is located in an area with a high water table or in, or near, marsh lands or coastal areas. Contamination of underground water reservoirs results when rain or surface water drains through uncovered wastes at poorly designed disposal sites.[28] The drainage carries portions of the waste with it into underground water formations. Drinking water wells have been contaminated by waste disposal site drainage in more than thirty cases.[29] In addition, water pollu-

23. By applying a very conservative four percent annual inflation factor to the cost of solid waste disposal and collection, the cost could reach $50 per ton by 1985.

24. These numbers do not include the difficult to estimate number of "promiscuous" dumps. These are unplanned and uncontrolled disposal sites which in reality are little more than popular places for litter accumulation. They are the "dump in the ditch" disposal sites. Other dump terminology in the Act itself may be cause for litigation. The meaning of the "open dump" and "sanitary landfill" is left unclear, although both terms are included in the statutory language.

25. U.S. ENVIRONMENTAL PROTECTION AGENCY, MISSION 5000 CITIZEN'S SOLID WASTE MANAGEMENT PROJECT 4 (1972).

26. Indeed, fumes from one burning disposal site were so thick they caused a chain accident on the New Jersey Turnpike which made national headlines a few years ago. Lazar, *Damage Incidents from Improper Land Disposal*, 1 J. HAZARDOUS MATERIALS at 161 (1975-76).

27. BRUNNER, HUBBARD, KELLER & NEWTON, CLOSING OPEN DUMPS 2 (U.S. Environmental Protection Agency, SW-61ts, 1971).

28. *Id.*

29. From materials prepared by the U.S. Environmental Protection Agency for

tion from disposal sites is a known problem at many locations; indeed, thirty-one states are faced with potentially significant water pollution problems resulting from waste drainage.[30] The importance of underground water pollution is highlighted by the fact that nearly 50 percent of the nation is dependent on ground water formations for their drinking supply; and this percentage is growing.[31]

Although a large portion of buried solid waste is organic, biodegradable and for the most part not irreversibly damaging to the environment, a small portion of our waste volume, 37 million tons, is extremely dangerous and capable of causing virtually permanent damage to the environment.[32] We will refer to these wastes as hazardous wastes. Under the Resource Conservation and Recovery Act (Act), hazardous waste means

> a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—
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> (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
>
> (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.[33]

Much of this waste is toxic.

As a practical matter, hazardous waste includes toxic metals and

use by the House Subcommittee on Transportation and Commerce of the House Committee on Interstate and Foreign Commerce (Aug. 5, 1976).

30. MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, *supra* note 8, at 26.

31. *Id.* at 39. In addition, dumps provide food and shelter for vermin, particularly rats and flies. Dumps often are open to uncontrolled scavenging, exposing persons so engaged to wounds from sharp glass and metal objects, to pathogenic organisms, toxic chemicals and fires. CLOSING OPEN DUMPS, *supra* note 23, at 2. Landfills can also cause explosions. The decay of organic materials in a Richmond, Virginia, landfill created highly explosive methane gas. One explosion forced condemnation of an apartment building and threatened several schools and houses built on the site of a former landfill. Washington Star, Apr. 4, 1976, at A-1, col. 1.

32. An eight industry survey by EPA found 37 million tons of hazardous wastes being produced in those industries. Although the total amount of hazardous waste produced annually is surely larger than the results reported by EPA, the total volume of hazardous waste is small compared to the total volume of all wastes generated each year. MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, *supra* note 5, at 22.

33. Resource Conservation and Recovery Act of 1976 § 1004(5), 42 U.S.C.A. § 6903(5) (West Supp. 1977).

their compounds; synthetic organic compounds, flammable compounds and explosives. The toxic metals, which include arsenic, mercury and lead, account for approximately 25 percent of all metals in common usage.[34] Synthetic organic wastes include liquid and dry pesticide, herbicide and other chemical compounds and the 250 million containers contaminated with these substances and discarded each year.[35] Flammables include organic solvents like paint remover, oils, plasticizers and off-specification chemical products. Explosive waste, generated by the Department of Defense and by private ordnance manufacturers, consists of outmoded but intact rounds of ammunition, off-specification or contaminated powders and also contained industrial gases.[36] It is common practice to dispose of toxic materials at a disposal site not designed for hazardous waste disposal. Pits, ponds and lagoons are often used for long-term storage or permanent disposal of liquid hazardous wastes and simple roadside disposal of hazardous waste exists as well.[37]

Improper disposal of hazardous waste may produce injury to humans upon contact with, or on accumulation in or on, the body.[38] At one disposal site where municipal and industrial wastes were accepted, chemical and biological waste pollutants were found in groundwater serving as a drinking water supply for 40,000 persons.[39] At another location, nauseating fumes from improperly disposed organic liquid wastes plagued nearby residents.[40] In

34. COUNCIL ON ENVIRONMENTAL QUALITY, TOXIC SUBSTANCES 2 (1971).

35. OFFICE OF SOLID WASTE MANAGEMENT PROGRAMS, U.S. ENVIRONMENTAL PROTECTION AGENCY, REPORT TO CONGRESS: DISPOSAL OF HAZARDOUS WASTES 4 (SW-115, 1974).

36. *Id.* at 6. Although most ordnance is simply detonated prior to disposal, investigators for the Congressional Office of Technology Assessment learned that that procedure is not always followed. They tell the story of a widow who decided to remove her late husband's war mementos from the attic of her home. When the trash man picked up the bag at the curbside he found it almost too heavy to lift. Weighing down the trash bag with the other war souvenirs was a live land mine.

37. Irresponsible roadside disposal is not the only dangerous highway disposal practice. The highly toxic chemical polyclorinated biphenyl (PCB) was almost sprayed over the roads of Des Moines, Iowa on purpose! The spray contained enough PCB to kill or cripple almost everyone in the state. Use of waste oil and chemicals as road treatments is not uncommon. Washington Star, Mar. 20, 1977, at A-6, col. 1.

38. REPORT TO CONGRESS: DISPOSAL OF HAZARDOUS WASTES, *supra* note 35, at 4.

39. Lazar, *supra* note 26, at 160.

40. *Id.* at 161.

another instance, 20,000 head of cattle were quarantined following improper disposal and roadside spills of the chemical hexachlorobenzene.[41] Examples of improper hazardous waste disposal are numerous.

Too often the consequences of poor disposal practice are severe and quickly experienced. A few years ago 20 persons suffered permanently disabling lung damage after inhaling a gas leaking from a pressurized canister improperly disposed of by the manufacturer. In another example a two and one-half year old child was hospitalized after playing among discarded fifty-five gallon drums. The child became intoxicated as a result of pesticide poisoning.[42] In addition to the immediately identifiable effects of health and environmental damage related to improper disposal of hazardous waste, there may be long-term dangers as well. In Pennsylvania, children are using a playground located directly adjacent to 1.5 million cubic yards of industrial asbestos wastes.[43] Inhalation of asbestos dust can cause chronic inflammation of the lungs, lesions of the chest cavity and lung cancer.[44] Other cancers and birth defects have been correlated with the presence of many compounds typical of those found in hazardous wastes.[45] Persons exposed to wastes containing such compounds may well be increasing the risk of incapacitating illness or painful death.

Present solid waste management practice has evolved over a long period of time. The problems resulting from current methods are not new, although many are being recognized for the first time. The next section will discuss what local, state, and federal governments have done in the past to cope with the solid waste management problem.

III. ATTEMPTS TO COPE WITH THE SOLID WASTE PROBLEM

Traditionally, solid waste management has been a local function performed by individual citizens, private contractors, and county and municipal governments. In fact, solid waste management remained primarily a function of local government until the mid-

41. *Id.*
42. *Id.* at 162.
43. *Id.* at 161.
44. *Id.*
45. REPORT TO CONGRESS: DISPOSAL OF HAZARDOUS WASTES, *supra* note 35, at 8.

nineteen-sixties. Prior to that time waste management regulations consisted primarily of general health and safety ordinances applied to waste disposal sites; less than half of the cities and towns in the United States with populations greater than 2,500 had programs for sanitary disposal of solid waste.[46]

On the state level, concern with solid waste management was minimal. Much of the state legislative activity merely authorized municipalities to deal with solid waste management, a power many communities already had under general welfare provisions of their state constitutions, statutes or municipal charters.[47] Direct state involvement with solid waste management consisted largely of the enactment of anti-litter laws or prohibitions on dumping of wastes on public property.[48] "In 1964, only twelve States reported to the Public Health Service that they had identifiable solid waste activities, while 31 indicated no program at all."[49] Only two states, however, had developed statewide programs for solid waste management.[50]

This lack of interest on the state level existed despite a federal program begun in the early 1950's under the authority of the Public Health Service Act. That law stated: "The Surgeon General shall conduct . . . and promote the coordination of, research, investigations, experiments, demonstrations, and studies relating to the causes, . . . control, and prevention of . . . diseases . . . , including water purification, sewage treatment, and pollution of lakes and streams."[51] It also granted the Surgeon General authority to "make and enforce such regulations . . . necessary to prevent the introduction, transmission, or spread of communicable diseases."[52] Because rats and flies at waste disposal sites had long been recognized as potential carriers of disease, the first federal solid waste management program, which emphasized waste disposal research, was conducted under the general authority of the Public Health Service. Due in large part to annual appropriations of less than $500,000, that first federal program had little effect on

46. H.R. REP. NO. 899, 89th Cong., 1st Sess. 7 (1965).
47. E.S. SAVAS, EVALUATING THE ORGANIZATION OF SERVICE DELIVERY: SOLID WASTE COLLECTION AND DISPOSAL, ch. 10 at 10 (1975).
48. *Id.*, ch. 14 at 5.
49. S. REP. NO. 192, 89th Cong., 1st Sess. 7 (1965).
50. SAVAS, *supra* note 47, ch. 10 at 10.
51. 42 U.S.C. § 241 (1970).
52. 42 U.S.C. § 264(a) (1970).

waste management practice or state and local waste management law.[53]

In 1965, Congress enacted the first federal legislation to specifically address solid waste management. The Solid Waste Disposal Act of 1965 affirmed reliance on local action but also encouraged greater activity at the state level. That law directed the Department of Health, Education and Welfare "to provide technical and financial assistance to States and local governments . . . in the planning and development of resource recovery and solid waste disposal programs."[54] The Solid Waste Disposal Act of 1965 expanded the federal role to include direct technical and financial assistance to state and local governments and made grants available to those states that developed statewide solid waste management plans and designated a single state agency to implement the waste management plan.[55] Under this encouragement 48 states had adopted some form of waste management law and all of the states had issued some kind of solid waste disposal regulations by 1975.[56] Identifiable state waste management programs varied however in their level of activity under the new state laws. These state programs were staffed by as few as one person to as many as 62 persons. Budgets for solid waste management programs ranged from zero dollars to $1.2 million. The typical state program had a staff and budget closer to the lower end of the range than to the higher.[57]

During the ten year period of state plan development, the Solid Waste Disposal Act of 1965 was amended to expand the federal interest in solid waste management. The Resource Recovery Act of 1970[58] amended the Solid Waste Disposal Act of 1965 "(1) to pro-

53. S. REP. NO. 192, 89th Cong., 1st Sess. 7 (1965).

54. Solid Waste Disposal Act of 1965 § 202(b)(2), 42 U.S.C. § 3251(b)(2) (1970).

55. *Id.* § 206, 42 U.S.C. § 3255 (Supp. I 1965), *as amended*, 42 U.S.C. § 3254a (1970).

56. SAVAS, *supra* note 47, ch. 14 at 33.

57. Association of State and Territorial Solid Waste Management Officials, 76 Program Survey. (Unpublished survey available from the Association or the House Subcommittee on Transportation and Commerce of the Committee on Interstate and Foreign Commerce.) The survey includes each state, a description of the state's population, number of cities and square miles, the state agency responsible for solid waste management provisions of solid waste authority, its budget, total employees, the amount of federal funds received, type of state money available, and the date of state solid waste statutes or regulations.

58. Pub. L. No. 91-512, 84 Stat. 1227 (1970).

mote the demonstration, construction, and application of solid waste management and resource recovery systems which preserve and enhance the quality of air, water, and land resources; . . . [and] (4) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems."[59] Thus, even as the states were developing solid waste management plans under the stimulus of federal grants under the Solid Waste Disposal Act, the federal government was becoming more directly involved in waste management with the promulgation of waste management guidelines. The Resource Recovery Act of 1970 also authorized federal grants for the construction of facilities which would recover usable materials from waste.[60] This was the first federal recognition that recovering materials and energy from waste was a promising method of reducing the volume of waste requiring disposal. Eight resource recovery projects were funded under the Resource Recovery Act of 1970. They demonstrated the recovery of energy from wastes, as well as the recovery of such materials as paper fiber, ferrous metals, aluminum, and tin.[61] These projects were funded under the auspices of the Environmental Protection Agency (EPA), a new federal agency which in 1970 took over the functions of the Department of Health, Education and Welfare's Bureau of Solid Waste Management.[62]

The solid waste management programs established under the Solid Waste Disposal Act of 1965 and the Resource Recovery Act of 1970 received substantially greater funding from Congress after the creation of EPA than did the solid waste programs under the

59. *Id.* § 101, 42 U.S.C. § 3251(b).

60. *Id.* § 104(b), 42 U.S.C. § 3254b.

61. The resource recovery projects funded by EPA pursuant to either sections 204 or 208 of the Solid Waste Disposal Act, as amended by the Resource Recovery Act, include projects at: City of Franklin, Ohio, $2,154,000; City of St. Louis, Mo., $2,580,000; City of Baltimore, Md., $7,000,000; City of Lowell, Mass., $2,154,000; County of San Diego, Calif., $4,242,000; State of Delaware, $9,000,000; District of Columbia, $750,000 awarded, not yet obligated; Palmer Township, Pa., $350,000. These facts are based upon a letter from the EPA to Fred B. Rooney, Chairman of the Subcommittee on Transportation and Commerce (Aug. 5, 1976). For an entire listing of resource recovery systems constructed or under construction, with or without federal dollars, and a description of each process undertaken by the resource recovery facility, *see* MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, *supra* note 8.

62. Reorg. Plan No. 3 of 1970, 3 C.F.R. 1072 (1966-1970 Compilation), *reprinted in* 5 U.S.C. app., at 609 (1970) *and in* 84 Stat. 2086 (1970).

Department of Health, Education and Welfare. In the years following the enactment of the Resource Recovery Act of 1970, however, the number of staff positions in EPA's office of Solid Waste Management dropped from 225 in 1973 to 174 in 1976.[63] Personnel and agency activity decreased in the mid-nineteen-seventies despite EPA reports to Congress which showed that the volume of solid waste requiring disposal continued to increase, and that little real progress toward protecting the environment from waste pollution had been made.[64] Previous federal efforts to involve state governments in waste management were statistically successful, yet the incidence of environmental damage from waste pollution remained high. In spite of new waste management planning in the state as a result of the Solid Waste Disposal Act of 1965 and in spite of federal activity in demonstrating environmentally sound alternatives to present waste management practice, health and the environment were still being threatened by waste pollution in 1976. The next section will discuss the history of the congressional response to the waste management situation—the Resource Conservation and Recovery Act of 1976.[65]

IV. LEGISLATIVE HISTORY

It has been said within the halls of Congress that the law and sausage are much alike: to maintain your respect for either you shouldn't watch it being made. Although the comparison may be somewhat true, it is often necessary to understand how a law is "made" in order to fully understand what the law says and what it does. In this section we will discuss how the Act was made.

The procedural history of the Act is atypical. It does not strictly follow the normal legislative pattern of two bills introduced and amended, one in the House and one in the Senate, with the differences resolved in a third, compromise bill created by a House-Senate conference committee. In this case, House and Senate

63. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 12 (1976).

64. U.S. ENVIRONMENTAL PROTECTION AGENCY, FIRST REPORT TO CONGRESS: RESOURCE RECOVERY AND WASTE REDUCTION (1973); U.S. ENVIRONMENTAL PROTECTION AGENCY, SECOND REPORT TO CONGRESS: RESOURCE RECOVERY AND WASTE REDUCTION (1974); U.S. ENVIRONMENTAL PROTECTION AGENCY, THIRD REPORT TO CONGRESS: RESOURCE RECOVERY AND WASTE REDUCTION (1975).

65. Pub. L. No. 94-580, 90 Stat. 2795 (codified at 42 U.S.C.A. §§ 6901-6987 (West Supp. 1977)).

differences were resolved and a new law created without a House-Senate conference committee agreeing to a compromise bill.

In the Senate, Jennings Randolph of West Virginia, Senate Public Works Committee Chairman, introduced S. 2150, "[a] bill to amend the Solid Waste Disposal Act to authorize State program and implementation grants, to provide incentives for the recovery of resources from solid wastes, to control the disposal of hazardous wastes, and for other purposes."[66] Usually, unless major lobbying groups recruit opposition to a bill, a committee chairman has substantial control over its movement through his committee and Congress. Even though no major opposition was encountered and Randolph kept control of his bill, the Senate Public Works Committee struck all but the enacting clause and the authorizing section of the bill.[67] In that form S. 2150 extended funding for programs under the Solid Waste Disposal Act for one year.[68]

The deleted pages of S. 2150 were not forgotten. They were later introduced by Senator Randolph as S. 3622, "[a] bill to amend the Solid Waste Disposal Act to authorize state program and implementation grants, to provide incentives for the recovery of resources from solid wastes and for resource conservation, to control the disposal of hazardous wastes, and for other purposes."[69] S. 3622 contained most of the provisions of the original S. 2150, but it

66. S. 2150, 94th Cong., 1st Sess. (1975).

67. All that remained of the 46 page bill was the following:

Be it enacted by the Senate and the House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Solid Waste Utilization Act of 1976."

SEC. 2. Section 216 of the Solid Waste Disposal Act, as amended by the Resource Recovery Act of 1970 (84 Stat. 1230), is amended by adding a new paragraph (4) to subsection (a), as follows: "(4) There are authorized to be appropriated to the Administrator of the Environmental Protection Agency to carry out the provisions of this Act not to exceed $35,000,000 for the fiscal year ending September 30, 1977.

S. 2150, 94th Cong., 2d Sess. (1976). The deletion of the substantive provisions of the bill was undertaken in order to complete Committee consideration of the bill before May 15, 1976. Under rules issued pursuant to the preparation of the congressional budget under the Congressional Budget and Impoundment Control Act of 1974, Pub. L. No. 93-344, 88 Stat. 297 (1974), all legislation containing new budgetary authority had to be reported from congressional committees by that date.

68. *Compare* S. 2150, 94th Cong., 2d Sess. (1976) *with* Pub. L. No. 93-611, 88 Stat. 1974 (1975). Pub. L. No. 93-611 authorized $76 million for 1975 which was maintained through 1976 under a continuing resolution. S. 2150 at this stage authorized only $35 million for fiscal 1977.

69. S. 3622, 94th Cong., 2d Sess. (1976).

also included several refinements. The new bill, which covered sixty-three pages, was passed by the Senate Public Works Committee without hearings or major amendment. When S. 2150 was called for debate on the Senate floor, S. 3622 was attached to it as an amendment, forming one unified piece of waste management legislation. The amended S. 2150 was approved in the Senate by an 88 to 3 vote.[70]

Meanwhile, a companion bill had been introduced in the House of Representatives. Pennsylvania's Fred B. Rooney, Chairman of the Subcommittee on Transportation and Commerce of the House Interstate and Foreign Commerce Committee, introduced H.R. 14496, "[a] bill to provide technical and financial assistance for the development of management plans and facilities for the recovery of energy and other resources from discarded materials and for the safe disposal of discarded materials, and to regulate the management of hazardous waste."[71] Rooney's subcommittee began consideration of H.R. 14496 in July, but the subcommittee meetings were adjourned in mid-course when major opposition to a funding provision stalled progress. Further action on H.R. 14496 was delayed one month. When the funding deadlock was broken, the bill moved to the parent House Committee on Interstate and Foreign Commerce where amendments were few and action was quick. H.R. 14496 was approved by the House Commerce Committee with less than one hour of consideration.

As the House Commerce Committee and its subcommittee considered H.R. 14496, another solid waste management bill was introduced and considered by another House Committee. California's George E. Brown, Jr., Chairman of the Environment and the Atmosphere Subcommittee of the House Committee on Science and Technology, introduced H.R. 14965, "[a] bill to amend the Solid Waste Disposal Act to provide certain authorities respecting research, development, and demonstration."[72] Although that bill was approved by the House Committee on Science and Technology, the steps needed to bring the bill to the House floor for a vote were never taken. Instead, H.R. 14965, the House Science Committee bill, was attached without change to the House Commerce

70. 122 CONG. REC. S11097 (daily ed. June 30, 1976).
71. H.R. 14496, 94th Cong., 2d Sess. (1976).
72. H.R. 14965, 94th Cong., 2d Sess. (1976).

Committee bill, H.R. 14496.[73] Unlike the jointure of the two Senate solid waste bills, which took place on the floor of that house of Congress, the attachment of H.R. 14965 to H.R. 14496 took place before the House Commerce Committee. On September 9, 1976, the House Commerce Committee approved H.R. 14496, as amended by H.R. 14965, and sent it to the floor of the House of Representatives as a single piece of solid waste management legislation.[74]

The date the House Commerce Committee reported H.R. 14496 is significant. Time constraints placed on the legislative process by virtue of the bill's consideration in an election year threatened its passage. The House Rules Committee, which sets the length and procedure for floor debate, set a September 10 deadline for issuing rules for debate.[75] Only one day remained to get a hearing before the Rules Committee and to obtain a rule. Many bills not considered important enough to get a rule died when the House and Senate adjourned October 1. H.R. 14496 was granted a rule September 10; there was still hope for passage, but major obstacles remained. H.R. 14496 was not scheduled for debate in the House until September 27. Since it was unlikely that the House bill would be identical to S. 2150, a long House-Senate conference to work out a compromise bill seemed certain; yet unless both houses could agree to a compromise and formally approve it before adjournment, the legislation would die. There was not enough time for the House to approve H.R. 14496, compromise with the Senate, approve the compromise and wait for the Senate to do the same. The attempt to enact new federal solid waste management legislation appeared to have failed.

Four days before the scheduled House debate on H.R. 14496 a new plan was devised: the House and Senate would hammer out a compromise before H.R. 14496 was approved in the House. Since the House had not yet approved H.R. 14496, no House-Senate conference committee, composed of members from each chamber, had been appointed. House Commerce Committee and Senate Public Works Committee staff members met the weekend of September 25 to negotiate the compromise. After two days of bargain-

73. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 2 (1976).
74. *Id.*
75. 122 CONG. REC. H8499 (daily ed. Aug. 9, 1976).

ing, an agreement was reached. At 10:30 P.M. September 26 the language of the compromise had yet to be drafted for submission to the House of Representatives the following day.

On September 27 it was ready. A substitute bill (actually a typed manuscript more than an inch thick, covered with proofreader's notations and looking very different from the usual bill printed in fancy bold and italic type, was delivered to the Clerk of the House. There still remained the possibility of amendment, which would destroy the agreement with the Senate. House debate began with brief opening statements by Representatives Rooney and Brown who were in control of the debate. The compromise was offered as a substitute for H.R. 14496, there were no objections, and other amendments were now in order.[76] Several members of the House, anticipating long opening statements and hours of debate on H.R. 14496 were not on the floor of the House to offer their amendments. They arrived too late to do anything but cast their vote on passage of the compromise substitute for H.R. 14496. The compromise, which no member of the House had read, was approved by a vote of 369 to 8.[77] The Senate formally agreed to the compromise September 30, 1976, the day before Congress adjourned.[78] The Resource Conservation and Recovery Act of 1976 became Public Law 94-580 when signed by President Gerald Ford on October 21, 1976.[79]

The procedural history of the Act illustrates some of the pressures at work during the legislative progress of the Act. In later sections of this Article dealing with interpretation of the statutory language, the reader will do well to recall the "beat the clock" character of the final days of the Act's procedural history. Prior to those final days, the stop and go sequence of procedural events correspond to events which substantively changed the Act as it moved through the House and Senate.

76. 122 CONG. REC. H11181 (daily ed. Sept. 27, 1976).

77. *Id.* at 11182. Due to the delivery of the substitute to the House clerk literally minutes before consideration on the floor, no member of the House could have read the substitute. *Contra*, *id.* at 11181 (remarks of Rep. du Pont).

78. 122 CONG. REC. S17256 (daily ed. Sept. 30, 1976).

79. 12 WEEKLY COMP. OF PRES. DOC. 1560 (Oct. 22, 1976).

V. Requirements of the Resource Conservation and Recovery Act Upon Local Governments

A. *General Structure of the Act*

Enactment of the Resource Conservation and Recovery Act of 1976 represented a change in federal policy relating to solid waste management from a limited role of research, development and the supply of information to one of direct federal involvement. The new law, moreover, is comprehensive in scope and treats the wide range of problems caused by the poorly planned disposal of solid waste.

The Act's primary focus is on the problems associated with municipal solid waste, government procurement of recovered materials, federal facilities, and hazardous waste. The Act addresses the problems caused by poor municipal solid waste disposal by offering financial and technical assistance to the states and their political subdivisions as an incentive to voluntarily develop and implement a solid waste management plan that will provide for the recovery of materials from waste, resource conservation or environmentally sound methods for the disposal of solid waste.[80] If a state does not develop or implement a solid waste management plan for its municipal waste, it does not receive federal financial or technical assistance. Under the Act the EPA has no regulatory authority to require state implementation of any federal standards relating to municipal waste management.

The provisions of the Act relating to the procurement of materials recovered from waste require all federal agencies to review existing procurement regulations and to amend those regulations to give preference to items containing recovered materials.[81] The agencies must purchase such items if they meet agency perfor-

80. The term "State" is defined to mean "any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands." Resource Conservation and Recovery Act of 1976 § 1004(31), 42 U.S.C.A. § 6903(31) (West Supp. 1977).

81. *Id.* § 6002, 42 U.S.C.A. § 6962. The term "procuring agency" in the Act means "any Federal agency, or any State agency or agency of a political subdivision of a State which is using appropriated Federal funds for such procurement, or any person contracting with any such agency with respect to work performed under such contract." *Id.* § 1004(17), 42 U.S.C.A. § 6903(17).

mance standards and are reasonably available at prices reasonably similar to that of the item produced from virgin material. The purposes of such provisions are to reduce the consumption of virgin materials, to stimulate resource recovery and to create markets for materials recovered from municipal solid waste pursuant to a state plan.[82] Such provisions achieve their purpose by directing the use of the federal dollar thus forcing those selling goods to federal procuring agencies to use recovered rather than virgin materials in order to be given a preference at the time of sale.

The Act requires federal facilities to comply with federal, state, local and interstate laws or regulations, both substantive and procedural, "respecting the control and abatement of solid waste or hazardous waste disposal in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges."[83] Such requirements mean that federal facilities, in addition to complying with the federal minimum standards relating to hazardous waste and procurement, must also comply with the state and local standards adopted pursuant to a municipal solid waste management plan, as must other persons. Therefore, federal facilities may be subject to differing solid waste planning requirements in different areas of the United States.

Under the provisions relating to hazardous waste, EPA is required to establish minimum federal standards applicable to all who generate, transport, treat, store or dispose of such wastes. Further, EPA is given the authority to issue administrative orders or to file suit in order to enforce the minimum standards. Unlike the provisions relating to municipal solid waste, which are voluntary, the provisions relating to hazardous wastes are mandatory. Although the Administrator is responsible under the Act for developing, implementing and enforcing such standards, a state may assume the authority, in lieu of EPA, if the state develops, implements and enforces a hazardous waste plan that is at least equivalent to the minimum federal standards. Financial and technical assistance is also available as an incentive to states to undertake their own hazardous waste program. However, if a state does not undertake such a program then the responsibility falls upon EPA to enforce

82. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 5 (1976).

83. Resource Conservation and Recovery Act of 1976 § 6001, 42 U.S.C.A. § 6961 (West Supp. 1977).

the minimum federal standards in that state.

Therefore, the Act addresses the range of problems caused by the increasing amount of solid waste generated with solutions structured to solve each problem. With municipal solid waste the congressional intent was to avoid federal regulation. Incentives would stimulate planning to recover the resources from the waste and reduce the volume landfilled. Further, markets for recovered materials could be developed. On the other hand, with hazardous waste there existed adverse health effects coupled with little market demand for the waste. The congressional intent respecting hazardous waste was to regulate, since without such regulation it would remain economically advantageous to dispose of the hazardous wastes in an environmentally unsound manner. The Act stresses planning and coordination between neighboring jurisdictions and among other environmental laws so that a future crisis, such as cities running out of landfill, shortage of materials, or the poisoning of drinking water supplies can be avoided.

B. *Standards Regulating Hazardous Wastes*

The provisions of the Resource Conservation and Recovery Act relating to hazardous wastes require EPA to promulgate standards for persons who generate,[84] transport,[85] store, treat or dispose of[86] hazardous wastes. These requirements apply not only to those who participate in the operation of such activities but to those having an ownership interest in those activities.[87] Although the EPA promulgates these regulations, the states retain the authority to establish a state program to administer and enforce those regulations in lieu of a federal program, provided the state program meets federal minimum standards. The state standards can be more stringent than the federal standards, however. If a state does not receive EPA approval for its hazardous waste program, it is EPA's responsibility to implement and enforce the federal regulations in that state.

If a state's hazardous waste program is approved, EPA cannot take legal action against a violator of the federal regulations without

84. *Id.* § 3002, 42 U.S.C.A. § 6922.
85. *Id.* § 3003, 42 U.S.C.A. § 6923.
86. *Id.* § 3004, 42 U.S.C.A. § 6924.
87. *Id.* § 3005, 42 U.S.C.A. § 6925.

giving 30 days notice to the state in which the violation occurs.[88] The primary justification for the notice requirement is to give the state the opportunity to implement its own plan without federal interference. EPA can disapprove a state program only after an opportunity for public hearing and a finding "that (1) such State program is not equivalent to the Federal program . . . (2) such program is not consistent with the Federal and State programs applicable in other States, or (3) such program does not provide adequate enforcement."[89] The third factor is significant in that it requires a continuing commitment by the state rather than merely the enactment of state laws or promulgation of regulations consistent with the Act.

The establishment of a hazardous waste program, whether by the states or by EPA, will take a minimum of two years if the timetable under the Act is followed. By April of 1978 EPA will promulgate the federal regulations. They will take effect six months after promulgation. Only after the federal regulations are promulgated will the states decide to take over the hazardous waste program or to leave the burden of administration and enforcement of the federal regulations to EPA.

1. *Identification of Hazardous Wastes*. The initial function performed by EPA before the federal regulations are promulgated will be to develop criteria to identify the characteristics of a hazardous waste. Under the Act, EPA must take into account toxicity, persistence in nature and degradability, and potential for accumulation in tissue.[90] After developing the criteria for identifying such hazardous characteristics EPA is required to promulgate a list of those wastes that: "(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."[91] EPA's initial list is the starting point as to which wastes are deemed hazardous. Initiative to reverse the last may come from three sources. First, state governors may petition EPA to list

88. *Id.* § 3008(a)(2), 42 U.S.C.A. § 6928(a)(2).
89. *Id.* § 3006(b), 42 U.S.C.A. § 6926(b).
90. *Id.* § 3001, 42 U.S.C.A. § 6921.
91. *Id.* § 1004(5), 42 U.S.C.A. § 6903(5).

a waste as hazardous.[92] Second, anyone can petition EPA to promulgate, amend, or repeal any regulation, including the listing of hazardous wastes.[93] Third, EPA can revise the list of hazardous wastes as the administrator of EPA deems appropriate.

It is likely that those persons whose petitions for a change in the regulations are denied will initiate legal proceedings alleging that EPA's decision was not based on the evidence. The section allowing public petition serves as the Act's own miniature Administrative Procedure Act and if the Congress had desired to impose a standard of evidence on the decisions reached by EPA on public petition it could have established such standards in the section dealing with petition procedure. This section, unlike every other section of the Act relating to rulemaking, does not guarantee a hearing on petition. The lack of a hearing requirement is an indication that the purpose of the section is to generate public comment and input and not to create a substantive right for every citizen to propose a change in the regulations which must be reviewed under some judicial standard. The lack of a hearing right under this provision does not result in a violation of due process because all persons affected by any regulation promulgated by the Administrator are guaranteed notice and hearing under EPA's procedure for promulgating the original substantive regulations.

2. *Legislative Direction for Waste Regulations.* For those hazardous wastes listed by EPA, the congressional directive underlying the regulations is that they must "protect human health and the environment."[94] This directive differs significantly from those of other environmental legislation. It does not require EPA to consider economic and technical limitations. The Noise Control Act of 1972 for example, requires EPA noise control regulations to be based on "the best available technology, taking into account the cost of compliance."[95] The Federal Water Pollution Control Act requires EPA's guidelines to take into account "the best practicable control technology currently available." Determining the best practicable control technology involves consideration of "total cost . . .

92. *Id.* § 3001(c), 42 U.S.C.A. § 6921(c); H.R. REP. NO. 1491, 94th Cong., 2d Sess. 25 (1976).

93. Resource Conservation and Recovery Act of 1976 § 7004, 42 U.S.C.A. § 6974 (West Supp. 1977).

94. *Id.* §§ 3002-3004, 42 U.S.C.A. §§ 6922-6924.

95. 42 U.S.C. §§ 4916, 4917 (Supp. V 1975).

age of equipment . . . non-water quality environmental impact . . . and other factors."[96]

The decision to omit consideration of economic and technological limitations in the development of the hazardous waste regulations may be found in the legislative history of the Act. As H.R. 14496 was reported from the House Committee on Interstate and Foreign Commerce, the congressional directive was to "reasonably protect human health and the environment."[97] However, in the House-Senate compromise the word "reasonable" was omitted so that the standard would be acceptable to the Senate, whose waste management bill did not contain such restrictions. The directive finally contained in the Act is the much tougher standard "to protect human health and the environment."[98] If EPA employs economic or technological considerations in developing the regulations, the agency may be subject to suit for exceeding its authority. Yet, if it does not employ such considerations, the regulations may be financially impractical or technically impossible to comply with.

3. *Requirements Applicable to Hazardous Wastes.* Among the regulations EPA is required to develop are those for recordkeeping and labeling practices; use of containers for hazardous wastes; furnishing information on the chemical composition of wastes; the use of a trip ticket to keep tabs on waste in transit; and storage and disposal practice. Under the Act, EPA's authority to regulate generators of hazardous waste is specifically defined. The limitation of authority is found in the language describing the requirements for hazardous waste generators: [EPA] "shall establish requirements respecting—(1) recordkeeping practices . . . (2) labeling practices . . . (3) use of appropriate containers . . . (4) furnishing information on the general chemical composition . . . (5) use of a manifest system . . . and (6) submission of reports to . . . (EPA or the state agency if appropriate) . . . setting out (A) the quantities of hazardous waste . . . generated . . . and (B) the disposition of all hazardous waste reported."[99] The Act grants the EPA no authority to limit in any way the creation of hazardous waste. The reason for not doing so was a concern that such regulatory authority would

96. 33 U.S.C. § 1314(b) (Supp. V 1975).

97. H.R. 14496, 94th Cong., 2d Sess. (1976).

98. Resource Conservation and Recovery Act of 1976 §§ 3002-3004, 42 U.S.C.A. §§ 6922-6924 (West Supp. 1977).

99. *Id.* § 3002, 42 U.S.C.A. § 6922.

adversely affect the production of products the manufacture of which created hazardous waste.[100]

The authority granted EPA for regulating those who transport, treat, store or dispose of hazardous wastes is much broader than its authority relating to generators of hazardous waste. Under the Act EPA's regulations for the transportation of hazardous waste "shall include but need not be limited to requirements respecting—(1) recordkeeping concerning such hazardous waste transported, . . . their source and delivery points; (2) transportation of such waste only if properly labeled; (3) compliance with the manifest system, . . . and (4) transportation of all such hazardous waste only to the . . . facilities which the shipper designates."[101] The labeling required of the generators of hazardous waste has its impact in the trasportation of the waste, as only labeled wastes may be transported under the Act. The manifest system, referred to in both the requirements for generators and transporters of hazardous waste, is in effect a trip-ticket system. The shipper (generator) must initiate the trip ticket when the waste is entrusted to the transporter. The transporter, in turn, would note any transferance of the waste to another carrier or to the disposal facility designated as the recipient by the shipper. Under the Act it is unlawful for the transporter of hazardous waste to unload his cargo anywhere but at the facility designated by the shipper, which must be one authorized to handle hazardous waste.

EPA has its broadest authority in issuing regulations for those facilities which treat, store or dispose of hazardous wastes. Under the Act, EPA must promulgate regulations establishing performance standards which

> shall include, but need not be limited to requirements respecting (1) maintaining records of all hazardous wastes . . . treated, stored, or disposed of . . . and the manner in which such wastes were treated, stored, or disposed of . . . ; (2) . . . reporting, monitoring, and inspection and compliance with the manifest system . . . ; (3) operating methods, techniques, and practices . . . ; (4) location, design and construction . . . ; (5) contingency plans . . . to minimize unanticipated damage . . . ; (6) . . . quali-

100. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 26 (1976).

101. Resource Conservation and Recovery Act of 1976 § 3003, 42 U.S.C.A. § 6923 (West Supp. 1977).

> fications as to ownership, continuity of operation, training for personnel, and financial responsibility.[102]

The authority to issue regulations in these specific areas plus the statement that EPA's authority "need not be limited" to these areas gives EPA considerable control over the actual management of hazardous wastes.

The Act is very clear that owners of hazardous waste management facilities are subject to the federal regulations as are the actual operators. In addition the Act requires that owners of hazardous waste management facilities "provide assurances of financial responsibility and continuity of operation consistent with the degree and duration of risks."[103] Under this requirement EPA can deny authorization to operate a hazardous waste management facility unless the agency is satisfied that the owner maintains sufficient insurance or is otherwise able to satisfy any liability judgment resulting from the waste management operation. In addition, EPA will require "estimates with respect to the composition quantities, and concentrations, . . . time, frequency, or rate of which such (hazardous) waste is proposed to be disposed of."[104] All of the preceeding requirements must be satisfied before EPA (or a state with an equivalent program) can issue a permit to operate the hazardous waste management facility. Under the Act, "the disposal of any such hazardous waste is prohibited except in accordance with such a permit" after October, 1978.[105]

4. *Enforcement of Regulations*. The enforcement of the hazardous waste regulations rests with the states if they choose to administer and enforce a state program rather than have EPA enforce the federal regulations in the state. Of course in states with their own programs, the hazardous waste management requirements may be more stringent than the federal regulations. Where the state refuses to undertake hazardous waste program responsibility, EPA is required to enforce the federal hazardous waste regulations in that state.[106] EPA's primary enforcement tools are the com-

102. *Id.* § 3004, 42 U.S.C.A. § 6924.

103. *Id.*

104. *Id.* § 3005(b)(1), 42 U.S.C.A. § 6925(b)(1).

105. *Id.* § 3005(a), 42 U.S.C.A. § 6925(a).

106. *Id.* § 3006, 42 U.S.C.A. § 6926. Under the structure of the Act the authority to implement the federal minimum standards relating to hazardous waste remains with the EPA unless the state affirmatively acts by establishing equivalent standards

pliance order and the civil suit. The Act says: "If such violation [of a hazardous waste regulation] extends beyond the thirtieth day after [notice of violation] the Administrator [of EPA] may issue an order requiring compliance within a specific time period or [he] may commence a civil action in the United States district court . . . for appropriate relief, including a temporary or permanent injunction."[107] That civil penalty may be as high as $25,000 per day of noncompliance with the EPA order.[108] The Act also provides for criminal penalties for specific acts. Under the Act "any person who knowingly (1) transports any hazardous waste . . . to a facility which does not have a permit . . . (2) disposes of any hazardous waste . . . without having obtained a permit . . . (3) makes any false statement or representation in any application, label, manifest, record, report, permit or other document . . . shall upon conviction be subject to a fine of not more than $25,000 for each day of violation, or to imprisonment, not to exceed one year, or both."[109] For repeat offenders the penalties double to $50,000 and two years imprisonment. Where the criminal provisions are invoked, the Department of Justice based upon EPA's recommendation would initiate the action. The Act provides that the states with hazardous waste programs should enforce the hazardous waste regulations in the first instance. If the states do not, EPA and the Justice Department have authority to bring civil suit or criminal action respectively. At times, however, either as a result of bureaucratic inertia or White House policy, agencies fail to enforce federal law. In those instances where neither the states, EPA nor the Justice Department enforce the Act or regulations promulgated under it, citizens may bring suit in the federal courts, against any person, including a government agency, who is in violation of the Act. This provision of the Act will allow citizens individually, or any interest group to bring suit against an individual violator, a federal agency or department in violation of the Act or against EPA for failure to perform an act required by the law.[110] To use the citizen suit provision of the Act, the plaintiff must give

and implementing such standards. However, once the state meets these requirements the EPA is required to approve its hazardous waste program. *Id.*

107. *Id.* § 3008(a)(1), 42 U.S.C.A. § 6928(a)(1).

108. *Id.* § 3008(a)(3), 42 U.S.C.A. § 6928(a)(3).

109. *Id.* § 3008(d), 42 U.S.C.A. § 6928(d).

110. *Id.* § 7002(a), 42 U.S.C.A. § 6972(a).

sixty days notice to EPA, to the state in which the violation occurs and to the alleged violator.[111]

C. *Management of Municipal Solid Waste*

The primary purposes of the provisions relating to municipal solid waste are to assist and encourage environmentally sound methods of waste disposal, to maximize utilization of resources recovered from waste and to encourage resource conservation.[112] These goals are to be achieved through federal financial and technical assistance to state, interstate and local jurisdictions for the development of solid waste management plans and the development of federal guidelines designed to make information regarding solid waste planning available to the public and to foster cooperation between federal, state, and local governments and private industry.

1. *Federal Assistance.* As an incentive to state, local and interstate governments to adopt solid waste management plans the Act provides that several types of information be published in the form of guidelines: technical assistance is available through federal personnel that have expertise in the technical, marketing, financial and legal aspects of solid waste management. Financial assistance is available in the form of grants for the development and implementation of solid waste management plans.

a) *Development and publication of information relating to solid waste management plans.* The Act requires the Administrator to make information relating to solid waste management available in two forms. First, through the collection, coordination, and the establishment of a central library for the solid waste management information.[113] Second, through the publication of specific guidelines concerning the different types of solid waste management practices.[114]

Additional information to be developed includes model codes that promote uniform state and local solid waste management laws and a model accounting system "to assist State and local govern-

111. *Id.* § 7002(b), 42 U.S.C.A. § 6972(b).

112. *Id.* § 4001, 42 U.S.C.A. § 6941.

113. *Id.* §§ 8003(a), (b), 42 U.S.C.A. §§ 6983(a), (b).

114. *Id.* § 1008, 42 U.S.C.A. § 6907. Section 8001 of the Act lists 13 areas for "research, investigation, experiments, training, demonstrations, surveys, public education programs and studies" by public and private institutions and individuals. 42 U.S.C.A. § 6981.

ments in determining the cost and revenues associated with the collection and disposal of solid waste and with resource recovery operations."[115] The Act also requires EPA to undertake special studies and research, and demonstrations to advance the state of the art of solid waste management.[116] Such studies include how to recover glass and plastics from the solid waste stream; the sources, volumes, and health effects of mining wastes; the types, amount, health effects, costs, and uses of sludge; and the economic and technological demonstration of new technologies or practices that will advance the art of solid waste management.[117] All information is to be maintained in a central reference library and is to be available to all persons at reasonable times and subject to reasonable charges.[118]

b) *Publication of federal solid waste management guidelines.* The purpose of requiring the publication of guidelines and not regulations was to provide assistance to state and local authorities addressing the problem, and not to preempt state or local initiatives at managing the problem.[119]

To fulfill such responsibility the Act requires that the guidelines be published after consultation with appropriate federal, state and local authorities, and contain guidance on how to identify and establish regions for solving common solid waste problems; how to develop solid waste management plans; how to close open dumps, and prohibit the establishment of new open dumps; and how to prevent surface and groundwater contamination.[120]

(1) *Identification of solid waste management regions.* The concept of a region is not defined by the Act. However, guidance as to its meaning is found in the wording of the statute which requires "identification of those areas which have common solid waste management problems and are appropriate units for planning regional solid waste management services."[121] To identify such regions,

115. *Id.* § 8001, 42 U.S.C.A. § 6981.
116. *Id.* § 8005, 42 U.S.C.A. § 6985.
117. *Id.* § 8002, 42 U.S.C.A. § 6982.
118. *Id.* § 8003(b), 42 U.S.C.A. § 6983(b).
119. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 33 (1976); S. REP. NO. 988, 94th Cong., 2d Sess. 10 (1976).
120. Resource Conservation and Recovery Act of 1976, §§ 4002, 4004, 4005, 42 U.S.C.A. §§ 6942, 6944, 6945 (West Supp. 1977).
121. *Id.* § 4002(a), 42 U.S.C.A. § 6942(a).

consideration must be given to the size and location of the area involved; the volume of waste in the area and the available means of coordinating planning within the area with the solid waste plans of adjoining areas. The purpose of these guidelines is "to assist States identify and develop appropriate areas within the State or interstate regions for discarded materials planning."[122] It is from this set of guidelines that the governors are to develop appropriate planning areas within or between the respective states. After the areas are identified, the state, with the elected officials of general purpose units of local government are to jointly identify the agency to plan and implement the state discarded materials plan for that area.[123] EPA is to publish such guidelines by April, 1977. To be effective this set of guidelines must define the term "region" or at a minimum illustrate the types of areas a state governor could consider as a region. Further, the guidelines should assist the governor to develop criteria for determining the proper region based on population, area and volume of waste. Factors to consider, could include the history of cooperation between neighboring jurisdictions, existing regional institutions within an area, the size and volume of waste, geological conditions in an area, and existing transportation facilities in the area. The guidelines should include more than a list of factors to consider in developing a region. They should offer guidance as to how to evaluate such factors when they are considered. Without such guidance regions will be established by each governor independently giving greater weight to different factors considered. This diversity of methods may produce regions that are inappropriate for the type of solid waste planning they elect to undertake. These risks could be avoided if the guidelines offered methods to evaluate the factors considered and coordinated the governors' development of the regions with the technical assistance provisions of the Act. This coordination would enable each governor, prior to a final determination of the regions in the respective states, to have the plan reviewed by those with expertise in all facets of solid waste management planning. Such experts could check the determined regions against theoretical computer models and real life demonstration regions for economic viability.

122. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 32-33 (1976).

123. Resource Conservation and Recovery Act of 1976 § 4006(b), 42 U.S.C.A. § 6946(b) (West Supp. 1977); *see* H.R. REP. NO. 94th Cong., 2d Sess. 40 (1976).

Also by coordinating the available federal technical assistance with the development of the regions the states could examine alternative regions with alternative solid waste management plans, rather than requiring the state to establish the regions and then develop solid waste management plans to fit the designated areas.

(2) *Guidelines for development of state plans.* Subsequent to publishing the guidelines for the identification of regions, EPA is required to publish guidelines that assist the state in the development and implementation of a state solid waste management plan. Basically, the guidelines are to consider how waste can be disposed of in an environmentally sound manner, or materials recovered or conserved from such waste considering the geographical area, its climate, population volume and type of waste. The guidelines relating to the development of the plan will have to contain management principles as how to coordinate jurisdictions within the region so as to ensure collection and delivery of waste to its proper end point; certain technical matters such as how to prevent ground and surface water contamination; and certain planning matters relating to what type of resource conservation, recovery or land disposal methods will work in the designated region.[124] As in the identification of the regions, the guidelines for development of state plans must give assistance in evaluating alternatives in addition to an enumeration of factors to be considered. Such evaluation should assist those responsible for developing the plan to determine when resource recovery is more beneficial than resource conservation methods or continued land disposal. For example guidelines could state that there are several alternatives for the management of municipal solid waste (*e.g.*, incineration, land disposal, resource recovery or resource conservation (source reduction)), give methods to determine the economic and environmental costs of each alternative which would include methods to determine the effects on the land, water, air, industry, markets, and political institutions of the area depending upon the method chosen. It is only by evaluating each alternative that the proper solid waste management plan can be determined. Again, close coordination between the available technical assistance teams and the state and local officials responsible for developing the plan would expand available planning alter-

124. Resource Conservation and Recovery Act of 1976 § 4002, 42 U.S.C.A. § 6942 (West Supp. 1977); *see* S. REP. NO. 988 94th Cong., 2d Sess. 12-13 (1976).

natives by offering the federal expertise to those planning and direct access to the information on similar projects that would be contained in the central library.

(3) *Guidelines relating to open dumps.* By October, 1977, EPA is required to promulgate regulations containing criteria for classifying land disposal facilities as sanitary landfills or open dumps. "At a minimum, such criteria shall provide that a facility may be classified a sanitary landfill and not an open dump only if there is no probability of adverse effects on health or the environment from the disposal at such facility."[125] The open dump is defined as a site for the disposal of solid waste "which is not a sanitary landfill."[126] Although the definition of the terms appears circular, the House report offers some illumination of congressional intent. The report states that "[t]he legislative standard for the Administrator to determine a sanitary landfill is a disposal site of which there is not reasonable chance of adverse effects on health and the environment from the disposal of discarded material at the site." Whereas an "open dump" is described as an "open land disposal site where discarded materials are deposited with little or no regard for pollution controls or esthetics, where wastes are left uncovered and where frequently the use of the site for waste disposal is neither authorized nor supervised."[127] The criteria set forth strictly a performance standard. The reason for making the distinction between a sanitary landfill and an open dump is that the two terms are often used interchangeably regardless of the effects of a site on the environment.[128] After such criteria are developed open dumping would be prohibited in those states that seek federal assistance for the development of a solid waste plan.

The criteria published concerning open dumps and sanitary landfills may be the most controversial of all criteria that the Administrator is required to publish because they affect almost every local government in the United States. Some estimates are that 94 percent of the existing land disposal sites would not qualify as "sanitary landfills."[129] Because of this high percentage there may be

125. Resource Conservation and Recovery Act of 1976 § 4004(a), 42 U.S.C.A. § 6944(a) (West Supp. 1977).

126. *Id.* § 4005(a), 42 U.S.C.A. § 6945(a).

127. H.R. REP NO. 1491, 94th Cong., 2d Sess. 37 (1976).

128. *Id.* at 36.

129. *Id.* at 38.

strong opposition to a strict standard for determining sanitary landfills or there may be considerable local opposition to participating in a state solid waste plan. Therefore, two issues will have to be addressed by EPA before local authorities decide on whether to comply with the prohibition on open dumping. First, is an "open dump" interpreted in the narrow sense of just being uncovered or does it have a broader meaning that relates to its effect on the environment? The broad interpretation of an "open dump" as being open to the environment receives support in the statute and the House report. The House report lists examples of the effects of open dumps on health and the environment. The adverse impacts cited include fire hazards, air pollution, explosive gas migration, and surface and groundwater contamination.[130] Such impacts would not be eliminated by providing a ground cover for the open dump. In view of the objectives of the provisions of the Act relating to the planning and management of municipal solid waste and the extensive report language relating to the adverse effects of open dumps, it appears that "open" in this situation means open to the environment rather than merely open to wind blown litter or unauthorized disposal. Such a broad interpretation would imply that sanitary landfills must include in their construction safeguards against explosive gas migration, surface or groundwater contamination and even air pollution which will increase costs to local governments. The local government will likely balance the increased cost against the types of federal assistance to be received and the community pressure for a healthy environment prior to determining whether to participate in the state solid waste management plan.

The second issue that must be given extensive consideration by EPA before the criteria for "open dumps" and "sanitary landfills" can be established is the applicability of the prohibition on open dumps. The Act states that any solid waste practice or facility which "constitutes the open dumping of solid waste or hazardous waste is prohibited."[131] Is all open dumping prohibited or only the open dumping in states which seek federal assistance under the Act? From the plain meaning of the words it appears that all open dumps are prohibited. However, this language appears in the stat-

130. *Id.* at 37.

131. Resource Conservation and Recovery Act of 1976 § 4005(c), 42 U.S.C.A. § 6945(c) (West Supp. 1977).

ute in the title relating to municipal solid waste planning whose provisions are mandatory only upon those states seeking federal assistance.[132] There is significant legislative history to support the position that Congress only intended the prohibition on open dumping to apply to states seeking federal assistance.

The Senate report states in discussing the prohibition on "open dumping" that "[f]ailure to implement this provision results in a loss of eligibility for State program grants under section 207."[133] Therefore, it appears that the congressional intention was that states that do not enforce the open dumping provisions will lose their federal assistance as the only consequence. Attempting to prohibit all "open dumps" even in states that do not seek federal assistance would fly in the face of political reality because it would lack enforcement, and aggravate states by giving its citizens standing to sue in federal courts to close up a site or facility that the state permits to exist. Lacking supportive legislative history it is doubtful that the courts would support an expansive reading of the

132. If all open dumps were prohibited the enforcement problem would be tremendous. The Act does not directly authorize EPA to close down an open dump except in limited circumstances when there is imminent and substantial danger to health or the environment. *Id.* § 7003, 42 U.S.C.A. § 6973. In all other circumstances EPA can only withhold federal assistance from a state in which open dumping continues. It is argued that enforcement of the open dumping prohibition in states not seeking federal assistance would be under the citizen suit provisions of the Act which grant citizens the standing to sue in federal courts to enforce such provision. Although this appears to be the plain meaning of the language relating to the prohibition on open dumping, again, such language appears within the title of the Act that is only voluntary upon the states. Further there is no legislative history to support an expansive interpretation of the federal government granting citizens the right to sue state and local governments in federal courts when the federal government refused to preempt the field or require state action.

133. S. REP. NO. 988, 94th Cong., 2d Sess. 9 (1976). The House Report states:

> It is the Committee's intention that federal assistance should be an incentive for state and local authorities to act to solve the discarded materials problem. At this time federal preemption of this problem is undesirable, inefficient, and damaging to local initiative.
>
> Simply, the discarded materials problem is one of planning and the Committee anticipates that federal guidelines for planning will foster the necessary cooperation between the federal government, states, and local regions to meet very broad and flexible objectives of this act. If those objectives are not met, the states and local authorities within the states will lose the federal or technical assistance. However, the provisions of this legislation, specifically do not authorize the federal government to take over the responsibility for discarded materials disposal planning.

H.R. REP. NO. 1491, 94th Cong., 2d Sess. 33 (1976).

effects of the "open dumping" provision.

(4) *Guidelines relating to ground and surface water contamination.* Perhaps the most costly adverse environmental effect of the open dump is its contamination of underground and surface water. Since such water supplies constitute approximately 50 percent of the nation's drinking water supply, it is essential that the guidelines assist the states to protect their water supplies by ensuring that "there is no reasonable probability of adverse effects on health or the environment from disposal of solid waste at such facility."[134] Several provisions of the Act authorize EPA to publish guidelines that will assist states and local jurisdictions to end disposal practices that endanger water supply. First, EPA is required to publish guidelines describing levels of performance, including appropriate methods and degrees of control, that provide at a minimum for "protection of the quality of ground waters and surface waters from leachates," and "protection of the quality of surface waters from runoff through compliance with effluent limitations under the Federal Water Pollution Control Act."[135] Further, in the development of guidelines for state plans the Administrator is required to consider several factors which may have direct or indirect effects on water contamination.[136]

In addition to these guidelines is the provision which requires that before a state plan can be approved by EPA and receive federal financial and technical assistance, the plan must ensure that its land disposal practices present no reasonable probability of adverse effects on health and the environment from disposal of solid waste,[137] which would include effects on water quality. The prevention of water contamination applies not only to land disposal but also includes contamination from pits, ponds, and lagoons.[138]

Of course, these provisions are mandatory only for those states who seek funds for an approved state plan. EPA enforcement powers with respect to water contamination are therefore limited to its general power to (1) withhold financial assistance for noncom-

134. Resource Conservation and Recovery Act of 1976 § 4004(a), 42 U.S.C.A. § 6944(a) (West Supp. 1977).

135. *Id.* §§ 1008(a)(2)(B), (C), 42 U.S.C.A. §§ 6907(a)(2)(B), (C).

136. *Id.* § 4002(c), 42 U.S.C.A. § 6942(c).

137. *Id.* §§ 4003, 4004(a), 42 U.S.C.A. §§ 6943, 6944(a).

138. Letter from Douglas Costle, Administrator of EPA, to Paul Rodgers, Chairman of the House of Representatives Subcommittee on Health and the Environment (Mar. 17, 1977).

pliance with guidelines, (2) regulate hazardous waste[139] and (3) sue for injunctions in cases of "imminent and substantial endangerment to health or the environment."[140] The primary vehicle to prohibit such contamination is the state plan which can be enforced by the state or local government or its citizens. With this enforcement mechanism, state and local cooperation is essential not only for the effective operation of the Act but also for the benefit of the citizens of each state.

EPA could coordinate its ground and surface water guidelines published under the Act and the federal assistance available under the Act with the federal assistance and regulatory authority under the Safe Drinking Water Act and the Federal Water Pollution Control Act to bring tremendous pressure upon states to prohibit disposal practices that contaminate water supplies. Each of the above Acts permits the respective Act to be integrated with other environmental statutes to achieve the congressional objective.[141] Each Act also offers planning assistance to prevent water contamination.[142] Although the loss of funds to be received by a state from one Act may not be sufficient to prevent water contamination, the loss of all federal assistance to prevent water contamination under the three Acts would have a tremendous impact on the states' residual planning process.

c) *Technical assistance.* Another incentive to the states and local authorities to encourage voluntary participation in the planning and implementation of a municipal solid waste management plan is the availability of federal technical assistance. Such assistance is available in the form of "Resource Recovery and Conservation Panels." These panels are available to state and local governments that have a state solid waste plan or are developing a state solid waste plan. There is no charge to the state or local government for the panels and they are available upon request. Each panel would be composed of persons having different expertise in

139. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 5 (1976).

140. Resource Conservation and Recovery Act of 1976 § 7003, 42 U.S.C.A. § 6973 (West Supp. 1977).

141. *Id.* § 1006(b), 42 U.S.C.A. § 6905(b); *see* 33 U.S.C. §§ 1371, 1373 (Supp. V 1975).

142. Resource Conservation and Recovery Act of 1976 § 4008, 42 U.S.C.A. § 6948 (West Supp. 1977); *see* 42 U.S.C. §§ 300j-2, 300j-3 (Supp. IV 1974); 33 U.S.C. §§ 1256(e), 1288(j), 1313 (Supp. V 1975).

the financial, technical, institutional and legal areas of resource recovery or resource conservation.[143] The area of resource recovery or resource conservation is complex, possibly involving large expenditures for the construction of a recovery facility, or vast legal problems coordinating numerous communities in an effort to obtain sufficient waste volume so that the resource recovery facility would be economically viable. Therefore, it is the sole purpose of the panels to make such expertise available in order to develop and implement the proper solid waste management plan for the requesting area.[144] Without such assistance many states or communities would either adopt approaches or facilities that do not properly fit their needs or fail to even plan for their disposal needs. These panels could warn of difficulties in a particular plan, suggest alternatives to a particular approach, evaluate a proposed approach, or just supply an interested community information on qualified consultants it might obtain. To emphasize its intent that such assistance be available to all communities that request it, Congress specifically required that twenty percent of all administrative funds appropriated to the Office of Solid Waste Management for carrying out the Act be used solely for purposes of Resource Recovery and Conservation Panels.[145]

d) *Financial assistance.* Federal financial assistance of $45,000,000 and $55,000,000 respectively is available in the form of grants for fiscal years 1978 and 1979 to state and local jurisdictions under the Act.[146] First, grants are available to states for most aspects of development and implementation of an approved state plan.[147] However, federal funds cannot be used for construction of a solid waste facility, the acquisition of land or any subsidy for the price of the recovered materials. These planning and implementation funds are to be allotted to the states according to the popula-

143. Resource Conservation and Recovery Act of 1976 § 2003, 42 U.S.C.A. § 6913 (West Supp. 1977).

144. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 14-15 (1976).

145. Resource Conservation and Recovery Act of 1976 § 2006(b), 42 U.S.C.A. § 6916(b) (West Supp. 1977).

146. *Id.* §§ 4008(a), (c), 42 U.S.C.A. §§ 6948(a), (c).

147. *Id.* Under the definition of "implementation," federal financial assistance cannot be used for "acquisition, leasing, construction, or modification of facilities or equipment or the acquisition, leasing, or improvement of land," and after December 31, 1979, federal funds cannot be used to pay employees' salaries. *Id.* § 1004(8), 42 U.S.C.A. § 6903(8).

tion of each state. When the state receives such funds it must reallocate the funds to the local or regional entities within the state in proportion to such entities' responsibilities under the solid waste management plan.[148]

Another form of financial assistance available under the Act is the Rural Communities Assistance. The provision limits this assistance to municipalities with a population of five thousand or less, or counties with a population of ten thousand or less, or less than twenty persons per square mile and not within a metropolitan area. For fiscal years 1978 and 1979 $25,000,000 is available for such communities. Allotment of these funds is "on the basis of the average of the ratio which the population of rural areas of each State bears to the total population of rural areas of all the States."[149]

It was the congressional intent that the development and implementation grants under the Act are to be supplemental to state solid waste budgets and that state solid waste expenditures cannot be reduced below the solid waste expenditures for 1975. A state will be denied federal financial assistance if its expenditures drop below the 1975 level.[150]

Although the Act separately authorizes and describes how the funds are to be allocated for solid waste management, it appears that the Executive Office of Management and Budget is determined to distribute such funds in a block grant program instead of

148. *Id.* § 4003(1), 42 U.S.C.A. § 6943(1).

149. *Id.* § 4009, 42 U.S.C.A. § 6949. The Act further authorizes $5 million for 1978-79 for "Special Communities." *Id.* § 4008(e), 42 U.S.C.A. § 6949(e). Applying the restrictions on what constitutes a "Special Community," it is unlikely that the money could go anywhere but Depford, N.J. This was undoubtedly intended by the provisions author, Representative James Florio who represents New Jersey's First District and the special community of Depford. Not incidentally, Representative Florio is a member of the House Subcommittee on Transportation and Commerce, which first considered H.R. 14496 and added the special community provision to it. This provision might have been removed from the Act in the House-Senate compromise under pressure from the Senate, had some influential Senators not also represented other special needs. For Senator Joseph R. Biden, Jr. the needy community was New Castle County, Delaware, where the public water supply is threatened by drainage from the Langollen Landfill. Senator Biden's remedy for the situation consisted of a $250,000 study and $400,000 to contain the landfill drainage. Pub. L. No. 94-580 § 4, 90 Stat. 2840-41. (This section is at the end of the Act, and does not amend the Solid Waste Disposal Act of 1965.)

150. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 41 (1976) S. REP. NO. 988, 94th Cong., 2d Sess. 10 (1976).

the authorized categorical grant program.[151] The block grant approach would lump the state planning funds authorized under the Water Pollution Control Act, the Toxic Substances Control Act, the Safe Drinking Water Act, the Clean Air Act as well as the Resource Conservation and Recovery Act into one fund to be distributed to the states for environmental planning. This means that a state will receive a lump sum of money and retain the authority to determine the environmental programs on which the funds will be expended. Although this method appears to offer an opportunity for better local coordination of environmental laws, it has serious legal and structural flaws that could impede the effective working of the Act. Legally, it is questionable whether EPA can lump the solid waste planning funds together with all other environmental planning funds when Congress specifically established a procedure as to how solid waste management funds are to be allotted. In addition, notwithstanding the legality of the block grant approach, lumping all the planning funds together tends to remove emphasis on the infant solid waste Act that has few planning organizations in place at the local level and strengthens the position of the established water and air planning authorities to acquire a disproportionate share of the block grant funds. If the Administrator distributes funds in the block grant method it is likely that solid waste planning will receive less than its share of funding, and that the states will have no incentive to seek federal assistance since the same environmental block grant will be available whether or not they develop and implement a solid waste management plan. Finally, the Administrator will run the risk of suit either by a Congressman alleging nullification of his vote as a member of Congress or by a state or local governmental agency that is eligible to receive a categorical grant for solid waste planning.

2. *Requirements to Obtain Federal Assistance.* To obtain fed-

151. Letter from Bert Lance, Director of the Office of Management and Budget to Fred B. Rooney, Chairman of the Subcommittee on Transportation and Commerce of the House Committee on Interstate and Foreign Commerce (Mar. 28, 1977). The pertinent paragraph reads:

> An additional $12 miilion above the January budget for a total of $150 million for the air, water, water supply, solid waste, and toxic substances grant programs to State and local governments. This 20% increase over current levels will increase the ability of State and local governments to fulfill their statutory responsibilities for the abatement and control of environmental pollution.

eral technical or financial assistance under the Act, a state is required to: identify regions within such state or between states, determine the state or local agencies that are to develop and implement the solid waste plan for the identified region and develop and implement a solid waste management plan approved by the Administrator. The information that EPA collects and makes available and published guidelines relating to solid waste management are to be the sources that can be utilized by state and local officials to meet the requirements of the Act. Although each of the requirements offers the state and local participants wide flexibility, each requirement must be met.

a) *Development of Solid Waste Regions.* Within 180 days after EPA publishes the guidelines relating to the development of solid waste management regions, the governor of each state, after consultation with local elected officials, is required, provided such state seeks federal assistance, to identify boundaries within each area of the state for carrying out regional solid waste management planning. The development of the regions is to be based upon EPA's guidelines and is to consider factors such as the population, geography, volume of waste and means of transportation within the designated region.[152] The identification of such regions only establishes the boundaries for the region and the identification of the local governments and elected officials within such designated boundaries.

b) *Identification of duties and responsible agencies.* Once the boundaries of a region have been identified, the state and elected officials of general purpose units of local government are required, if they seek federal assistance for solid waste management, to jointly identify the agency or agencies that will develop and implement the state solid waste plan for the region.[153] Further, such officials are required to determine which functions will be undertaken by the state and which functions will be undertaken by the local officials.[154] The purpose of requiring the identification of the agency and officials responsible for various functions of the plan is to ensure that those responsible for carrying out the requirements

152. Resource Conservation and Recovery Act of 1976 § 4006(a), 42 U.S.C.A. § 6946(a) (West Supp. 1977).

153. *Id.* § 4006(b), 42 U.S.C.A. § 6946(b).

154. *Id.*; *see* H.R. REP. NO. 1491, 94th Cong., 2d Sess. 40 (1976).

of the Act receive the federal assistance.[155] This avoids the problem of all assistance going to one unit of government, mostly the state, which may assume little responsibility, while those developing and implementing the Act do not receive the needed assistance. This procedure ensures clear identification of responsibility and enables those assuming such responsibility to bargain for their share of the assistance. Further, it enables all to know the proportion of their share of assistance and responsibility prior to participation. However, if the state and local officials cannot jointly agree on the agencies and the distribution of responsibilities and assistance, then the governor, if seeking federal assistance, is required to designate a state agency to develop and implement the state plan for such area.[156] These provisions of the Act require cooperation between state and local authorities if a solid waste plan is to be developed and implemented. Neither can achieve the planning objective in conflict with the other. Simply, the plan will have to be negotiated between the interested parties.

c) *Contents of the Solid Waste Management Plan.* The Act is very confusing as to what the solid waste management plan must contain in order to receive EPA approval. Under the provisions of the Act entitled "Minimum Requirements for Approval of Plans," six requirements are listed. The requirements include (1) the identification of regions and responsibilities under the plan, the distribution of federal assistance and the means for coordination and implementation of the plan; (2) the prohibition on open dumping and requirement that solid waste be either utilized for resource recovery, disposed of in sanitary landfills or otherwise in an environmentally sound manner; (3) the closing or upgrading of existing open dumps; (4) the establishment of state regulatory authority to implement the plan; (5) the requirement that no state or local law can prohibit a local unit of government from entering a long-term contract for the supply of solid waste to a resource recovery facility; and (6) the provision for resource conservation, recovery or the disposal of solid waste in sanitary landfills or any combination of practices.[157] Notwithstanding the title of this provision or the

155. H.R. REP. NO. 1491, 94th Cong., 2d Sess. 33 (1976).

156. Resource Conservation and Recovery Act of 1976 § 4006(b)(2), 42 U.S.C.A. § 6946(b)(2) (West Supp. 1977).

157. *Id.* § 4003, 42 U.S.C.A. § 6943.

listing of the requirements, all requirements are not necessary for the approval of the state's plan. Instead another provision of the Act entitled "Approval of State Plan" states that the Administrator shall approve the plan if the requirements of numbers (1), (2), (3) and (5) listed above are met.[158] Simply, to receive EPA approval for the plan it is not necessary for such plan to contain state regulatory authorities capable of implementing the plan nor does the plan have to contain a system that provides that all solid waste be subject to resource conservation, recovery, or disposal in sanitary landfills or any such combination. By eliminating these two provisions as requirements of EPA approval, it could be argued that the Act eliminates the substantive requirements relating to how the state's solid waste will be utilized or disposed of. However, this is not correct since the requirements for approval still require the elimination or upgrading of open dumps and that waste be utilized for resource recovery or disposed of in an environmentally sound manner.[159] All that is really eliminated is that the plan shall provide for "resource conservation" as one of its options, and that state regulatory controls will not be required. Both provisions are unnecessary since "resource conservation" can still be considered as part of a state plan and even without state regulatory authority the Act could be enforced by the citizen suit provisions in those states receiving federal assistance. Further, EPA has the authority to deny or withhold federal assistance to any state not enforcing its solid waste management plan.

3. *Compliance of Solid Waste Management Plans.* Compliance of the state plan with federal guidelines can be accomplished in three ways. First, EPA can withhold federal financial or technical assistance to a state if the state is not implementing or enforcing its plan.

Second, any citizen can bring suit against any person or government instrumentality who is alleged to be in violation of any requirements of the Act or against the Administrator for failure to perform any duty which is not discretionary under the Act.[160] Therefore, a citizen could bring an action against a state or local government for not implementing the state plan as approved by

158. *Id.* § 4007, 42 U.S.C.A. § 6947.
159. *Id.* §§ 4003(2), (3), 4007(a)(1), 42 U.S.C.A. §§ 6943(2), (3), 6947(a)(1).
160. *Id.* § 7002(a), 42 U.S.C.A. § 6972(a).

EPA or the citizen could bring suit against EPA if federal assistance is not withheld from a state in violation of its plan. Prior to commencing any such action, sixty days notice of the violation must be given to the violator, Administrator, and the state.[161]

A third method of enforcement permits EPA to seek injunctive relief whenever the disposal of a solid waste presents an imminent and substantial endangerment to health or the environment. EPA is limited in its enforcement of the provisions of the Act relating to municipal solid waste simply because the congressional intent was that this problem, at this time, can be best solved by local effort encouraged with federal incentives. Additional methods of enforcement would only ensure additional federal involvement in an aspect of the solid waste problem Congress believes can still be solved with state and local planning.[162]

D. *Requirements for Federal Procurement of Recovered Materials Under the Resource Conservation and Recovery Act*

Congress realized that increased use of recovered materials would substantially alleviate problems of solid waste disposal. In addition to reducing the amount of waste which requires disposal, the use of recovered materials will reduce the nation's dependence on foreign raw material imports and help lower its trade deficit. An illustration of the benefits of recovering materials from waste is found in the uses of aluminum, tin and iron. At present the United States imports over 90 percent of its aluminum, 75 percent of its tin and 30 percent of its iron. Through recovery of these materials from its waste and reuse of such materials, the United States could recover of its total annual consumption eight percent of its aluminum, 19 percent of its tin and 7 percent of its iron.[163] As recovery and reuse of waste increases, there will be a corresponding increase in materials available and a corresponding decrease in the amount and volume of waste that must be disposed of on land, thus offering local governments an alternative to the scarce and often environmentally harmful open dumps.

If the plans for recovering usable materials from municipal solid

161. *Id.* § 7002(b), 42 U.S.C.A. § 6972(b).

162. *See* H.R. REP. NO. 1491, 94th Cong., 2d Sess. 33 (1976).

163. U.S. ENVIRONMENTAL PROTECTION AGENCY, THE ENVIRONMENTAL PROTECTION AGENCY: LEGISLATION, PROGRAMS AND ORGANIZATION 26 (1976).

waste are to be successful as a waste management technique, however, markets for recovered materials must exist. The Act attempts to stimulate existing markets and create new markets for the materials recovered from municipal solid waste. First, it directs the Secretary of Commerce to identify geographical locations of existing or potential markets, the economic or technical barriers to use of recovered materials in such markets, and the encouragement of new uses for recovered materials.[164] Second, to dispel myths that recovered materials cannot be substituted for virgin materials because of inferior characteristics, the National Bureau of Standards of the Department of Commerce is directed to develop specifications which "shall pertain to the physical and chemical properties and characteristics of such materials with regard to their use in replacing virgin materials in various industrial, commercial, and governmental uses."[165] Third, items procured with federal funds are required to be, to the extent practicable, recovered materials. The scope of this provision is broad and applies to items procured not only by the federal government but also by "any State agency or agency of a political subdivision of a State which is using appropriated Federal funds for such procurement, or any person contracting with any such agency with respect to work performed under such contract."[166]

To assist the procuring agencies purchase items with the highest percentage of recovered materials, agencies procuring with federal dollars will have available to them the information developed by the National Bureau of Standards relating to when a recovered material can be substituted for a virgin material. In addition, such agencies will have to eliminate from their specifications any exclusion of the use of recovered materials in an item, and any specification that requires an item to be produced from virgin materials.[167] Further, "each procuring agency shall procure items composed of the highest percentage of recovered materials practicable consistent with maintaining a satisfactory level of competition."[168] It appears

164. Resource Conservation and Recovery Act of 1976 § 5003, 42 U.S.C.A. § 6953 (West Supp. 1977).

165. *Id.* § 5002, 42 U.S.C.A. § 6952.

166. *Id.* § 1004(17), 42 U.S.C.A. § 6903(17). For a discussion of this provision, *see* H.R. REP. NO. 1491, 94th Cong., 2d Sess. 43 (1976).

167. Resource Conservation and Recovery Act of 1976 § 6002(d)(2), 42 U.S.C.A. § 6962(d)(2) (West Supp. 1977).

168. *Id.* § 6002(c), 42 U.S.C.A. § 6962(c).

that the requirements place two considerations upon the procurement, that of obtaining the highest percentage of recovered materials in each item and the maintenance of a level of competition. The word "competition" is not defined in the Act nor is there any legislative history explaining a congressional intent behind the use of the phrase. However, the statute requires that, if a decision is made not to procure an item containing the highest amount of recovered materials, then a determination must be made that such item (1) was not reasonably available; (2) that it failed to meet the performance standards of the specifications; or (3) that it was available only at an unreasonable price.[169] No determination is required concerning the maintenance of a satisfactory level of competition. Therefore, it appears that the purchase of items containing the highest percentage of recovered materials is the primary purpose of the procurement provisions. This is supported by the House and Senate Committee reports. The maintenance of a satisfactory level of competition is a factor that must be considered, but not permitted to interfere with the goal of the provisions. Further, since competition is not defined questions arise as to how such a factor is to be considered. Is it competition among all items that have the same end use whether made from recovered materials or virgin materials, notwithstanding the ability of the manufacturer to use recovered materials in the manufacture of the item? To attribute such a meaning to "competition" would mean Congress placed an exception into the statute that requires federal agencies to procure items made with virgin materials despite the availability of recovered materials in order to maintain existing competition among vendors of similar items. Such a policy is in direct contradiction of the congressional intent of the procurement provisions. Instead Congress most likely used the word "competition" in its plain meaning. This means that procuring agencies should consider bids from vendors of an item, all of whom are free to use recovered materials in the manufacture of their product, and award the contract to the vendor whose item contains the highest percentage of recycled materials. To hold otherwise would be to construe "competition" as a mechanism to subsidize non-competitive vendors by awarding contracts to such vendors who do not use recovered materials when such materials are available to them, solely for the

169. *Id.*

purpose of maintaining additional bids on a contract. This interpretation is also consistent with the use of the term "competition" for purpose of anti-trust law which the courts have defined to mean "a free and open market among both buyers and sellers for the sale and distribution of commodities."[170] Therefore, the term "consistent with a satisfactory level of competition" as used in the Act means that federal procurement should be undertaken in a manner that requires procurement items be composed of the highest percentage of recovered materials, and that the vendors of such goods being free to use recovered materials in their manufacturing process, are free to bid against each other for the award of a government contract.

Once the specifications are established by the National Bureau of Standards for substituting recovered materials for virgin materials other government procuring agencies will have the knowledge to redraft their specifications to purchase procurement items containing recovered materials. Such action will create new and expand existing markets for the sale of recovered materials. This will create a new demand for recovered materials by those desirous of obtaining government contracts. In turn, local authorities will find buyers for materials recovered from waste. As this occurs planning will be seen as a means to the delivery of valuable products as opposed to the collection of waste.

To achieve such objectives Congress realized that it would take a coordinated federal effort. To achieve this coordination objective, Congress required the Office of Procurement Policy in the Executive Office of the President, in cooperation with EPA, to coordinate federal procurement policy to maximize the use of recovered resources, and to annually report its progress to Congress.[171] By placing such coordinating responsibility with the Executive Office of the President, rather than in several agencies, there is a greater probability of such policy being implemented by all agencies in a uniform manner. Further, if such policy is frustrated by the Office of Procurement Policy the Congress will know that the President is not desirous of achieving such goals and that additional legislative action is necessary.

170. Maple Flooring Mfr's. Ass'n v. United States, 268 U.S. 563, 583 (1925).

171. Resource Conservation and Recovery Act of 1976 § 6002(g), 42 U.S.C.A. § 6962(g) (West Supp. 1977).

E. *Responsibilities Of Federal Facilities Under the Act*

The term "Federal facility" although not defined in the Act, is defined by Executive Order to mean "the buildings, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned by, or constructed or manufactured for the purpose of leasing to, the Federal Government."[172] The range of functions undertaken by these facilities include, but are not limited to, defense installations, fish hatcheries, national parks, research laboratories, hydroelectric dams, nuclear power plants, hospitals, prisons, naval vessels, and government offices.[173]

The Act in referring to such facilities requires that

> [e]ach department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any solid waste management facility or disposal site, or (2) engaged in any activity resulting, or which may result, in the disposal of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting control and abatement of solid waste or hazardous waste disposal in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. Neither the United States, nor any agent, employee, or officer thereof, shall be immune or exempt from any process or sanction of any State or Federal Court with respect to the enforcement of any such injunctive relief.[174]

In practical terms, this provision requires that such facilities comply with both the substantive and procedural requirements of the state solid and hazardous management waste plans developed pursuant to the Act. With federal compliance, regional planning will include all the waste in the region and will no longer have to exempt the area occupied by the federal facility from its plant.[175]

172. Exec. Order No. 11,752, 38 Fed. Reg. 34,793 (1973).

173. R. Shaw, The Procedures To Ensure Compliance By Federal Facilities with Environmental Quality Standards 2 (Report prepared for Administrative Conference of the United States 1975).

174. Resource Conservation and Recovery Act of 1976 § 6001, 42 U.S.C.A. § 6961 (West Supp. 1977).

175. S. REP. NO. 988, 94th Cong., 2d Sess. 23 (1976).

Also, provisions are in the Act to permit state, local or citizen enforcement of local, substantive and procedural laws, when the facility contravenes such laws.[176]

The justification for this provision is more easily understood by examining the background of how such facilities complied or failed to comply with the local environmental laws of the area in which they were located.

Presently the federal government owns or operates over 20,000 facilities that are engaged in activities which generate or manage solid waste.[177] Prior to the passage of the Act, the federal facilities managed their solid waste problems independently of the state and local jurisdictions in which they were situated. Such facilities were only required to comply with guidelines for solid waste recovery, collection, separation and disposal systems recommended by EPA.[178] Moreover, EPA did not have enforcement authority to ensure compliance with their guidelines. This situation produced conflict between local and federal authorities over how to solve the area's solid waste problem.[179]

Under other environmental laws, the Clean Air Act and the Federal Water Pollution Control Act, unlike the Solid Waste Disposal Act, federal facilities were required to comply with federal, state, interstate and local requirements respecting control and abatement of air and water pollution to the same extent that any

176. Resource Conservation and Recovery Act of 1976 § 7002, 42 U.S.C.A. § 6972 (West Supp. 1977).

177. R. Shaw, *supra* note 173, at 2.

178. *Id.* at 20-21.

179. A specific illustration of this problem is the problem between the Colorado citizens living in the vicinity of the Rocky Mountain Arsenal and the Rocky Mountain Arsenal. The Arsenal since World War II has been a dumping ground for mustard gas and chemical by-products from the manufacture of pesticides and herbicides. These waste liquids began infiltrating into the soil in 1951 and moved directly into the groundwater. Initially the crops irrigated with the contaminated groundwater experienced damage, exhibited by yellow foliage, retarded growth and low yields. The contamination continued and by 1965 there was severe contamination of the aquifer below the area in which the Arsenal is located for at least 12 square miles. Eventually, there was contamination of 30 square miles of shallow water table aquifer, soil contamination by toxic substances (aldrin and dieldrin) in the vicinity of the Arsenal's holding pond and forced abandonment of 64 domestic, stock irrigation wells. U.S. ENVIRONMENTAL PROTECTION AGENCY, HAZARDOUS WASTE DISPOSAL DAMAGE REPORTS 5-8 (S.W. 151.2, 1975). Although under local law the unsafe methods of disposal undertaken by the Army were prohibited, the Arsenal, as a federal facility, did not have to comply with the local or state law prohibiting such leaks.

person is subject to such requirements.[180] Pursuant to such a requirement, several states with federally approved air and water pollution abatement plans attempted to require the federal facilities located in their states to comply with the substantive and procedural aspects of the state approved plan. Although the federal facilities agreed in principle to comply with the substantive aspects of the state air and water plans, such facilities refused to comply with the procedural aspects which required the obtaining of a state permit, the submission of reports, and the granting of permission to state inspectors for entry into the federal facility. Subsequent to such refusal the States of Kentucky and California filed suit in federal court requesting that such facilities be ordered to comply with the States' procedural, mainly permit, requirements. The two States argued that without compliance with the procedural requirements, such as the filing requirements for a permit or the submission of reports, it would be impossible to evaluate the facilities' compliance with substantive law.

Two federal circuit courts of appeals reached conflicting conclusions on the virtually identical language relating to federal facilities that is contained in the Clean Air Act and the Water Pollution Control Act. The Ninth Circuit Court of Appeals in *California v. EPA*,[181] held that the statutory language of section 313 of the Federal Water Pollution Control Act was sufficiently clear to constitute a waiver of the Plenary Powers Clause and the Supremacy Clause of the Constitution, thereby requiring federal facilities to comply with the procedural as well as substantive requirements of the State plan. Whereas, the Sixth Circuit Court of Appeals, in *Kentucky ex rel. Hancock v. Ruckelshaus*,[182] held that although section 118 of the Clean Air Act required federal facilities to comply with Kentucky's substantive air quality standards, neither the statutory language nor the legislative history of the Clean Air Act required compliance with procedural state standards.

The United States Supreme Court granted the two petitions for certiorari so as to resolve the conflict. The Court addressed the issue in two separate opinions, *Hancock v. Train*,[183] the Kentucky

180. 42 U.S.C. § 1857f (1970); 33 U.S.C. § 1323 (Supp. V 1975).
181. 511 F.2d 963 (9th Cir. 1975).
182. 497 F.2d 1172 (6th Cir. 1974).
183. 426 U.S. 167 (1976).

case involving the Clean Air Act, and *EPA v. California ex rel. State Water Resources Control Board*,[184] the California case involving the Water Pollution Control Act. The Court, recognizing that the statutory language relating to federal facilities in the Clean Air Act and the Water Pollution Control Act was virtually identical, held that a federal facility was required to comply with state substantive requirements relating to air and water pollution abatement. However, the Court concluded with respect to state procedural requirements that "statutes which in general terms divest pre-existing rights or privileges will not be applied to the sovereign without a clear expression or implication to that effect."[185] Therefore, unless Congress clearly and affirmatively states that the federal facilities are subject to state substantive and procedural mechanisms the federal function must be left free of regulation.[186] The Court held that from the language of the statute it was clear that federal facilities had to comply with state substantive air and water pollution abatement standards, however, neither the statutory language nor the legislative history were clear and unambiguous that such facilities were to comply with state procedural requirements. After this decision, if federal facilities were to comply with state procedural mechanisms, then Congress must clearly state its intention. The provision of the Act relating to the solid waste activities of federal facilities is drafted with the Supreme Court's opinion in *Hancock* in mind. The word "procedural" is inserted requiring the federal facility to comply with both federal, interstate, state and local substantive and procedural requirements for solid waste management. This means that such facilities have to comply not only with federal requirements but also the various state and local requirements that may be more substantively stringent and the numerous procedural matters that may require federal facilities to obtain permits, make certain reports, and meet certain schedules.

Therefore, the Act for the first time establishes standards for solid waste management that federal facilities are required to comply with. Although EPA was not given specific authority to enforce compliance of each federal facility with the Act, EPA, with respect to those wastes identified as hazardous, can take action against any

184. 426 U.S. 200 (1976).
185. Hancock v. Train, 426 U.S. 167, 179 (1976) (citations omitted).
186. Mayo v. United States, 319 U.S. 441, 448 (1943).

person, including federal personnel acting outside the scope of their duty, for not complying with the requirements of the Act. The effect of such action would be to force those federal officials responsible for implementing the Act to ensure its implementation or risk being sued for acting outside the scope of their duty. In addition, state, local, or interstate governments and private citizens are given standing to sue to enforce all the standards of the Act against federal facilities.

VI. Impediments To Comprehensive Waste Management

Although the Act authorizes new funding for EPA's Office of Waste Management and new authority with regard to the management of hazardous wastes, passage of the Act is but the first step toward protecting the environment from waste pollution. The Act establishes a federal policy on waste management and gives the EPA some direction in carrying out that policy. That is not enough to achieve the objectives of the Act which are "to promote the protection of health and the environment and to conserve valuable material and energy resources." To be successful, the programs contemplated in the Act must be actively promoted by EPA and adequately funded by Congress. To properly protect health and the environment, other sources of waste pollution must also be addressed. In this section we will discuss the need for additional action by EPA and Congress if public health and the environment are to be protected from the dangers of pollution from waste.

A. *Short Term*

Because the Act primarily authorizes incentive type programs, with minimum federal standards applying only to hazardous waste management, the success of the Act in promoting environmentally sound waste management is dependent on a number of factors. The first and probably most important of these factors is the degree to which local and state governments cooperate with each other and with EPA. Local and state funding and personnel commitment to waste management programs must at least remain at their present levels. Increased federal assistance should augment local and state waste management activity, not replace it.[187] State and espe-

187. Resource Conservation and Recovery Act of 1976 § 4008(b), 42 U.S.C.A. § 6948(b) (West Supp. 1977).

cially local governments are willing to take an active role in waste management if adequate resources are made available to them. In the past, local and state budgets have not permitted them to fully address waste management problems. The federal assistance provisions authorized by the Act should help eliminate this obstacle to local and state action.

Implicit in a successful waste management program under the Act is a cooperative effort in waste management planning between local and state governments. Since a considerable portion of the funds used to formulate and implement these management plans will come from the federal government, however, it is important that EPA establish a close working relationship with local and state governments. It is also important that EPA make every effort to ensure adequate resources for distribution to local and state governments. In the past EPA's relationship with state and local governments has been less than ideal, and its pursuit of financial resources, for itself and others, has been less than inspiring. In fact, EPA's record in seeking money from Congress for solid waste programs is deplorable. In 1973, EPA's request for funds to the Appropriations Committees of the Congress was $194 million less than the amount authorized in the Solid Waste Disposal Act of 1965. In 1974 the difference between the agency's budget request and Congress' budget authorization rose to more than $210 million! The following year however the difference between budget request and authorization was smaller—only $61 million. Did the agency finally ask for more money since Congress had authorized its committment to solid waste programs? No. In 1975 the grant authorization for demonstrating recovery of resources from waste expired, reducing the total amount Congress was willing to spend. This in turn reduced the difference from the amount EPA requested. It was the demonstration grant money that would have gone to local and state governments. EPA was no more concerned with requesting money for the local and state governments than it was for securing funds for its own solid waste programs. Between 1972 and 1974 Congress authorized $360 million to assist local and state governments demonstrate recovery of usable materials from waste as a waste management technique. During those years the EPA requested $4 million.[188]

188. MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY

If the programs contemplated and in some instances required by the Act are to be successful in their impact on waste management, the agency will have to demonstrate greater concern for the needs of the local and state governments it is directed to assist. The agency will also have to take a more ambitious approach to promoting its own waste management programs and seeking the resources to properly support them.

However, that approach alone will not ensure adequate resources. The Resource Conservation and Recovery Act of 1976 contains yearly authorizations of approximately $176 million. This represents the ceiling for federal spending under the Act. Actual money available for expenditure by the agency is set by the Appropriations Committees of the House and Senate which receive the Agency's budget request. Although the Appropriations Committees seldom approve the expenditure of the entire amount authorized, solid waste management programs have received generous treatment, at least in terms of the amounts requested by the Agency. Between 1971 and 1975 the funds appropriated by Congress for expenditure in solid waste management have exceeded EPA's total waste management budget request by at least $3 million each year. Even more generous have been the appropriations for the local and state resource recovery demonstration grants. In 1972, when EPA requested only $4 million, the Appropriations Committees showered more than $11 million on the agency. The following year when the EPA request was zero dollars, appropria-

ACT OF 1976, *supra* note 5, at 84. The following chart, developed by EPA's Budget Operations Office, illustrates EPA's authorizations, appropriations and obligation for its solid waste program for fiscal years 1973, 1974, 1975, and 1976. (Chart on file with the Subcommittee on Transportation and Commerce of the House Committee on Interstate and Foreign Commerce, as of Oct. 28, 1976.)

	1973	*1974*	*1975*	*1976*
Authorization	216,000	216,000	76,000	Expired
Section 208	140,000	140,000	. . .	Expired
Section 216	76,000	76,000	76,000	Expired
Appropriated	36,553	8,760	19,529	15,685
Section 208	15,000	. . .	. . .	. . .
Section 216	21,553	8,760	19,529	15,685
Obligations	43,732	13,023	20,184	16,632
Section 208	20,349	633	2,257	. . .
Section 216	23,383	12,390	17,927	16,632

tions increased to $15 million.[189]

The appropriations under the Solid Waste Disposal Act of 1965 are reason for hope that Congress will adequately fund waste management programs under the Resource Conservation and Recovery Act. If it does not, little progress in waste management can result from the Act. If funding under the Act is inadequate, EPA will have to husband its scarce resources by prioritizing the various provisions of the Act. Some provisions, probably those which constitute specific direction from Congress to do something, will be funded and carried out. Other provisions, probably those which give the agency general authority without specific direction, will be inadequately funded or abandoned. Another possibility resulting from an inadequate appropriation is that no program will have sufficient resources to meet the congressional objective contained in the Act. This could result from an agency decision to divide its solid waste appropriation equally among the activities authorized by the Act. The difficulty with this approach is easily illustrated.

The agency is required to publish minimum standards for the management of hazardous waste. It is also required to publish guidelines for non-hazardous waste management. If the states do not voluntarily enforce the hazardous waste standards with financial assistance as the incentive to do so, EPA must initiate what could be an extremely costly enforcement program. If the states and local governments do not adopt the non-hazardous waste management guidelines, federal financial assistance is terminated. EPA takes no further action. If a limited appropriation is disbursed equally among the activities authorized under the Act, EPA might not have sufficient resources to entice the states to enforce the minimum standards for hazardous waste management. Even worse, the Agency would have no money left to enforce the standards where the states failed to do so. The likely result would be citizen suits against the agency for not complying with the specific congressional directive to protect health and the environment from hazardous wastes. Both the Agency and the appropriations committees of Congress must recognize the need for adequate funding under the Act.

189. MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, *supra* note 8, at 84.

B. *Long Term*

In the long term, the success of the Act will depend on the ability of local and state governments to find alternatives to presently used, though environmentally inadequate, methods of waste management. One method of reducing the volume of waste which must be disposed of, and rendering remaining waste less noxious, is to recover both reusable materials and energy from waste. The recoverable materials can be extracted and the organic waste burned to produce energy and an easily managed ash. The Act anticipates much interest in such projects and authorizes the Resource Conservation and Recovery Panels discussed above, to provide technical assistance to such projects' development. Another important factor in the construction of waste recovery plants is, however, not addressed by the Act—money. Waste recovery plants are typically capital intensive, and require investments of millions of dollars. Presently the willingness of private investors to finance these waste recovery projects is uncertain. Municipal and state governments which might want to invest in waste recovery generally face tight markets for all kinds of public works financing. This limited capital availability for waste recovery projects formed the basis for both the House and Senate loan guarantee programs proposed, but not included in the Act.[190] Unless the private capital markets

190. When it was introduced in the House by Representative Rooney, H.R. 14496 included language which would have created a federally supported "nonprofit corporation, to be known as the United States Resource Recovery Corporation." H.R. 14496, 94th Cong., 2d Sess. § 601 (1976). This entity was to encourage the construction of plants which recovered usable materials from waste by "reducing a portion of the risk inherent in the traditional methods of capital formation . . . [and] reducing a portion of the operating risk associated with the supply of discarded materials." *Id.* § 602. The corporation would guarantee investments made in waste recovery plants and would sell insurance to cover the risk that such a plant's garbage supply would be interrupted. Supporting such a scheme were members of Representative Rooney's House Subcommittee on Transportation and Commerce and the Office of Technology Assessment investigators who had found waste recovery plants having trouble raising construction money. Opposition to the proposal included the Ford administration, a member of Rooney's subcommittee who also served as Chairman of the House Budget Committee, and a coalition of environmental groups. The Ford administration contended that there were already too many federal loan guarantee programs and, as a result too much contingent liability for the federal government. *But see* H.R. REP. NO. 1491, 94th Cong., 2d Sess. 82 (1976). Representative Brock Adams, then chairman of the House Budget Committee voiced similar arguments. He was also concerned with the size of the $2.5 billion program. Environmental groups (led by Environmental Action and supported by the League of Women Vot-

overcome their hesitance to become involved in waste recovery financing, materials recovery from waste may be severely limited as an alternative waste management method. Factors which limit environmentally acceptable waste management alternatives also limit the success of the Act. Already there have been stirrings in the Congress to provide financing assistance for waste recovery projects,[191] and ease the capital crunch such projects may face.

While the jury is out on whether or not capital intensive waste recovery plants receive the needed funds, pressure to reduce the volume of waste by other means will increase. The proponents of the nonreturnable beverage container ban and other packaging restrictions, will continue their crusade.[192] There is substantial fed-

ers) contended that the loan guarantee program would push communities toward the "black box" high technology solution to waste management problems. They were committed to personal initiative programs such as in the home separation of glass, newspapers and other reusable materials from biodegradable waste. Consideration of H.R. 14496 was delayed nearly a month while the supporters and opponents tried to persuade each other. Finally Rep. Rooney agreed to strike the Resource Recovery Corporation from H.R. 14496 in exchange for administration support and backing from the environmental groups. Although the deadlock was broken, some members of Congress wanted the loan guarantee provisions retained and at least one congressman considered the possibility of reinstating the $2.5 billion provision when H.R. 14496 reached the floor of the House. Although the House bill remained free of a loan guarantee provision, the Senate approved a small guarantee program. The Senate bill, S. 3622, contained a $150 million program which was to be administered by EPA to help finance "commercial demonstration facilities" which recovered materials from waste. S. 3622, 94th Cong., 2d Sess § 217 (1976). During the negotiation which resulted in the Act, that provision was dropped. Instead of the loan guarantee program included in either S. 3622 or H.R. 14496, a grant program of $35 million for demonstration plants became part of the Act, but was limited upon inclusion in the Act by the narrow definition of the term "demonstration." Resource Conservation and Recovery Act of 1976 § 1004(2A), 42 U.S.C.A. § 6903(2A) (West Supp. 1977).

191. H.R. 1214, 95th Cong., 1st Sess. (1977) is nearly identical to H.R. 14496, 94th Cong., 2d Sess. (1976), as introduced, including the loan guarantee provisions.

192. When H.R. 14496 came to the House floor for debate, it did not give EPA authority to promote resource conservation, in its full meaning, as a method of waste management. The House-Senate compromise, which replaced H.R. 14496 on the House floor, did include the expansive definition of resource conservation as a result of Senate insistence on the provision's inclusion. Although the Act includes resource conservation authority for studies on reducing the amount of waste generated and reducing the amount of resources consumed, both environmentalists and the labor-industry group were anxious for a resolution of the "ban the bottle" battle. A number of House and Senate bills had been introduced to ban the interstate sale of nonreturnable beverage containers. *See e.g.*, H.R. 406, 1124, 1526, 2192, 2768, 2769, 3246, 94th Cong., 1st Sess. (1976). These had the support of the environmentalists as amendments to the House waste management bill, H.R. 14496. Others favored the industry position and sought to eliminate EPA's authority to issue nonreturnable bev-

eral interest in the regulation of packaging as a solution to the growing volume of waste. A number of proposals have been introduced in Congress to establish a national ban on the interstate sale of nonreturnable beverage containers. In the same vein are proposals to impose federal regulation on the types and amounts of other packaging.[193] Underlying both package regulation proposals is the theory that waste should be reduced by limiting the production of packaging materials which are thrown away upon delivery of the product to the consumer. More radical still are proposals to regulate the production of ordinary consumer goods if they require too much virgin material or energy in their manufacture.[194] These proposals may be the harbingers of an expanded federal role in the future of waste management. If they are, a long and bitter battle between the affected industries and environmentalists is insured. If the environmental interests are successful in promoting federal packaging regulations, the increase in the volume of waste will certainly be reduced. If the packaging industry has greater influence with Congress, and there is reason to believe it does, waste reduction may suffer a fatal setback both at the national level and in the nation's state houses. In either event a great deal of money, effort and emotion will be expended on the effort to limit bottles, cans

erage container rules for federal facilities such as military bases under the Solid Waste Disposal Act of 1965. H.R. 15470, 94th Cong., 2d Sess. (1976). Since the nonreturnable beverage container issue was such a volatile one, both the proponents and opponents of nonreturnable beverage container legislation agreed not to offer their proposals as amendments to H.R. 14496. It was fortunate they reached that agreement, for no issue could more certainly have jeopardized the passage of H.R. 14496.

193. Efforts in the 95th Congress to control litter and waste have thus far emphasized a mandatory deposit for beverage containers, with a refund upon their return (making them less costly and therefore more attractive to the consumer than throw-aways). As in the previous Congress, the attack on disposable beverage containers is led by Rep. Jeffords of Vermont, who introduced H.R. 936, 95th Cong., 1st Sess. (1977), H.R. 937, 95th Cong., 1st Sess. (1977), and H.R. 5582, 95th Cong., 1st Sess. (1977), and Sen. Hatfield of Oregon, who introduced S. 276, 95th Cong., 1st Sess. (1977). All mandate a deposit and refund. H.R. 873, 95th Cong., 1st Sess. (1977), introduced by Rep. Fish of New York, would ban the interstate sale of nonreturnable beverage containers. Regulation of all types of packaging was proposed during the early stages of the drafting of the Act. *See* Solid Waste Utilization Act, Preliminary Staff Suggestions §§ 306, 307 (Dec. 8, 1975) (for use of the Subcommittee on Transportation and Commerce of the House Committee on Interstate and Foreign Commerce). Senator Gary Hart of Colorado has introduced a similar proposal. S. 2181, 95th Cong., 1st Sess. (1977).

194. Solid Waste Utilization Act, Preliminary Staff Suggestions, *supra* note 193, at § 307.

and packages which make up 45 of the 135 million tons of post consumer waste created each year.[195] The war on waste which is possible under the Act may be undercut by the interest groups focusing full attention on the battle over nonreturnable bottles and cans, and not on the waste management planning provisions established under the Act.

Because the Act will encourage the recovery of usuable materials from waste or prohibitions on packaging through the local and state planning process, and because the Act provides the first federal regulatory authority over hazardous waste management, we have talked of it as being comprehensive. Its scope is much broader than that of the federal waste management legislation which preceded it. The Act is, however, not truly all encompassing. It fails to address the most important waste management question in the history of mankind—what to do with radioactive waste. None of the Act's provisions apply to any activity or substance covered by the Atomic Energy Act of 1954.[196] Under the Atomic Energy Act, the disposal of radioactive waste is not specifically addressed. Instead, the term "byproduct material" is used and defined to mean "any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material."[197] This meaning could encompass radioactive waste; however, there is no congressional directive as to its management.

Dissatisfaction with methods allowed under present agency regulation is growing. When the Nuclear Regulatory Commission considers a license application for a nuclear power plant, it must consider the storage and disposal of radioactive wastes generated at the plant. The Commission must ensure that licensees are

195. MATERIALS RELATING TO THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, *supra* note 8, at 3, 5.

196. Resource Conservation and Recovery Act of 1976 § 1004(27), 42 U.S.C.A. § 6903(27) (West Supp. 1977). Neither the Senate nor House bills were drafted to include radioactive waste because legislative responsibility for radioactive materials rested with the Joint Committee on Atomic Energy rather than with the Senate Public Works Committee, which drafted S. 2150, 94th Cong., 2d Sess. (1976), or the House Committee on Interstate and Foreign Commerce, which drafted H.R. 14496, 94th Cong., 2d Sess. (1976). Subsequent to passage of the Act legislative responsibility in the House was changed, placing radioactive waste within the purview of the House Commerce Committee.

197. 42 U.S.C. §§ 2011-2296, 2014(e) (1970).

"equipped to observe and . . . agree to observe such safety standards to protect health and to minimize danger to life or property as the Commission may by rule establish."[198] The Atomic Energy Act contains no specific direction for radioactive waste management comparable to the direction for management of non-radioactive hazardous waste under the Resource Conservation and Recovery Act of 1976.[199] The power of the Commission to regulate radioactive waste management rests on its general authority to "establish by rule, regulation, or order, such standards . . . to govern the . . . use of . . . byproduct material . . . to promote the common defense and security or to protect health or to minimize danger to life or property."[200] It is interesting to note the standard of protection required by the Resource Conservation and Recovery Act and the standard required by the Atomic Energy Act. Under the former Act hazardous wastes, which may be man-made chemicals, or naturally-occurring elements, having toxic lifetimes of hundreds of years, are required to be isolated in a manner that protects "health and the environment."[201] Under the general authority of the Commission however, protection from radioactive wastes, with toxic lifetimes of hundreds of thousands of years, need only be isolated so as to "protect health or to minimize danger to life and property."[202] With the enactment of the Act, less hazardous wastes with shorter toxic lifetimes will be more stringently regulated than the more dangerous and long lived radioactive wastes. To comprehensively protect health and the environment from pollution by wastes, the standards of the Act should be extended to the most threatening waste of all—radioactive waste.

198. *Id.* § 2133(b).

199. *See* Resource Conservation and Recovery Act of 1976 subtit. C, 42 U.S.C.A. §§ 6921-6931 (West Supp. 1977).

200. 42 U.S.C. § 2201(b) (1970).

201. Resource Conservation and Recovery Act of 1976 § 3002, 42 U.S.C.A. § 6922 (West Supp. 1977).

202. 42 U.S.C. § 2201(b) (1970).