THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Legal Compilation

Statutes and Legislative History
Executive Orders
Regulations
Guidelines and Reports

JANUARY 1973

WILLIAM D. RUCKELSHAUS
Administrator

ENVIRONMENTAL PROTECTION AGENCY

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FOREWORD

It has been said that America is like a gigantic boiler in that once the fire is lighted, there are no limits to the power it can generate. Environmentally, the fire has been lit!

With a mandate from the President and an aroused public concern over the environment, we are experiencing a new American Revolution, a revolution in our way of life. The era which began with the industrial revolution is over and things will never be quite the same again. We are moving slowly, perhaps even grudgingly at times, but inexorably into an age when social, spiritual and aesthetic values will be prized more than production and consumption. We have reached a point where we must balance civilization and nature through our technology.

The U.S. Environmental Protection Agency, formed by Reorganization Plan No. 3 of 1970, was a major commitment to this new ethic. It exists and acts in the public's name to ensure that due regard is given to the environmental consequences of actions by public and private institutions.

In a large measure, this is a regulatory role, one that encompasses basic, applied, and effects research; setting and enforcing standards; monitoring; and making delicate risk-benefit decisions aimed at creating the kind of world the public desires.

The Agency was not created to harass industry or to act as a shield behind which man could wreak havoc on nature. The greatest disservice the Environmental Protection Agency could do to American industry is to be a poor regulator. The environment would suffer, public trust would diminish and instead of free enterprise, environmental anarchy would result.

It was once sufficient that the regulatory process produce wise and well-founded courses of action. The public, largely indifferent to regulatory activities, accepted agency actions as being for the "public convenience and necessity." Credibility gaps and cynicism make it essential not only that today's decisions be wise and well-founded but that the public know this to be true. Certitude, not faith, is de rigueur.

In order to participate intelligently in regulatory proceedings, the citizen should have access to the information available to the agency. EPA's policy is to make the fullest possible disclosure of information, without unjustifiable expense or delay, to any interested party. With this in mind, the EPA Compilation of Legal Authority was produced

not only for internal operations of EPA, but as a service to the public, as we strive together to lead the way, through the law, to preserving the earth as a place both habitable by and hospitable to man.

WILLIAM D. RUCKELSHAUS
Administrator
U.S. Environmental Protection Agency

PREFACE

Reorganization Plan No. 3 of 1970 transferred 15 governmental units to create the U.S. Environmental Protection Agency, along with their functions and legal authority. Since only the major laws were cited in the Plan, the Administrator, William D. Ruckelshaus, requested that a compilation of EPA legal authority be researched and published.

The publication has the primary function of providing a working document on a permanent basis. Secondary, as per the policy of the Agency, it will serve as a research tool for the public.

A permanent office in the Office of Legislation has been established to keep the publication updated by supplements.

It is the hope of EPA that this set will assist in the awesome task of developing a better environment.

MARY LANE REED WARD GENTRY, J.D.
Assistant Director for Field Operations
Office of Legislation
U.S. Environmental Protection Agency

ACKNOWLEDGMENT

The idea of producing a compilation of the legal authority of EPA was conceived and commissioned by William D. Ruckelshaus, Administrator of EPA. The production of this compilation involved the cooperation and effort of numerous sources, both within and outside the Agency. The departmental libraries at Justice and Interior were used consistently, therefore we express our appreciation to Marvin P. Hogan, Librarian, Department of Justice; Arley E. Long, Land & Natural Resources Division Librarian, Department of Justice; Frederic E. Murray, Assistant Director, Library Services, Department of the Interior.

For exceptional assistance and cooperation, my gratitude to: Gary Baise, formerly Assistant to the Administrator, currently Director, Office of Legislation, who first began with me on this project; A. James Barnes, Assistant to the Administrator; K. Kirke Harper, Jr., Special Assistant for Executive Communications; John Dezzutti, Administrative Assistant, Office of Executive Communications; Roland O. Sorensen, Chief, Printing Management Branch, and Jacqueline Gouge and Thomas Green, Printing Management Staff; Ruth Simpkins, Janis Collier, Wm. Lee Rawls, Peter J. McKenna, James G. Chandler, Jeffrey D. Light, Randy Mott, Thomas H. Rawls, John D. Whittaker, Linda L. Payne, John M. Himmelberg, and Dana W. Smith, a beautiful staff who gave unlimited effort; and to many others, behind the scenes who rendered varied assistance.

MARY LANE REED WARD GENTRY, J.D.
Assistant Director for Field Operations
Office of Legislation
U.S. Environmental Protection Agency

INSTRUCTIONS

The goal of this text is to create a useful compilation of the legal authority under which the U.S. Environmental Protection Agency operates. These documents are for the general use of personnel of the EPA in assisting them in attaining the purposes set out by the President in creating the Agency. This work is not intended and should not be used for legal citations or any use other than as reference of a general nature. The author disclaims all responsibility for liabilities growing out of the use of these materials contrary to their intended purpose. Moreover, it should be noted that portions of the Congressional Record from the 92nd Congress were extracted from the "unofficial" daily version and are subject to subsequent modification.

EPA Legal Compilation consists of the Statutes with their legislative history, Executive Orders, Regulations, Guidelines and Reports. To facilitate the usefulness of this composite, the Legal Compilation is divided into the eight following chapters:

A. General
B. Air
C. Water
D. Solid Waste
E. Pesticides
F. Radiation
G. Noise
H. International

SOLID WASTE

The chapter labeled "Solid Waste," and colored coded yellow contains the legal authority of the Agency applicable to pollution abatement of solid waste. The majority of statutes and legislative history appear in full text herein; however, here are several statutes which apply to other areas of pollution and in that event just the statute will appear in full text with a reference made to the "General" chapter for legislative history.

SUBCHAPTERS

Statutes and Legislative History

For convenience, the Statutes are listed throughout the Compilation by a one-point system, i.e., 1.1, 1.2, 1.3, etc., and Legislative History begins wherever an alphabet follows the one-point system. Thusly, any 1.1a, 1.1b, 1.2a, etc., denotes the public laws comprising the 1.1, 1.2

statute. Each public law is followed by its legislative history. The legislative history in each case consists of the House Report, Senate Report, Conference Report (where applicable), the Congressional Record beginning with the time the bill was reported from committee.

Example:

1.1 The Solid Waste Disposal Act, as amended, 42 U.S.C. §3251 *et seq.* (1970).

1.1a The Solid Waste Disposal Act, October 20, 1965, P.L. 89-272, 79 Stat. 997.

(1) Senate Committee on Public Works, S. REP. No. 192, 89th Cong., 1st Sess. (1965).

(2) House Committee on Interstate and Foreign Commerce, H.R. REP. No. 899, 89th Cong., 1st Sess. (1965).

(3) Congressional Record, Vol. 111 (1965):

(a) May 18: Considered and passed Senate, pp. 10781-10783;

(b) Sept. 23: Considered in House, p. 24941;

(c) Sept. 24: Considered and passed House, amended, pp. 25049-25073;

(d) Oct. 1: Senate concurred in House amendments, pp. 25848-25851.

1.1b One-Year Extension of Solid Waste Disposal Authorization, October 15, 1968, P.L. 90-574, Title V, §506, October 15, 1968, 82 Stat. 1013.

You will note that the Congressional Record cited pages are only those pages dealing with the discussion and/or action taken pertinent to the section of law applicable to EPA. In the event there is no discussion of the pertinent section, only action or passage, then the asterisk (*) is used to so indicate, and no text is reprinted in the compilation. In regard to the situation where only one section of a public law is applicable, then only the parts of the report dealing with same are printed in the compilation.

Secondary Statutes

Many statutes make reference to other laws and rather than have this manual serve only for major statutes, these secondary statutes have been included where practical. These secondary statutes are indicated in the table of contents to each chapter by a bracketed cite to the particular section of the major act which made the reference.

Citations

The United States Code, being the official citation, is used throughout the Statute section of the compilation. In four Statutes, a parallel table to the Statutes at Large is provided for your convenience.

TABLE OF STATUTORY SOURCE

Statutes	Source
1.1 Solid Waste Disposal Act, as amended, 42 U.S.C. §3251 *et seq.* (1970).	Reorg. Plan No. 3 of 1970.
1.2 Contracts: Acquisition, Construction or Furnishing of Test Facilities and Equipment, as amended, 10 U.S.C. §2353 (1956).	Referenced to in the Solid Waste Disposal Act at §3253(b)(3).
1.3 Housing Act of 1954, as amended, 40 U.S.C. §461 (1970).	Referenced to in the Solid Waste Disposal Act at §3254a(a), §3254a(c).
1.4 Definition of Executive Agency, 5 U.S.C. §105 (1966).	Referenced in the Solid Waste Disposal Act at §3254e(a)(1).
1.5 Davis–Bacon Act, as amended, 40 U.S.C. §§276a–276a–5 (1964).	Referenced to in the Solid Waste Disposal Act at §3256.
1.6 Reorganization Plan No. 14 of 1950, 64 Stat. 1267 (1950).	Referenced to in the Solid Waste Disposal Act at §3265.
1.7 Regulations Governing Contractors and Subcontractors, as amended, 40 U.S.C. §276c (1958).	Solid Waste Disposal Act, at §3256.
1.8 Amortization of Pollution Control Facilities, as amended, 26 U.S.C. §169 (1969).	Cited in Reorg. Plan No. 3 of 1970.
1.9 Interest on Certain Government Obligations, as amended, 26 U.S.C. §103 (1969).	Direct reference to Solid Waste Facilities on Industrial bond.

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The Executive Orders are listed by a two-point system (2.1, 2.2, etc.). Executive Orders found in General are ones applying to more than one area of the pollution chapters.

Regulations

The Regulations are noted by a three-point system (3.1, 3.2, etc.). Included in the Regulations are those not only promulgated by the Environmental Protection Agency, but those under which the Agency has direct contact.

Guidelines and Reports

This subchapter is noted by a four-point system (4.1, 4.2, etc.). In this subchapter is found the statutorily required reports of EPA, published guidelines of EPA, selected reports other than EPA's and interdepartmental agreements of note.

UPDATING

Periodically, a supplement will be sent to the interagency distribution and made available through the U.S. Government Printing Office in order to provide an accurate working set of EPA Legal Compilation.

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1.1b One-Year Extension of Solid Waste Disposal Authorization, October 15, 1968, P.L. 90-574, Title V, §506, October 15, 1968, 82 Stat. 1013 75

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§ 3251. Congressional findings and declaration of purpose

(a) The Congress finds—

(1) that the continuing technological progress and improvement in methods of manufacture, packaging, and marketing of consumer products has resulted in an ever-mounting increase, and in a change in the characteristics, of the mass of material discarded by the purchaser of such products;

(2) that the economic and population growth of our Nation, and the improvements in the standard of living enjoyed by our population, have required increased industrial production to meet our needs, and have made necessary the demolition of old buildings, the construction of new buildings, and the provision of highways and other avenues of transportation, which, together with related industrial, commercial, and agricultural operations, have resulted in a rising tide of scrap, discarded, and waste materials;

(3) that the continuing concentration of our population in expanding metropolitan and other urban areas has presented these communities with serious financial, management, intergovernmental, and technical problems in the disposal of solid wastes resulting from the industrial, commercial, domestic, and other activities carried on in such areas;

(4) that inefficient and improper methods of disposal of solid wastes result in scenic blights, create serious hazards to the public health, including pollution of air and water resources, accident hazards, and increase in rodent and insect vectors of disease, have an adverse effect on land values, create public nuisances, otherwise interfere with community life and development;

(5) that the failure or inability to salvage and reuse such materials economically results in the unnecessary waste and depletion of our natural resources; and

(6) that while the collection and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies, the problems of waste disposal as set forth above have become a matter national in scope and in concern and necessitate Federal action through financial and technical assistance and leadership in the development, demonstration, and application of new and improved methods

and processes to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid-waste disposal practices.

(b) The purposes of this chapter therefore are—

(1) to promote 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;

(2) to provide technical and financial assistance to States and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs;

(3) to promote a national research and development program for improved management techniques, more effective organizational arrangements, and new and improved methods of collection, separation, recovery, and recycling of solid wastes, and the environmentally safe disposal of nonrecoverable residues;

(4) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems and

(5) to provide for training grants in occupations involving the design, operation, and maintenance of solid waste disposal systems.

Pub.L. 89–272, Title II, § 202, Oct. 20, 1965, 79 Stat. 997, amended Pub.L. 97–512, Title I, § 101, Oct. 26, 1970, 84 Stat. 1227.

§ 3252. Definitions.

When used in this chapter—

(1) The term "Secretary" means the Secretary of Health, Education, and Welfare; except that such term means the Secretary of the Interior with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities.

(2) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(3) The term "interstate agency" means an agency of two or more municipalities in different States, or an agency established by two or more States, with authority to provide for the disposal of solid wastes and serving two or more municipalities located in different States.

(4) The term "solid waste" means 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, such as silt, dissolved or suspended solids in industrial waste water effluent, dissolved materials in irrigation return flows or other common water pollutants.

(5) The term "solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid waste.

(6) The term "construction", with respect to any project of construction under this chapter, means (A) the erection or building of new structures and acquisition of lands or interests there, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and (B) the acquisition and installation of initial equipment of, or required in connection with, new or newly acquired structures or the expanded, remodeled, altered, modernized or extended part of existing structures (including trucks and other motor vehicles, and tractors, cranes, and other machinery) necessary for the proper utilization and operations of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and
(C) the inspection and supervision of the process of carrying out the project to completion.

(7) The term "municipality" means a city, town, borough, country, parish, district, or other public body created by or pursuant to State law with responsibility for the planning or administration of solid waste disposal, or an Indian tribe.

(8) The term "intermunicipal agency" means an agency established by two or more municipalities with responsibility for planning or administration of solid waste disposal.

(9) The term "recovered resources" means materials or energy recovered from solid wastes.

(10) The term "resources recovery system" means a solid waste management system which provides for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues.

Pub.L. 89–272, Title II, § 203, Oct. 20, 1965, 79 Stat. 998, amended Pub.L. 91–512, Title I, § 102, Oct. 26, 1970, 84 Stat. 1228.

§ 3253. Research, demonstrations, training and other activities —Authority of Secretary to conduct; encouragement, etc., of public and private agencies in the conduct of

(a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to—

(1) any adverse health and welfare effects of the release into the environment of material present in solid waste, and methods to eliminate such effiects;

(2) the operation and financing of solid waste disposal programs;

(3) the reduction of the amount of such waste and unsalvageable waste materials;

(4) the development and application of new and improved methods of collecting and disposing of solid waste and processing and recovering materials and energy from solid wastes; and

(5) the identification of solid waste components and potential materials and energy recoverable from such waste components.

Collection and dissemination of information: cooperation with public or private agencies; grants-in-aid; contracts

(b) In carrying out the provisions of the preceding subsection, the Secretary is authorized to—

(1) collect and make available, through publications and other appropriate means, the results of, and other information pertaining to, such research and other activities, including appropriate recommendations in connection therewith;

(2) cooperate with public and private agencies, institutions, and organizations, and with any industries involved, in the preparation and the conduct of such research and other activities; and

(3) make grants-in-aid to public or private agencies and institutions and to individuals for research, training projects, surveys, and demonstrations (including construction of facilities), and provide for the conduct of research, training, surveys, and demonstrations by contract with public or private

agencies and institutions and with individuals; and such contracts for research or demonstrations or both (including contracts for construction) may be made in accordance with and subject to the limitations provided with respect to research contracts of the military departments in section 2353 of Title 10, except that the determination, approval, and certification required thereby shall be made by the Secretary.

Provisions of grants or contracts to insure availability of information, uses, processes and patents; use of and adherence to Statement of Government Patent Policy

(c) Any grant, agreement, or contract made or entered into under this section shall contain provisions effective to insure that all information, uses, processes, patents and other developments resulting from any activity undertaken pursuant to such grant, agreement, or contract will be made readily available on fair and equitable terms to industries utilizing methods of solid-waste disposal and industries engaging in furnishing devices, facilities, equipment, and supplies to be used in connection with solid-waste disposal. In carrying out the provisions of this section, the Secretary and each department, agency, and officer of the Federal Government having functions or duties under this chapter shall make use of and adhere to the Statement of Government Patent Policy which was promulgated by the President in his Memorandum of October 10, 1963. (3 CFR, 1963 Supp., p. 238.)

(d) Repealed. Pub.L. 91–512, Title I, § 103(b), Oct. 26, 1970, 84 Stat. 1228.

Pub.L. 89–272, Title II, § 204, Oct. 20, 1965, 79 Stat. 998, amended Pub.L. 91–512, Title I, § 103, Oct. 26, 1970, 84 Stat. 1228.

§ 3253a. **Recovery of useful energy and materials—Special study; report to the President and the Congress**

(a) The Secretary shall carry out an investigation and study to determine—

(1) means of recovering materials and energy from solid waste, recommended uses of such materials and energy for national or international welfare, including identification of potential markets for such recovered resources, and the impact of distribution of such resources on existing markets;

(2) changes in current product characteristics and production and packaging practices which would reduce the amount of solid waste;

(3) methods of collection, separation, and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes;

(4) the use of Federal procurement to develop market demand for recovered resources;

(5) recommended incentives (including Federal grants, loans, and other assistance) and disincentives to accelerate the reclamation or recycling of materials from solid wastes, with special emphasis on motor vehicle hulks;

(6) the effect of existing public policies, including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives, upon the recycling and reuse of materials, and the likely effect of the modification or elimination of such incentives and disincentives upon the reuse, recycling, and conservation of such materials; and

(7) the necessity and method of imposing disposal or other charges on packaging, containers, vehicles, and other manufactured goods, which charges would reflect the cost of final disposal, the value of recoverable components of the item, and any social costs associated with nonrecycling or uncontrolled disposal of such items.

The Secretary shall from time to time, but not less frequently than annually, report the results of such investigation and study to the President and the Congress.

Demonstration projects

(b) The Secretary is also authorized to carry out demonstration projects to test and demonstrate methods and techniques developed pursuant to subsection (a) of this section.

Applicability of other sections

(c) Section 3253(b) and (c) of this title shall be applicable to investigations, studies, and projects carried out under this section.
Pub.L. 89–272, Title II, § 205, as added Pub.L. 91–512, Title I, § 104(a), Oct. 26, 1970, 84 Stat. 1228.

§ 3254. Encouragement of interstate and interlocal cooperation

The Secretary shall encourage cooperative activities by the States and local governments in connection with solid-waste disposal programs; encourage, where practicable, interstate, interlocal, and regional planning for, and the conduct of, interstate, interlocal, and regional solid-waste disposal programs; and encourage the enactment of improved and, so far as practicable, uniform State and local laws governing solid-waste disposal.
Pub.L. 89–272, Title II, § 206 formerly § 205, Oct. 20, 1965, 79 Stat. 999, renumbered Pub.L. 91–512, Title I, § 104(a), Oct. 26, 1970, 84 Stat. 1228.

§ 3254a. Grants for State, interstate, and local planning—Authorization

(a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this chapter, make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 461(g) of Title 40, of not to exceed 66⅔ per centum of the cost in the case of an application with respect to an area including only one municipality, and not to exceed 75 per centum of the cost in any other case, of—

(1) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and

(2) developing and revising solid waste disposal plans as part of regional environmental protection systems for such areas, providing for recycling or recovery of materials from wastes whenever possible and including planning for the reuse of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites,

(3) developing proposals for projects to be carried out pursuant to section 3254b of this title, or

(4) planning programs for the removal and processing of abandoned motor vehicle hulks.

Application; contents

(b) Grants pursuant to this section may be made upon application therefor which—

(1) designates or establishes a single agency (which may be an interdepartmental agency) as the sole agency for carrying out the purposes of this section for the area involved;

(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to area-wide planning for proper and effective solid waste disposal consistent with the protection of the public health and welfare, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal and resources recovery programs;

(3) sets forth plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

(4) provides for submission of such reports of the activities of the agency in carrying out the purposes of this section, in such form and containing such information, as the Secre-

tary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary; and

(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

Coordination of solid waste disposal planning with other planning activities

(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with and not duplicate other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 461 of Title 40.

Pub.L. 89–272, Title II, § 207, as added Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1229.

§ 3254b. Grants for resource recovery systems and improved solid waste disposal facilities—Authorization

(a) The Secretary is authorized to make grants pursuant to this section to any State, municipal, or interstate or intermunicipal agency for the demonstration of resource recovery systems or for the construction of new or improved solid waste disposal facilities.

Conditions of grant for the demonstration of a resource recovery system; Federal share

(b) (1) Any grant under this section for the demonstration of a resource recovery system may be made only if it (A) is consistent with any plans which meet the requirements of section 3254a (b) (2) of this title; (B) is consistent with the guidelines recommended pursuant to section 3254c of this title; (C) is designed to provide areawide resource recovery systems consistent with the purposes of this chaper, as determined by the Secretary, pursuant to regulations promulgated under subsection (d) of this section; and (D) provides an equitable system for distributing the costs associated with construction, operation, and maintenance of any resource recovery system among the users of such system.

(2) The Federal share for any project to which paragraph (1) applies shall not be more than 75 percent.

Conditions of grant for construction of solid waste disposal facility; Federal share

(c) (1) A grant under this section for the construction of a new or improved solid waste disposal facility may be made only if—

(A) a State or interstate plan for solid waste disposal has been adopted which applies to the area involved, and the facility to be constructed (i) is consistent with such plan, (ii) is included in a comprehensive plan for the area involved which is satisfactory to the Secretary for the purposes of this chapter, and (iii) is consistent with the guidelines recommended under section 3254c of this title, and

(B) the project advances the state of the art by applying new and improved techniques in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials.

(2) The Federal share for any project to which paragraph (1) applies shall be not more than 50 percent in the case of a project serving an area which includes only one municipality, and not more than 75 percent in any other case.

Establishment of procedure for awarding grants; considerations in making grants

(d) (1) The Secretary, within ninety days after October 26, 1970, shall promulgate regulations establishing a procedure for awarding grants under this section which—

(A) provides that projects will be carried out in communities of varying sizes, under such conditions as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions, and rural areas, under representative geographic and environmental conditions; and

(B) provides deadlines for submission of, and action on, grant requests.

(2) In taking action on applications for grants under this section, consideration shall be given by the Secretary (A) to the public benefits to be derived by the construction and the propriety of Federal aid in making such grant; (B) to the extent applicable, to the economic and commercial viability of the project (including contractual arrangements with the private sector to market any resources recovered); (C) to the potential of such project for general application to community solid waste disposal problems; and (D) to the use by the applicant of comprehensive regional or metropolitan area planning.

Terms and conditions; non-Federal share

(e) A grant under this section—

(1) may be made only in the amount of the Federal share of (A) the estimated total design and construction costs, plus (B) in the case of a grant to which subsection (b) (1) of this section applies, the first-year operation and maintenance costs;

(2) may not be provided for land acquisition or (except as otherwise provided in paragraph (1) (B) for operating or maintenance costs;

(3) may not be made until the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project (subject to paragraph (1) (B)); and

(4) may be made subject to such conditions and requirements, in addition to those provided in this section, as the Secretary may require to properly carry out his functions pursuant to this chapter.

For purposes of paragaph (1), the non-Fedeal share may be in any form, including, but not limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Secretary.

Limitation on grants

(f) (1) Not more than 15 percent of the total of funds authorized to be appropriated under section 3259(a) (3) of this title for any fiscal year to carry out this section shall be granted under this section for projects in any one State.

(2) The Secretary shall prescribe by regulation the manner in which this subsection shall apply to a grant under this section for a project in an area which includes all or part of more than one State.

Pub.L. 89–272, Title II, § 208, as added Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1230.

§ 3254c. Recommendation by Secretary of guidelines; publication in Federal Register; recommendation by Secretary of model codes, ordinances, and statutes; issuance of information to appropriate agencies

(a) The Secretary shall, in cooperation with appropriate State, Federal, interstate, regional, and local agencies, allowing for public comment by other interested parties, as soon as practicable after October 26, 1970, recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which shall be consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines shall apply to such systems whether on land or water and shall be revised from time to time.

(b) (1) The Secretary shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this chapter.

(2) The Secretary shall issue to appropriate Federal, interstate, regional, and local agencies information on technically feasible solid waste collection, separation, disposal, recycling, and recovery methods, including data on the cost of construction, operation, and maintenance of such methods.

Pub.L. 89–272, Title II, § 209, as added Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1232.

§ 3254d. Grants to or contracts with eligible organization—Authorization

(a) The Secretary is authorized to make grants to, and contracts with, any eligible organization. For purposes of this section the term "eligible organization" means a State or interstate agency, a municipality, educational institution, and any other organization which is capable of effectively carrying out a project which may be funded by grant under subsection (b) of this section.

Training projects; application; contents

(b) (1) Subject to the provisions of paragraph (2), grants or contracts may be made to pay all or a part of the costs, as may be determined by the Secretary, of any project operated or to be operated by an eligible organization, which is designed—

(A) to develop, expand, or carry out a program (which may combine training, education, and employment) for training persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities; or

(B) to train instructors and supervisory personnel to train or supervise persons in occupations involving the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities.

(2) A grant or contract authorized by paragraph (1) of this subsection may be made only upon application to the Secretary at such time or times and containing such information as he may prescribe, except that no such applications shall be approved unless it provides for the same procedures and reports (and access to such reports and to other records) as is required by section 3254a(b) (4) and (5) of this title with respect to applications made under such section.

Investigation and study by Secretary; report to the President and the Congress

(c) The Secretary shall make a complete investigation and study to determine—

(1) the need for additional trained State and local personnel to carry out plans assisted under this chapter and other solid waste and resource recovery programs;

(2) means of using existing training programs to train such personnel; and

(3) the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field which may limit either available manpower or the advancement of personnel in such field.

He shall report the results of such investigation and study, including his recommendations to the President and the Congress not later than one year after October 26, 1970.

Pub.L. 89–272, Title II, § 210, as added Pub.L. 91–512, Title I, § 104(b) Oct. 26, 1970, 84 Stat. 1232.

§ 3254e. Applicability of solid waste disposal guidelines to Executive agencies

(a) (1) If—

(A) an Executive agency (as defined in section 105 of Title 5) has jurisdiction over any real property or facility the operation or administration of which involves such agency in solid waste disposal activities, or

(B) such an agency enters into a contract with any person for the operation by such person of any Federal property or facility, and the performance of such contract involves such person in solid waste disposal activities,

then such agency shall insure compliance with the guidelines recommended under section 3254c of this title and the purposes of this chapter in the operation or administration of such property or facility, or the performance of such contract, as the case may be.

(2) Each Executive agency which conducts any activity—

(A) which generates solid waste, and

(B) which, if conducted by a person other than such agency, would require a permit or license from such agency in order to dispose of such solid waste,

shall insure compliance with such guidelines and the purposes of this chapter in conducting such activity.

(3) Each Executive agency which permits the use of Federal property for purposes of disposal of solid waste shall insure com-

pliance with such guidelines and the purposes of this chapter in the disposal of such waste.

(4) The President shall prescribe regulations to carry out this subsection.

(b) Each Executive agency which issues any license or permit for disposal of solid waste shall, prior to the issuance of such license or permit, consult with the Secretary to insure compliance with guidelines recommended under section 3254c of this title and the purposes of this chapter.

Pub.L. 89–272, Title II, § 211, as added Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1233.

§ 3254f. National disposal sites study for the storage and disposal of hazardous wastes

The Secretary shall submit to the Congress no later than two years after October 26, 1970, a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which may endanger public health or welfare. Such report shall include: (1) a list of materials which should be subject to disposal in any such site; (2) current methods of disposal of such materials; (3) recommended methods of reduction, neutralization, recovery, or disposal of such materials; (4) an inventory of possible sites including existing land or water disposal sites operated or licensed by Federal agencies; (5) an estimate of the cost of developing and maintaining sites including consideration of means for distributing the short- and long-term costs of operating such sites among the users thereof; and (6) such other information as may be appropriate.

Pub.L. 89–272, Title II, § 212, as added Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1233.

§ 3255. Repealed. Pub.L. 91–512, Title I, § 104(a), Oct. 26, 1970, 84 Stat. 1228

§ 3256. Labor standards

No grant for a project of construction under this chapter shall be made unless the Secretary finds that the application contains or is supported by reasonable assurance that all laborers and mechanics employed by contractors or subcontractors on projects of the type covered by the Davis-Bacon Act, as amended, will be paid wages at rates not less than those prevailing on similar work in the locality as determined by the Secretary of Labor in accordance with that Act; and the Secretary of Labor shall have

with respect to the labor standards specified in this section the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 and section 276c of Title 40.
Pub.L. 89–272, Title II, § 213, formerly § 207, Oct. 20, 1965, 79 Stat. 1000, renumbered Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1229.

§ 3257. Authorities and responsibilities under other laws not affected

This chapter shall not be construed as superseding or limiting the authorities and responsibilities, under any other provisions of law, of the Secretary of Health, Education, and Welfare, the Secretary of the Interior, or any other Federal officer, department, or agency.
Pub.L. 89–272, Title II, § 214, formerly § 208, Oct. 20, 1965, 79 Stat. 1000, renumbered Pub.L. 91–512, Title I, § 104(b), Oct. 26, 1970, 84 Stat. 1229.

§ 3258. General provisions

(a) Payments of grants under this chapter may be made (after necessary adjustment on account of previously made underpayments or overpayments) in advance or by way of reimbursement, and in such installments and on such conditions as the Secretary may determine.

(b) No grant may be made under this chapter to any private profit-making organization.
Pub.L. 89–272, Title II, § 215, formerly § 209, Oct. 20, 1965, 79 Stat. 1001, renumbered and amended Pub.L. 91–512, Title I, § 104(b), (c), Oct. 26, 1970, 84 Stat. 1229, 1233, 1234.

§ 3259. Authorization of appropriations

(a) (1) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare for carrying out the provisions of this chapter (including, but not limited to, section 3254b of this title), not to exceed $41,500,000 for the fiscal year ending June 30, 1971.

(2) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out the provisions of this chapter, other than section 3254b of this title, not to exceed $72,000,000 for the fiscal year ending June 30, 1972, and not to exceed $76,000,000 for the fiscal year ending June 30, 1973.

(3) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out section 3254b of this title not to exceed $80,000,000 for the fiscal year ending June 30, 1972, and not to exceed $140,000,000 for the fiscal year ending June 30, 1973.

(b) There are authorized to be appropriated to the Secretary of the Interior to carry out this chapter not to exceed $8,750,000 for the fiscal year ending June 30, 1971, not to exceed $20,000,000 for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973. Prior to expending any funds authorized to be appropriated by this subsection, the Secretary of the Interior shall consult with the Secretary of Health, Education, and Welfare to assure that the expenditure of such funds will be consistent with the purposes of this chapter.

(c) Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other payments under any provision of this chapter for any fiscal year beginning after June 30, 1970, shall be available for evaluation (directly, or by grants or contracts) of any program authorized by this chapter.

(d) Sums appropriated under this section shall remain available until expended.

Pub.L. 89–272, Title II, § 216, formerly § 210, Oct. 20, 1965, 79 Stat. 1001, amended Pub.L. 90–574, Title V, § 506, Oct. 15, 1968, 82 Stat. 1013, renumbered and amended Pub.L. 91–512, Title I, §§ 104(b), 105, Oct. 26, 1970, 84 Stat. 1229, 1234.

1.1a THE SOLID WASTE DISPOSAL ACT

October 20, 1965, P.L. 89-272, 79 Stat. 997

TITLE II—SOLID WASTE DISPOSAL

SHORT TITLE

SEC. 201. This title (hereinafter referred to as "this Act") may be cited as the "Solid Waste Disposal Act".

FINDINGS AND PURPOSES

SEC. 202. (a) The Congress finds—

(1) that the continuing technological progress and improvement in methods of manufacture, packaging, and marketing of consumer products has resulted in an ever-mounting increase, and in a change in the characteristics, of the mass of material discarded by the purchaser of such products;

(2) that the economic and population growth of our Nation, and the improvements in the standard of living enjoyed by our population, have required increased industrial production to meet our needs, and have made necessary the demolition of old buildings, the construction of new buildings, and the provision of highways and other avenues of transportation, which, together with related industrial, commercial, and agricultural operations, have resulted in a rising tide of scrap, discarded, and waste materials;

(3) that the continuing concentration of our population in expanding metropolitan and other urban areas has presented these communities with serious financial, management, intergovernmental, and technical problems in the disposal of solid wastes resulting from the industrial, commercial, domestic, and other activities carried on in such areas;

(4) that inefficient and improper methods of disposal of solid wastes result in scenic blights, create serious hazards to the public health, including pollution of air and water resources, accident hazards, and increase in rodent and insect vectors of disease, have an adverse effect on land values, create public nuisances, otherwise interfere with community life and development;

(5) that the failure or inability to salvage and reuse such materials economically results in the unnecessary waste and depletion of our

natural resources; and

(6) that while the collection and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies, the problems of waste disposal as set forth above have become a matter national in scope and in concern and necessitate Federal action through financial and technical assistance and leadership in the development, demonstration, and application of new and improved methods and processes to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid-waste disposal practices.

(b) The purposes of this Act therefore are—

(1) to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid-waste disposal, including studies directed toward the conservation of natural resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid wastes; and

(2) to provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, and conduct of solid-waste disposal programs.

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DEFINITIONS

SEC. 203. When used in this Act—

(1) The term "Secretary" means the Secretary of Health, Education, and Welfare; except that such term means the Secretary of the Interior with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities.

(2) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(3) The term "interstate agency" means an agency of two or more municipalities in different States, or an agency established by two or more States, with authority to provide for the disposal of solid wastes and serving two or more municipalities located in different States.

(4) The term "solid waste" means 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, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants.

(5) The term "solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid waste.

(6) The term "construction", with respect to any project of construction under this Act, means (A) the erection or building of new structures and acquisition of lands or interests therein, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and (B) the acquisition and installation of initial equipment of, or required in connection with, new or newly acquired structures or the expanded, remodeled, altered, modernized or extended part of existing structures (including trucks and other motor vehicles, and tractors, cranes, and other machinery) necessary for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and (C) the inspection and supervision of the process of carrying out the project to completion.

RESEARCH, DEMONSTRATIONS, TRAINING, AND OTHER ACTIVITIES

SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid-waste disposal programs, the development and application of new and improved methods of solid-waste disposal (including devices and facilities therefor),

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and the reduction of the amount of such waste and unsalvageable waste materials.

(b) In carrying out the provisions of the preceding subsection, the Secretary is authorized to—

(1) collect and make available, through publications and other appropriate means, the results of, and other information pertaining

to, such research and other activities, including appropriate recommendations in connection therewith;

(2) cooperate with public and private agencies, institutions, and organizations, and with any industries involved, in the preparation and the conduct of such research and other activities; and

(3) make grants-in-aid to public or private agencies and institutions and to individuals for research, training projects, surveys, and demonstrations (including construction of facilities), and provide for the conduct of research, training, surveys, and demonstrations by contract with public or private agencies and institutions and with individuals; and such contracts for research or demonstrations or both (including contracts for construction) may be made in accordance with and subject to the limitations provided with respect to research contracts of the military departments in respect to research contracts of the military departments in title 10, United States Code, section 2353, except that the determination, approval, and certification required thereby shall be made by the Secretary.

(c) Any grant, agreement, or contract made or entered into under this section shall contain provisions effective to insure that all information, uses, processes, patents and other developments resulting from any activity undertaken pursuant to such grant, agreement, or contract will be made readily available on fair and equitable terms to industries utilizing methods of solid-waste disposal and industries engaging in furnishing devices, facilities, equipment, and supplies to be used in connection with solid-waste disposal. In carrying out the provisions of this section, the Secretary and each department, agency, and officer of the Federal Government having functions or duties under this Act shall make use of and adhere to the Statement of Government Patent Policy which was promulgated by the President in his memorandum of October 10, 1963. (3 CFR, 1963 Supp., p. 238).

(d) Notwithstanding any other provision of this Act, the United States shall not make any grant to pay more than two-thirds of the cost of construction of any facility under this Act.

INTERSTATE AND INTERLOCAL COOPERATION

SEC. 205. The Secretary shall encourage cooperative activities by the States and local governments in connection with solid-waste disposal programs; encourage, where practicable, interstate, interlocal, and regional planning for, and the conduct of, interstate, interlocal, and regional solid-waste disposal programs; and encourage the enactment of improved and, so far as practicable, uniform State and local laws governing solid-waste disposal.

GRANTS FOR STATE AND INTERSTATE PLANNING

SEC. 206. (a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State and interstate agencies of not to exceed 50 per centum of the cost of making surveys of solid-waste disposal practices and problems within the jurisdictional

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areas of such States or agencies, and of developing solid-waste disposal plans for such areas.

(b) In order to be eligible for a grant under this section the State, or the interstate agency, must submit an application therefor which—

(1) designates or establishes a single State agency (which may be an interdepartmental agency) or, in the case of an interstate agency, such interstate agency, as the sole agency for carrying out the purposes of this section;

(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to statewide planning (or in the case of an interstate agency jurisdiction-wide planning) for proper and effective solid-waste disposal consistent with the protection of the public health, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal programs;

(3) sets forth its plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

(4) provides for submission of a final report of the activities of the State or interstate agency in carrying out the purposes of this section, and for the submission of such other reports, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary to assure the correctness and verification of such reports; and

(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the State or interstate agency under this section.

(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid-waste disposal will be coordinated, so far as practicable, with other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

LABOR STANDARDS

SEC. 207. No grant for a project of construction under this Act shall be made unless the Secretary finds that the application contains or is supported by reasonable assurance that all laborers and mechanics employed by contractors or subcontractors on projects of the type covered by the Davis-Bacon Act, as amended (40 U.S.C. 276a—276a–5), will be paid wages at rates not less than those prevailing on similar work in the locality as determined by the Secretary of Labor in accordance with that Act; and the Secretary of Labor shall have with respect to the labor standards specified in this section the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 5 U.S.C. 133z–15) and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 176c).

OTHER AUTHORITY NOT AFFECTED

SEC. 208. This Act shall not be construed as superseding or limiting the authorities and responsibilities, under any other provisions of law, of the Secretary of Health, Education, and Welfare, the

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Secretary of the Interior, or any other Federal officer, department, or agency.

PAYMENTS

SEC. 209. Payments of grants under this Act may be made (after necessary adjustment on account of previously made underpayments or overpayments) in advance or by way of reimbursement, and in such installments and on such conditions as the Secretary may determine.

APPROPRIATIONS

SEC. 210. (a) There is hereby authorized to be appropriated to the Secretary of Health, Education, and Welfare, to carry out this Act, not to exceed $7,000,000 for the fiscal year ending June 30, 1966, not to exceed $14,000,000 for the fiscal year ending June 30, 1967, not to exceed $19,200,000 for the fiscal year ending June 30, 1968, and not to exceed $20,000,000 for the fiscal year ending June 30, 1969.

(b) There is hereby authorized to be appropriated to the Secretary of the Interior, to carry out this Act, not to exceed $3,000,000 for the fiscal year ending June 30, 1966, not to exceed $6,000,000 for the fiscal year ending June 30, 1967, not to exceed $10,800,000 for the fiscal year ending June 30, 1968, and not to exceed $12,500,000 for the fiscal year ending June 30, 1969.

Approved October 20, 1965, 9:10 a.m.

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1.1a (1) SENATE COMMITTEE ON PUBLIC WORKS

S. REP. No. 192, 89th Cong., 1st Sess. (1965)

CLEAN AIR ACT AMENDMENTS AND SOLID WASTE DISPOSAL ACT

MAY 14, 1965—Ordered to be printed

Mr. MUSKIE, from the Committee on Public Works, submitted the following

REPORT

[To accompany S. 306]

The Committee on Public Works, to whom was referred the bill (S. 306) to amend the Clean Air Act to require standards for controlling the emission of pollutants from gasoline-powered or diesel-powered vehicles, to establish a Federal Air Pollution Control Laboratory, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the bill do pass. The amendments are indicated in the bill as reported and are shown in linetype and italic.

PURPOSE

* * * * * * *

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The purpose of title II of S. 306 is to—

(1) Authorize the initiation and acceleration of a national research and development program for new and improved methods of proper and economic solid waste disposal, reducing the amount of waste and unsalvageable material and recovering and utilizing potential sources of solid waste, and provide technical and financial assistance to State and local governments and interstate agencies in planning, developing, construction, and conduct of solid waste disposal programs.

(2) Provide that not to exceed 25 percent of funds appropriated for this purpose may be made for grants-in-aid, or to contract with, public or private agencies and institutions and to individuals for research and training.

(3) Authorize grants to State, municipality, or intermunicipal or interstate agency for the purpose of assisting in the development of any project which will demonstrate a new or improved method of disposing of solid waste. Up to two-thirds of the cost of any project approved may be paid from funds appropriated. No more than 12½ percent of appropriations authorized and amended for projects may be made in any one State. Grantee must have appropriate ordinances or regulations prohibiting open burning of solid wastes and provide for enforcement action to insure that beneficial results will occur. Also, assurances must be given that proper and efficient operation and maintenance of facility for which funds have been provided. All of the information, copyrights, uses, processes, patents, and other developments resulting from activity financed with Federal funds will be made available to the general public.

(4) Encourage cooperative activities by States and local governments in connection with solid waste disposal programs, encourage planning, and encourage the enactment of improved,

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and, so far as practicable, uniform State and local laws governing solid waste disposal.

(5) Authorize up to 10 percent of funds available for the solid waste disposal program to be used in connection with the grants for support of air pollution control programs of the Clean Air Act. Grants would be made in an amount of up to two-thirds of the cost of making surveys of solid waste disposal practices and problems within the jurisdictional areas of appropriate agencies, and development of solid waste disposal plans. Assurances must be given that the planning of solid waste disposal will be coordinated with other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

(6) Insure compliance with provisions of the Davis-Bacon Act for a project constructed under this act.

(7) Authorize to be appropriated $20 million for fiscal year ending June 30, 1966, and fiscal year ending June 30, 1967, for the solid waste disposal program and section 104(d) of the Clean Air Act.

GENERAL STATEMENT

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The committee has learned of the vast amount of solid waste which has to be disposed of each day, the problem incident to coping with its sheer volume, and the effect on the health and welfare of the people

Consequently, the committee believes that a Federal program of assistance is essential to stimulate action in this field.

NEED FOR LEGISLATION

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The problem of solid wastes collection and disposal is one of the neglected areas of pollution control. Studies conducted by the American Public Health Association and the Public Health Service show that less than half of the cities and towns in the United States with populations over 2,500 have approved sanitary methods of disposing of the estimated 90 million tons of refuse they produce each year and which must be removed and disposed of either through burning, burial, or conversion into forms of organic matter for final disposition or put to useful purposes.

State and local programs to stimulate local improvements in solid wastes storage, collection and disposal are lacking. In 1964, only 12 States reported to the Public Health Service that they had identifiable solid waste activities, while 31 indicated no program at all.

At the Federal level, activities have been meager in relation to the size and scope of the problem. Although the Public Health Service has, for many years, encouraged and supported research on solid waste problems, its efforts would appear to fall far short of research needs. The Public Health Service's total expenditure in fiscal year 1964 in this field was about $430,000, of which $360,000 was used to support research projects carried out by non-Federal institutions.

MAJOR PROVISIONS OF THE BILL

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Title II—Solid waste disposal

Section 201 designates this title as the "Solid Waste Disposal Act."

Section 202 enumerates the purposes of this act, which are to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid waste disposal, including studies directed toward the conservation of natural resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid wastes; and provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, establishment, and conduct of solid waste disposal programs.

Section 203 of the bill contains definitions relating to solid waste [illegible]

Section 204 (research, demonstrations, training, and other activities) provides that the Secretary of Health, Education, and Welfare shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid-waste disposal programs, the development and application of new and improved methods of solid-waste disposal (including devices and facilities therefor), and the reduction of the amount of such waste and unsalvageable waste materials.

In carrying out the provisions of the preceding subsection, the Secretary is authorized to—

(1) collect and make available, through publications and other appropriate means, the results of, and other information pertaining to, such research and other activities, including appropriate recommendations in connection therewith;

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(2) cooperate with public and private agencies, institutions, and with any industries involved, in the preparation and the conduct of such research and other activities; and

(3) make grants-in-aid to, or contract with, public or private agencies and institutions and individuals for research and training projects, but not in excess of 25 percent of the total amount appropriated for any fiscal year may be obligated for such purposes.

(4) make grants to any State, municipality, or intermunicipal or interstate agency for the purpose of assisting in the development (including the construction of facilities) of any project which will demonstrate a new or improved method of disposing of solid wastes, except that (A) not more than two-thirds of the cost of any project approved by the Secretary may be paid from the appropriations made pursuant to this act; (B) not more than $12\frac{1}{2}$ percent of the appropriations made and expended for this purpose may be expended in any one State; (C) no grant shall be made to any municipality that has not enacted or is not subject to, a law, ordinance or other regulation prohibiting open burning of solid wastes and containing enforcement procedures insuring that disposal facilities will have a beneficial effect on reducing air pollution; and (D) no grant shall be made for any facility until the applicant has made provision satisfactory to the Secretary to assure the proper and efficient operation and maintenance of the facility after completion of the construction thereof; and (E) no grant shall be made to any State, municipality,

or interstate agency for demonstration projects until the Secretary of Health, Education, and Welfare has consulted with the appropriate official as designated by the Governor or Governors.

There is provided that no part of any appropriated funds may be expanded pursuant to authorization given by this act involving any scientific or technological research or development activity unless such expenditure is conditioned upon provisions effective to insure that all information, copyrights, uses, processes, patents, and other developments resulting from that activity will be made freely available to the general public. It is further provided that the owner of any background patent relating to any such activity shall not be deprived without his consent, of any right which owner may have under that patent.

Section 205 provides that the Secretary shall encourage cooperative activities by the States and local governments in connection with solid waste disposal programs; encourage, where practicable, interstate, interlocal, and regional planning for, and the conduct of, interstate, interlocal, and regional solid waste disposal programs; and encourage the enactment of improved and, so far as practicable, uniform State and local laws governing solid waste disposal.

Section 206 of the bill provides that not to exceed 10 percent of amounts appropriated for the solid waste disposal program for any fiscal year may be used by the Secretary to make grants to State or interstate air pollution control agencies in any amount up to two-thirds of the cost of making or arranging for surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies, and of developing solid waste disposal plans for such areas. The Secretary shall make a grant under this provision only

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if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

Section 207 of the bill makes the provision of the Davis-Bacon Act applicable to grants for projects constructed under the solid waste disposal program.

Sections 208 and 209 relate to effect on other authority and payments.

Section 210 of the bill authorizes $20 million for fiscal years ending June 30, 1966, and June 30, 1967, to finance the program of solid waste disposal and allow not to exceed 10 percent of such funds to provide grants-in-aid for support of air pollution control programs.

The committee considers the purposes of the Solid Waste Disposal Act to be one of the most significant steps in improving the health and

welfare of our people since the enactment of the Federal Water Pollution Control Act and the Clean Air Act and feels that the modest proposal of $20 million annually for 2 years is well justified as a means of making further studies of the problem and devising means of coping with it.

The program is to be administered by the Secretary of Health, Education, and Welfare; however, in section 203 of the bill (definitions) the following language is included:

> (a) The term "Secretary" means the Secretary of Health, Education, and Welfare; except that such term means the Secretary of the Interior with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities.

The committee wishes to emphasize its intention that title II of the bill shall in no way be construed to confer upon the Secretary of Interior any authority with respect to research on or the control of air pollution, or to impair, diminish or dilute the authority of the Secretary of Health, Education, and Welfare with respect to research or control of air pollution.

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1.1a (2) HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

H.R. REP. No. 899, 89th Cong., 1st Sess. (1965)

SOLID WASTE DISPOSAL ACT

AUGUST 31, 1965—Ordered to be printed

Mr. HARRIS, from Committee on Interstate and Foreign Commerce, submitted the following

REPORT

[To accompany S. 306]

The Committee on Interstate and Foreign Commerce, to whom was referred the bill (S. 306) to amend the Clean Air Act to require standards for controlling the emission of pollutants from gasoline-powered or diesel-powered vehicles, to establish a Federal Air Pollution Control

Laboratory, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

PURPOSES OF LEGISLATION

The committee substitute would broaden the present authority of the Department of Health, Education, and Welfare in two areas affecting the public health and welfare: (1) air pollution, and (2) solid waste disposal.

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The remainder of the committee substitute is related to a program of research and demonstrations to be carried on by the Secretary of HEW and the Secretary of the Interior with regard to solid waste disposal.

APPROPRIATIONS AUTHORIZED

Appropriations for these programs are authorized for the fiscal year ending June 30, 1966, and the 3 succeeding fiscal years in the following amounts:

APPROPRIATIONS AUTHORIZED

[In thousands]

	1966	1967	1968	1969
Motor vehicles pollution control—HEW	470	845	1,195	1,470
Solid waste:				
HEW	7,000	14,000	19,200	20,000
Interior	3,000	6,000	10,800	12,500

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NEED FOR LEGISLATION

One of the more serious problems facing our society today is the increasing contamination of our environment arising out of our increasingly industrialized and urbanized society. The trends of economic growth, technological progress, and rising urban populations have helped to create environmental contamination particularly in two areas (1) air pollution, especially emanating from motor vehicles, affecting thousands of communities in all parts of the country and imposing a serious threat to public health and national welfare, and (2) difficulties encountered in the efficient and economical disposal of solid waste.

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SOLID WASTE DISPOSAL

Title II of the bill deals with the subject of the disposal of solid wastes. This growing public health problem has increasingly been brought to the committee's attention in recent years. This year the following bills have been introduced and are pending before the committee dealing with this subject, in addition to the reported bill: H.R. 890 (Mr. Roosevelt), H.R. 4798 (Mr. Roybal), H.R. 4854 (Mr. Kluczynski), H.R. 4878 (Mr. Hawkins), H.R. 4940 (Mr. Celler), H.R. 5182 (Mr. Van Deerlin), H.R. 5373 (Mr. Corman), H.R. 5560 (Mr. Brown of California), H.R. 5568 (Mr. Dingell), and H.R. 8248 (Mr. Matthews).

Testimony favorable to this legislation was submitted to the committee from the National League of Cities, the National Association of Sanitarians,

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the Conference of State Sanitary Engineers, the American Public Works Association, the American Medical Association, the Massachusetts Department of Public Health, the Arizona State Department of Health, the Nevada State Department of Health, the Washington State Department of Health, the cities of New York, Oakland, Calif., Boise, Idaho, East Orange, N.J., Milwaukee, Wis., Seattle, Wash., Philadelphia, Pa., and the Los Angeles County Board of Supervisors, as well as the New Jersey Division of Environmental Health, the Department of Agricultural Engineering of the University of California, the Department of Civil Engineering of the University of Kansas, and the Department of Civil Engineering of West Virginia University.

Solid waste collection and disposal activities create one of the most serious and most neglected aspects of environmental contamination affecting public health and welfare. Solid wastes include a great variety of things that individuals, manufacturers, commercial establishments, and communities discard as no longer usable, such as garbage, rubbish, ashes, street refuse, demolition debris, construction refuse, abandoned automobile hulks, old refrigerators and furniture, and the wastes from slaughterhouses, canneries, manufacturing plants, and hospitals. The dimensions of the problem are staggering. Available data indicate that current production nationally of solid wastes in urban communities amounts to a half billion pounds daily, and it has been estimated that the total will rise to approximately three times that amount by 1980.

The efforts now being made to deal with this problem are clearly inadequate. Less than half of the cities and towns in the United States with populations of more than 2,500 have programs for sanitary disposal of solid wastes. All too often, refuse is disposed of by methods that create unhealthful, insanitary, and unsightly environmental conditions. Such practices contribute to air, water, and soil pollution and create

breeding places for disease-carrying insects and rodents. Accumulations of litter, refuse, and junk cause fire hazards, contribute to accidents and destroy the beauty of cities and the countryside.

In the opinion of the committee, immediate action must be taken to initiate a national program directed toward finding and applying new solutions to the waste disposal problem. This is a challenge which State and local governments cannot meet without assistance from the Federal Government. The handling and disposal of solid wastes are costly operations that strain the resources of State and local agencies. Approximately $3 billion a year is being spent today for refuse collection and disposal through services provided by local governments and private entrepreneurs. In contrast, less than $500,000 annually is being spent to improve methods of solid waste disposal.

The committee takes note of the role being played by the secondary materials industry in reclaiming materials that would otherwise add to the solid waste problem. The committee, therefore, expects that the funds authorized under this act will be used to demonstrate new and improved methods in solid waste disposal and not for facilities that would duplicate those operated by the secondary materials industry.

Commonly used waste disposal practices, such as sanitary landfilling and incineration have many shortcomings. Space for landfills is becoming increasingly scarce in and around urban areas. Municipal incinerators often

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add to community air pollution problems. The difficulties involved in disposing of solid wastes are frequently compounded by interjurisdictional disputes relating to unhealthful conditions and public nuisances.

The current Federal program in this field is conducted under the general authority of the Public Health Service Act and is not sufficiently broad in scope to provide the degree of assistance that State and local governments must have in order to meet their waste disposal problems. Nor is the program adequate to meet pressing needs for research aimed at the development of new and better methods of handling solid wastes.

Few technological advances have been made in this field in recent years, since only a small fraction of the needed technical resources are being devoted to the problem. A primary need is for a national research program that will utilize the competencies of government and a broad spectrum of scientific institutions to develop improved methods of solid waste disposal, particularly methods of reusing materials of potential economic value. The time gap between research and its application must be narrowed. This can best be accomplished by establishing demonstration projects and by training activities to increase the competence of technical personnel in this field.

In addition, Federal financial assistance is needed to encourage and help States and interstate agencies to undertake surveys of solid waste disposal practices and to develop solid waste disposal plans on a statewide or interstate basis.

It is evident that statutory provisions establishing a national program to meet and accomplish these objectives for improved solid waste handling must include the following basic elements: (1) authority for the conduct and support of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid waste disposal programs, the development and application of new and improved methods of solid waste disposal, and the reduction of the amount of unsalvageable waste materials, and for the collection and dissemination of technical information; (2) provision must be made for interstate and interlocal cooperation in the establishment and conduct of solid waste disposal programs; (3) authority for grants to State and interstate agencies of not to exceed 50 percent of the cost of surveys of practices and problems to provide for the development of solid waste disposal plans for areas within their jurisdictions.

The committee is of opinion that the present bill is a logical response to the growing waste disposal problem. The bill provides for the establishment of a national program of assistance to States, communities, and industries for prevention, control, and solution of solid waste problems. It would accelerate the mobilization of resources to attack current solid waste problems and provides the basis for initiation of a long-range program of research and development directed toward discovery and early application of new and improved methods of solid waste disposal.

SECTION-BY-SECTION SUMMARY

The following is a summary of the provisions of the reported bill other than those technical, clerical, and conforming changes necessary to carry out the basic provisions of the bill.

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This bill consists of two titles. Title I comprises a number of amendments to the Clean Air Act. Title II consists of the Solid Waste Disposal Act.

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TITLE II OF THE BILL

Title II of the bill provides for a national program of research and development for new and improved methods of proper and economic solid waste disposal. This title consists of 10 sections.

Section 201 provides that this title may be cited as the Solid Waste Disposal Act

Section 202 cites a number of congressional findings relating to the necessity for this legislation and a declaration of the basic purposes of the Act which are (1) to initiate a national research and development program relating to solid waste disposal, including studies directed toward conserving natural resources and recovering and utilizing potential resources in solid wastes and (2) to provide technical and financial assistance to State

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and local governments and interstate agencies in planning, developing, and conducting solid waste disposal programs.

Section 203 defines for the purposes of this title the following terms: (1) Secretary, (2) State, (3) interstate agency, (4) solid wastes, (5) solid waste disposal, (6) construction. The term Secretary is so defined that it will mean the Secretary of Health, Education, and Welfare except with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities in which case the term will mean the Secretary of the Interior. Thus, with respect to most solid waste disposal programs, this act will be administered by the Secretary of Health, Education, and Welfare but with respect to those solid waste disposal programs specified in the definition the act will be administered by the Secretary of the Interior.

Section 204 authorizes the Secretary to conduct and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid-waste disposal programs, the development and application of new and improved methods of solid-waste disposal (including devices and facilities therefor), and the reduction of the amount of such waste and unsalvageable waste materials. In carrying out this provision, the Secretary is authorized: (1) To collect and make available publications and other information pertaining to research, including recommendations, (2) to cooperate with public and private agencies and industries in the preparation and conduct of research and other activities, and (3) to make grants-in-aid to public or private agencies, institutions, and individuals for research, training projects, surveys,

and demonstrations, including construction of facilities, and in addition to provide for such research, training, surveys, and demonstrations by contract.

Subsection (c) provides that any agreement or contract entered into by the Secretary pursuant to the authority granted by this act shall contain provisions that all information, uses, processes, patents, and other developments resulting from any activity undertaken pursuant to such agreement or contract will be made readily available on fair and equitable terms to industries using solid-waste disposal methods and industries engaging in furnishing devices, facilities, equipment, and supplies to be used in connection with solid-waste disposal.

At the present time there are in existence some Federal statutes applicable to specified agencies relating to patents resulting from research and development activities carried on by private industry pursuant to grants made and contracts entered into by these agencies. There is not in existence, however, a Federal statute setting forth a generally applicable patent policy. Such legislation is now under consideration by the Congress. If and when the Congress enacts such legislation, its provisions may take the place of the instant provision. Until such time, however, the Secretary would be directed to insert in all agreements or contracts entered into pursuant to this legis-

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lation appropriate provisions agreed to between the contracting parties which would be designed to achieve the objective set forth in this provision.

Finally, this section contains a limitation that no grant is to be made which would result in the United States paying more than two-thirds of the construction cost of a facility constructed under this act.

Section 205 provides that the Secretary is to encourage all cooperative activities by the State and local governments in connection with their solid-waste disposal programs, including the planning and conduct thereof and he is required to encourage enactment of improved and, to the extent practicable, uniform State and local laws governing solid-waste disposal.

Section 206 authorizes the Secretary to make grants to State and interstate agencies of up to 50 percent of the cost of making surveys of solid-waste disposal practices and problems within the jurisdictional areas of such States or agencies and of developing solid-waste disposal plans. In order to be eligible for such a grant the applicant must: (1) Designate a sole agency to carry out the purposes of this act, (2) provide for full consideration of all aspects of planning for proper and effective solid-waste disposal consistent with the protection of the public health, (3) set forth plans for expenditure of the grant which provide reasonable

assurance of carrying out the purposes of this section, (4) provide for submission of a final report containing necessary information, and (5) provide fiscal control and fund accounting procedures to assure proper disbursement and accounting of funds. The Secretary may make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid-waste disposal will be coordinated to the extent practicable with all other related planning activities.

Section 207 provides that the Davis-Bacon Act will apply to any grant for a construction project under this act.

Section 208 is a provision designed to insure that no existing authority will be superseded or limited by the provisions of this act.

Section 209 provides that payments of grants may be made in advance or by way of reimbursement and in such installments and on such conditions as the Secretary may prescribe.

Section 210 authorizes appropriations. Subsection (a) authorizes appropriations to the Secretary of Health, Education, and Welfare in the following amounts: $7 million for fiscal 1966, $14 million for fiscal 1967, $19,200,000 for fiscal 1968, and $20 million for fiscal 1969.

Subsection (b) authorizes appropriations to the Secretary of the Interior in the following amounts: $3 million for fiscal 1966, $6 million for fiscal 1967, $10,800,000 for fiscal 1968, and $12,500,000 for fiscal 1969.

AGENCY REPORTS

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,

June 10, 1965.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: This letter is in response to your requests for reports on S. 306, as passed by the Senate, and on the following House bills: H.R. 463, H.R. 2105, H.R. 4001, H.R. 7065, H.R. 7394, H.R. 8007, and H.R. 8398.

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10. Solid waste disposal

As more particularly set forth in the enclosed summary, title II of S. 306, to be cited as the Solid Waste Disposal Act, provides for (a) a national research, demonstration, and training program for new and improved methods of solid waste disposal (including studies as to reduction of waste and recovery and utilization of potential resources in solid wastes) and (b) encouragement and grant assistance for surveys and planning in this field by State or interstate agencies. The program envisioned by title II of S. 306 would be an independent measure outside the framework of the Clean Air Act, except that the above-mentioned survey and planning grants would be made under the Clean Air Act, to State and interstate air pollution control agencies,

from funds made available under the Solid Waste Disposal Act. The responsibility for administration at Federal level would be lodged in this Department, except that the Interior Department would deal with solid waste problems involved in the extraction, processing, or utilization of minerals or fossil fuels where the control of the production or reuse of such waste is a feature of the technology or economy of the operation of the extraction, processing, or utilization facility and can be controlled within the facility.[1] H.R. 7065 provides—in addition

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to the research grant authority for solid waste disposal also contained in H.R. 7394 and mentioned earlier in this report—for a 3-year program of $100 million per year for grants to municipalities and air pollution control agencies for facilities or devices to control air pollution from solid waste disposal or from heat or power generation; similar provisions (except for the inclusion of heat or power generation) were originally in S. 306, but were deleted in committee. What is needed at this time is not a large-scale construction program but rather an approach more along the lines of S. 306, modified as proposed in the draft bill enclosed herewith and summarized below.

In his recent message to the Congress on natural beauty, the President emphasized the need for proper solid waste disposal as a vital factor in the maintaining and improving the health of our Nation and the beauty of the environment in which we live. He pointed out that:

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

And he recommended legislation to:

"Assist the States in developing comprehensive programs for some forms of solid waste disposal," and

"Provide for research and demonstration projects leading to more effective methods for disposing of or salvaging solid wastes."

The problem of solid waste disposal is all-pervasive and has become national in scope. Its growth is compounded by two factors: first, the increasing per capita refuse production associated with a rising standard of living and rapid technological changes, and second, population growth and concentration. Already, as pointed out by the President, we must dispose of half a billion pounds of such wastes every day, at a cost of $2.8 billion per year. And it is estimated that by 1980 total refuse production in the Nation will reach a level of over 520 billion pounds a year, with further increases in succeeding years.

Improper and inadequate solid waste handling and disposal practices, which are widespread, contribute directly to unhealthful, insanitary, and unsightly environmental conditions. Such practices cause air, water, and land pollution problems, and create breeding places for disease-carrying insects and rodents. Accumulations of litter, refuse, and junk are eyesores, create fire hazards, and cause accidents. In short, the solid waste problem is a growing menace to the healthfulness and beauty of our cities and countryside.

Handling and disposal of garbage, rubbish, and other solid waste materials from our communities, businesses, and industries is, as above indicated, a costly operation, and it is too often an ineffectual one. Land for this purpose is becoming scarce in and

[1] As pointed out in the Senate report on S. 306 in this connection, "The committee wishes to emphasize its intention that title II of the bill shall in no way be construed to confer upon the Secretary of Interior any authority with respect to research on or the control of

near urban areas. Interjurisdictional disputes arise because of the health and nuisance conditions associated with improper solid waste disposal. The problem is one that State and local governments, and the industries whose activities produce solid waste, cannot well solve alone. Vigorous action should and will continue under the Federal Water Pollution Control Act and the Clean Air Act, to control contamination of water and air from solid and other wastes, and the President has recommended amendment of those acts to stop such pollution at its source. But action under those acts is not enough. Immediate action is needed to start a comprehensive national program directed toward the solution of health, nuisance, and blight problems caused by improper and inadequate handling and disposal of solid wastes. The attainment of this goal will require the combined resources of the Federal, State, and local governments as well as industry and research institutions.

What is needed at this point is, as above indicated, not a large-scale Federal construction grant program to build more disposal plants of the types now in use, for these are not the answer to the problem. Very few

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technological advances have been made in this field in recent years, and only a small fraction of the needed technical brain-power is being devoted to the problem. We need a national research program that will utilize the competencies of government and a broad spectrum of scientific institutions and talent to improve methods of solid waste disposal. We need to develop new methods of conversion and of safe, healthful, and economic utilization of solid wastes. And we must narrow the time gap between research and its application. This can best be accomplished by establishing demonstration projects on an operating scale to solve the safety, feasibility, management, and engineering problems and develop basic criteria tailored to fit the operations, and by the training of technicians in the latest methods.

Federal stimulus and financial assistance are needed, moreover, to encourage and help States and interstate agencies to undertake statewide and interstate surveys of solid waste disposal practices, and to develop solid waste disposal plans on a statewide or interstate area basis.

In view of these considerations, we would, in general, favor the basic approach to this problem which is reflected in title II of S. 306. We would, however, suggest certain amendments which we believe would improve that title and make its provisions more effective. For your consideration, therefore, we are enclosing a draft of a bill, with the suggestion that your committee consider it as a basis for amendment of title II of S. 306. The principal amendments suggested in this draft are:

(a) The draft includes congressional findings with respect to the solid-waste problem which will provide important policy guidelines for carrying out the provisions of the bill.

(b) The term "solid waste disposal" is defined to exclude organic solids in untreated domestic sewage, which are already subject to the Federal Water Pollution Control Act.

(c) The draft would authorize grants to, and contracts with, public or private agencies and institutions and individuals for research and training as provided in S. 306. The draft would, in addition, allow use of the contract authority for the support of demonstrations (including construction of facilities), while S. 306 would permit only grants for this support; would remove the limitations upon the percentage of appropriated funds which may be used for research and training grants and contracts;

air pollution, or to impair, diminish, or dilute the authority of the Secretary of Health, Education, and Welfare with respect to research or control of air pollution."

and would omit certain other limitations on demonstration grants which are presently found in S. 306. All of these suggested amendments are directed toward providing a desirable degree of flexibility in the administration of the program which will permit the most effective use of appropriated funds in response to the changing and varied situations characteristic of solid-waste disposal problems in the United States.

(d) The draft would authorize grants for surveys and the development of solid-waste disposal plans, as provided in S. 306, but would (1) avoid the need for using under the Clean Air Act funds appropriated under the Solid Waste Disposal Act; (2) authorize such grants to be made to State or interstate agencies designated by the State or States concerned rather than only to air pollution agencies; (3) provide for at least 50 percent non-Federal matching (rather than one-third); (4) provide additional requirements to assure the development of plans consistent with a broad range of relevant population, economic, and governmental considerations; and (5) delete the limitation upon the percentage of appropriated funds which may be used for such grants. Such amendments of S. 306 would reflect the desirability of dealing with solid-waste disposal problems on a broad, comprehensive basis rather than being limited to an approach which treats such problems solely as a component of air pollution control programs, and would, within the overall appropriation ceiling in the Solid Waste Disposal Act, allow the determination of the amount of funds to be expended for these purposes to be made in response to changing needs and conditions through the annual budget and appropriation process rather than freezing at this time the relative emphasis to be given to such grants.

(e) Subsection (c) of section 204 of S. 306, unlike the enclosed draft bill, contains a provision requiring that all information, copyrights, uses,

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patents, and other developments resulting from federally financed research or development under the solid-waste disposal program be made freely available to the general public. While in this area, the basic policy of this provision appears to be generally in line with the 1963 statement of Presidential patent policy, to which this Department adheres, the subsection does not provide the necessary flexibility to cope with special circumstances that may arise. We believe that patent legislation relating to areas in this bill is not now needed. If legislation on this subject were to be considered, we believe that it should be Government-wide in scope as is the President's directive. Such bills are now under active consideration in the Senate Judiciary Committee.

(f) In order to provide the basis for orderly program development and longer range planning of the Federal program and concomitant State and local activity in this field, it is suggested that a 5-year program be authorized, with an initial fiscal year appropriation authorization of $10 million and authorization for such sums as may be necessary for each of the 4 succeeding fiscal years, instead of the $20 million limitation for each of 2 fiscal years contained in S. 306.

In conclusion, we urge the prompt enactment of S. 306, amplified by the provisions of H.R. 7429, with the additions and modifications above suggested.

We are advised by the Bureau of the Budget that there is no objection to the presentation of this report and that the enactment of legislation along the lines of S. 306 would be consistent with the administration's objectives.

Sincerely,

WILBUR J. COHEN,
Under Secretary.

EXPLANATION OF DRAFT BILL: "THE SOLID WASTE DISPOSAL ACT"

A bill "To prevent air, water, and other environmental pollution from solid wastes through strengthening and acceleration of research in, and the development and demonstration of, new and improved methods of proper and economic solid-waste disposal, including reduction of the amount of waste and unsalvageable materials and recovery and utilization of potential resources in solid wastes". This bill may be referred to by the short title "Solid-Waste Disposal Act".

In his recent message to Congress on natural beauty, the President emphasized the need for proper solid-waste disposal as a vital factor in maintaining and improving the health of our Nation and the beauty of the environment in which we live. He pointed out that:

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

And he recommended legislation to:

"Assist the States in developing comprehensive programs for some forms of solid waste disposal.

"Provide for research and demonstration projects leading to more effective methods for disposing of or salvaging solid wastes."

The purpose of the present draft bill is to carry out these recommendations.

The problem of solid-waste disposal is all-pervasive and has become national in scope. Its growth is compounded by two factors: first, the increasing per capita refuse production associated with a rising standard

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of living and rapid technological changes, and second, population growth and concentration. Already, as pointed out by the President, we must dispose of half a billion pounds of such wastes every day. The collection and disposal services, with their obvious shortcomings, are now costing the American public $2.8 billion per year. And it is estimated that by 1980 total refuse production in the Nation will reach a level of over 520 billion pounds a year, with further increases in succeeding years.

Improper and inadequate solid-waste handling and disposal practices contribute directly to unhealthful, insanitary, and unsightly environmental conditions. Such practices cause air, water, and land pollution problems, and create breeding places for disease-carrying insects and rodents. Accumulations of litter, refuse, and junk are eyesores, create fire hazards, and cause accidents. In short, the solid-waste problem is a growing menace to the healthfulness and beauty of our cities and countryside.

Handling and disposal of garbage, rubbish, and other solid-waste materials from our communities, businesses, and industries is, as above indicated, a costly operation, and it is too often an ineffectual one. Land for this purpose is becoming scarce in and near urban areas. Interjurisdictional disputes arise because of the health and nuisance conditions associated with improper solid-waste disposal. The problem is one that States and local governments, and the industries whose activities produce solid waste, cannot well solve alone. Vigorous action should and will continue under the Federal Water Pollution Control Act and the Clean Air Act, to control contamination of water and air from solid and other wastes, and the President has recommended amendment of those acts to stop such pollution at its source. But action under those acts is not enough. Immediate action is needed to start a national program directed toward the solution of problems of solid-waste disposal to stem the health, nuisance, and blight problems caused by improper and inadequate handling and disposal of solid wastes. The attainment of this goal will require the combined resources of the Federal, State, and local governments as well as industry and research institutions.

What is needed at this point is not a large-scale Federal construction grant program to build more disposal plants of the antiquated types now in use, for these are not the answer to the problem. Very few technological advances have been made in this field in recent years, and only a small fraction of the needed technical brain power is being devoted to the problem. We need a national research program that will utilize the competencies of Government and a broad spectrum of scientific institutions and talent to improve methods of solid-waste disposal. We need to develop new methods of conversion and of safe, healthful, and economic utilization of solid wastes. And we must narrow the time gap between research and its application. This can best be accomplished by establishing demonstration projects on an operating-scale to solve the safety, feasibility, management, and engineering problems and develop basic criteria tailored to fit the operations, and by the training of technicians in the latest methods.

Federal stimulus and financial assistance are needed, moreover, to encourage and help States and interstate agencies to undertake statewide and interstate surveys of solid-waste disposal practices, and to develop solid-waste disposal plans on a statewide or interstate area basis.

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The proposed legislation would require the Federal Government to emphasize the effects of mineral-industry-based wastes on the total environment and require that more attention be directed to instances where waste disposal practices might be improved for the dual purposes of conserving the resource and of conserving other resource values,

including natural beauty. This legislation would enable the Secretary of the Interior to carry out a research and planning program designed to meet the problems of solid-waste disposal resulting from the extraction, processing, or utilization of minerals or fossil fuels where such activities are or could be controlled within the operating or extractive facilities.

In summary, the act would establish a national program of assistance to States, communities, and industries for prevention and control of solid-waste problems. It would mobilize resources to attack current solid-waste problems and would initiate a longer range program of research and development directed toward discovery and application of new and improved methods of solid-waste disposal.

TITLE II—SOLID WASTE DISPOSAL

SHORT TITLE

SEC. 201. This title (hereinafter referred to as "this Act") may be cited as the "Solid Waste Disposal Act".

SEC. 202. (a) The Congress finds—

(1) that the continuing technological progress and improvement in methods of manufacture, packaging, and marketing of consumer products has resulted in an ever mounting increase, and in a change in the characteristics, of the mass of material discarded by the purchasers of such products;

(2) that the economic and population growth of our nation, and the improvements in the standard of living enjoyed by our population, have required increased industrial production to meet our needs, and have made necessary the demolition of old buildings, the construction of new buildings, and the provision of highways and other avenues of transportation, which, together with related industrial, commercial, and agricultural operations, have resulted in a rising tide of scrap, discarded, and waste materials;

(3) that the continuing concentration of our population in expanding metropolitan and other urban areas has presented these communities with serious financial, management, intergovernmental, and technical problems in the disposal of solid wastes resulting from the industrial, commercial, domestic, and other activities carried on in such areas;

(4) that inefficient and improper methods of disposal of solid wastes result in scenic blights, create serious hazards to the public health, including pollution of air and water resources, accident

hazards, and increase in rodent and insect vectors of disease, have an adverse effect on land values, create public nuisances, otherwise interfere with community life and development; and

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(5) that the failure or inability to salvage and reuse such materials economically results in the unnecessary waste and depletion of our natural resources; and

(6) that while the collection and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies, the problems of waste disposal, as set forth above, have become a matter national in scope and in concern and necessitating Federal action through financial and technical assistance and leadership in the development, demonstration, and application of new and improved methods and processes to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid-waste disposal practices.

(b) The purposes of this Act therefore are:

(1) to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid-waste disposal, including studies directed toward the conservation of natural resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid wastes; and

(2) to provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, and conduct of solid-waste disposal programs.

DEFINITIONS

SEC. 203. When used in this Act—

(a) The term "Secretary" means the Secretary of Health, Education, and Welfare; except that such term means the Secretary of the Interior with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities.

(b) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(c) The term "interstate agency" means an agency of two or more municipalities in different States, or an agency established by two or

more States, with authority to provide for the disposal of solid wastes and serving two or more municipalities located in different States.

(d) The term "solid waste" means garbage, refuse, and other discarded solid materials, including solid waste materials resulting from industrial, commercial, and agricultural operations, and from community activities.

(e) The term "solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid waste other than organic solids in untreated domestic sewage.

(f) The term "construction", with respect to any project of construction under this Act, means (1) the erection or building of new structures and acquisition of lands or interests therein, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and (2) the acquisition and installation of initial equipment of, or required in connection with, new or newly acquired structures or the expanded, remodeled, altered, modernized or extended part of existing struc-

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tures (including trucks and other motor vehicles, and tractors, cranes, and other machinery) necessary for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public-health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and (3) the inspection and supervision of the process of carrying out the project to completion.

RESEARCH, DEMONSTRATIONS, TRAINING, AND OTHER ACTIVITIES

SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid-waste disposal programs, the development and application of new and improved methods of solid-waste disposal (including devices and facilities therefor), and the reduction of the amount of such waste and unsalvageable waste materials.

(b) In carrying out the provisions of the preceding subsection, the Secretary is authorized to—

(1) collect and make available, through publications and other

appropriate means, the results of, and other information pertaining to, such research and other activities, including appropriate recommendations in connection therewith;

(2) cooperate with public and private agencies, institutions, and organizations, and with any industries involved, in the preparation and the conduct of such research and other activities; and

(3) make grants-in-aid to public or private agencies and institutions and to individuals for research, training projects, surveys, and demonstrations (including construction of facilities), and provide for the conduct of research, training, surveys, and demonstrations by contract with public or private agencies and institutions and with individuals; and such contracts for research or demonstrations or both (including contracts for construction) may be made in accordance with and subject to the limitations provided with respect to research contracts of the military departments in Title 10, United States Code, section 2353, except that the determination, approval, and certification required thereby shall be made by the Secretary.

INTERSTATE AND INTERLOCAL COOPERATION

SEC. 205. The Secretary shall encourage cooperative activities by the States and local governments in connection with solid-waste disposal programs; encourage, where practicable, interstate, interlocal, and regional planning for, and the conduct of, interstate, interlocal, and regional solid-waste disposal programs; and encourage the enactment of improved and, so far as practicable, uniform State and local laws governing solid-waste disposal.

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GRANTS FOR STATE AND INTERSTATE PLANNING

SEC. 206. (a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to States and interstate agencies of not to exceed fifty percent of the cost of making surveys of solid-waste disposal practices and problems within the jurisdictional areas of such States or agencies, and of developing solid-waste disposal plans for such areas.

(b) In order to be eligible for a grant under this section the State, or the interstate agency, must submit an application therefor which—

(1) designates or establishes a single State agency (which may be an interdepartmental agency) or, in the case of an interstate agency, such interstate agency, as the sole agency for carrying out the purposes of this section;

(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to statewide planning (or in the case of an interstate agency jurisdiction-wide planning) for proper and effective solid-waste disposal consistent with the protection of the public health, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal programs;

(3) sets forth its plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

(4) provides for submission of a final report of the activities of the State or interstate agency in carrying out the purposes of this section, and for the submission of such other reports, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary to assure the correctness and verification of such reports; and

(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the State or interstate agency under this section.

(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid-waste disposal will be coordinated, so far as practicable, with other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

LABOR STANDARDS

SEC. 207. No grant for a project of construction under this Act shall be made unless the Secretary finds that the application contains or is supported by reasonable assurance that all laborers and mechanics employed by contractors or subcontractors on projects of the type covered by the Davis-Bacon Act, as amended (40 U.S.C. 276a—276a-5), will be paid wages at rates not less than those prevailing on similar work in the locality as determined by the Secretary of Labor in accordance with that Act; and the

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Secretary of Labor shall have with respect to the labor standards specified in this paragraph the authority and functions set forth in Reorganization Plan No. 14 of 1950 (15 F.R. 3176; 5 U.S.C. 113z—15) and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c).

OTHER AUTHORITY NOT AFFECTED

SEC. 208. This Act shall not be construed as superseding or limiting the authorities and responsibilities, under any other provision of law, of the Secretary of Health, Education, and Welfare, the Secretary of the Interior, or any other Federal officer, department, or agency.

PAYMENTS

SEC. 209. Payments of grants under this Act may be made (after necessary adjustment on account of previously made underpayments or overpayments) in advance or by way of reimbursement, and in such installments and on such conditions, as the Secretary may determine.

APPROPRIATIONS

SEC. 210. There are hereby authorized to be appropriated for the purpose of carrying out this Act $10,000,000 for the fiscal year ending June 30, 1966, and such sums as may be necessary for each of the four succeeding fiscal years.

Amend the title of the bill to read as follows:

[Here insert amended titles if change in titles is desired by the Committee.]

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D. C., July 8, 1965.

Hon. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: This is in response to your request for a report on S. 306, a bill to amend the Clean Air Act to require standards for controlling the emission of pollutants from gasoline-powered or diesel-powered vehicles, to establish a Federal Air Pollution Control Laboratory, and for other purposes. This will also respond to your request for the views of the Bureau of the Budget on H.R. 463, H.R. 4001, H.R. 7065, H.R. 7394, and H.R. 7429, bills of related purpose.

The major provisions of S. 306 are:

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* * * * * * *

6. A new title, the "Solid Waste Disposal Act," would be added, authorizing a national research, development, demonstration, and planning assistance program to promote new and improved methods of disposing of solid wastes. The portions of this program related to domestic solid wastes and trash would be administered by the Secretary of Health, Education, and Welfare and those aspects related to metal salvage and reclamation and mining wastes would be administered by the Secretary of the Interior.

The enactment by the Congress of the Clean Air Act in December 1963 has greatly furthered activities directed toward dealing with this problem through both research and the application of control techniques and procedures. The basic objectives of S. 306 seem to us to be directed toward continuing and accelerating the progress which was spurred by that act and consistent too with the President's urging that we "end the poisoning of * * * the air we breathe," and that we seek better solutions to the problems posed by the rapid increase in solid wastes.

Our comments on specific provisions of S. 306 are as follows:

* * * * * * *

4. The provisions of S. 306 relating to patents and copyrights do not provide the flexibility provided in the President's patent policy memorandum of October 10, 1963. In our view, patent policy should be addressed by general regulation or legislation, rather than by piecemeal application to individual programs. Accordingly, if legislation is to be enacted in this area, we support the general approach taken in S. 1809. We therefore, recommend deletion of subsection (c) of section 209 of the proposed Solid Waste Disposal Act.

In addition to the above specific comments on S. 306, we wish to recommend the committee's favorable consideration of technical and clarifying amendments suggested in the report of the Department of Health, Education, and Welfare. With respect to the solid waste title, we recommend revisions in accordance with the draft submitted with the report of that Department.

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We recommend against enactment of the remaining bills because we believe that S. 306, with the amendments which we have recommended, is best adapted to the purpose of reducing air pollution. However, with respect to three of the other bills, we wish to bring three specific objections to your attention:

* * * * * * *

3. Finally, we object to the provisions regarding the establishment of statutory interagency committees in certain of the bills. Flexible arrangements are advisable in fast-moving scientific and technical areas.

Section 203(a)(3) of the administration-proposed amendment to S. 306 submitted with the report of the Department of Health, Education, and Welfare deals with solid wastes. We wish to make specific the administration's views on the application of that section to the restoration of abandoned strip mine land.

Section 205 of the Appalachian Regional Development Act of 1965 authorizes a comprehensive study of the strip mine problem in the United States to provide a factual basis for policies under which the Federal Government may participate in an action program. The law requires that this study be completed and submitted to the President, and by him to the Congress with his recommendations by July 1, 1967. The Appalachian Act authorized limited rehabilitation of unreclaimed strip-mined areas in the Appalachian region only until the study is completed. Congress subsequently restricted the action program under the legislation to publicly owned land. We concur fully in the Congress objectives in authorizing the study and in restricting the action program: Establishing a sound factual basis for Federal action, and preventing windfall financial gain to private landowners from the expenditure of Federal funds to reclaim abandoned strip mines located on their properties.

The solid waste title of the bill under consideration permits demonstration projects only, but the authorization is not restricted to public lands. However, the Department of the Interior has indicated that use of this authority to reclaim strip-mined private

land will not be undertaken unless provision and procedure for preventing windfall financial gain to private property owners are assured. We share the Department's concern and intend to support fully the Department's efforts in this regard. We believe that strip mine rehabilitation expenditures should be restricted to publicly owned land except where detailed project plans for private property rehabilitation eliminate the possibility of private financial windfall from these Federal expenditures.

This authority will be administered consistent with the study authorized by the Appalachian Act. Strip mine rehabilitation policies will be

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thoroughly reviewed and appropriately modified in the light of findings and recommendations resulting from that study.

In summary, legislation along the lines of S. 306 would be consistent with the objectives of the administration and we recommend its enactment subject to consideration of the above comments and suggested modifications.

Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

GENERAL COUNSEL OF THE DEPARTMENT OF COMMERCE,
Washington, D. C., June 21, 1965.

Hon. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: This letter is in further reply to your request for the views of this Department with respect to H.R. 463, H.R. 2105, H.R. 4001, H.R. 7065, H.R. 7394, H.R. 7429, H.R. 8007, H.R. 8398, and S. 306, bills for reducing air pollution from motor vehicles and other sources. We recommend enactment of H.R. 7429 and S. 306, if amended as set forth below, and recommend against enactment of H.R. 463, H.R. 2105, H.R. 4001, H.R. 7065, H.R. 7394, H.R. 8007, and H.R. 8398.

* * * * * * *

S. 306 also includes a proposed Solid Waste Disposal Act which would authorize cooperation with public authorities and others in promoting improvement of solid waste disposal facilities and development and application of new methods of solid waste disposal. Dissemination of information, cooperation in research and other activities, and grants for research and training projects and for development of new methods of

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disposing of solid wastes would be authorized. S. 306 would also require that all funds expended under the proposed Solid Waste Disposal Act be subject to the condition that all information, copyrights, user provisions, patents, and other developments resulting from activities supported by such funds will be made freely available to the general public and provides enforcement procedures.

In general, we believe that S. 306 is well adapted to the purposes of providing Federal programs to control motor vehicle exhaust emissions and to encourage improvement of our present methods and facilities for disposing of solid waste.

* * * * * * *

While the Solid Waste Disposal Act is generally well adapted toward establishing a national program of aiding and encouraging improvement of our solid waste disposal facilities and methods, its provisions relating to patents and copyrights are in conflict with the President's patent policy memorandum of October 10, 1963 (28 F.R. 10943). Patent policy should be set by general regulation or legislation, rather than by piecemeal application to individual programs. Furthermore, we believe that the President's memorandum reflects a more sound view of patent policy than the view presently incorporated in S. 306. Accordingly, we recommend amendment of S. 306 before enactment to delete subsection (c) of section 204 of the proposed Solid Waste Disposal Act. In addition, there appears to be an error in reference in S. 306, and we recommend amendment of the figure "207" in line 7 of page 4 of the bill to read "208":

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* * * * * * *

The Bureau of the Budget advises that there would be no objection to the submission of this report from the standpoint of the administration's program.

Sincerely yours,

ROBERT E. GILES.

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DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., June 9, 1965.

Hon. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington D. C.

DEAR MR. HARRIS: Your committee has requested our report on H.R. 4001, a bill to amend the Clean Air Act to require standards for controlling the emission of pollutants from gasoline-powered or diesel-powered vehicles, to establish a Federal Air Pollution Control Laboratory, and for other purposes, and a similar bill, S. 306, which passed the Senate on May 18, 1965.

* * * * * * *

S. 306 also adds to the Clean Air Act a new title relating to the disposal of solid wastes. The bill refers to this title as "title II." We think it should be renumbered as "title III."

This new title will be very important to this Department. It authorizes the Secretary of Health, Education, and Welfare and the Secretary of the Interior to carry out a program to meet the problems of solid waste disposal.

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The disposal, control, and reclamation of waste products resulting from the extraction, processing, and utilization of mineral substances are important technologic and economic factors in the effective conservation of mineral resources as well as the economics of the mineral-based industries. The Department of the Interior, through the Bureau of Mines, has for many years approached the problem of minimizing waste mainly from the standpoint of conserving the resource. Specifically, we have sought instances where improved recovery systems would reduce mineral losses, and incidentally reduce the volume of the products finally discarded. We have concentrated our attention in those instances where improvements in recovery promised direct economic gains to the industry.

S. 306 will require the Federal Government, including this Department, to emphasize the effects of mineral industry-based wastes on the total environment and require that more attention be directed to instances where waste disposal practices might be improved for the dual purposes of conserving the resources and of conserving other resource values, including natural beauty.

S. 306 directs this Department to encourage, cooperate with, and give financial, technical, and other aid to public and private agencies and institutions, and individuals in the conduct of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid waste disposal programs, the development and use of new and better methods of disposal, and the reduction of the amount of waste and unsalvageable waste materials. The Secretary is also authorized to carry out these activities directly. Thus, the bill enables this Department to carry out a comprehensive program designed to meet the problems of solid waste disposal resulting from the extraction, processing, or utilization of minerals or fossil fuels where such activities are or could be controlled within the operating or inactive facility or facilities, such as the plant, a coal mine (active or inactive), or strip mine (active or inactive).

In carrying out this program, we may publish the results of our research and other activities, cooperate with public or private groups in the preparation and conduct of research and other activities, make grants for research and training projects, and enter into contracts for such projects. Contracts will be made in accordance with title 10, United States Code, section 2353. The bill provides that not more than 25 percent of the amount appropriated to carry out this title in any one fiscal year may be obligated by this Department and the Secretary of Health, Education, and Welfare for such grants and contracts.

The bill also authorizes the Secretary to make grants to any State, municipality, or intermunicipal, or interstate agency to aid in developing a project to demonstrate a new or improved method of disposing of solid wastes. The maximum grant for a project can be two-thirds of the project cost. In the case of a municipality, there must be a law, regulation, or ordinance that prohibits open burning of solid wastes. The Secretary must also find that the project will continue to be operated and maintained after construction. The bill provides that not more than 12.5 percent of the amount appropriated under this title may be expended in any one State by this Department and HEW. We assume that this means 12.5 percent of the amount appropriated each fiscal year. If it does not, we recommend that this provision be clarified.

The bill provides that no part of the funds made available under this title involving any scientific research and development activity may be expended unless the expenditure is conditioned upon provisions which insure that all information, processes, patents, etc., will be made available to the public. Provision is also made for the enforcement of the patent provision by the Attorney General. There is an existing Presidential policy statement on patents which make these provisions undesirable.

The bill also adds a new provision to title I of the Clean Air Act which authorizes the Secretary of Health, Education, and Welfare to use

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10 percent of the annual amount appropriated to carry out the solid waste disposal title for grants to State and interstate air pollution control agencies in the amount of two-thirds of the costs of making or arranging for surveys of solid waste disposal practices and problems within the scope of these agencies, and of developing solid waste disposal plans for such areas. We think this latter provision is desirable, but we believe it should be made a part of the solid waste title which would be administered by both this Department and HEW.

The bill authorizes an annual appropriation of $20 million for fiscal years 1966 and 1967.

We believe that S. 306 fully carries out the objectives of President Johnson when he said in his natural beauty message that he recommends legislation to—

"Assist the States in developing comprehensive programs for some forms of solid waste disposal.

"Provide for research and demonstration projects leading to more effective methods for disposing of or salvaging solid wastes."

We strongly recommend its enactment with the amendments suggested by the administration.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

STEWART L. UDALL,
Secretary of the Interior.

FEDERAL POWER COMMISSION,
Washington, D. C., June 10, 1965.

Hon. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: S. 306, upon which your letter of May 24, 1965, requests us to make a report, would amend the Clean Air Act * * *

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and to enact the Solid Waste Disposal Act for the purpose of encouraging research and providing technical and financial assistance to solid waste disposal programs.

The Commission appreciates the seriousness of air and water pollution problems. Our report on H.R. 4001, 89th Congress, which is also before your committee, suggests specific areas for intensified research and discusses generally this Commission's interest in these problems. Please treat our report on H.R. 4001, which was transmitted to your committee June 4, as our report on S. 306.

Sincerely,

DAVID S. BLACK, *Acting Chairman.*

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1.1a (3) CONGRESSIONAL RECORD, VOL. 111 (1965)

1.1a (3)(a) May 18: Considered and passed Senate, pp. 10782, 10783

Mr. MUSKIE.

* * * * *

The purpose of title II of S. 306 is to:

First. Authorize the initiation and acceleration of a national research and development program for new and improved methods of proper and economic solid waste disposal, reducing the amount of waste and unsalvageable materials, and recovering and utilizing potential sources of solid waste, and provide technical and

financial assistance to State and local governments, and interstate agencies in planning, developing, construction, and conduct of solid waste disposal programs.

Second. Provide that not to exceed 25 percent of funds appropriated for this purpose may be made for grants-in-aid, or to contract with, public or private agencies and institutions, and to individuals for research and training.

Third. Authorize grants to State, municipality, or intermunicipal, or interstate agency for the purpose of assisting in the development of any project which will demonstrate a new or improved method of disposing of solid waste. Up to two-thirds of the cost of any project approved may be paid from funds appropriated. No more than 12½ percent of appropriations authorized and amended for projects may be made in any one State. Grantee must have appropriate ordinances or regulations prohibiting open burning of solid wastes and provide for enforcement action to insure that beneficial results will occur. Also, assurances must be given that proper and efficient operation and maintenance of facility for which funds have been provided. All of the information, copyrights, uses, processes, patents, and other developments resulting from activity financed with Federal funds will be made available to the general public.

Fourth. Encourage cooperative activities by States and local governments in connection with solid waste disposal programs, encourage planning, and encourage the enactment of improved, and, so far as practicable, uniform State and local laws governing solid waste disposal.

Fifth. Authorize up to 10 percent of funds available for the solid waste disposal program to be used in connection with the grants for support of air pollution control programs of the Clean Air Act. Grants would be made in an amount of up to two-thirds of the cost of making surveys of solid waste disposal practices and problems within the jurisdictional areas of appropriate agencies, and development of solid waste disposal plans. Assurances must be given that the planning of solid waste disposal will be coordinated with other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

Sixth. Insure compliance with provisions of the Davis-Bacon Act for a project constructed under this act.

[p. 10782]

Seventh. Authorize to be appropriated $20 million for fiscal year ending June 30, 1966, and fiscal year ending June 30, 1967, for the solid waste disposal program and section 104(d) of the Clean Air Act.

* * * * *

The committee is very much concerned with the magnitude of the solid waste disposal problem. Each day our Nation must dispose of 520 million pounds of refuse which must be removed or disposed of either through burning, burial, or conversion into forms of organic matter for final disposition, or put to useful purposes. The modest research and development program included in S. 306 will enable us to find economic and effective ways of dealing with these byproducts of our society.

The VICE PRESIDENT.

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The question is on agreeing to the committee amendment.

The amendment was agreed to.

* * * * *

The bill was ordered to be engrossed for a third reading, was read the third time, and passed.

Mr. MANSFIELD. Mr. President, I move that the Senate reconsider the vote by which the bill was passed.

Mr. BOGGS. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

[p. 10783]

1.1a (3)(b) Sept. 23: Considered in House, p. 24941

[No Relevant Discussion on Pertinent Section]

1.1a (3)(c) Sept. 24: Considered and passed House, amended, pp. 25049–25054, 25056–25059, 25061–25063, 25065–25066, 25068–25071, 25073

Mr. HARRIS. Mr. Chairman, I yield myself as much time as I may consume.

Now, Mr. Chairman, we have today a bill which deals primarily with two public health problems.

First, air pollution resulting from emissions from automobiles.

* * * * *

Then, second, the problems involved in the disposal of solid waste. Our committee was unanimous in reporting title I of this bill which deals with automotive air pollution.

[p. 25049]

However, I frankly admit, Mr. Chairman, that there was a great deal of controversy in the committee, and probably will be here in the Committee of the Whole House on the State of the Union today, over title II of the bill dealing with solid waste disposal.

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[p. 25050]

Mr. Chairman, title II of the bill deals with the problem of the disposal of solid waste. There are those who feel that this is an unnecessary invasion and interference by the Government into a problem that should be primarily local.

If we accepted the viewpoint of those who feel that the Federal Government is going to assume the responsibility and the obligation of disposing of garbage and all solid waste of municipalities all over this country, then they would be right, but I want to make it abundantly clear here and now that that is not the purpose of the program.

The purpose of this program is research, investigations, experiments, training, surveys, studies and demonstrations, relating to the operation of financing and otherwise disposing of this solid waste product. That is what this program involves.

This program was contained in the bill passed by the Senate. It is included in legislation proposed by many of our colleagues. The report mentions the various Members who have introduced legislation along this line, all of which bills were referred to the committee.

Other than the bill to which I referred a moment ago, having to do with Federal facilities, the bill given most consideration was that offered by the distinguished chairman of the House Committee on Public Works, the gentleman from Maryland [Mr. FALLON], and the bill which passed the Senate, being considered today, S. 306.

What we did was along the lines generally proposed in S. 306, which is the bill most acceptable to the Department of Health, Education, and Welfare, to the President and his administration. Many of the provisions of the gentleman's bill are included in this.

This is a highly important title to this bill. Even though it is going to be somewhat controversial, I believe that when we conclude the debate the overwhelming sentiment in the House will be behind it. We should understand what is proposed. We should be farsighted enough to take this advanced step toward doing something about solid waste disposal through incineration and other means which might be developed, some of which are not in existence today. This should be of great

interest to the overwhelming majority of the House.

Remember that more than one-half of all the cities in the United States, with populations in excess of 2,500 have inadequate or improper waste disposal practices. Smaller communities in particular have had to resort to open dumps and equally unhealthful and unsanitary methods. Such practices are menaces both to the communities themselves and to the rural countryside.

As a result many communities have been subject to litigation, which has been brought by many people because of highly unsatisfactory conditions caused by mounting volumes of garbage, refuse, and debris which must be disposed of. Fly- and rodent-breeding places, water and air pollution and general nuisances are all directly associated with these situations. More and more, these cities of all sizes are confronted with insoluble problems and are requesting the types of assistance provided by S. 306. Many of the smaller cities are requesting assistance from the Federal Government. If these problems continue to grow unattended, they can only get worse—and costlier—to solve in the long run. For these important reasons, the establishment of a national program of research and demonstration as provided in S. 306 is a vital need to communities, small and large, and to rural residents as well.

I urge Members to get a copy of the report and turn to page 7 and just read the information which we have developed here about the accumulation of litter and refuse and junk which causes fire hazards and contributes to accidents and destroys the beauty of the cities and countryside. What is the use of having a beautification program which is going to be brought to this House in a few days if at the same time we are going to permit a situation to exist where there is no proper method for dealing with such rubbish as demolition debris, construction refuse, or abandoned material, such as old refrigerators, waste from slaughterhouses, canneries, and manufacturing plants, and all of this other stuff that is dumped in this country every day. What we are trying to do here is to develop some method of new techniques whereby these cities can have available methods to use besides taking it out in the countryside and dumping it, which creates a condition that I know the people of this country just do not want. This is highly important and I think it should be seriously considered by this Committee.

* * * * *

I would like to address my question to the part of title II of the bill concerning solid waste disposal and to call attention to the second paragraph of your report on page 8 where you make mention of the fact that the committee does not want anything in this legislation to duplicate work being done in this area by the secondary materials industry. I have in my district a company, the International Disposal Corp., which for many years has been spending large sums of money experimenting with a process which is now perfected and which is now in the process of being put into commercial production, which deals with one phase of solid waste disposal. What I would like to know from the chairman is this: Do you think the terms of this bill are broad enough to cover an activity of this sort and protect it from having their activities duplicated by the provisions of this bill? Or does it require additional language in the bill to include this type of activity along with the secondary materials industry?

Mr. HARRIS. The committee thought in its deliberate consideration of this problem that it had sufficiently resolved this question. I would like to quote the sentence following the sentence that the gentleman read in the House report on page 8. I think this explains the attitude of the committee and what we intended, anyway. If we do not do it to the satisfaction of the gentleman and other Members, we will be glad to do so in order to make it clear that that is what we intend. We said there:

The committee, therefore, expects that the funds authorized under this act will be used to demonstrate new and improved methods in solid waste disposal and not for facilities that would duplicate—

And I repeat—

not for facilities that would duplicate those operated by the secondary materials industry.

We did not intend to interfere with the magnificent effort of such companies as the gentleman has referred to in his own State.

Mr. STEED. Mr. Chairman, I appreciate what the chairman has said. I am in hopes that the Department will realize that any activity under this bill, if it becomes law, that duplicates this sort of thing would not be in keeping with the spirit and intent of the committee and the bill and would also be a foolish waste of public funds.

Mr. HARRIS. The gentleman has accurately stated the committee's intention.

Mr. McCLORY. Mr. Chairman, will the gentleman yield?

Mr. HARRIS. I yield to the gentleman.

Mr. McCLORY. Mr. Chairman, I thank the gentleman for yielding.

Mr. Chairman, I have a constituent who has written me about title II of this legislation. This gentleman appears to be in the scrap iron business and he writes in part as follows:

S. 306 in its present form needs more study and certainly a new definition of "solid waste." Scrap iron that feeds our steel mills and paper stock that conserves our forests and feeds the paper mills certainly is not "waste" or "junk."

The question I have to ask of the gentleman is whether or not the gentleman would consider that scrap iron which is for use in steel mills is to be included within the definition as a solid waste.

Mr. HARRIS. We had some discussion of that particular program. I think it was decided that to single out any one product or commodity might make it necessary to go on ad infinitum and

[p. 25051]

single out others; that it would be obvious that scrap iron and even such matters as could be baled and utilized as we do in this country would not be considered as solid waste as we define in this legislation.

Mr. McCLORY. In other words, it is the intention to provide research and studies in cooperation with local and State governments with regard to solid waste that we want to get rid of and not solid waste which we want to sell and utilize in industry in some other way.

Mr. HARRIS. Yes. I might say the kind of solid waste that would be referred to as trash or rubbish or garbage that they get from homes and so forth and which pose a problem to a community, particularly in the metropolitan areas where there are governmental entities all intertwined, represent a different matter. Here you have a governmental entity in this vicinity, and in an adjoining vicinity another one, and then maybe another one. This presents a health problem in solid waste disposal. There is no way in which these governmental entities can deal with this problem as it should be dealt with except by agreement, and that is always difficult.

We had testimony from certain of our cities that have this problem where certain entities of Government felt that another one should assume more responsibility, and that one said, "No, this one should do it," and the first thing you know they go around in circles and nothing is done, which creates these hazardous health problems.

I feel that we can by demonstration and experiment and new techniques deal with those Government entities and come up with new methods of disposal to meet this ever-growing problem in our society.

Mr. McCLORY. That is the way I understand it.

Mr. HARRIS. What the gentleman has referred to is a product that does not come from a municipality as solid waste, as such, but is a product that is utilized in our industrial, private endeavors in this country. We do talk in the record about reclaiming certain solid waste, but that means reclaiming this kind of solid waste that I am talking about and not reclaiming such items as scrap iron, which would, through the processes we know of in this country, be utilized again in our industrial output.

Mr. McCLORY. I thank the gentleman.

Mr. HARRIS.

* * * * *

The bill provides that the Secretary must consider these views that will be submitted from other sources in connection with these air pollution programs.

With respect to solid wastes, I will say further to the gentleman, if he will observe the bill itself, in title II there is $92 million authorized to deal with this problem over a period of 4 years.

Also approximately $60 million of this authorization is made available to the Secretary of Health, Education, and Welfare, and the other $32 million is made available to the Secretary of the Department of the Interior, to carry out work in the field of solid-waste disposal.

Mr. EDMONDSON. If I understand correctly, the effective working relationship between those two departments as they now exist would continue. A good deal of the work of the Department of Interior has been conducted at times with funds made available by the Department of Health, Education, and Welfare to carry out projects of the Department of Health, Education, and Welfare. I was hoping, with some very understandable instances of the role of the Secretaries of Health, Education, and Welfare in this air pollution field, it was still the intention of this committee that effective working relationships of this type would utilize the experts of other departments in the future.

* * * * *

Mr. HARRIS. Mr. Chairman, I want to make it clear again that this does not

[p. 25052]

mean that the Federal Government is taking over the solid waste disposal problem. To the contrary, the Solid Waste Disposal Act is, I repeat, aimed at mobilization of all levels of government, Federal, State, and local, recruiting the talents of scientists and other specialists in industry to participate in a nationwide program affecting the health and well-being of most of our citizens.

It is traditional in this country for the Federal Government to lend assistance in eliminating a national problem. This is a national problem—do not overlook that. And it is traditional for the Federal Government to aid in meeting problems through supporting research demonstrations and training when local, State and private sources are unable to cope with the magnitude of the problem.

So let me emphasize that the Federal moneys are only a small fraction of the governmental expenditures in this field. But even so they would be directed at across-the-board activities which are intended to be beneficial to all of our great country.

Let us not overlook the fact that solid wastes are related to and contribute to our air and water pollution problems. Certainly if this Congress can provide national programs for action against air and water pollution, we can at least do something about this problem that is as significant as in all respects of the same magnitude as the problem of solid wastes disposal throughout the Nation today.

Our committee by an overwhelming majority commends this legislative program as one of the great forward steps in an attempt to deal with a national problem. We hope that the House will approve this bill in its entirety.

The CHAIRMAN. The gentleman from Arkansas has consumed 50 minutes and has 10 minutes remaining.

The Chair recognizes the gentleman from Nebraska [Mr. CUNNINGHAM] for 1 hour.

Mr. CUNNINGHAM. Mr. Chairman, I yield myself such time as I may consume.

* * * * *

I wish to speak just a moment on the subject of solid waste disposal. I am favorable that that provision should remain in this bill. I wonder if I could direct a question to the distinguished chairman. I was going to ask if he might answer the following inquiry: Under the definition of "solid waste," would the chairman think that the term would include leaves that fall in the autumn time?

Mr. HARRIS. It is conceivable that it could include refuse that might come from

leaves, because they would become a part of waste disposal, which I know the gentleman has experienced in great metropolitan areas. I know at my own home we burn our leaves in a wire basket or similar container in the back yard. It creates certain disposal waste that we must do something with. So in that way leaves could become a solid waste.

Mr. CUNNINGHAM. I appreciate that response. That is the way I read the legislation. I understand that it would be included.

Mr. HARRIS. Mr. Chairman, if the gentleman would yield further, I wish to reiterate that it is not the intention to take over the problem of waste disposal. The program is designed to find new ways, methods, and techniques of disposing of solid wastes in order that we can make those ways, methods, and so forth available to the municipalities and the communities of our country for waste disposal.

[p. 25053]

Mr. NELSEN. I thank the gentleman.

I might point out that in the committee the section of the bill dealing with solid waste was the only section which seemed to be in some dispute. We found there were those who had the opinion that it should not be in this bill and should be treated as a separate subject. I believe the Senate took it out of its bill. However, it has been considered in another measure there.

We did feel we should make one suggestion, contained in our minority views. The Department of Health, Education, and Welfare made this statement:

> The collection and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies.

We continued:

> We do not agree, however, with its final conclusion because it is our position that the Federal Government should not participate in solid waste disposal by providing financial aid including construction money and technical assistance, as the bill provides.

Now, as the chairman has pointed out, the purpose which he seeks to gain is experimental to determine ways in which we can handle this solid waste, not primarily to give assistance to communities to eliminate their personal or local problems but more in the direction of finding a method that all communities could finally follow. However, I might mention the language on page 34 of the bill is rather broad, but I do think that the legislative history will pretty well nail down what the intent of the Congress is. I might say, however, that there is a minority view in the report which I have personally signed. I think there is considerable controversy relative to this particular section and considerable misunderstanding.

Mr. ROGERS of Florida. Mr. Chairman, will the gentleman yield?

Mr. NELSEN. I will be happy to yield to the gentleman.

Mr. ROGERS of Florida. I would like to join the gentleman also in establishing the legislative history which the chairman attempted to establish and which he has done so effectively here by saying that the solid waste disposal program is one for research and finding new methods of trying to handle the problem rather than, as you just stated, going out and trying to solve the individual community problems of disposing of solid waste. So I think this is firmly understood in the debate today and there should be no area for misunderstanding what we intend. With this in mind I would very strongly support this proposal as well as this legislation and urge its passage.

* * * * *

This legislation has two primary areas of concern: the abatement of air pollution and the development of a national program of research into new and improved methods of proper and economic solid waste disposal. These two provisions are in a sense interdependent on one another. For if we are to conquer the problems of providing a clean atmosphere we must be prepared to meet the exigencies of all situations which are contributing to the contamination of that atmosphere.

* * * * *

The committee has recognized that the collection and disposal of solid wastes is, and should remain, primarily a function of State, regional, and local agencies. But our hearings on this matter also brought out the increased need in this area for new methods and processes. It has therefore become necessary to conduct studies on the national level to develop new and improved methods of proper and economic solid-waste disposal. The bill will also provide assistance to State governments and interstate agencies in planning, developing, and conducting solid-waste disposal programs. These programs are not an encroachment upon the reserve prerogatives of the States, but rather an effort at assisting the States in an area that is fast outgrowing the present methods of treatment. In comparison with the $3 billion figure that is being spent on refuse collection and disposal, the $500,000 being spent on studying advanced methods of disposal is far and away inadequate.

Currently Federal efforts in this field are confined solely to the Public Health Service Act and it is not sufficiently broad in scope to aid the States in providing assistance for their programs. Nor are the current Federal efforts in this field sufficiently adequate to meet the pressing needs for research in this area.

In short, Mr. Chairman, the magnitude of the problem we are attempting to deal with makes this legislation vitally necessary. When we consider the number of motor vehicles on our highways, the vast concentration of people and industry in our urban areas, and the projected increases in both of these factors we can then, and only then, get some idea of the goals of this undertaking. I urge passage of this farsighted measure to insure that the current problems in air pollution and solid-waste disposal are adequately met.

Mr. NELSEN. Mr. Chairman, I would point out that the cost will be $92.5 million for this purpose in the next 3 years. Of course, as I stated earlier in the consideration of other legislation before the committee, I think without question there are many, many things that would have great merit which we could do. However, we do need to proceed with caution wherever possible in the way of the expenditure of taxpayer dollars. Our country continues to go deeper into debt, and we want to be sure every dollar we spend is properly spent.

Mr. Chairman, I have no further requests for time.

[p. 25054]

Mr. McVICKER. Mr. Chairman, I am extremely pleased to join with so many of my colleagues in support of S. 306.

* * * * *

I am equally concerned with the disposal of solid waste, inasmuch as that is one of the most pressing problems confronting my fast-growing suburban district. In that connection I would like to acquaint my colleagues of the House with the constructive steps taken by one of my progressive communities to cope with this problem.

The discussion thus far clearly demonstrates that the Members of this body are acutely aware of the urgent need to purge our cities of the deadly contaminants which foul their atmosphere. I am confident the Congress will lend concrete support to State and local efforts in this area.

* * * * *

I would like to discuss another aspect of the measure which we are considering here today.

The provisions of title II of S. 306, which is known as the Solid Waste Disposal Act, will be of tremendous benefit to the people of the Second District of Colorado. The four major counties I have the good fortune to represent, once predominantly rural in character, are urbanizing at an extremely rapid rate. With the growth and concentration of population the disposal of solid waste has become one of the area's most critical problems. The municipalities and counties in my district are responsible for providing, at the minimum, safe and sanitary places for the disposal of solid wastes, and many of the cities and towns collect

refuse as well. In addition, the modified sanitary landfill operation where the city and county of Denver puts most of its solid waste is located in Adams County, part of the Second District. Thus, the counties within my district are the recipients of the solid waste from another jurisdiction as well as being required to provide disposal facilities for waste material from their own jurisdiction. For many years, Denver's refuse was deposited in an open, burning dump which is surrounded by fine residential areas. Fortunately, the practice of open burning by the city and county of Denver at this site was terminated earlier this year. Consequently, the problem of disposing of solid wastes is serious in my district and has placed an overwhelming burden upon its people and local governments.

The local governments of the Second District are not standing by and waiting for someone to solve this problem for them. Instead they are beginning the long, slow, tedious, and costly process of developing better and less expensive methods of collecting and disposing of garbage and refuse. They look to us today to help them by authorizing a nationwide research and demonstration program in this field, a program which will bring the attention of sanitation experts across the country to bear on a situation which will have all of us inundated with waste materials if more adequate methods are not discovered. I believe the programs which have been started by local governments in my district, when coupled with other local programs around the country, will fulfill the purpose of this important legislation.

With your permission, Mr. Chairman, I would like to take a few moments to

[p. 25056]

describe a solid waste disposal program which has just been started on a cooperative basis by the city of Boulder and the county of Boulder. As you know, Boulder County is one of the most beautiful in our Nation, and the city of Boulder, the county seat and home of the University of Colorado, with a population of approximately 50,000, is located at the foot of the Rocky Mountains below the picturesque red sandstone flatirons about 30 miles northwest of Denver.

As early as 1954, the surrounding property owners sued the city of Boulder and asked that the practice of open burning be stopped. Late in 1962, the city was named defendant in a lawsuit in which the plaintiffs asked $750,000 in property damages. As a result of the program which the city has undertaken to correct the hazardous operation of the modified sanitary landfill, the case was recently settled out of court for only $4,000.

In 1962, the Public Health Service, in conjunction with the Boulder City-County Department of Health, conducted an environmental health survey for Boulder County. PHS reported, at the conclusion of the main survey, that the modified sanitary landfill operated by the city of Boulder in an unincorporated portion of Boulder County posed a serious health hazard for the entire county. The refuse deposited at the site was burned in an open pit before being buried, and rats, other rodents, and insects thrived at the dump. Smoke from the burning dump posed a nuisance to surrounding property owners and residents, and rodents and insects invaded surrounding property and homes.

In an effort to provide a sanitary method of disposing of solid wastes in Boulder County, the city and county jointly undertook a comprehensive study of the matter with the assistance of the Federal Government which was provided through the Housing and Home Finance Agency's 701 planning program. As a result of this study, it was discovered that the soil conditions and high water table in Boulder County prevented the successful use of sanitary landfill methods. The high ground water in almost every area of the county led to the conclusion that landfill operations would result in the serious problem of polluting part of the water supply for the county. The poor soil conditions were brought about by shale beds underlying most of the county at very high levels. Consequently, sufficient quantities of de-

sirable cover materials were not available for successful sanitary landfill operations.

These problems were further magnified by the fact that land, the primary ingredient for a successful sanitary landfill operation, is not available in sufficient quantity on an economical basis. Boulder is a growing community, and land values have soared beyond the point where it is economical for the city or the county to acquire land close to concentrated areas of population to devote to this use. To go farther away from the community where the solid waste is produced, would present other problems. The planning study indicated that the cost of hauling refuse to a sanitary landfill site which the city or the county could afford to purchase would range from 25 cents to 40 cents per mile. These hauling costs would unreasonably increase the cost of service for the home and business owner. These facts led city and county officials to search for another, less expensive means of solid waste disposal.

In an effort to overcome the health hazards existing as a result of the several open, burning dumps in the county, the board of county commissioners established minimum standards for sanitary landfill operations, and, to date, all of the cities and private operators have made their disposal facilities conform. The county then entered into a contract with a private firm for the operation of a composting facility at the county-designated disposal site. The city of Boulder has designated this disposal site as the only place where the private haulers licensed by the city may deposit refuse they collect. The city of Lafayette has taken similar action, and it is hoped that other cities will also abandon their present dump sites and designate the new county disposal area.

The change in Boulder County's appearance has been dramatic since all of this has taken place. The new county disposal site is operated under the close supervision of the Boulder City-County Department of Health, and is a vast improvement over the old sites in terms of public health standards and esthetics. The county, the cities, and the private operator realize that the value of a composting operation in the field of solid waste disposal lies in finding a market for the finished product. Consequently, they have approached Colorado State University with the idea of developing a research and demonstration project at this site for the purpose of illustrating how new ideas of composting can reduce the cost of the final product. I understand that this is just the sort of thing that this legislation is designed to encourage.

We are not authorizing another Federal-aid program by enacting S. 306. Instead, we are recognizing that our Nation is faced with a very serious problem, a problem which will require the imagination and hard work of people at all levels of government if the solution is to be found in time to save the Nation from its devastating effects. Local governments are simply not equipped financially to find this solution by themselves. But their efforts, based on financial and technical assistance from the Federal Government and coordination on a nationwide basis, will be productive.

Gentleman, there is no single, simple satisfactory solution to the problem of solid waste disposal, as is indicated by the study which the local governments in my district have undertaken. What may work in Boulder County might not be successful in other areas of the country. But enactment of this legislation will permit the exchange of Boulder's ideas with those from other parts of the country, to the end that all parts of the Nation will receive the benefits of this important legislation. Mayor Paul Crouch; his city council; Boulder County Commissioners Joe Smith, W. D. "Ted" McCaslin, and G. B. Akins, Jr.; Robert Turner and Robert Quinlin, the former and present city managers in Boulder; James Kean, assistant city manager in Boulder; and Archie Twitchel, Boulder's assistant director of planning, should be complimented for their devotion to searching for a solution to the solid waste disposal problems of Boulder County, Colo.

Their research and action demonstrates the importance of this problem to local

governments of all sizes, and it illustrates to me the importance of our favorable action on S. 306 today.

[p. 25057]

Mr. PELLY.

* * * * *

Mr. Chairman, I have been particularly interested in the fact that title II was added to this bill, having to do with the disposal of solid waste.

Mr. Chairman, the congressional district which it is my honor to represent, the city of Seattle, has been struggling for months seeking to arrive at the most efficient and effective way to dispose of its garbage and waste.

Mr. Chairman, I was particularly gratified to have the chairman of the committee, the distinguished gentleman from Arkansas [Mr. HARRIS], state that this bill basically was a bill to develop research and help the local communities with this problem, but not tell them what to do.

Mr. Chairman, I realize that this is a very difficult problem and that each community should study different ways of meeting it.

I repeat I am very gratified to have the chairman of the committee state that this is basically a research bill and not one of the Federal Government dictating to local communities as to how best to meet this problem.

Mr. CUNNINGHAM. Mr. Chairman, I yield 5 minutes to the gentleman from Missouri [Mr. CURTIS].

Mr. CURTIS.

* * * * *

What disturbs me is the statement in the minority report, found on page 66. I presume this is a fair statement:

> Section 202 of title II—solid waste disposal—is a long introduction which attempts to rationalize and justify the whole scheme. This language was not in the bill passed by the other body or in any House bill, but was suggested to the committee by the Department of Health, Education, and Welfare after the hearings.

I presume, therefore, that the committee did not hold hearings on section 202 and, looking at the committee hearings, I find about the extent of the comment on the solid waste proposition consists of letters put in the record, but no cross-examination of any of the witnesses which, in my judgment, is required if there is to be a study.

I originally was attracted to the problems by the language on page 7 of the committee report itself, where this statement was made—and I am going to read it. Frankly, I would like to know its verification, referring to the problems of solid waste disposal:

> This is a challenge which State and local governments cannot meet without assistance from the Federal Government. The handling and disposal of solid wastes are costly operations that strain the resources of State and local agencies.

That is the issue and there has been no substantiation for the statement. I must say to the Members of the House it is the Federal income tax that is under great pressure as far as strain is concerned. It is the Federal Government that is not meeting its bills, and we have to continue to increase the debt ceiling. There certainly has been a great strain on local and State governments with their resources, but they have been meeting their obligations. I was curious to know how the committee could have reached this conclusion that the State and local governments cannot meet this problem without assistance from the Federal Government.

Then, going on, the following statement is made:

> Approximately $3 billion a year is being spent today for refuse collection and disposal through services provided by local governments and private entrepreneurs.

I suspect it is probably about that amount of money.

The next statement is the one I want to point up:

> In contrast, less than $500,000 annually is being spent to improve methods of solid waste disposal.

That is something that is surely being pulled out of the air, because there are some companies that spend that amount of money themselves in trying to figure out improved methods of solid waste disposal. I can tell you that the $500,000

figure is inaccurate, that it is closer to hundreds of millions a year spent trying to improve the methods of solid waste disposal.

I have introduced bills to give tax credits to private enterprise that will put money into the kind of capital investment necessary to take care of disposing of waste that goes into streams and I might say the disposition of solid wastes. Although a great deal of money is being spent in this area, a great deal of it I will say is on research and development, but a great deal more needs to be spent. In my judgment it would be spent if we would enact legislation similar to the 1962 tax incentive act to encourage our private corporations to invest in modern machinery and get rid of obsolescence. This act gave them an extra tax credit—a tax credit I might say beyond normal depreciation schedules. If this is a good policy, I argue that it would be a better policy to move forward in this area of solid waste disposal in the same fashion.

I do note in the committee report in the letter of the Department of Health, Education, and Welfare which appears on page 20, there is reference to some bills that have been introduced in the tax incentive area—but they just go ahead and dismiss it by saying:

> However, we defer to the views of the Treasury Department as to the consistency of the proposed amendments with national tax policy as well as the technical adequacy of these provisions.

Well, there are many ways to skin a rabbit; if we want to move forward in our society, and we all do, to solve this great problem of solid waste disposal, I think the committee has accurately described it, as an increasingly great problem. This needs to be thought of from many angles. We need to develop what really is being done in the private sector and what is being done by our local and State governments rather than simply beg the question as is done in the committee report by saying this is a challenge which State and local governments cannot meet without assistance from the Federal Government.

I again want to call attention to what is increasingly proving to be true, the Curtis corollary to Gresham's law—Gresham's law saying that bad money draws out good money. The Curtis corollary simply says that Government money drives out private money. It does not have to do this but if we are not careful, and we have not been careful, when we move forward with Federal programs instead of encouraging and benefiting the private sector and local and State governments, we will bring about a situation that will lead to the deterioration of the private sector and local and State governments. There will be a substitution of the Federal Government for the local and State governments and private initiative.

[p. 25058]

Mr. HARRIS. Mr. Chairman, I yield myself such time as I may require. I do so because I think it is important to comment on some of the statements made by the gentleman from Missouri.

Let me say I appreciate the gentleman's bringing these points to the attention of the committee. First I would refer to the tax credit matter. It is true that the statement which was included in the Department's report deferred to the Treasury. I would remind the gentleman that the Treasury has also given us a letter which is included in the report on pages 50 and 51 and I think it would be important to take note of that.

In the second place, with reference to tax credits, that is a matter that is with another committee and with which we cannot deal in connection with this program. Like the Department when it deferred to the Treasury, we of the Interstate and Foreign Commerce Committee, defer to the Committee on Ways and Means that has jurisdiction over these problems.

Next, the gentleman from Missouri, I believe, did give the impression, though not intentionally, in reading the language in the report about the challenge which the State and local governments cannot meet, that this has reference to the entire problem of waste disposal.

The gentleman did not include in the

statement the first sentence of the paragraph, occurring immediately prior to the sentence he started off reading. The gentleman referred to the challenge and its importance. The first sentence states:

> In the opinion of the committee, immediate action must be taken to initiate a national program directed toward finding and applying new solutions to the waste disposal problem.

That is the challenge which the State and local governments are unable to meet. It is not the actual disposal program itself. It is finding new methods and techniques dealing with the problem.

Mr. CURTIS. Mr. Chairman, will the gentleman yield?

Mr. HARRIS. I yield to the gentleman from Missouri.

Mr. CURTIS. The gentleman is making a proper point. Indeed that is so. But you then go on, in the final sentence, to say:

> In contrast, less than $500,000 annually is being spent to improve methods of solid waste disposal.

That is the point I was contesting.

Mr. HARRIS. The gentleman did make that very appropriate point. We did not intend to convey the impression that that amount was all of the funds being spent in that field. We had in mind that this amount is what the Government is spending in the field.

Mr. CURTIS. I see.

Mr. HARRIS. What we had reference to was that in the 1965 budget the total of all solid waste research would include 12 grants amounting to $393,747. We did not include or attempt to include what was being spent in the private sector.

Mr. CURTIS. Mr. Chairman, will the gentleman yield further?

Mr. HARRIS. I yield.

Mr. CURTIS. I thank the gentleman. In other words, that is what the Federal Government has been spending.

Mr. HARRIS. Yes. That is the information we intended to convey.

Mr. CURTIS. I think the gentleman acted properly in direction attention to that sentence I did not read. I was not trying to confuse the matter. The gentleman has clarified it.

Mr. HARRIS. Yes; I understand thoroughly. I thank the gentleman for calling the point to the attention of Members, particularly the reference to the total amount of the research expenditure, which is included in the report. We intended to mean the amount of Government funds going into that field.

[p. 25059]

Mr. KING of Utah. Mr. Chairman, I wish to express my support for S. 306 on behalf of the smaller and medium-sized cities and counties of my district. The municipal and county officials of my district are confronted with the overwhelming problem of disposing of solid wastes, and they are, therefore, extremely interested in our action on what is known as the Solid Waste Disposal Act portion of this legislation.

During my travels throughout my district, I have noted that there are far too many open, burning dumps scarring the countryside. However, I recognize fully that the local governments of such communities as Provo, Salt Lake City, and Orem lack the financial resources to research the disposal of this waste material by more suitable methods. This legislation, if acted upon favorably, will authorize the expenditure of funds for the development and demonstration of new and less expensive solid waste disposal techniques. Even if the cities and counties of my district do not actively participate in the program, this legislation will help develop and make available new techniques which will be available to all cities. The new techniques should make solid waste disposal less expensive and more effective for all. For these reasons I urge the adoption of S. 306 as reported by the Committee on Interstate and Foreign Commerce.

[p. 25061]

Mr. HELSTOSKI.

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For a richer and healthier life, under clean skies, we should take a three-step approach to this problem.

First. Impress upon the automobile manufacturers to install antipollutant devices upon every motor vehicle leaving the factory. If this cannot be done on a voluntary basis then this Congress should enact legislation to make such installations mandatory.

Second. Take steps to find a method to reduce the sulfur content in fuels used by industry which contribute so much to the pollution of the air around these industrial centers.

Third. Waste disposal problems should be solved in such a way so as to end the overburdening of our cities' incinerators and the open burning of rubbish.

If we do anything less than this we are neglect in our duty to the people of our Nation. I am sure that the legislation before us at this time will be far reaching toward finding a solution to this problem to provide a healthier climate around us.

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[p. 25062]

Mr. ROOSEVELT. Mr. Chairman, I rise in support of the Clean Air and Solid Waste Disposal Acts. As my colleagues know, I am not an engineer, nor am I a specialist in the various ways of disposing of the mountains of solid waste accumulated each day in our country. I became interested in the subject, however, because the problem is daily becoming more acute in California and in other States which are experiencing rapid growth in terms of population, agriculture, industry, and commerce.

In statements presented to the House of Representatives at the time I introduced legislation on solid waste disposal last year and again early in this session, I described the national solid waste situation in some detail, based on information I had received from conversations with, and through reading articles by, many people who know most about this problem. I learned that we have within our means the technological resources to grapple with the problem and work toward a solution, and I am very gratified that the bill now under consideration gives recognition to the urgency for immediate attention.

Mr. RYAN.

* * * * *

We need solutions to our solid waste disposal problems. This bill will provide the assistance for that research.

At last Congress has recognized this problem and begun to deal with it. The problem becomes more complex, difficult and expensive with every day that passes. This legislation will begin to cope with the disposal of wastes that cause 50 percent of our air pollution.

Mr. Chairman, it is time we stopped killing ourselves.

[p. 25063]

Mrs. DWYER.

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The present bill would deal with both sources of pollution, auto exhaust, and solid waste disposal. It will help bring closer the mandatory installation on new cars of devices to reduce the volume of harmful hydrocarbons and carbon monoxide which have poured unimpeded from the exhausts of tens of millions of cars. It will also help prevent new air pollution before it gets out of hand, improve research and development facilities, and initiate an attempt to find new, safer, and more sanitary ways of disposing of solid wastes like garbage, rubbish, refuse, debris, and so forth, which pollute both the air and water.

This is not a very radical bill, Mr. Chairman, nor does it go as far as many of us—alarmed at the speed with which air pollution is endangering the total environment—believe we should go in simple self-defense. It is a welcome step forward, albeit a modest one, and if it is backed by adequate funds and effective enforcement it can make a substantial difference in the battle against pollution.

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[p. 25065]

The CHAIRMAN. Are there any other

amendments to be offered to title I? If not, the Clerk will read.

The CLERK. Page 32, line 11:

TITLE II—SOLID WASTE DISPOSAL

Short title

[reprint of the bill followed as it appeared in the House Report]

[p. 25066]

Mr. HARRIS (interrupting the reading of the bill). Mr. Chairman, title II, which begins at page 32, line 11, and goes through the remainder of the bill on page 43, has to do with solid waste disposal. We have thoroughly debated this title and what is intended in all of its provisions. Therefore, I ask unanimous consent that the title be considered as read, printed at this point in the RECORD, and open for amendment.

The CHAIRMAN. Is there objection to the request of the gentleman from Arkansas?

There was no objection.

AMENDMENT OFFERED BY MR. NELSEN

Mr. NELSEN. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. NELSEN: Page 32, strike out line 11 and all that follows down through and including line 6 on page 43.

Mr. NELSEN. Mr. Chairman, this amendment bears out the wishes of the minority as expressed in the minority views on page 66 of the report. However, there was some mention by one member of the group that there may have been some basis for a more favorable report than indicated. I might point out that in our minority views we stated that we felt this particular portion of the bill should have been separately considered; and, it was not logically a part of this legislation. We also point out in our view that we felt this was primarily a function of local governments and not the responsibility of the Federal Government. Therefore, Mr. Chairman, I have offered the amendment in support of the minority view and move its adoption.

Mr. HARRIS. Mr. Chairman, I rise in opposition to the amendment.

Mr. Chairman, I shall take only a few minutes, in view of the extensive discussion which we had on this question during the general debate.

Mr. Chairman, I hope this amendment will not prevail. I believe that this Congress has the vision and the courage to recognize the facts with which we are faced in this country. I do not believe that even those who are opposed to this would question the need and the desirability for a program of new techniques and methods of disposing of one-half billion pounds of refuse and waste disposal that we have in this country every day.

Now, Mr. Chairman, if the members of the Committee do not believe that adds up to a sizable amount, just stop for 1 minute and think about it. Every day, one-half billion pounds of garbage is dumped on this country of ours.

Mr. Chairman, we have made it very clear that there has been some very fine work in this field by private companies and the efforts of others.

There are examples to which we can point, but as I stated in general debate, over one-half of the cities in the United States with populations of 2,500 or more do not have a program to adequately dispose of this material without there being a real health hazard to the people of the areas.

Now, Mr. Chairman, are we going to stick our heads in the sand? Are we going to close our eyes to this problem when we know that the local communities and States are unable to combat and meet the problem of developing new techniques?

Mr. Chairman, if we do not have some new method or way of meeting this problem, then 10 years from now, let me tell you, my colleagues, we will be confronted with a most serious situation.

Mr. Chairman, we are undertaking, today, to provide a program to meet the imperative need 10, 20, and even more years in the future and not just today.

Mr. Chairman, I just believe that this House of Representatives has the courage and the foresight to look down the road and to leave something to which our own children will point with pride and say,

"I thank God for what my dad did 10 years ago or 20 years ago," because believe me, otherwise a serious problem is going to be here.

Mr. Chairman, all we attempt to do here is to set up a program through research, studies, investigations, and demonstrations to develop new methods and techniques in this field.

There is no problem that faces us today that is more imperative than that one.

I hope the pending amendment will be defeated.

Mr. GROSS. Mr. Chairman, I rise in support of the pending amendment.

I may say to the gentleman from Arkansas [Mr. HARRIS], that I support this amendment for the reason that I want to take a look down the road. I want to take a look at the bill that is coming out of the Committee on Public Works with respect to so-called highway beautification, the elimination of automobile junkyards, and that sort of thing.

I note in your report on page 7 that this is one of the things you plan to go into with this bill.

Mr. HARRIS. Mr. Chairman, will the gentleman yield?

Mr. GROSS. I yield to the gentleman from Arkansas.

Mr. HARRIS. I believe that is the wrong construction. It is not our intention to go into a program involving automobile—I do not want to say "junkyard," because the industry objects to that term—but automobile disposal belongs to another committee.

Mr. GROSS. Let me read what you say on page 7:

> Solid wastes include a great variety of things that individuals, manufacturers, commercial establishments, and communities discard as no longer usable, such as garbage, rubbish, ashes, street refuse, demolition debris, construction refuse, abandoned automobile hulks, old refrigerators, and furniture.

It is clear that under this bill it is planned to go into the business of eliminating junkyards. You go further, and say:

> Accumulations of litter, refuse, and junk cause fire hazards, contribute to accidents and destroy the beauty of cities and the countryside.

I repeat, a beautification bill is coming from the Public Works Committee. Why not dispense with this $90-million provision of the present bill? We can all agree on the necessity and the hope that title I will provide clean air. I sometimes wonder if we should not apply it to the House of Representatives as well as the countryside. But why not postpone this expensive phase of the bill until we see how far they are going to roam with the beautification bill coming out of the Committee on Public Works. On the basis of your report you are certainly getting into that field.

Mr. HARRIS. Mr. Chairman, will the gentleman yield?

Mr. GROSS. I yield to the gentleman from Arkansas.

Mr. HARRIS. In the first place, we have air conditioned the House Chamber in an effort to meet the problem that the gentleman refers to.

Mr. GROSS. I did not know it was proposed to deal with air conditioning. I thought it was a question of purifying the air.

Mr. HARRIS. I will say again that the gentleman and those who have serious objections, that we are not going to get into the business of disposing of these things. We leave that to the other committee and other legislation. What we are doing is providing a program for the discovery of new methods and techniques for the disposal of such waste disposal. We do not get into the field of actually setting up a program to dispose of it.

[p. 25068]

Mr. GROSS. Is the gentleman trying to say that the Committee on Public Works is going to bring a bill out, providing for spending a considerable amount of money as I understand it, without having discovered any techniques for getting rid of junkyards? Incidentally, I am informed that the State of Texas leads all States in the number of automobile junkyards.

Can it be possible the Public Works Committee will bring a bill out here without having gone into the necessary

techniques for the elimination of junk yards?

Mr. HARRIS. In the first place, if the gentleman will permit, I doubt very seriously that our colleagues from Texas would admit that statement that the gentleman just made is correct.

Mr. GROSS. I would not expect him to and I would not want him to.

Mr. HARRIS. I think at least there would be some argument about it. But again, there we go. We get these health hazards that develop from such things as old refrigerators and things of that kind that we do not know what to do with except to take them off and dump them in a hole somewhere. As a result, some areas in the country are running out of holes and we have to devise some new means and methods of disposing of such waste that create these health hazards.

The CHAIRMAN. The time of the gentleman has expired.

Mr. CURTIS. Mr. Chairman, I rise in support of the amendment.

Mr. Chairman, as the chairman of the legislative committee has said, we have had some debate on this and indeed we have. But the whole point is, as I have tried to say in general debate, this matter has not been studied by the committee:

> Section 202 of title II was not in the bill passed by the other body or in any House bill. But it was suggested to the committee by the Department of HEW after the committee hearings.

I am reading from the minority report which I assume is accurate. Certainly this is a matter of great concern—$3 billion apparently is spent a year by our local communities and private enterprises in the disposal of this waste. This bill would authorize $92 million on a research program where there has not been any coordination with other programs. It is very clear just from the colloquy that went on between the gentleman from Iowa and the chairman of the committee that there is no coordination of this suggested program here and of the programs that exist.

It is very true that we cannot expect the Committee on Interstate and Foreign Commerce to coordinate programs that are not within its jurisdiction, such as the one I mentioned on the tax credit approach through the Committee on Ways and Means and the one which the gentleman from Iowa mentioned that is coming to us under the public works bill. But I certainly would expect the executive department, the Department of Health, Education, and Welfare, for example, to have coordinated this program with the other programs that exist in the executive department. This has not been done.

The reason I support the amendment is because I think this matter ought to go back to the committee for hearings, which hearings have not been held, to find out what other programs there are where it might need coordination. It is only in this way that we can intelligently spend, I suggest, $92 million over a period of the next 4 years in research and development. I, myself, would like to know and have a better idea of the sums of money presently being spent on research and development in this area now by both private enterprise and local and State governments.

Mr. HARRIS. Mr. Chairman, will the gentleman yield?

Mr. CURTIS. I yield to the gentleman.

Mr. HARRIS. The gentleman has referred again to the fact that this provision was not included in the bill that came from the other body.

Mr. CURTIS. I simply say this is what the minority views say and that has not been contested so I assume it is so.

Mr. HARRIS. I should have referred to this earlier. But notwithstanding what is included in the minority views, if the gentleman has a copy of the bill, and will refer to page 11, showing where the whole matter from the other body was stricken out and a new bill was written by the House, he will find that a statement of purpose is included in section 202 of the Senate passed bill.

It has to do with the same problem that we include in section 202 of our bill, which the gentleman will find on page 32.

We made other changes in title II. The principal change that was made from what was then in the Senate bill was that the Senate bill provided that our pollution

control agencies of the States should be in charge of waste disposal research studies and surveys. We feel that this problem ought to be attacked by those who have the expertise in the field of solid waste disposal instead of the highly technical problem of air pollution.

So, consequently our version of the bill does not provide for this new program to be carried out by the air pollution boards of the States. We feel that it was a justified change. After calling this matter to the attention of the Department and the Administration, they agreed and accepted that viewpoint. That is the reason for the change.

Mr. CURTIS. I think there is great merit to that change.

Yet I still come back to the basic point. In looking at the hearings and listening to the debate, I find that little evidence has been developed and has been made available to us as to what is being done by local and State governments and private enterprise in this area of solid waste disposal.

Mr. HARRIS. Mr. Chairman, I ask unanimous consent that all debate on the pending amendment close in 10 minutes.

The CHAIRMAN. Without objection, it is so ordered.

Mr. JONAS. Mr. Chairman, I move to strike out the last word.

I shall not take 5 minutes but asked for this time in order not to interrupt a speaker and to direct a question or two to the chairman of the committee.

First, I fully support title I. I have not made up my mind on the current amendment, but would like to know why it is necessary to authorize appropriations 4 years in advance if the sole purpose of title II is to engage in research in order to develop new techniques for the disposal of solid waste. As I understood the gentleman from Arkansas, the purpose of that title is to do what I have just said. There is no intention or purpose in this title to participate in the actual disposal of waste. That is a matter for the local communities, the cities, and the municipalities concerned. The intention is to limit the activity of the Federal Government to the financing of research in order to develop new techniques.

Mr. HARRIS. And some demonstrations.

Mr. JONAS. What if they come up with a satisfactory new technique that will solve this problem in a year? You would not need to continue to spend money on the program then.

Mr. HARRIS. If, within a year, there is a breakthrough of great importance, the Appropriations Committee and the Congress would have no need to make any further appropriation in that field. The proposal is merely an authorization. We would undertake the program on a limited basis from year to year for a period of 4 years. Only two-thirds of the fund—approximately $60 million—would be for that particular type of program. The other one-third—approximately $30 million or thereabouts—would be appropriated to the Department of the Interior during this time because, as the gentleman knows, as one travels throughout this country, he sees certain areas of the country which are filled with great holes and all kinds of hazards which have developed. For example, in my own State we have the bauxite area, which is a most terrible looking thing.

We made it very clear that they were not going to have programs of trying to beautify all these areas. This is a program to develop methods by which industry can prevent such from happening in the future.

Mr. JONAS. It is not intended to be related to the elimination of these hazards?

Mr. HARRIS. It is intended to include research, studies and demonstrations to develop techniques and methods which will eliminate these hazards.

Mr. JONAS. How can we eliminate such a hazard without filling the hole up?

Mr. HARRIS. That is one of the problems we hope to solve. There will be contracts the Secretary will enter into with people who will be involved. Then these methods would be applied.

Mr. JONAS. I understood the gentleman from Arkansas to say that a substantial number of cities in the United States—I do not recall the percentage—

do not have any effective plans for the elimination of solid waste. I would assume from that the other cities do have

[p. 25069]

productive plans. I could not imagine the air at cities of New York, Chicago, Philadelphia, and others I might name, not having spent considerable time and effort trying to develop new methods and techniques for eliminating solid waste. Can the gentleman tell me whether they have been derelict in that?

Mr. HARRIS. I would not want to say there has been dereliction. I believe it has been a matter of capability, in respect to all the gentleman mentioned.

Mr. JONAS. I could have named others.

Mr. HARRIS. Yes. In the field of disposal of waste, Milwaukee, Wis., has established the kind of program that would be desirable. That is an example which should not be overlooked.

Mr. ROGERS of Texas. Mr. Chairman, I move to strike the requisite number of words.

The CHAIRMAN. The gentleman from Texas is recognized.

Mr. COLLIER. Mr. Chairman, a parliamentary inquiry.

The CHAIRMAN. The gentleman will state it.

Mr. COLLIER. Do I correctly understand that an agreement has been entered to limit debate to 10 minutes? I presume there is at the desk the names of Members who were on their feet at the time the unanimous-consent request was granted.

The CHAIRMAN. The gentleman was standing. The Chair will recognize the gentleman from Texas for 2½ minutes.

Mr. JONAS. Mr. Chairman, a parliamentary inquiry.

The CHAIRMAN. The gentleman will state it.

Mr. JONAS. I believe I was recognized by the Chair before the unanimous consent was granted. I believe each of the gentlemen now should be entitled to 5 minutes.

The CHAIRMAN. The gentleman makes a proper statement of the case. The Chair recognizes the gentleman from Texas for 5 minutes, and will later recognize the gentleman from Illinois for 5 minutes.

Mr. ROGERS of Texas. Mr. Chairman, I want to say at this point that I supported title I of this measure vigorously, as I have for many years. However, I feel there are some things which should be said concerning title II.

No one doubts that we need a program in this country for the disposal of solid waste. No one would deny that.

However, the manner in which this has been approached is contrary to my views as to how the program should be approached. In the first instance, we are providing over $90 million for research in this field. This is a problem that has been faced by every city in the country large or small. Much work has been done by private agencies and is being done now. This $90 million can be handed out to any Tom, Dick, or Harry that might appeal to these departments that are being handed these funds. I object to that, and I do not think that much money ought to be spent. To show you the significance of it, for a period of well over 10 years the program to desalt water, which is one of the most important programs in the history of mankind, has not spent more money than is proposed here. And I call your attention to the fact that this $90 million is only for a period of 3 years.

The next thing I want to point out is this: This bill is the authorization of funds to be appropriated up to June 1969. I oppose this type of authorization, because it takes away from the legislative committee the right to go into these matters further if they are not being handled in a proper manner and in a manner that the Congress wants them to be handled in during the first year of the program. We made this change in the desalinization program so that these departments downtown must not only come back to our Committee on Appropriations, for which I have full respect, but to the legislative committee which has the power in the first instance. I do not believe the best interest of the taxpayer will be served by this procedure.

For those reasons I expect to support the amendment to strike out title II.

In my opinion this type of program handled under this procedure is an open invitation to corruption and scandal.

The CHAIRMAN. The Chair recognizes the gentleman from Illinois [Mr. COLLIER] for 5 minutes.

Mr. COLLIER. I thank the chairman.

I am delighted that the Chair recognized the gentleman from Texas first, because I rise to echo the sentiments he has expressed, but I would add thereto the fact that the colloquy earlier in this debate today together with the debate on the legislation on this floor yesterday certainly makes it eminently clear to me—and it should to every Member of this House—that the manner in which we have been scoop shoveling legislation through this House this year is creating a very serious problem with regard to conflicts, overlap and duplication not only within the sprawling agencies, commissions, and bureaus set up by the Congress day in and day out. In fact similar conflicts and overlap of duties and responsibilities have occurred in areas that have been traditionally those of the States and local governments.

If this Congress proceeds in the next few months the way it has in the past 9 months, we will have to establish a new agency in this Government just to coordinate the programs and bureaus, because the left bureaucratic hand does not know what the right bureaucratic hand is doing any more. Then we may be faced with the further problem of creating a coordinating agency to coordinate the coordinators. It is just getting that bad.

In conclusion, Mr. Chairman, I would say that I think this body would act wisely today to support the pending amendment so that we can move on to support title I of the bill, which I think, of course, is necessary and good legislation.

Mr. ROGERS of Florida. Mr. Chairman, will the gentleman yield?

Mr. COLLIER. I will be delighted to yield to my good friend from Florida.

Mr. ROGERS of Florida. Mr. Chairman, I would like to take issue with the gentleman on the fact that title II is not needed. I think the chairman pointed out very vividly the problem that exists today of solid waste disposal which we have. We have to face 500 million pounds of solid waste disposal in this country every day. In 15 years they estimate this problem will triple, so it will be 1.5 billion pounds every day. Now, all that this title does, as has been pointed out here, is to provide research funds to try to find out how to solve the problem; that is, not to get into the garbage business and dispose of it but simply to find some new knowledge as to what we can do and, further, to find new knowledge as to how this material can be reused and money obtained from it, perhaps, to pay more back into the country than we can put into the research program which this one section would allow.

Mr. Chairman, I would urge very strongly the defeat of this amendment.

Mr. COLLIER. Mr. Chairman, I would say that the gentleman from Florida has merely reiterated what the distinguished chairman has said. The question involved here, it seems to me, is not necessarily in recognizing the problem which we face but in attempting to coordinate many programs in the private sector as well as in the areas of our educational effort in this Government that are already working on similar programs or programs akin to the one proposed in title II of this bill.

Mr. DOLE. Mr. Chairman, will the gentleman yield?

Mr. COLLIER. I yield to the gentleman.

Mr. DOLE. I agree with the gentleman that we are all against waste, and I think this is a good opportunity to dispose of about $92 million of it by supporting this amendment.

I thank the gentleman.

Mr. COLLIER. I thank the gentleman for his contribution.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Minnesota [Mr. NELSEN].

The question was taken; and on a divi-

sion (demanded by Mr. NELSEN) there were—ayes 29, noes 101.

So the amendment was rejected.

AMENDMENT OFFERED BY MR. DADDARIO

Mr. DADDARIO. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. DADDARIO: Line 25, page 38, after the word "disposal.", add the following: "In carrying out the provisions of this section, the Secretary and each department, agency, and officer of the Federal Government having functions or duties under this Act shall make use of and adhere to the Statement of Government Patent Policy which was promulgated by the President in his memorandum of October 10, 1963. (3 CFR, 1963 Supp., p. 238.)"

Mr. HARRIS. Mr. Chairman, will the gentleman yield?

Mr. DADDARIO. I yield to the chairman of the committee.

Mr. HARRIS. Mr. Chairman, I believe we can dispose of this amendment very briefly. The gentleman proposes an amendment to the committee amendment in the bill that was worked out by the committee primarily under the leadership of the gentleman from California

[p. 25070]

[Mr. Moss]. The gentleman from Connecticut will recall that when we had S. 1588, the transportation research bill, there was an amendment in that bill similar to the amendment included in this bill. The gentleman from Connecticut and I had a colloquy on it at that time.

Here in the Senate-passed bill the so-called Long amendment on patents was included in the bill. Now, our committee struck out the so-called Long provision of the Senate-passed bill, and we included the amendment that had been worked out similar to the one contained in S. 1588, the transportation research bill, and it is included in this bill.

So, therefore, this will involve a possible conference between the House and the other body as to a resolution of the matter between the two provisions.

Mr. Chairman, in view of that, the gentleman from Connecticut proposes an amendment that would refer to the Government patent policy promulgated by the President in his memorandum of October 10, 1963. In view of the fact that it brings this limited provision within the rule promulgated by that memorandum, it seems to me that it would be in keeping with the provision that was intended.

Mr. Chairman, I have discussed the matter with the gentleman from California [Mr. Moss] in view of the fact that he did take the major part in developing the amendment and it is satisfactory to him. The gentleman from California has indicated that he is willing to accept the amendment of the gentleman from Connecticut.

Therefore, Mr. Chairman, I am perfectly willing to accept the amendment.

Mr. CUNNINGHAM. Mr. Chairman, will the gentleman yield?

Mr. DADDARIO. I yield to the gentleman from Nebraska.

Mr. CUNNINGHAM. I would like to agree with the chairman and say those of us on the minority side also accept the amendment.

The CHAIRMAN. The question is on the amendment offered by the gentleman from Connecticut.

The amendment was agreed to.

The CHAIRMAN. The question now is on the committee substitute.

The committee substitute was agreed to.

The CHAIRMAN. Under the rule, the Committee rises.

Accordingly, the Committee rose; and the Speaker having resumed the chair, Mr. FLOOD, Chairman of the Committee of the Whole House on the State of the Union, reported that that Committee having had under consideration the bill (S. 306) to amend the Clean Air Act to require standards for controlling the emission of pollutants from gasoline-powered or diesel-powered vehicles, to establish a Federal Air Pollution Control Laboratory, and for other purposes, pursuant to House Resolution 587, he reported the bill back to the House with an amendment adopted by the Committee of the Whole.

The SPEAKER. Under the rule, the previous question is ordered.

The question is on the amendment.

The amendment was agreed to.

The SPEAKER. The question is on the third reading of the bill.

The bill was ordered to be read a third time, and was read the third time.

Mr. DEVINE. Mr. Speaker, I offer a motion to recommit.

The SPEAKER. Is the gentleman opposed to the bill?

Mr. DEVINE. I am, in its present form, Mr. Speaker.

The SPEAKER. The Clerk will report the motion to recommit.

The Clerk read as follows:

Mr. DEVINE moves to recommit the bill to the Committee on Interstate and Foreign Commerce with instructions to report it back forthwith with an amendment as follows: Page 32, strike out line 11 and all that follows down through and including line 6 on page 43.

Mr. HARRIS. Mr. Speaker, I move the previous question on the motion to recommit.

The previous question was ordered.

The SPEAKER. The question is on the motion to recommit.

The question was taken.

Mr. GROSS. Mr. Speaker, I object to the vote on the ground that a quorum is not present, and make the point of order that a quorum is not present.

The SPEAKER. Evidently a quorum is not present.

The Doorkeeper will close the doors, the Sergeant at Arms will notify absent Members, and the Clerk will call the roll.

The question was taken; and there were —yeas 80, nays 220, not voting 132, * * *

[p. 25071]

* * * * *

The title was amended so as to read: "An Act to amend the Clean Air Act to require standards for controlling the emission of pollutants from certain motor vehicles, to authorize a research and development program with respect to solid-waste disposal, and for other purposes."

A motion to reconsider was laid on the table.

[p. 25073]

1.1a (3)(d) Oct. 1: Senate concurred in House amendments, p. 25851

Mr. MUSKIE.

* * * * *

Mr. President, these are the differences between the two versions of S. 306 which concerned us. We are satisfied that the Senate can accept the House version, knowing that we will have improved the Clean Air Act, taken a major step toward the control of automotive exhausts, and started a new program for the control of solid waste disposal. I urge that the Senate concur in the House amendments.

In closing, Mr. President, I want to express my appreciation to my colleagues on the Subcommittee on Air and Water Pollution and to the staffs of the Public Works Committee and the committee members for their contribution to the bill. I want to commend the members of the House committee, and particularly Chairman HARRIS, for the contribution they have made to the improved Federal program for the control and abatement of air pollution.

Mr. President, I move that the Senate concurs in the House amendments.

The PRESIDING OFFICER. The motion is on agreeing to the motion of the Senator from Maine.

The motion was agreed to.

[p. 25851]

1.1b ONE-YEAR EXTENSION OF SOLID WASTE DISPOSAL AUTHORIZATION

October 15, 1968, P.L. 90-574, Title V, §506, October 15, 1968, 82 Stat. 1013

ONE YEAR EXTENSION OF SOLID WASTE DISPOSAL AUTHORIZATION

SEC. 506. Section 210 of the Solid Waste Disposal Act (42 U.S.C. 3259) is amended—

(1) by striking out "and not to exceed $20,000,000 for the fiscal year ending June 30, 1969" in subsection (a) and inserting in lieu thereof "not to exceed $20,000,000 for the fiscal year ending June 30, 1969, and not to exceed $19,750,000 for the fiscal year ending June 30, 1970"; and

(2) by striking out "and not to exceed $12,500,000 for the fiscal year ending June 30, 1969" in subsection (b) and inserting in lieu thereof "not to exceed $12,500,000 for the fiscal year ending June 30, 1969, and not to exceed $12,250,000 for the fiscal year ending June 30, 1970".

[p. 1013]

1.1b (1) HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

H.R. REP. No. 1536, 90th Cong., 2d Sess. (1968)

GRANTS FOR REGIONAL MEDICAL PROGRAMS, AGRICULTURAL MIGRANT WORKERS, AND ALCOHOLIC AND NARCOTIC ADDICT REHABILITATION FACILITIES

JUNE 10, 1968.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. STAGGERS, from the Committee on Interstate and Foreign Commerce, submitted the following

REPORT

[To accompany H.R. 15758]

The Committee on Interstate and Foreign Commerce, to whom was referred the bill (H.R. 15758) to amend the Public Health Service Act

so as to extend and improve the provisions relating to regional medical programs, to extend the authorization of grants for health of migratory agricultural workers, to provide for specialized facilities for alcoholics and narcotic addicts, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

[p. 1]

1.1b (2) SENATE COMMITTEE ON LABOR AND PUBLIC WELFARE

S. REP. No. 1454, 90th Cong., 2d Sess. (1968)

HEALTH SERVICE AMENDMENTS OF 1968

JULY 24, 1968.—Ordered to be printed

Mr. HILL, from the Committee on Labor and Public Welfare, submitted the following

REPORT

[To accompany H.R. 15758]

The Committee on Labor and Public Welfare, to which was referred the bill (H.R. 15758) to amend the Public Health Service Act so as to extend and improve the provisions relating to regional medical programs, to extend the authorization of grants for health of migratory agricultural workers, to provide for specialized facilities for alcoholics and narcotic addicts, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

[p. 1]

1.1b (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 1924, 90th Cong., 2d Sess. (1968)

HEALTH SERVICES AND FACILITIES AMENDMENTS

SEPTEMBER 25, 1968.—Ordered to be printed

Mr. STAGGERS, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H.R. 15758]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 15758) to amend the Public Health Service Act so as to extend and improve the provisions relating to regional medical programs, to extend the authorization of grants for health of migratory agricultural workers, to provide for specialized facilities for alcoholics and narcotic addicts, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

* * *

[p. 1]

SOLID WASTE DISPOSAL

The Senate amendment provided a 1-year extension, at the current authorization level of $32.5 million, for the program of research and demonstrations into disposal of solid wastes. The House bill contained no provision on this subject.

[p. 13]

1.1b (4) CONGRESSIONAL RECORD, VOL. 114 (1968)

1.1b (4)(a) July 27: Amended and passed Senate, p. 23802

The PRESIDING OFFICER. The bill is open to amendment.

Mr. SPONG. Mr. President, I send to the desk an amendment and ask for its consideration.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk read as follows:

At the end of the bill insert a new section as follows:

"ONE YEAR EXTENSION OF SOLID WASTE DISPOSAL AUTHORIZATION

"SEC. 507. Subsections (a) and (b) of section 210 of the Solid Waste Disposal Act (42 U.S.C. 3259) are each amended by inserting before the period at the end thereof a comma and 'and for the succeeding fiscal year'."

Mr. SPONG. Mr. President, the amendment to H.R. 15758 which I have sent to the desk does not relate to this particular legislation but is instead an amendment to the Solid Waste Disposal Act of 1965. The language of this amendment is identical to the bill, S. 3201, which was reported by the Senate Committee on Public Works and which simply continues for 1 year the authorizations for the Federal solid waste disposal program. The language of S. 3201 is being added to this legislation in order to facilitate passage during this session of the 90th Congress.

The Committee on Public Works was informed by the appropriate House committee that it would be difficult to hold hearings and report the House version of this legislation this year. The leadership of that committee also indicated that this amendment would be accepted if attached to H.R. 15758. The noncontroversial nature of the simple extension of the solid waste program, combined with a need to have the fiscal year 1970 authorization precede the appropriations suggest the usefulness of this approach.

The Solid Waste Disposal Act of 1965—Public Law 89-272 title II—launched a new program to develop efficient means of disposing the millions of tons of solid wastes that clog the Nation's cities and countryside. In 1965 only two States had identifiable solid waste programs, while today 38 States are developing modern plans for statewide solid waste programs and comprehensive survey of solid waste problems and practices under the Department of Health, Education, and Welfare grants.

The quantities of solid waste have become so great in recent years that traditional methods of disposal are either inefficient or ineffective. Incineration and landfill, the traditionally accepted methods of disposal, are inadequate and often compound existing air and water pollution problems degrading the overall quality of the environment.

A report prepared at the request of Senator J. CALEB BOGGS, entitled "Availability, Utilization, and Salvage of Industrial Materials," suggests that the industrial economy of the United States—and indeed that of the entire industrial world—should undergo a shift from a use-and-discard approach to a system which includes methods of salvage, reprocessing, and reuse. The report further suggests that the timing of this conversion need not be precise, nor immediate, but that it must occur, or man, in the future, faces a continually degrading environment which will eventually be intolerable to him.

The President, in his conservation message of March 11, 1968, called for a comprehensive review of current solid waste disposal technology to be undertaken by the Director of the Office of Science and Technology, working with the appropriate Cabinet officers. This review is to consider two key problems: first, how to lower the present high costs of solid waste disposal, and second, how to improve and strengthen Government-wide research and development in this field.

In order to take advantage of the results of this study it is desirable that a

simple 1-year extension of the Solid Waste Disposal Act be granted. This extension is provided by S. 3201. Following completion of the President's study the Public Works Committee will evaluate the results which should indicate the best and most useful methods of handling solid waste disposal. At that time hearings will be held on S. 1646, or similar proposals, which would authorize a massive Federal grant program to assist communities in the construction of solid waste disposal facilities.

Mr. President, I move the adoption of the amendment.

Mr. BOGGS. Mr. President, as a cosponsor of S. 3201, now in the form of an amendment, to H.R. 15758, the pending bill, I wish to join in the remarks made by the Senator from Virginia [Mr. SPONG].

Solid waste disposal represents a growing problem in this country, and while we have made good strides in controlling pollution of air and water, we are faced with developing programs and methods to help dispose of the increasing amounts of solid waste.

This simple 1-year extension of the existing Solid Waste Disposal Act will give the Department of Health, Education, and Welfare the authority to continue its research and fund some pilot programs seeking an answer to this serious problem.

I commend the Senator from Maine [Mr. MUSKIE] for his continued leadership in the pollution field and I urge approval of this amendment by the Senate.

Mr. HILL. We have no objection to the amendment.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Virginia.

The amendment was agreed to.

The PRESIDING OFFICER. The question is on agreeing to the committee amendment in the nature of a substitute, as amended.

The committee amendment, as amended, was agreed to.

[p. 23802]

1.1b (4)(b) Sept. 27: Conference report agreed to in Senate, p. 28601

Mr. MUSKIE.

* * * * *

SOLID WASTE DISPOSAL

The Senate amendment provided a 1-year extension at the current authorization level of $32.5 million for the program of research and demonstrations into disposal of solid wastes. The House bill contained no provision on this subject.

The conference substitute authorizes $32 million for this purpose for the fiscal year ending June 30, 1970.

The conference report is signed by all of the conferees on the part of the Senate and by all of the conferees on the part of the House.

Mr. President, I move the adoption of the report.

The motion was agreed to.

[p. 28601]

1.1b (4)(c) Oct. 1: Conference report agreed to in House, p. 28851

Mr. STAGGERS.

* * * * *

The Senate amendment also contained a 1-year extension of the Solid Waste Disposal Act, and the House conferees agreed to this provision with a reduction from $32.5 million for fiscal 1970 to $32 million. The conference agreement also provides a 1-year increase in authorizations for the Gorgas Memorial Laboratory of $500,000. The work of this laboratory involves the study of tropical disease.

[p. 28601]

1.1c EXTENSION OF SOLID WASTE DISPOSAL ACT

July 10, 1970, P.L. 91-316, 84 Stat. 416

An act to extend the Clean Air Act, as amended, and the Solid Waste Disposal Act, as amended, for a period of sixty days.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That pending extensions by Act of Congress of the Clean Air Act and Solid Waste Disposal Act, the authorizations contained in sections 104(c) and 309 of the Clean Air Act, as amended, for the fiscal year ending June 30, 1970, and the authorization contained in section 210 of the Solid Waste Disposal Act, as amended, for the fiscal year ending June 30, 1970, shall remain available through August 31, 1970, notwithstanding any provisions of those sections.

Approved July 10, 1970.

[p. 416]

1.1c (1) SENATE COMMITTEE ON PUBLIC WORKS

S. REP. No. 91-941, 91st Cong., 2d Sess. (1970)

TEMPORARY EXTENSIONS OF CLEAN AIR AND SOLID WASTE DISPOSAL ACT

JUNE 23, 1970.—Ordered to be printed

Mr. MUSKIE, from the Committee on Public Works, submitted the following

REPORT

[To accompany S. 4012]

The Committee on Public Works reports a clean bill, S. 4012, and recommends that the bill do pass.

The purpose of this bill is to provide an extension of the authorization for the solid waste and air pollution programs. This bill will continue

those authorizations at their present level through August 31, 1970. It is needed to provide time for careful consideration of pending air quality and solid waste legislation. The authorizations in existing law are greater than the levels of appropriation requested in the President's budget. This extension would allow appropriation for this 2-month period of the unappropriated balance of fiscal year 1970 authorizations. Therefore, the Appropriations Committee can be guided by this resolution. The Senate Committee on Public Works fully anticipates completion of action on both solid waste legislation and air pollution legislation prior to the first of September. The Resource Recovery Act, S. 2005, will be reported for Senate action in the near future. Pending air pollution legislation will be available for Senate floor action by mid–July.

[p. 1]

1.1c (2) CONGRESSIONAL RECORD, VOL. 116 (1970)

1.1c (2)(a) June 25: Considered and passed in Senate, pp. 21363–21364

EXTENSION OF THE CLEAN AIR ACT AND SOLID WASTE DISPOSAL ACT

The bill (S. 4012) to extend the Clean Air Act, as amended, and the Solid Waste Disposal Act, as amended, for a period of 60 days was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 4012

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That pending extensions by Act of Congress of the Clean Air Act and Solid Waste Disposal Act, the authorizations contained in sections *104(c)* and *309 of the Clean Air Act,* as amended, for the fiscal year ending June 30, 1970, and the authorization contained in section 210 of the Solid Waste Disposal Act, as amended, for the fiscal year ending June 30, 1970, shall remain available through August 31, 1970, notwithstanding any provisions of those sections.

[p. 21363]

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (*No. 91–941*), explaining the purposes of the measure.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

The purpose of this bill is to provide an extension of the authorization for the solid waste and *air pollution* programs. This bill will continue those authorizations at their present level through August 31, 1970. *It is needed to provide time for* careful consideration of pending air quality and solid waste legislation. The authorizations in existing law are greater than the levels of appropriations requested in the President's budget. This extension would allow appropriation for this 2-month period of the unappropriated balance of fiscal year 1970 authorizations. Therefore, the Appropriations Committee can be guided by this resolution. The Senate Committee on Public Works fully anticipates completion of action on both solid waste *legislation* and air pollution legislation prior to the first of September. The Resource Recovery Act, S. 2005, will be reported for Senate action in the near future. Pending air pollution *legislation* will be available for Senate floor action by mid-July.

[p. 21364]

1.1c (2)(b) June 30: Considered and passed House, p. 22095

EXTENDING THE CLEAN AIR ACT, AND THE SOLID WASTE DISPOSAL ACT

Mr. STAGGERS. Mr. Speaker, I ask unanimous consent for the immediate consideration of the bill (S. 4012) to extend the Clean Air Act, as amended, and the Solid Waste Disposal Act, as amended, for a period of 60 days.

The Clerk read the title of the Senate bill.

The SPEAKER. Is there objection to the request of the gentleman from West Virginia?

There was no objection.

The Clerk read the Senate bill as follows:

S. 4012

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That pending extensions by Act of Congress of the Clean Air Act and Solid Waste Disposal Act, the authorizations contained in sections 104(c) and 309 of the Clean Air Act, as amended, for the fiscal year ending June 30, 1970, and the authorization contained in section 210 of the Solid Waste Disposal Act, as amended, for the fiscal year ending June 30, 1970, shall remain available through August 31, 1970, notwithstanding any provisions of those sections.

The Senate bill was ordered to be read a third time, was read the third time, and passed, and a motion to reconsider was laid on the table.

[p. 22095]

1.1d THE RESOURCE RECOVERY ACT OF 1970

October 26, 1970, P.L. 91-512, 84 Stat. 1227

An act to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such Act, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Resource Recovery Act of 1970".

TITLE I—RESOURCE RECOVERY

SEC. 101. Section 202(b) of the Solid Waste Disposal Act is amended to read as follows:

"(b) The purposes of this Act therefore are—

"(1) to promote 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;

"(2) to provide technical and financial assistance to States and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs;

[p. 1227]

"(3) to promote a national research and development program

for improved management techniques, more effective organizational arrangements, and new and improved methods of collection, separation, recovery, and recycling of solid wastes, and the environmentally safe disposal of nonrecoverable residues;

"(4) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems; and

"(5) to provide for training grants in occupations involving the design, operation, and maintenance of solid waste disposal systems."

SEC. 102. Section 203 of the Solid Waste Disposal Act is amended by inserting at the end thereof the following:

"(7) The term 'municipality' means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law with responsibility for the planning or administration of solid waste disposal, or an Indian tribe.

"(8) The term 'intermunicipal agency' means an agency established by two or more municipalities with responsibility for planning or administration of solid waste disposal.

"(9) The term 'recovered resources' means materials or energy recovered from solid wastes.

"(10) The term 'resource recovery system' means a solid waste management system which provides for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues."

SEC. 103. (a) Section 204(a) of the Solid Waste Disposal Act is amended to read as follows:

"SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to—

"(1) any adverse health and welfare effects of the release into the environment of material present in solid waste, and methods to eliminate such effects;

"(2) the operation and financing of solid waste disposal programs;

"(3) the reduction of the amount of such waste and unsalvageable waste materials;

"(4) the development and application of new and improved methods of collecting and disposing of solid waste and processing and recovering materials and energy from solid wastes; and

"(5) the identification of solid waste components and potential materials and energy recoverable from such waste components."

(b) Section 204(d) of the Solid Waste Disposal Act is repealed.

SEC. 104. (a) The Solid Waste Disposal Act is amended by striking out section 206, by redesignating section 205 as 206, and by inserting after section 204 the following new section:

"SPECIAL STUDY AND DEMONSTRATION PROJECTS ON RECOVERY OF USEFUL ENERGY AND MATERIALS

"SEC. 205. (a) The Secretary shall carry out an investigation and study to determine—

"(1) means of recovering materials and energy from solid waste, recommended uses of such materials and energy for

[p. 1228]

national or international welfare, including identification of potential markets for such recovered resources, and the impact of distribution of such resources on existing markets;

"(2) changes in current product characteristics and production and packaging practices which would reduce the amount of solid waste;

"(3) methods of collection, separation, and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes;

"(4) the use of Federal procurement to develop market demand for recovered resources;

"(5) recommended incentives (including Federal grants, loans, and other assistance) and disincentives to accelerate the reclamation or recycling of materials from solid wastes, with special emphasis on motor vehicle hulks;

"(6) the effect of existing public policies, including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives, upon the recycling and reuse of materials, and the likely effect of the modification or elimination of such incentives and disincentives upon the reuse, recycling, and conservation of such materials; and

"(7) the necessity and method of imposing disposal or other charges on packaging, containers, vehicles, and other manufactured goods, which charges would reflect the cost of final disposal, the value of recoverable components of the item, and any social costs associated with nonrecycling or uncontrolled disposal of such items.

The Secretary shall from time to time, but not less frequently than annually, report the results of such investigation and study to the President and the Congress.

"(b) The Secretary is also authorized to carry out demonstration projects to test and demonstrate methods and techniques developed pursuant to subsection (a).

"(c) Section 204 (b) and (c) shall be applicable to investigations, studies, and projects carried out under this section."

(b) The Solid Waste Disposal Act is amended by redesignating sections 207 through 210 as sections 213 through 216, respectively, and by inserting after section 206 (as so redesignated by subsection (a) of this section) the following new sections:

"GRANTS FOR STATE, INTERSTATE, AND LOCAL PLANNING

"SEC. 207. (a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of not to exceed 66⅔ per centum of the cost in the case of an application with respect to an area including only one municipality, and not to exceed 75 per centum of the cost in any other case, of—

"(1) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and

"(2) developing and revising solid waste disposal plans as part of regional environmental protection systems for such areas, providing for recycling or recovery of materials from wastes whenever possible and including planning for the reuse of solid waste

[p. 1229]

disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites,

"(3) developing proposals for projects to be carried out pursuant to section 208 of this Act, or

"(4) planning programs for the removal and processing of abandoned motor vehicle hulks.

"(b) Grants pursuant to this section may be made upon application therefor which—

"(1) designates or establishes a single agency (which may be an interdepartmental agency) as the sole agency for carrying out the purposes of this section for the area involved;

"(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to areawide planning for proper and effective solid waste disposal

consistent with the protection of the public health and welfare, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal and resource recovery programs;

"(3) sets forth plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

"(4) provides for submission of such reports of the activities of the agency in carrying out the purposes of this section, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary; and

"(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

"(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with and not duplicate other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

"GRANTS FOR RESOURCE RECOVERY SYSTEMS AND IMPROVED SOLID WASTE DISPOSAL FACILITIES

"SEC. 208. (a) The Secretary is authorized to make grants pursuant to this section to any State, municipal, or interstate or intermunicipal agency for the demonstration of resource recovery systems or for the construction of new or improved solid waste disposal facilities.

"(b) (1) Any grant under this section for the demonstration of a resource recovery system may be made only if it (A) is consistent with any plans which meet the requirements of section 207(b)(2) of this Act; (B) is consistent with the guidelines recommended pursuant to section 209 of this Act; (C) is designed to provide areawide resource recovery systems consistent with the purposes of this Act, as determined by the Secretary, pursuant to regulations promulgated under subsection (d) of this section; and (D) provides an equitable system for distributing the costs associated with construction, operation, and maintenance of any resource recovery system among the users of such system.

"(2) The Federal share for any project to which paragraph (1) applies shall not be more than 75 percent.

"(c) (1) A grant under this section for the construction of a new or improved solid waste disposal facility may be made only if—

[p. 1230]

"(A) a State or interstate plan for solid waste disposal has been adopted which applies to the area involved, and the facility to be constructed (i) is consistent with such plan, (ii) is included in a comprehensive plan for the area involved which is satisfactory to the Secretary for the purposes of this Act, and (iii) is consistent with the guidelines recommended under section 209, and

"(B) the project advances the state of the art by applying new and improved techniques in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials.

"(2) The Federal share for any project to which paragraph (1) applies shall be not more than 50 percent in the case of a project serving an area which includes only one municipality, and not more than 75 percent in any other case.

"(d) (1) The Secretary, within ninety days after the date of enactment of the Resource Recovery Act of 1970, shall promulgate regulations establishing a procedure for awarding grants under this section which—

"(A) provides that projects will be carried out in communities of varying sizes, under such conditions as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions, and rural areas, under representative geographic and environmental conditions; and

"(B) provides deadlines for submission of, and action on, grant requests.

"(2) In taking action on applications for grants under this section, consideration shall be given by the Secretary (A) to the public benefits to be derived by the construction and the propriety of Federal aid in making such grant; (B) to the extent applicable, to the economic and commercial viability of the project (including contractual arrangements with the private sector to market any resources recovered); (C) to the potential of such project for general application to community solid waste disposal problems; and (D) to the use by the applicant of comprehensive regional or metropolitan area planning.

"(e) A grant under this section—

"(1) may be made only in the amount of the Federal share of (A) the estimated total design and construction costs, plus (B) in the case of a grant to which subsection (b) (1) applies, the first-year operation and maintenance costs;

"(2) may not be provided for land acquisition or (except as otherwise provided in paragraph (1) (B) for operating or maintenance costs;

"(3) may not be made until the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project (subject to paragraph (1) (B)); and

"(4) may be made subject to such conditions and requirements, in addition to those provided in this section, as the Secretary may require to properly carry out his functions pursuant to this Act.

For purposes of paragraph (1), the non-Federal share may be in any form, including, but not limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Secretary.

"(f) (1) Not more than 15 percent of the total of funds authorized to be appropriated under section 216 (a) (3) for any fiscal year to carry out this section shall be granted under this section for projects in any one State.

"(2) The Secretary shall prescribe by regulation the manner in which this subsection shall apply to a grant under this section for a project in an area which includes all or part of more than one State.

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"RECOMMENDED GUIDELINES

"SEC. 209. (a) The Secretary shall, in cooperation with appropriate State, Federal, interstate, regional, and local agencies, allowing for public comment by other interested parties, as soon as practicable after the enactment of the Resource Recovery Act of 1970, recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which shall be consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines shall apply to such systems whether on land or water and shall be revised from time to time.

"(b) (1) The Secretary shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act.

"(2) The Secretary shall issue to appropriate Federal, interstate, regional, and local agencies information on technically feasible solid waste collection, separation, disposal, recycling, and recovery methods, including data on the cost of construction, operation, and maintenance of such methods.

"GRANTS OR CONTRACTS FOR TRAINING PROJECTS

"SEC. 210. (a) The Secretary is authorized to make grants to, and contracts with, any eligible organization. For purposes of this section the term 'eligible organization' means a State or interstate agency, a municipality, educational institution, and any other organization which is capable of effectively carrying out a project which may be funded by grant under subsection (b) of this section.

"(b) (1) Subject to the provisions of paragraph (2), grants or contracts may be made to pay all or a part of the costs, as may be determined by the Secretary, of any project operated or to be operated by an eligible organization, which is designed—

"(A) to develop, expand, or carry out a program (which may combine training, education, and employment) for training persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities; or

"(B) to train instructors and supervisory personnel to train or supervise persons in occupations involving the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities.

"(2) A grant or contract authorized by paragraph (1) of this subsection may be made only upon application to the Secretary at such time or times and containing such information as he may prescribe, except that no such application shall be approved unless it provides for the same procedures and reports (and access to such reports and to other records) as is required by section 207(b) (4) and (5) with respect to applications made under such section.

"(c) The Secretary shall make a complete investigation and study to determine—

"(1) the need for additional trained State and local personnel to carry out plans assisted under this Act and other solid waste and resource recovery programs;

"(2) means of using existing training programs to train such personnel; and

"(3) the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field which may limit either available manpower or the advancement of personnel in such field.

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He shall report the results of such investigation and study, including his recommendations to the President and the Congress not later than one year after enactment of this Act.

"APPLICABILITY OF SOLID WASTE DISPOSAL GUIDELINES TO EXECUTIVE AGENCIES

"SEC. 211. (a) (1) If—

"(A) an Executive agency (as defined in section 105 of title 5, United States Code) has jurisdication over any real property or facility the operation or administration of which involves such agency in solid waste disposal activities, or

"(B) such an agency enters into a contract with any person for the operation by such person of any Federal property or facility, and the performance of such contract involves such person in solid waste disposal activities,

then such agency shall insure compliance with the guidelines recommended under section 209 and the purposes of this Act in the operation or administration of such property or facility, or the performance of such contract, as the case may be.

"(2) Each Executive agency which conducts any activity—

"(A) which generates solid waste, and

"(B) which, if conducted by a person other than such agency, would require a permit or license from such agency in order to dispose of such solid waste,

shall insure compliance with such guidelines and the purposes of this Act in conducting such activity.

"(3) Each Executive agency which permits the use of Federal property for purposes of disposal of solid waste shall insure compliance with such guidelines and the purposes of this Act in the disposal of such waste.

"(4) The President shall prescribe regulations to carry out this subsection.

"(b) Each Executive agency which issues any license or permit for disposal of solid waste shall, prior to the issuance of such license or permit, consult with the Secretary to insure compliance with guidelines recommended under section 209 and the purposes of this Act.

"NATIONAL DISPOSAL SITES STUDY

"SEC. 212. The Secretary shall submit to the Congress no later than two years after the date of enactment of the Resource Recovery Act of 1970, a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which may endanger public health or welfare. Such report shall include: (1) a list of materials which should be subject to disposal in any such site; (2) current methods of disposal of such materials; (3) recommended

methods of reduction, neutralization, recovery, or disposal of such materials; (4) an inventory of possible sites including existing land or water disposal sites operated or licensed by Federal agencies; (5) an estimate of the cost of developing and maintaining sites including consideration of means for distributing the short- and long-term costs of operating such sites among the users thereof; and (6) such other information as may be appropriate."

(c) Section 215 of the Solid Waste Disposal Act (as so redesignated by subsection (b) of this section) is amended by striking out the head-

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ing thereof and inserting in lieu thereof "GENERAL PROVISIONS"; by inserting "(a)" before "Payments"; and by adding at the end thereof the following:

"(b) No grant may be made under this Act to any private profit-making organization."

SEC. 105. Section 216 of the Solid Waste Disposal Act (as so redesignated by section 104 of this Act) is amended to read as follows:

"SEC. 216. (a) (1) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare for carrying out the provisions of this Act (including, but not limited to, section 208), not to exceed $41,500,000 for the fiscal year ending June 30, 1971.

"(2) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out the provisions of this Act, other than section 208, not to exceed $72,000,000 for the fiscal year ending June 30, 1972, and not to exceed $76,000,000 for the fiscal year ending June 30, 1973.

"(3) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out section 208 of this Act not to exceed $80,000,000 for the fiscal year ending June 30, 1972, and not to exceed $140,000,000 for the fiscal year ending June 30, 1973.

"(b) There are authorized to be appropriated to the Secretary of the Interior to carry out this Act not to exceed $8,750,000 for the fiscal year ending June 30, 1971, not to exceed $20,000,000 for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973. Prior to expending any funds authorized to be appropriated by this subsection, the Secretary of the Interior shall consult with the Secretary of Health, Education, and Welfare to assure that the expenditure of such funds will be consistent with the purposes of this Act.

"(c) Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other payments under any provision of this Act for any fiscal year beginning after

June 30, 1970, shall be available for evaluation (directly, or by grants or contracts) of any program authorized by this Act.

"(d) Sums appropriated under this section shall remain available until expended."

[p. 1234]

1.1d (1) HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

H.R. REP. No. 91-1155, 91st Cong., 2d Sess. (1970)

RESOURCE RECOVERY ACT OF 1970

JUNE 4, 1970.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. STAGGERS, from the Committee on Interstate and Foreign Commerce, submitted the following

REPORT

[To accompany H.R. 11833]

The Committee on Interstate and Foreign Commerce, to whom was referred the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

The amendment strikes out all of the bill after the enacting clause and inserts in lieu thereof a substitute which appears in the reported bill in italic type.

PURPOSES OF LEGISLATION

The purposes of the legislation are (1) to expand and intensify the development of new technologies for solid waste disposal; (2) to promote greater initiative on the part of the States in assuming increasing responsibilities for solid waste disposal programs; (3) to stimulate the construction by States and municipalities of pilot facilities utilizing new and improved waste disposal technologies; and (4) to conduct studies

to determine economical means of and appropriate incentives for, (*a*) recovering useful materials and energy from solid waste and (*b*) reducing the amount of such waste and facilitating the disposability thereof through improved production and packaging practices.

These objectives are to be achieved through (1) studies, investigations, and demonstration projects conducted by the Secretary of HEW

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and (2) construction grants to States and municipalities as well as interstate and intermunicipal agencies to contribute to the financing of pilot facilities utilizing new and improved technologies if the construction of such facilities is part of a State or interstate plan setting forth a comprehensive plan for solid waste disposal in the particular area or areas involved.

NEED FOR LEGISLATION

This Nation is generating approximately 360 million tons of industrial, municipal, and commercial solid waste. This amount is expected to double by 1980. To manage this waste, we spend $4.5 billion annually. While these expenditures are increasing steadily, we are failing to do a satisfactory job. The greatest amount of the moneys spent goes for collecting solid waste and transporting it to some place where it may be dumped or burned.

The most prevalent method for disposing of solid waste is open dumping. Yet, 94 percent of the open dumping facilities used are inadequate, since the dumped waste either is not covered daily with dirt as it properly should, or is being burned, or creates water pollution problems. Incineration is the second most frequently employed method. Yet, 75 percent of all municipal incinerators are inadequate because they are inefficient in reducing solid wastes, or create air pollution problems, or both. If present collection methods are not improved we shall not be able to build and operate enough trucks to collect the growing volume of waste materials.

Improved collection and disposal methods, however, will not suffice to take care of the steadily growing volume of solid waste materials. We shall have to develop new technologies for reclaiming and recycling usable materials and energy from such solid waste. We shall also have to improve production and packaging methods of products which end up as solid waste so as to reduce the amount of such waste and to facilitate the disposal thereof.

The development of such technologies is difficult and costly. The present level of funding of research to take care of a $4.5 billion problem is entirely inadequate. One such technology which holds out the greatest

promise is the generating of electric power from solid wastes and adequate funds should be made available promptly to reduce the leadtime in the case of this particular technology as much as possible. Beyond the development of such technologies, however, we shall have to provide adequate economic incentives to make the recapture and recycling of useful materials and energy attractive to those private industries which produce the products which are not used up but end up as solid waste.

The following tables indicating the composition of municipal solid waste suggest which industries are primarily responsible for generating such waste and what materials are primarily available for reuse or recycling.

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Composition and Analysis of Composite Municipal Refuse (1966) [1]

Components	*Percent by weight*
1. Corrugated paper boxes	23.38
2. Newspaper	9.40
3. Magazine paper	6.80
4. Brown paper	5.57
5. Mail	2.75
6. Paper food cartons	2.06
7. Tissue paper	1.98
8. Wax cartons	.76
9. Plastic coated paper	.76
10. Vegetable food wastes	2.29
11. Citric rinds and seeds	1.53
12. Meat scraps, cooked	2.29
13. Fried fats	2.29
14. Wood	2.29
15. Ripe tree leaves	2.29
16. Flower garden plants	1.53
17. Lawn grass, green	1.53
18. Evergreens	1.53
19. Plastics	.76
20. Rags	.76
21. Leather goods	.38
22. Rubber composition	.38
23. Paint and oils	.76
24. Vacuum cleaner catch	.76
25. Dirt	1.53
26. Metals	6.85
27. Glass, ceramics, ash	7.73
28. Adjusted moisture	9.05
Total	100.00

[1] Source: Kaiser, E. R. Chemical analyses of refuse components, 1966.

EXHIBIT C

Municipal Solid Wastes: Physical Characteristics Data [1] *(Typical Ranges)*

Category	*Percent by weight*
Metal products	8–11
Glass products	8–11
Paper products	40–54
Food wastes	10–26
Yard wastes	3–80
Wood products	3–70
Plastic products	1–20
Cloth, rubber, leather, synthetics	1–20
Dirt, ashes, rocks, and other inerts	1–50

[1] Source: "Characteristics of Municipal Solid Waste Management," Scrap Age, February 1969.

Additionally, the responsibility for the development of improved solid waste disposal programs cannot be left to individual municipalities, small and large, which traditionally have shouldered the responsibility for solid waste disposal, but the States must demonstrate increasing concern in this area. Prior to 1965, the year when the Solid Waste Disposal Act first was enacted by the Congress, few States assumed any responsibility for formulating solid waste disposal programs. While the number of States which have been willing to

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develop action programs has increased greatly since that year, the time now has come to stimulate through a highly selective grant program the construction of advanced disposal facilities designed to carry out such State plans on an area-by-area basis.

The legislation reported by your committee is designed to further all of these various objectives, and only through the pursuit of these several objectives is there any hope that the steadily mounting problem of solid waste management can be dealt with successfully.

SECTION-BY-SECTION ANALYSIS

Section 1. Title

Section 1 sets forth the title of the bill: "Resource Recovery Act of 1970."

Section 2. Definitions

Section 2 amends section 203 of the Solid Waste Disposal Act by adding a definition of the term "municipality".

Section 3. Multiple objectives of studies

Section 3 amends section 204 of the Solid Waste Disposal Act so as to emphasize (*a*) reduction of the amount of solid waste and, (*b*) new and improved methods of collecting and disposing of solid waste, and, (*c*) recovery of usable materials or energy from solid waste as the multiple objectives of studies, research, experiments, training, and demonstrations to be conducted by the Secretary of Health, Education, and Welfare.

Section 4. Special study, planning, and construction grants, and standards

Section 4(a) of the bill redesignates section 205 of the act as 206, inserts a new section 205 (relating to a special study), redesignates sections 207 through 210 as 210 through 213, and inserts new subsections 207 through 209. The new subsections 205, 207, 208, and 209 are described below.

New section 205 of act.—Special study and demonstration projects on recovery of useful energy and materials

This section directs the Secretary of Health, Education, and Welfare to carry out an investigation and study to determine—

(1) Economical means of recovering useful materials from solid waste, recommended uses of such materials for national or international welfare, and the market impact of such recovery;

(2) Appropriate incentive programs (including tax incentives) to assist in solving the problems of solid waste disposal;

(3) Practicable changes in current production and packaging practices which would reduce the amount of solid waste; and

(4) Practicable methods of collection and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes.

The Secretary is directed to report the results of such investigation and study to the President and the Congress.

The Secretary is authorized to carry out demonstration projects to test and demonstrate techniques developed as a result of the study. The provisions contained in section 204 of the act relating to patents and information resulting from Government-financed research activities are applicable to such demonstration projects.

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New section 207 of act—Planning grants

The new section 207 of the Solid Waste Disposal Act (a revision of section 206 of existing law) authorizes planning grants to State, interstate, municipal, and intermunicipal agencies as well of metropolitan,

regional, or district councils of government[1] of not to exceed 66⅔ per centum in the case of a project serving an area which does not include more than one municipality and not to exceed 75 per centum in any other case, and not to exceed 50 per centum of the cost of overseeing the implementation, enforcement and modification of such plans. Such planning grants are to be available for (1) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and (2) developing solid waste disposal plans as part of regional environmental protection systems for such areas, including planning for the reuse, as appropriate, of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites.

To qualify for planning grants, an applicant must meet the following conditions:

(1) Designate or establish a single agency as the sole agency to discharge for the area involved the responsibilities contemplated by this section;

(2) Indicate how an areawide planning of effective solid waste disposal programs provision will be made for the consideration of such public health factors as population growth, urban and metropolitan development, land use planning, water and air pollution control, and the feasibility of regional disposal programs;

(3) Set forth how the grant will be expended so as to carry out the purposes of this section;

(4) Provide for submission of a final report by the agency on its activities, and for submission of such other reports and information as the Secretary may prescribe; and

(5) Provide for appropriate fiscal control and accounting procedures.

Grants under this section shall be made only if the Secretary finds that the planning will not duplicate, but will be coordinated with, other related planning activities.

New section 208 of act—Grants for construction

This section provides grants to any State, municipality or interstate or intermunicipal agency for the construction of projects utilizing new and improved techniques of demonstrated usefulness in reducing the environmental impact of solid waste disposal, promoting the recovery of energy or resources, or the recycling of useful materials.

The program contemplated by this section is not a general grant-in-aid

[1] These councils of government are composed of public officials representative of the political jurisdictions within a metropolitan area, region, or district, and are eligible for planning grants under section 701(g) of the Housing Act of 1954.

program entitling each State to a share in available grant funds. The program is an experimental one designed to assist in the financing of advanced solid waste disposal facilities within those States which have demonstrated a willingness to assume responsibilities for formulating comprehensive solid waste disposal programs for intrastate or interstate areas within their territories. Within the framework of such

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plans, municipalities may apply singly or jointly for grants for pilot projects utilizing new and improved techniques of solid waste disposal. Since it can reasonably be expected that different techniques will be suitable for municipalities of different sizes, in different locales and having different characteristics, such comprehensive State plans are expected to call for a number of different facilities to be constructed concurrently. If more than 10 eligible projects are applied for, the funds are to be distributed among at least 10 applicants. If grants for fewer than 10 such projects are applied for, the Secretary may use the funds for those eligible municipalities which have applied.

In the case of construction grants to a single municipality, the amounts of such grants shall not exceed 50 percent of the estimated reasonable cost of the project as determined by the Secretary. In the case of construction grants to more than one municipality, the amounts may be increased by an additional 25 percent of such cost. In either case, however, grants shall be made only if—

(1) The applicant is unable to obtain such amounts from other sources upon terms and conditions equally favorable;

(2) The applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project after completion; and

(3) The project is consistent with the purposes of the Federal Water Pollution Control Act and the Clean Air Act.

The Secretary may impose such additional conditions as he deems necessary to carry out his functions pursuant to this act.

In determining the desirability of projects and of approving Federal financial aid in connection therewith, consideration shall be given by the Secretary to the public benefits to be derived by the construction and the propriety of Federal aid in such construction, the relation of the ultimate cost of the project to the public interest and to the public necessity for the project and the use by the applicant of comprehensive regional or metropolitan area planning.

Not more than 15 per centum of the total of funds appropriated for the purposes of this section in any fiscal year shall be granted for projects in any one State, and not more than 10 percent of the allotment to the

State for any one project (except that if fewer then 10 applicants apply, each applicant must receive at least 10 percent). In the case of a grant for a program in an area crossing State boundaries, the Secretary shall determine the portion of such grant which is chargeable to the percentage limitation under this subsection for each State into which such area extends.

It is the intention of the committee that projects under this section be subject to the review system established pursuant to Bureau of the Budget Circular No. A–95. This review system was established pursuant to title IV of the Intergovernmental Cooperation Act of 1968.

New section 209 of act—Standards

This section directs the Secretary, within 18 months following date of enactment, to recommend to the appropriate agencies standards for solid waste collection and disposal systems (including systems for private use) which are consistent with health, air, and water pollution standards and can be adopted to applicable land use plans. Such standards shall be developed in cooperation with appropriate State, interstate, and regional and local agencies. The Secretary is also authorized to recommend model codes to implement this section.

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Section 5. Authorization of additional appropriations

Responsibilities under the Solid Waste Disposal Act are divided between the Secretary of Health, Education, and Welfare and the Secretary of the Interior. The Secretary of Health, Education, and Welfare has been given the primary responsibility for dealing with solid waste disposal problems. The Secretary of the Interior's responsibilities are limited to "problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities." (Sec. 203(1).)

Section 5 would amend the redesignated section 213 (former section 210) of the Solid Waste Disposal Act by authorizing the following additional appropriations:

(*a*) to the Secretary of Health, Education, and Welfare for the fiscal year ending June 30, 1971, not to exceed $83 million; for the fiscal year ending June 30, 1972, not to exceed $152 million; for the fiscal year ending June 30, 1973, not to exceed $216 million.

(*b*) to the Secretary of the Interior: for the fiscal year ending June 30, 1971, not to exceed $17.5 million; for the fiscal year ending June 30,

1972, not to exceed $20 million; for the fiscal year ending June 30, 1973, not to exceed $22.5 million.

In addition, subsection (c) of this section authorizes up to 1 percent of appropriations to carry out the Solid Waste Disposal Act to be used for evaluation.

Section 6. Effective date

This section provides that the amendments made by the bill apply with respect to fiscal year 1971 and thereafter.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

SOLID WASTE DISPOSAL ACT

TITLE II—SOLID WASTE DISPOSAL

SHORT TITLE

SEC. 201. This title (hereinafter referred to as "this Act") may be cited as the "Solid Waste Disposal Act".

FINDINGS AND PURPOSES

SEC. 202. (a) The Congress finds—

(1) that the continuing technological progress and improvement in methods of manufacture, packaging, and marketing of consumer products has resulted in an ever-mounting increase, and in a change in the characteristics, of the mass of material discarded by the purchaser of such products;

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(2) that the economic and population growth of our Nation, and the improvements in the standard of living enjoyed by our population, have required increased industrial production to meet our needs, and have made necessary the demolition of old buildings, the construction of new buildings, and the provision of highways and other avenues of transportation, which, together with related industrial, commercial, and agricultural operations, have resulted in a rising tide of scrap, discarded, and waste materials;

(3) that the continuing concentration of our population in expanding metropolitan and other urban areas has presented these communities with serious financial, management, intergovernmental, and technical problems in the disposal of solid wastes resulting from the industrial, commercial, domestic, and other activities carried on in such areas;

(4) that inefficient and improper methods of disposal of solid wastes result in scenic blights, create serious hazards to the public health, including pollution of air and water resources, accident hazards, and increase in rodent and insect vectors of disease, have an adverse effect on land values, create public nuisances, otherwise interfere with community life and development;

(5) that the failure or inability to salvage and reuse such materials economically results in the unnecessary waste and depletion of our natural resources; and

(6) that while the collection and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies, the problems of waste disposal as set forth above have become a matter national in scope and in concern and necessitate Federal action through financial and technical assistance and leadership in the development, demonstration, and application of new and improved methods and processes to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid-waste disposal practices.

(b) The purposes of this Act therefore are—

(1) to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid-waste disposal, including studies directed toward the conservation of natural resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid wastes; and

(2) to provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, and conduct of solid-waste disposal programs.

DEFINITIONS

SEC. 203. When used in this Act—

(1) The term "Secretary" means the Secretary of Health, Education, and Welfare; except that such term means the Secretary of the Interior with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or

facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities.

(2) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(3) The term "interstate agency" means an agency of two or more municipalities in different States, or an agency established by two or more States, with authority to provide for the disposal of solid wastes and serving two or more municipalities located in different States.

(4) The term "solid waste" means 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, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants.

(5) The term "solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid waste.

(6) The term "construction", with respect to any project of construction under this Act, means (A) the erection or building of new structures and acquisition of lands or interests therein, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and (B) the acquisition and installation of initial equipment of, or required in connection with, new or newly acquired structures or the expanded, remodeled, altered, modernized or extended part of existing structures (including trucks and other motor vehicles, and tractors, cranes, and other machinery) necessary for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and (C) the inspection and supervision of the process of carrying out the project to completion.

(7) The term "municipality" means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law and having jurisdiction over the disposal of solid wastes.

RESEARCH, DEMONSTRATIONS, TRAINING, AND OTHER ACTIVITIES

SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and

institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to the operation and financing of solid-waste disposal programs, [the development and application of new and improved methods of solid-waste disposal (including devices and facilities therefor), and the reduction of the amount of such waste and unsalvageable waste materials.] *the reduction of the amount of such waste and un-*

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salvageable waste materials, and the development and application of new and improved methods of collecting and disposing of solid waste and processing and of recovering usable energy and materials from solid waste (including devices and facilities therefor).

(b) In carrying out the provisions of the preceding subsection, the Secretary is authorized to—

(1) collect and make available, through publications and other appropriate means, the results of, and other information pertaining to, such research and other activities, including appropriate recommendations in connection therewith;

(2) cooperate with public and private agencies, institutions, and organizations, and with any industries involved, in the preparation and the conduct of such research and other activities; and

(3) make grants-in-aid to public or private agencies and institutions and to individuals for research, training projects, surveys, and demonstrations (including construction of facilities), and provide for the conduct of research, training, surveys, and demonstrations by contract with public or private agencies and institutions and with individuals; and such contracts for research or demonstrations or both (including contracts for construction) may be made in accordance with and subject to the limitations provided with respect to research contracts of the military departments in title 10, United States Code, section 2353, except that the determination, approval, and certification required thereby shall be made by the Secretary.

(c) Any grant, agreement, or contract made or entered into under this section shall contain provisions effective to insure that all information, uses, processes, patents and other developments resulting from any activity undertaken pursuant to such grant, agreement, or contract will be made readily available on fair and equitable terms to industries utilizing methods of solid-waste disposal and industries engaging in furnishing devices, facilities, equipment, and supplies to be used in connection with solid-waste disposal. In carrying out the provisions of this section, the Secretary, and each department, agency, and officer of the Federal Government having functions or duties under this Act shall make use

of and adhere to the Statement of Government Patent Policy which was promulgated by the President in his memorandum of October 10, 1963. (3 CFR, 1963 Supp., p. 238.)

[(d) Notwithstanding any other provision of this Act, the United States shall not make any grant to pay more than two-thirds of the cost of construction of any facility under this Act.]

SPECIAL STUDY AND DEMONSTRATION PROJECTS ON RECOVERY OF USEFUL ENERGY AND MATERIALS

SEC. 205. (a) The Secretary of Health, Education, and Welfare shall carry out an investigation and study to determine—

(1) economical means of recovering useful energy and materials from solid waste, recommended uses of such energy and materials for national or international welfare, and the market impact of such recovery;

(2) appropriate incentive programs (including tax incentives) to assist in solving the problems of solid waste disposal;

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(3) practicable changes in current production and packaging practices which would reduce the amount of solid waste; and

(4) practicable methods of collection and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes.

The Secretary shall from time to time, but not less frequently than annually, report the results of such investigation and study to the President and the Congress.

(b) The Secretary is also authorized to carry out demonstration projects to test and demonstrate methods and techniques developed pursuant to subsection (a).

(c) Section 204 (b) and (c) shall be applicable to investigations, studies, and projects carried out under this section.

INTERSTATE AND INTERLOCAL COOPERATION

SEC. [205] *206*. The Secretary shall encourage cooperative activities by the States and local governments in connection with solid-waste disposal programs; encourage, where practicable, interstate, interlocal, and regional planning for, and the conduct of, interstate, interlocal, and regional solid-waste disposal programs; and encourage the enactment of improved and, so far as practicable, uniform State and local laws governing solid-waste disposal.

[GRANTS FOR STATE AND INTERSTATE PLANNING

[SEC. 206. (a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to

carry out the purposes of this Act, make grants to State and interstate agencies of not to exceed 50 per centum of the cost of making surveys of solid-waste disposal practices and problems within the jurisdictional areas of such States or agencies, and of developing solid-waste disposal plans for such areas.

[(b) In order to be eligible for a grant under this section the State, or the interstate agency, must submit an application therefor which—

[(1) designates or establishes a single State agency (which may be an interdepartmental agency) or, in the case of an interstate agency, such interstate agency, as the sole agency for carrying out the purposes of this section:

[(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to statewide planning (or in the case of an interstate agency jurisdictionwide planning) for proper and effective solid-waste disposal consistent with the protection of the public health, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal programs;

[(3) sets forth its plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

[(4) provides for submission of a final report of the activities of the State or interstate agency in carrying out the purposes of this section, and for the submission of such other reports, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes

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of this section and for keeping such records and affording such access thereto as he may find necessary to assure the correctness and verification of such reports; and

[(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the State or interstate agency under this section.

[(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid-waste disposal will be coordinated, so far as practicable, with other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.]

GRANTS FOR STATE, INTERSTATE, AND LOCAL PLANNING

SEC. 207. (a) The Secretary of Health, Education, and Welfare may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of——

"(1) not to exceed 66⅔ per centum of the cost in the case of an application with respect to an area including only one municipality, and not to exceed 75 per centum of the cost in any other case—

"(A) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and

"(B) developing solid waste disposal plans as part of regional environmental protection systems for such areas, including planning for the reuse, as appropriate, of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites, and

"(2) not to exceed 50 per centum of the cost of overseeing the implementation, including enforcement, and modification of plans developed under paragraph (1)(B).

(b) Grants pursuant to this section shall be made upon application therefore which—

(1) designates or establishes a single agency as the sole agency for carrying out the purposes of this section for the area involved,

(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to areawide planning for proper and effective solid waste disposal consistent with the protection of the public health, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal programs,

(3) sets forth plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

(4) provides for submission of a final report of the activities of the agency in carrying out the purposes of this section, and for the submission of such other reports, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such

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records and affording such access thereto as he may find necessary to assure the correctness and verification of such reports; and

(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

(c) *The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with, and not duplicative of, other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.*

GRANTS FOR CONSTRUCTION

SEC. 208. (a) *The Secretary of Health, Education, and Welfare is authorized to make grants pursuant to this section to any State, municipality, or interstate or intermunicipal agency for the construction of solid waste disposal and resource recovery facilities, including improvement of existing facilities.*

(b) *Any such grant—*

(1) *shall be made for a project only if—*

(A) *a State or interstate plan for solid waste disposal has been adopted which applies to the area involved, and the project is consistent with such plan, is included in a comprehensive plan for the area involved which is satisfactory to the Secretary for the purposes of this Act, and is consistent with any standards developed pursuant to section 209, and*

(B) *it utilizes new and improved techniques of demonstrated usefulness in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials;*

(2) *shall be made (A) in amounts not exceeding 50 per centum of the estimated reasonable cost of the project as determined by the Secretary in the case of a project serving an area which includes only one municipality and not exceeding 75 per centum of such cost in any other case, and (B) only if the applicant is unable to obtain such amounts from other sources upon terms and conditions equally favorable;*

(3) *shall not be made until the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project after completion;*

(4) *shall not be made unless such project is consistent with the purposes of the Federal Water Pollution Control Act and the Clean Air Act; and*

(5) *may be made subject to such conditions and requirements, in addition to those provided in this section, as the Secretary may require to properly carry out his functions pursuant to this Act.*

(c) *In determining the desirability of projects and of approving Federal financial aid in connection therewith, consideration shall be given by the Secretary to the public benefits to be derived by the construction and the propriety of Federal aid in such construction, the relation of the ultimate cost of the project to the public interest and to the public necessity for the*

project, and the use by the applicant of comprehensive regional or metropolitan area planning.

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(d) (1) Not more than 15 per centum of the total of funds appropriated for any fiscal year and available for purposes of this section shall be granted for projects in any one State.

(2) Of the sums granted for projects in any one State in any fiscal year, not more than 10 per centum shall be granted in such year for any single project in such State; except that in the case of a State for which less than 10 project applications which meet the requirements of this section have been submitted (prior to such date as the Secretary shall prescribe) for a fiscal year, at least 10 per centum of such sum shall be granted for each such project.

(3) The Secretary shall prescribe by regulation the manner in which this subsection shall apply to a grant under this section for a project in an area which includes all or part of more than one State.

RECOMMENDED STANDARDS

SEC. 209. (a) The Secretary of Health, Education, and Welfare shall, in cooperation with appropriate State, interstate, and regional and local agencies, within eighteen months following the date of enactment of the Resource Recovery Act of 1970, recommended to appropriate agencies standards for solid waste collection and disposal systems (including systems for private use) which are consistent with health, air, and water pollution standards and can be adapted to applicable land use plans.

(b) In addition, the Secretary of Health, Education, and Welfare shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act.

LABOR STANDARDS

SEC. [207] *210.* No grant for a project of construction under this Act shall be made unless the Secretary finds that the application contains or is supported by reasonable assurance that all laborers and mechanics employed by contractors or subcontractors on projects of the type covered by the Davis-Bacon Act, as amended (40 U.S.C. 276a—276a–5), will be paid wages at rates not less than those prevailing on similar work in the locality as determined by the Secretary of Labor in accordance with that Act; and the Secretary of Labor shall have with respect to the labor standards specified in this section the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 5 U.S.C. 113z–15) and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c).

OTHER AUTHORITY NOT AFFECTED

SEC. [208] *211.* This Act shall not be construed as superseding or limiting the authorities and responsibilities, under any other provisions of law, of the Secretary of Health, Education, and Welfare, the Secretary of the Interior, or any other Federal officer, department, or agency.

PAYMENTS

SEC. [209] *212.* Payments of grants under this Act may be made (after necessary adjustment on account of previously made underpayments of overpayments) in advance or by way of reimbursement, and in such installments and on such conditions as the Secretary may determine.

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APPROPRIATIONS

SEC. [210.] *213.* (a) There is hereby authorized to be appropriated to the Secretary of Health, Education, and Welfare, to carry out this Act, not to exceed $7,000,000 for the fiscal year ending June 30, 1966, not to exceed $14,000,000 for the fiscal year ending June 30, 1967, not to exceed $19,200,000 for the fiscal year ending June 30, 1968, not to exceed $20,000,000 for the fiscal year ending June 30, 1969, [and] not to exceed $19,750,000 for the fiscal year ending June 30, 1970, *not to exceed $83,000,000 for the fiscal year ending June 30, 1971, not to exceed $152,000,000 for the fiscal year ending June 30, 1972, and not to exceed $216,000,000 for the fiscal year ending June 30, 1973. The sums so appropriated shall remain available until expended.*

(b) There is hereby authorized to be appropriated to the Secretary of the Interior, to carry out this Act, not to exceed $3,000,000 for the fiscal year ending June 30, 1966, not to exceed $6,000,000 for the fiscal year ending June 30, 1967, not to exceed $10,800,000 for the fiscal year ending June 30, 1968, not to exceed $12,500,000 for the fiscal year ending June 30, 1969, [and] not to exceed $12,250,000 for the fiscal year ending June 30, 1970, *not to exceed $17,500,000 for the fiscal year ending June 30, 1971, not to exceed $20,000,000 for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973.*

(c) Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other payments under any provision of this Act for any fiscal year beginning after June 30, 1970, shall be available for evaluation (directly, or by grants, or contracts) of any program authorized by this title.

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1.1d (2) SENATE COMMITTEE ON PUBLIC WORKS

S. REP. No. 91-1034, 91st Cong., 2d Sess. (1970)

RESOURCE RECOVERY ACT OF 1970

JULY 23, 1970.—Ordered to be printed

Mr. MUSKIE, from the Committee on Public Works, submitted the following

REPORT

together with an

INDIVIDUAL VIEW

[To accompany S. 2005]

The Committee on Public Works, to which was referred the bill (S. 2005) to amend the Solid Waste Disposal Act, as amended, relating to financial assistance for the construction of solid waste disposal facilities, improving research programs pursuant to such Act, establishing a National Commission on Materials Policy, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill as amended do pass.

GENERAL STATEMENT

Solid waste is the residue of production and consumption—a byproduct of air and water pollution control—the litter that people promiscuously discard on the countryside—the "unusable" overburden of mining operations and the inedible remainder of agricultural production.

Solid waste falls into two categories: (1) planned disposable materials which are part of the Nation's production and consumption patterns, and (2) resources which have no known or economic use, to both instances solid waste is almost always a resource which, with ingenuity, can be used and re-used.

This Nation has always enjoyed resource abundance and has acted as though that abundance would last forever. Studies prepared for the Senate Committee on Public Works, testimony before the Subcommittee on Air and Water Pollution, and information generally available suggest

that anticipation of continued resource abundance is not only unwise—it is folly.

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Our resources fall in three categories—renewable, nonrenewable, and recoverable. Many, including forest and agricultural resources, are renewable resources. Nonrenewable (energy) resources produce only small amounts of solid waste while contributing substantially to air and water pollution problems if uncontrolled. Recoverable resources are those which maintain useful physical or chemical properties throughout their process of use and therefore can be continuously recycled in the production-consumption process.

And the nation has no choice. Consumption increases at a greater rate than population growth. Exhaustion of the Nation's resource base is a very real possibility. Already some industries see recycled waste as a more economic source of materials than primary sources.

But this recognition has neither reversed the trend toward greater waste generation nor reduced the burden on communities and other units of government which have assumed, albeit unwillingly, in some cases, the task of waste disposal.

Community waste disposal has, for centuries, been solved by a simple method—combustion. Open burning dumps in less urban areas and huge incinerators in major communities have provided major sources of stench and air pollution.

Today few communities are allowed the luxury of simple waste combustion. Most areas of the nation have turned to sanitary landfills (most of which are not at all sanitary) and "clean" incinerators (many of which are not at all clean). In both cases a solid waste problem is solved, but often air and water pollution problems result, and resources are always wasted.

This legislation is designed to develop systems which will change the present method of dealing with solid waste problems of communities, of farms, and of industries. The intent of this bill is to stimulate the development of resource recovery methods which will provide for more economic use of wastes.

The bill would authorize intensified research and demonstration of methods to improve collection and transportation of wastes, and development of environmentally safe methods to dispose of non-reusable waste residues. In those cases where wastes are too toxic for traditional disposal methods, the bill would authorize a study of the development of national toxic waste disposal sites. And, for those wastes which can be converted to energy, the bill would authorize development of efficiency energy conversion units.

The Committee carefully evaluated the desirability of legislation to provide direct financial assistance to communities to construct solid waste disposal facilities. This provision, included in S. 2005 as originally introduced, was rejected for three reasons: (1) construction grants at this time could lock in existing conventional technology, (2) even clean incinerators and sanitary landfills would not conserve resources, and (3) a large Federal grant authorization program at this time might retard present community efforts unless appropriations kept pace with authorizations, which is not likely.

The Committee believes that future Federal financial assistance to communities for construction of facilities may be necessary. Demonstration systems developed pursuant to this act will provide guidance as to what kinds of construction should be assisted, what recovery

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techniques will be most economical, and what collection innovations will most effectively reduce the cost of waste handling.

Further, other studies authorized by this bill will provide insights into methods to reduce the production of waste in packaging, in manufacturing of goods, design of vehicles and other consumer goods which are discarded after use.

Finally the committee hopes that the study of existing tax policies, depletion allowances and other economic incentives and disincentives will indicate how to encourage production practices which reduce waste or use of materials which can be recycled.

Through use of planning funds made available in this legislation, as well as the training grants to develop needed personnel, communities and States should be able to upgrade existing programs and design better programs for the future.

The National Materials Policy Study should provide the Nation with needed guidance for future conservation of resources by identifying future national materials requirements as well as a study of the materials-use chain.

HEARINGS

On April 10, 1969, the Subcommittee on Air and Water Pollution began hearings on current solid waste collection, transport, and disposal practices, and the need for new legislation in Boston, Massachusetts. On April 29, 1969, Senator Edmund S. Muskie, Chairman of the Subcommittee on Air and Water Pollution, introduced S. 2005, the Resource Recovery Act of 1969. Subsequently, Senator J. Caleb Boggs introduced the National Materials Policy Act of 1969 (Amdt. No. 153). During this period additional hearings were held in Detroit, Michigan, Jackson-

ville, Florida, and Washington, D.C. In all, 7 days of hearings were held in 1969.

Hearings were reconvened on February 20, 1970, to consider S. 2005 and S. 3469, the Wastes Reclamation and Recycling Act of 1970, introduced by Senator Scott for the Administration. Subsequently, an additional 11 days of hearings were held in Washington, D.C., and a field hearing was held in San Francisco, California.

A total of 18 days of hearings were held by the Subcommittee on Air and Water Pollution during 1969 and 1970. The Subcommittee heard testimony from more than 140 witnesses representing Federal, State, and local government, private citizens, expert public health, environmental, and engineering specialists, and the private sectors of the industry.

Subsequent to the hearings Senator Gaylord Nelson introduced S. 3665, concerning packaging practices and disposal fees, and Senator Jacob Javits offered Amendment No. 705, providing for a disposal charge on all new or existing motor vehicles. While these proposals were offered too late for attention in the hearings, studies to explore their potential have been authorized in title III of this bill.

PURPOSES OF LEGISLATION

AMENDMENTS TO PURPOSES OF THE ACT

The purposes of the Solid Waste Disposal Act of 1965 would be expanded by this bill to reflect emphasis on recycling and recovery of resources, rather than waste disposal.

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DEFINITIONS

Under the Solid Waste Disposal Act of 1965, the Secretary of the Interior has had a limited research authority "with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities." In this bill, no further authorization is made for programs within the Department of Interior. The definition of "Secretary" in Section 203(1) is amended to refer only to the Secretary of Health, Education, and Welfare. Under the President's Reorganization Plan No. 3, 1970, all functions under this Act would be transferred to the new Environmental Protection Agency. The Committee expects the administrator of the solid waste program to make use of the expertise in solid waste manage-

ment within the Bureau of Mines as well as other Federal agencies by contract or inter-agency agreement.

This section would also add new definitions of "municipality," "intermunicipal agency," "recovered resources," and "resource recovery system."

A "municipality" includes any public body with jurisdiction over solid management, including any city, town, borough, county, parish, direct, or Indian tribe or authorized Indian tribal organization. In instances where there is an unincorporated community which would not be eligible for a grant by reason of the fact that such community is not a "municipality," such a community would receive a grant by working through the county government of the county in which it is located. The county in such case could establish an agency for the purpose of facilitating the application for and use of the grant by the citizens of the community involved.

RESEARCH

While there has been considerable research provided for under the Solid Waste Disposal Act of 1965, the bill would require that the Secretary give increased emphasis to the development and demonstration of new and improved methods for the collection and disposal of solid wastes and recovering useful materials and energy. In furtherance of this program, the Secretary is directed to enter into grants and contracts to advance knowledge relating to—

(1) the potential public health and welfare effects of the environmental release of materials present in solid wastes and the development of methods to eliminate any adverse effects;

(2) the operation and financing of solid waste disposal programs;

(3) reduction of amounts of solid wastes, and recoverable components;

(4) the development and application of new and improved methods for the collection, separation and disposal of solid wastes, especially methods for recovering materials and energy; and

(5) the identification of solid waste components and potentially recoverable materials and energy.

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Although considerable progress has been observed in solid waste management research efforts, the Committee feels that such efforts have not been adequate to cope with the steadily increasing volumes and amounts of solid wastes.

Solutions to the solid wastes problems facing this Nation require application of the knowledge and expertise of people from both the public and private sector. The Committee does not believe that capabilities of the private sector have been adequately utilized.

Public health

Although there is a long association between health hazards and solid wastes, there are insufficient data to permit quantitative estimates of solid waste-disease relationships. Further research is needed to define these relationships; for example, the relationship between poorly managed solid waste collection, transport, and disposal operations and vectors of diseases, such as cockroaches, rats, and flies.

Environmental effects

In recent years there has been a shift in the emphasis of environmental quality goals from the control of pollutants to the maintenance and enhancement of the quality of air, water, and land resources. Environmental considerations preclude the use of some traditional solid waste disposal alternatives such as low-lying land as landfill sites. Therefore, it is essential to develop solid waste collection and disposal methods compatible with environmental quality policies.

The Committee believes that greater attention must be given to the interrelationships between air and water pollution control activities and solid waste disposal. Long-term reliance on incineration of solid wastes does not appear compatible with anticipated ambient air quality standards. Sanitary landfills may involve degradation of water quality. These methods must be made compatible with other environmental demands, and new methods must be found.

Waste management

Research is needed on methods for financing solid waste management systems and operating such systems efficiently and economically. Insufficient data are available to evaluate the cost effectiveness of alternative waste management systems. More complete information is needed on the interrelationship of regional economics and amounts of solid wastes generated economics of scale in solid waste management, and the economics of technologies now available or under development.

The current annual cost to collect, transport, and dispose of urban solid wastes is $4.5 billion. This figure does not include the internal costs to industry and agriculture of solid waste management, householder and institutional costs for storage and handling of refuse, losses in property values due to inadequacies in collection and disposal of solid wastes, or individual medical or loss-of-health costs from the various forms of pollution and inadequate control of disease vectors.

And the quantities of solid wastes are increasing. In testimony this year Leonard S. Wegman presented data showing that paper consumption has risen about 100 percent since 1950, and plastic consumption has risen 759 percent in the same period.

Testimony indicates that municipalities spend $8 to $20 per ton to collect and deliver refuse to the disposal point. Disposal costs range from $2 per ton for a simple landfill up to $7 to $10 per ton for a modern

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high temperature incinerator with effective environmental protection systems. Combined collection and disposal costs thus vary from $10 to $30 per ton.

Present methods of obtaining this money may differ. Municipalities with the high refuse volumes apply ad valorem property taxes and include refuse-related disbursements in their annual expense budget. Often these assessments against taxable property are inequitable. User charges should be considered, particularly ones related to a household's production of wastes.

Agricultural wastes

The Committee believes special emphasis should be given to research on the recovery and reuse of agricultural crop wastes which amount to an estimated 550 million tons annually. Agricultural wastes represent the largest segment of the nation's solid waste. Moreover, the development of economical methods for reusing, recycling, or recovering useful materials from agricultural wastes could serve the beneficial purpose of improving the farm economy.

Demonstration

Solid waste management traditionally has involved systems for collection, transport, storage, and ultimate disposal. The process has been to remove solid wastes from the point of discard to some remote area for burial or incineration. This waste of vital resources is a luxury the Nation can no longer afford. Attention must be focused on "closing the cycle" through recycling and resource recovery. This new emphasis on separation and reuse would be required by this bill.

The Committee believes that more attention should be given to mechanization in the collection and transportation of solid wastes and increased productivity per unit of labor, consistent with public health and welfare and occupational health and safety. Although this activity represents 80 percent of current costs, only 10 percent of current research dollars are devoted to improving waste handling methods.

Collection techniques offer the greatest potential for improvement in more efficient methods for handling solid wastes. Pipeline transport of solid wastes offers an important alternative to truck collection over both short and long distances.

Although such installations in the United States are presently only in the design stage, such as the system at Florida's Disney World resort,

pneumatic transport of domestic solid wastes is operational in Sweden. In Sundeburg, Sweden, there is a system servicing 250 apartments. The wastes are swept along in an air stream for 1.7 miles to an incinerator. The incinerator is part of a space heating plant which, in turn, distributes heat to the residential area. At the present time the system operates only 1 hour daily to service the 250 apartments. However, with 5,000 apartments planned in the area, it will require 20 hours of operation a day.

Another possibility is solid waste slurry pipelines. For this, however, there is no direct previous experience. Pipelines have been constructed to transport coal, iron ore tailings, and fly ash. When costs over 25 years are considered, it may well be that pipeline transport of solid wastes is the most economic means for collection. Unfortunately, current solid waste management schemes have focused on short-term solutions.

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The processes of compaction, baling, shredding, and other volume-reduction procedures, will assist in preparation of wastes for resource recovery. Methods of separation deserving particular attention are mechanical separation, air separation, flotation, magnetic and heavy media separation, vibration, and chemical treatment.

Much has been written on the high cost of incineration and resultant air and water pollution impacts. Adequate technology does exist. There is a need to establish design and operating guidelines for incinerators. This effort should focus on improved methods which result in usable energy, chars, liquids, and gases.

The committee was particularly interested in research efforts to produce electrical energy using municipal wastes as the fuel.

One method under study, for example, will reduce waste disposal costs to $1 per ton as compared to clean incineration costs of $6 to $8 a ton. This reduction results from the value of recovered electric energy and other recoverable materials.

The cost of development of the system through full-scale operating prototype is approximately $19,500,000. It is the type of technological development which should be considered for funding under this section.

There is considerable potential for metal and mineral recovery and reuse from incinerator residues. Significant progress has been made in this regard by the College Park Metallurgy Research Center. Residue samples are processed at a rate of approximately 1,000 pounds per hour. The process involves a series of mechanical operations including shredding, screening, grinding, and magnetic separation. The products are a metallic iron concentrate, a clean nonferrous metal composite, clean fine glass fractions, and a fine carbonaceous ash tailing. Processes of this type may hold significant potential for resource recovery and reuse and should

be demonstrated on a full-scale basis if, after separation of other recoverable resources, incineration proves to be the most economical means of metal extraction. Also the committee would expect that any demonstration of any incinerator technique would, at a minimum, be certified as in compliance with air quality standards and possibly be integrated with a demonstration of incinerator pollution control technology.

Coal wastes are a potential source of building materials.

Some nations have made great strides in using coal wastes for housing and housing components. In Sweden, for example, coal wastes are the primary raw material for building construction and eclipse all other materials in volume used. Over 80 percent of all flat roofs in Sweden are composed of a structural product manufactured from coal ash. In England coal ash is used in constructing 13 percent of all walls. In the United States, however, only about 16 percent of all coal ash, less than 1½ percent of the Nation's total coal wastes, is utilized.

Current U.S. annual production of coal ash alone exceeds 30 million tons. Annual production of all solid coal wastes exceeds at least 120 million tons.

Efforts to recycle coal ash and fly ash were discussed during the hearings on this bill by Joseph W. Leonard, director, Coal Research Bureau, West Virginia University. This research effort involves a pilot plant to produce fired structural products from coal ash. The Committee recommends that greater efforts be made to find and utilize markets for these products.

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Methods are under development to recycle organic wastes through composting, wet oxidation, anaerobic digestion, and biofractionation, among others. Testimony indicates, however, that this potential for resource recovery has not been adequately explored. A noticeable deficiency in existing demonstration projects was the failure to include consideration of methods and mechanisms to market the resultant by-products.

Waste inventories

The planning of efficient solid waste management systems, particularly resource recovery systems, requires an accurate knowledge of the individual materials or components of solid wastes.

In some cases these include materials which have been demonstrated as toxic or hazardous in other contexts. These materials include cadmium, lead, beryllium and other trace materials. At the same time there are materials which, when subjected to various treatment processes, form toxic substances. Plastics containing chlorine are a case in point. When incinerated, such plastics are converted to volatile chlorine products

which may have an adverse effect on public health and welfare. The Committee expects that an immediate effort will be made to acquire to the extent not now available detailed knowledge of the components of solid wastes.

GRANT LIMITATIONS

Direct grants of public funds to private profit making organizations do not provide the degree of supervision, control of performance, or utility of work product which contracts assure. Therefore, the Committee declares in new Section 205 that no grant under any program of the Solid Waste Act shall be made to a profit making organization. Contracts with such an organization, in which services are supplied, would be available under the terms of the Act.

PLANNING GRANTS

The new Section 207 of the Solid Waste Disposal Act is a revision of section 206 of existing law, which authorizes grants for State and interstate planning activities. This section would extend planning grants to municipal and intermunicipal agencies, and metropolitan or regional areas eligible for planning grants under Section 701(g) of the Housing Act of 1954. It also increases the Federal share of costs from 50 to 66⅔ per cent in the case of a single municipality or State planning unit and 75 per cent in the case of multiple jurisdictional units, whether interstate or intermunicipal.

These grants are available for four planning activities: surveys of solid waste disposal practices and problems in the jurisdiction involved; developing and annually revising solid waste management plans providing for recycling or recovery whenever possible and including the reuse of solid waste disposal areas and studies of areas adjacent to waste disposal sites; developing proposals of resource recovery systems to be submitted for selection under the demonstration grant program of Section 208; and planning programs for the removal and processing of abandoned motor vehicle hulks. The Committee intends that such grants be available for the support of State

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and multi-jurisdictional planning agencies, on an annually renewable basis, in order to provide for the updating of plans and the continuity of planning.

To qualify for planning grants, an applicant must meet the following conditions:

(1) Designate or establish a single agency as the sole agency to discharge for the area involved the responsibilities contemplated by this section which agency can have other planning responsibilities;

(2) Indicate how areawide planning of effective solid waste disposal programs provision will be made for the consideration of such public health factors as population growth, urban and metropolitan development, land use planning, water and air pollution control, and the feasibility of regional disposal programs;

(3) Set forth how the grant will be expended so as to carry out the purposes of this section;

(4) Provide for submission of reports by the agency on its activities, and for submission of such other information as the Secretary may prescribe; and

(5) Provide for appropriate fiscal control and accounting procedures.

Grants under this section shall be made only if the Secretary finds that the planning will not duplicate, but will be coordinated with, other related planning activities.

Although grants for planning are conditioned upon the designation of a single agency as the sole agency for carrying out the purposes of such section, similar to provisions in both the Clean Air Act, as amended, and the Federal Water Pollution Control Act, as amended, the Committee recognizes that Federal pollution control agencies may be organized into a single Environmental Protection Agency. The Committee hopes that State and municipal governments will organize so that environmental control policies, regulations, and procedures are compatible, harmonious and expeditious. The committee would, therefore, like to make clear that agencies designated for the purposes of this Act may be the same agency with responsibility to implement the Clean Air Act and the Federal Water Pollution Control Act. The Committee also hopes that any reorganization at the State, municipal, or local level will reflect the distinction between environmental control agencies and operating agencies with an impact on the environment.

RESOURCE RECOVERY SYSTEMS

After analysis of the completed hearing record on pending solid waste legislation, particularly testimony on Section 208 of the bill, the Committee determined that the authorization of a new unrestricted construction grant program for solid waste disposal is not justified at this time. As the bill reported from the Committee clearly reflects, there is an urgent need to redirect the thrust of waste management from disposal to the maximum recovery of reusable materials and energy. The authorization of a construction grant program at this time could result in a massive commitment to presently available technology oriented towards disposal. To avoid stimulating investment in inadequate technology the Com-

mittee has substituted a system demonstration provision for the proposed construction grant provision.

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At the same time the Committee recognizes that many communities across the Nation, particularly rural and small municipalities, have severe waste disposal problems, with constraints on past practices of waste management resulting from compliance with air and water quality standards. The cost and administration of disposal techniques such as sanitary land fill and modern incineration are expenses that should be borne by the producers of such waste, whether industrial or residential household.

The Committee does recognize that information regarding technology developed in part pursuant to the Solid Waste Disposal Act of 1965 regarding sanitary landfill and improved incineration has not been generally available to the communities throughout the Nation. Therefore, Section 209(c) of the reported bill would authorize a greatly expanded information dissemination function for the Secretary, so that all areas of the Nation can benefit from knowledge of sound waste management practices and technology currently available.

Consistent with the judgement that the Nation cannot afford merely to dispose of the tremendous volume of material that is generated by our industrial and consuming society, especially in urban concentrations, and recognizing further that a great deal of research has been done on resources recovery, the Committee has substituted for the construction grant proposal a new program of grants to municipalities to achieve demonstration of resources recovery systems on an areawide basis. This program is designed to stimulate, in the shortest time, the development of systems of technology necessary to manage growing volumes of community wastes and achieve maximum recovery of materials and energy from such wastes.

Throughout the hearings on resources recovery, testimony was received describing various technologies and systems to achieve resources recovery. The Committee believes it is urgent national policy to move these proposals into actual application and operation in as many different areas, from large metropolitan complexes to smaller communities, as necessary to demonstrate innovative and responsive resources recovery systems. Such systems can then be applied, as appropriate, to all areas of the country in which similar problems exist.

The program would provide 75 percent Federal assistance to develop and construct advanced systems of resources recovery in various categories of communities established by the Secretary in order to demonstrate systems applicable in different urban and rural conditions.

It is the Committee's intent that the program authorized shall be one which will, in many respects, parallel the type of research and development procurement conducted by the Department of Defense and the National Aeronautics and Space Administration in the sense that the Secretary is authorized to promulgate regulations describing the categories of systems for which applications will be received, specifying that such applications are to be received by a certain date and further establishing guidelines for review of such applications.

Grants are to be awarded only to those applications which the Secretary finds to be clearly superior with respect to the system of resources recovery proposed, the economics of the system and, the potential for general application for solution of the myriad of waste problems. It should be emphasized that the selection procedure, thereby established is not competition based strictly upon low cost,

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but rather is competition to stimulate innovative systems, of general application which are both economically and commercially viable and which recover the maximum amount of materials and energy.

The Committee was particularly impressed with testimony received in San Francisco describing a proposed municipal resources recovery system for the San Francisco Peninsula area, and the advanced state of development which that system proposes. The Committee received many other impressive descriptions and displays. It is the Committee's judgment that well researched methods, similar to those described in California, should be given an on-site demonstration application as soon as possible. The Nation can no longer afford to await more study and analysis and must move from the great deal of information presently available to full scale demonstration of recovery systems.

It is expected by the Committee that responsible government officials in municipalities and communities across the country will take advantage of the program proposed in the bill and will develop proposals for the most advanced and responsive systems imaginable, for consideration by the Secretary. The Committee encourages such municipalities to work very closely with relevant private industry talent and resources through contract or otherwise, to develop systems which will provide increased public service in waste management, combined with maximum recovery of materials and energy in such waste and economic viability through the use of user charges and markets for recovered material and energy.

The Committee looks upon the proposed demonstration grant program as a method of stimulating not just the development of technology and its areawide application, but it will also cause communities to study their own circumstances with respect to waste management. Through

such studies, communities will be able to provide better public service to their citizens in the future and be in a position to apply systems that are developed pursuant to these demonstration grants as they become available. The Committee hopes that communities will take immediate advantage of this program, and seeks to encourage that result by Section 207(a)(3) of the reported bill, which would authorize Federal assistance to develop proposals for resource recovery demonstration grants for submission to the Secretary.

RECOMMENDED GUIDELINES

Section 209(a) directs the Secretary to recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems, including systems for private use. These recommendations are to be developed in cooperation with State, Federal, interstate, regional, and local agencies, especially those with responsibilities in solid waste, air pollution, water pollution, or public health. The guidelines must be compatible with any air and water quality standards and applicable land use plans.

The Committee expects that such guidelines will be issued promptly for conventional solid waste management techniques such as sanitary land fill, incineration, and dumping practices, and that work will be accelerated on development of guidelines for resource recovery techniques, on the basis of research conducted under section 204 of the

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Solid Waste Disposal Act and Title III of this bill. All guidelines are to be issued as soon as practicable, allowing public comment by interested parties, and, of course, revised from time to time to reflect expanding knowledge.

The Committee intends that the agency which administers this act should issue guidelines for the dumping of solid wastes into all waters, including deep ocean disposal of waste originating in the United States. These guidelines will be obligatory standards for federally operated, licensed, or permitted activities.

Section 209(b) directs the Secretary to recommend model codes, ordinances, and statutes to implement the guidelines and the general purposes of the Act which should assist communities in developing optimum programs for administering local responsibilities.

In order that local jurisdictions with solid waste management responsibilities make maximum use of existing technology, to which they ordinarily might not be exposed, section 209(c) directs the Secretary to issue technical and cost information on solid waste collection, separation, disposal, recycling, and recovery methods to all relevant agencies. He is

also authorized to use mobile models and other visual aids, to reach local solid waste officials in their home areas, and to arrange trips to model facilities by representatives of public and private solid waste disposal agencies or corporations for on-site review. This provision is designed to avoid the need to use Federal funds for the construction of facilities using existing and conventional technology.

TRAINING GRANTS

Effective manpower planning requires knowledge of the number of people in the field, how many need training, how many new recruits are needed and what kind of training programs are required to meet such needs. The Clean Water Restoration Act of 1966 asked for a report to Congress on the manpower needs of the nation's water pollution control programs. The Air Quality Act of 1967 asked for a report to Congress on the manpower training needs of the nation's air pollution control program. The report on the manpower training needs of the nation's solid waste management programs required by this amendment thus requests necessary, but heretofore unavailable data and analysis for understanding of the nation's total pollution control program.

State and City administrators have often neglected the actual nature and extent of need for expanded and new solid waste management programs and associated manpower requirements. Solid waste disposal is, however, the Nation's third largest municipal expense.

At present, most communities are not equipped to plan for the backlog of unmet manpower needs, much less for the increases anticipated as improvements are made in the solid waste disposal and resource recovery field. The studies that have been made as to present and future solid waste management manpower needs have not been adequate. A 1968 study, conducted for the National Urban Coalition, projected 13,586 potential sanitation service job possibilities in 130 cities with population of 100,000 or more. The Commission on Technology, Automation and Economic Progress (1966) claimed—without citing source or method—that 650,000 new jobs could be created through public service employment in urban renewal and sanitation.

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In view of the high solid waste management labor turnover rate of up to 480%, as stated in the report of the National Academy of Sciences "Policies for Solid Waste Management" there is an urgent need to upgrade job requirements to meet newly authorized responsibilities for solid waste management. Associated with this is a need to plan and execute a comprehensive technical-training program to upgrade the skills and supply of adequately trained personnel for all levels of local and regional solid waste management.

Thus, despite the fact that 337,000 people are already directly employed in the collection, transportation, processing and disposal of urban solid wastes, the task of providing this Nation with an adequate solid waste management manpower force still remains a serious problem.

This amendment takes important first steps to provide adequate training and advancement opportunities, expand civil service coverage and enhance job prestige.

Section 210(d) would require that the Administrator of this Act study the extent and the nature of obstacles to employment and occupational advancement in the solid waste management field which may limit either available manpower or the advancement of personnel, as well as the need for additional trained personnel and the capability of present training programs. He would be required to report within a year after enactment.

The Committee feels that the study required by this Section, as partially implemented by the technical assistance provisions of the Act, will result in significant improvement in our Nation's solid-waste management efforts, maximizing career opportunities for the unemployed and underemployed. The manpower programs authorized by this bill should also serve to minimize both the high vacancy rates that exist in the jobs at the entry levels of solid-waste management programs and the underutilization of trained personnel, costly in both dollars and worker morale.

The Committee believes the authorized occupational training projects will provide the disadvantaged with technical and remedial training to guarantee them increased opportunities for employment and career advancement in the solid waste and resources recovery management field.

This section also deals with other aspects of manpower training where expanded authority is clearly appropriate.

First, Section 210(b)(1)(A) authorizes the Secretary to provide assistance to educational institutions and other relevant organizations to provide programs designed to train persons for occupations involving the design, operation and maintenance of solid waste disposal and resource recovery programs and facilities.

Second, Section 210(b)(1)(B) authorizes the Secretary to provide assistance to train persons, including teachers and adult basic education personnel, to train or supervise persons in these occupations.

By authorizing these training programs, new ground will be broken in our Nation's efforts to insure (1) that an adequate number of trained personnel will be available to staff solid waste and resource recovery management programs, and (2) that supervisory personnel will be trained so that they are capable of meeting the increased demands made on them as a result of newly developing systems for waste management.

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This section also endeavors to foster systematic exchanges of manpower information between governmental agencies, to stimulate a coordinated interagency manpower training system. It authorizes the Secretary to disseminate information which relates to outstanding teaching and training methods, materials, and curricula developed by projects assisted by the bill. The Committee also intends that reports on all other activities required by this section be transmitted to all government agencies with manpower training responsibilities.

The Committee recognizes that Congress is presently reviewing and revising the operation and administration of both manpower and environmental control programs for the purpose of improving their coordination, and expects that the administrator of this Act shall, in planning and administering the manpower programs authorized under this section, coordinate these programs to the maximum extent possible with the procedures and programs available under general manpower authorizations.

Pending question

The administrators and personnel of urban solid waste systems have long been plagued by high rates of accidents, illness, absenteeism, and labor turnover. Reliable figures for comparison are not available. But testimony indicates these rates may be the highest for any major occupational group in the Nation.

In 1967, the National Safety Council and the American Public Works Association conducted a survey of municipal safety experiences. Of the 245 cities that reported an active safety and training program, only 39 reported usable data on accident ratings. Of the 39, 12 were chosen as supplying data that could be reasonably well matched and representative of national experience. The condensed results were:

	Frequency [1]	Severity [2]
Refuse handling and disposal	60.77	2,012
All industry	6.91	689
Underground mining	36.64	6,165

$$\text{Frequency rate} = \frac{\text{Number of disabling injuries} \times 1{,}000{,}000}{\text{Employee hours of exposure}}$$

$$\text{Severity rate} = \frac{\text{Total man days charged} \times 1{,}000{,}000}{\text{Employee hours of exposure}}$$

The Committee on Public Works, received testimony on this serious matter during hearings on resource recovery. However, since occupational safety is not within the jurisdiction of this Committee, the Committee

wishes to bring it to the attention of the Committee on Labor and Public Welfare for their consideration.

COOPERATION BY FEDERAL AGENCIES

The Federal Government is one of the largest single institutional consumers in the Nation and responsible for the generation of tremendous volumes of solid waste. It is apparent, therefore, that if environmental quality objectives are to be achieved through the proper management of solid waste such efforts must include the Federal

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government. More significant, however, is the fact that the Federal government has a special responsibility to take a leadership role in proper solid waste management.

The Committee has therefore included in the reported bill a new sec. 211 which, similar to provisions which have been enacted in both the Clean Air Act and the Federal Water Pollution Control Act, would require Federal agencies to achieve proper management of solid waste in (*a*) their own activities, and (*b*) activities which they control through lease, contract, or permit.

As in the Committee's experience with air and water pollution legislation, testimony on the Solid Waste Disposal Act amendments and conducted in Washington as well as in field hearings throughout the country, revealed that many Federal agencies have a very poor record of solid waste management. Federal agencies are inclined to place important environmental quality control functions in a subordinate role to their mission. This is no longer appropriate or acceptable.

Federal agencies which generate volumes of waste have a correlative responsibility to request appropriations from Congress necessary to properly manage such waste as part of their normal operating expenses. The public will not tolerate the excuse that budget restrictions prevent compliance with waste management standards and guidelines; it is abundantly clear that the provisions of the environmental control laws do not permit the same excuse to be advanced by individuals or private organizations. Federal agencies must take the lead in overcoming the reluctance to invest funds necessary to control solid waste pollution.

The mandate in Section 211 goes to three areas of Federal activity.

First, each Federal agency having jurisdiction over any property, facility, or activity shall insure compliance with guidelines developed under Section 209 with respect to resource recovery, collection, separation, and disposal systems. Each Federal agency would be required to use the most advanced technology and management systems available to properly manage solid waste with maximum recovery of materials and energy.

Second, Section 211 would require compliance with guidelines developed under Section 209 in (1) those activities involving leases of Federal property or activity; (2) activities where, by contract, non-Federal organizations manage or operate any Federal property or facility; and (3) activities where a Federal agency issues a permit or a license for the use of Federal real property to dispose of solid waste such as the Bureau of Land Management or the United States Forest Service.

Third, Section 211 would require each Federal agency which issues permits for disposal of solid waste, such as the Corps of Engineers for the navigable waters of the United States, to consult with the administrator of this Act to insure compliance with guidelines for resources recovery, collection, separation, and disposal systems developed under Section 209.

The Committee expects that these provisions will improve the performance of Federal agencies in solid waste disposal and management. Enforcement of such requirements is always a difficult problem but the Committee expects that the public's growing concern with, and scrutiny of Federal activities will cause Federal agencies to fully

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implement the provisions of this section. Federal officials are under great obligations with respect to the environment and these obligations should not be minimized. Anything less than full implementation of the provisions of Section 211 would be a malfeasance of public trust and in clear contravention of the law.

NATIONAL DISPOSAL SITES STUDY

Considerable recent attention has been focused on disposal of materials which present a high risk to public health and welfare because of their toxicity or mutagenic effects. Congressional attention to such hazardous materials was reflected in the Water Quality Improvement Act of 1970, which requires identification of hazardous materials and study of liability for the cost of cleaning up such materials when discharged into the navigable waters of the United States.

Hazardous materials are often present in solid wastes. When released into the environment, they often cause ecological damage and risks to public health.

Frequently such materials are dumped into the ocean. The environmental implications of this practice are not understood. A prudent public policy necessitates discouraging or prohibiting this practice. Alternative methods must be developed and provided for disposal of these wastes.

The objective must be to dispose of these hazardous materials so that

their deleterious impact is eliminated. One approach is to provide a system of national disposal sites which would be supported by user fees.

It is the opinion of the committee that further information is needed on the desirability and feasibility of a system of solid waste disposal sites for hazardous materials.

The bill directs the Secretary to prepare a report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes. The report is to include a list of materials which may endanger public health and welfare as well as current and recommended methods for disposal of these materials. This section directs that the study include disposal methods for radioactive materials, toxic chemical wastes, biological materials, and other hazardous materials.

This study would provide an inventory of disposal sites currently operated or licensed by Federal agencies including both land and water disposal sites.

The report required by this legislation should include a compilation of current practices for the disposal of hazardous materials on land and at sea, including recommendations on practices that should be discontinued.

In proposing possible sites for inclusion in a system of national disposal sites, the Secretary is expected to estimate the costs of developing and maintaining such a system. These estimates should include proposals for distributing the costs for operating such sites between public and private users of such sites, and contract arrangements for employing any expertise of the private sector to operate such sites.

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AUTHORIZATION OF APPROPRIATIONS

The bill contains specific authorizations for the research program contained in section 204 of the Act and the demonstration grant program contained in section 208. Section 216 then authorizes such sums as may be necessary for the next four fiscal years, to carry out the other programs of the Act. The amount necessary to fund these programs, including planning grants, and training grants as well as administrative expenses, is estimated to be $114 million for four fiscal years.

In addition, section 216(b) authorizes up to 1 per cent of all appropriations under the Act to be used for evaluation of programs.

TITLE II—NATIONAL MATERIALS POLICY

Title II, The National Materials Policy Act of 1970, creates a National Commission on Materials Policy. This Commission, which would have seven members and report to the President and the Congress by June 30, 1973, would examine the broad subject of materials selection, treat-

ment, and use. The Commission report should seek to identify and analyze the components affecting the materials flow and articulate the method the United States should follow to achieve a national policy on materials and how that policy should be implemented.

The committee considered the question of what type of governmental unit should conduct such a study on materials policy. The committee rejected the view that the study should be undertaken by an existing unit of Government on a continuing basis. The commission will be looking critically at the existing organizational arrangements in matters related to materials policy. Therefore, it is appropriate that the study should not become a function of an existing agency. An independent commission, the committee found, would be best able to examine effectively the full breadth of materials policy questions, and then to chart a policy on materials that would be implemented on a continuing basis by an existing agency of Government.

The Commission is to be composed of seven members selected for their expertise bearing on materials problems. The Committee expects that the chairman would not be an employee of the Federal Government, with the members selected to give as wide a diversity in background and expertise as is possible.

Specifically, the Commission is empowered to study and evaluate the following topics:

(1) The current and projected domestic demands for materials, including study of those international factors that have a direct impact on the availability of materials to be processed within the United States; economic factors affecting materials selection is also a proper aspect of study, but such studies should concentrate on domestic materials requirements;

(2) The relationship of materials demand and use to national and international population size and the necessary enhancement of the environment; particular attention should be given to the effect of materials on the environment: the removal of materials in their raw state from the natural environment and the effect of materials selection on environmental enhancement;

(3) Methods for coordinating materials policy with the basic

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purpose of this Act: the recycling of materials to preserve their usefulness, to enhance environmental quality and conserve materials;

(4) An evaluation of methods to exploit existing scientific knowledge in the processing of materials;

(5) Methods for improving coordination and cooperation among Federal departments and agencies in materials demand, use, and study. The Committee considers this to be a major topic for study

when it is realized that nearly every agency of Government has a materials-related function, either in research, planning, pollution control, standards, or supply, and national materials policy must be woven from the threads of existing policy and knowledge; and

(6) Study the feasibility and the desirability of creating, or fostering the creation of, computer inventories of national and international material supplies and requirements.

For the purpose of this Act, materials are defined as any physical substance, whether animal, vegetable, or mineral, that is utilized by industry for processing and sale. The Committee has excluded foodstuffs from this definition. The Committee, however, intends that the definition of materials includes products used in the production of foodstuffs.

History

This amendment has direct precedent in the work of President Truman's Materials Policy Commission, better known as the Paley Commission. The Commission, headed by William Paley of the Columbia Broadcasting System, was created at the time of the Korean War. It sought to examine the nation's material status, particularly in reference to national stockpiles of strategic materials.

Despite the fact that the Commission's report was considered to be an excellent one within the materials community, the recommendations of the Paley Commission failed to generate significant legislative action.

In July 1967, Senator Boggs, as a member of the Committee on Public Works, requested that the Legislative Reference Service of the Library of Congress undertake a study of the question of materials and their relation to problems of solid waste disposal. The Science Policy Research Division of the Legislative Reference Service prepared an initial study on the subject, "Availability, Utilization, and Salvage of Industrial Materials." It was published as a print of the Senate Committee on Public Works on January 8, 1968.

Subsequently, the Library of Congress assisted in the organization of an ad hoc committee of materials experts to examine in more detail the need for a national materials policy. A second, more thorough report, "Toward A National Materials Policy," was published by the Senate Committee on Public Works in April 1969.

The report's main conclusion was stated in its proposal for creation of a National Commission on Materials Policy:

* * * it is judged timely and essential that a national commission be chartered and organized to study the present stance of the United States with respect to materials, and to make recommendations based on its findings. The objectives of the commission should be:

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1. To identify the relationship of the broad subject of materials in all their aspects to national goals and objectives;

2. To define materials goals and objectives of the Nation;

3. To contribute to a broader understanding and awareness of materials problems and opportunities;

4. To maximize, to the extent permitted by the constraints essential to the national interest, the opportunities for free enterprise to function efficiently in the materials field; * * *

Subsequently, an amendment to establish such a national commission was introduced in the Senate to pending solid waste legislation on September 9, 1969. The amendment was sponsored by 11 Senators.

TITLE III—RESOURCE RECOVERY INVESTIGATIONS

Title III of the bill authorizes a 2-year study into a variety of issues related to resource recovery. The study is authorized to be funded at $2 million. Any recommendations for development of technology would be demonstrated under authority provided in section 204 of the Solid Waste Disposal Act.

This title provides for the investigation of means for recovering materials and energy from solid waste and for analysis of the market demand and impact of recovered resources.

Present economic factors influencing resource recovery include (1) assured market for recycled and reclaimed materials, (2) identification of potential markets and, (3) uses for recycled materials.

The study also calls for an investigation of the use of Federal procurement to market recycled materials and energy. The committee anticipates that any examination of the use of Federal purchasing power to create a market for recovered resources will include review of the marginal economics involved in purchasing materials which would otherwise have to be burned or buried. The committee encourages Federal agencies not to await the results of this investigation before committing themselves to the recovered materials market, but to participate in the intent of this act by an energetic recycling purchasing policy.

This title also provides for study of methods to provide more efficient utilization of solid waste facilities through collection, separation, and containerization and for investigation of possible changes in product characteristics, production, and packaging practices to reduce the volume of wastes.

Another investigation under this title relates to a wide range of inducements offered by the Federal Government in the form of tax incentives and depletion allowances to encourage the exploitation of raw materials. While these policies may be consistent with the need to develop resources, they may be a disincentive to the recapture and reuse of materials.

For example, recycling of steel in junked cars is a major solid waste problem but the 15 percent mineral depletion allowance reduces the cost of ore relative to the cost of scrap encouraging the use of ore and thereby discouraging the use of scrap.

Since there is already a limited market for junked cars an increase in the price of ore due to elimination of the depletion allowance could affect the flow of scrapped vehicles from auto graveyards to steel mills.

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There are numerous other examples of tax incentives which may be disincentives to resource recovery. The full effects of these existing policies and incentives on conservation and recycling are not known. By adapting these policies to new national priorities, a substantial incentive could be created to recycle usable products which now only contribute to a growing pollution problem.

To examine the interrelationship of these public policies and efforts to encourage recycling, the committee has included in this title a provision suggested by Senator Eagleton to study the effect of existing subsidies, percentage depletion allowances, capital gains treatment, and other economic incentives and disincentives upon resource recovery and recycling. In conducting this study, the Secretary would also have to consider the likely effect of modifying or eliminating such subsidies and tax policies and make recommendations thereon.

This study would require a study of recommended incentives and disincentives (including grant programs) to accelerate recycling, with special emphasis on motor vehicle hulks, and on examination of the necessity and method of imposing disposal charges on vehicles, as well as on packaging, containers, and other manufacturered goods. The latter concept, proposed by Senator Nelson would require the imposition of disposal charges on products reflecting the cost of final disposal, the value of recoverable components of the item, and any social costs associated with nonrecycling or uncontrolled disposal of such goods.

Senator Nelson's proposal, as well as Senator Javits' amendment which would have imposed a fee on motor vehicles sufficient to cover the cost of disposal of vehicle hulks, were of great interest to the committee. However, both the Nelson and Javits legislation would require consideration by the Senate Committees on Finance and Commerce prior to enactment. It was the conclusion of the committee that these two proposals should be referred to these committees for comment and later action. This action of the Committee on Public Works should not be interpreted as rejection of the concepts included in S. 3665 and amendment 705. Evidence presented at the hearings suggests that some products will require disposal charges in order to assure orderly marketing and recovery. Identification of the specific amount of any charge and the manner in which it might

be levied is, however, beyond the jurisdiction of the Senate Committee on Public Works.

The study required by this section should include a discussion of the above question in order that the appropriate congressional committees can carry out their responsibilities.

Also, the study of disposal charges and other incentives to accelerate recycling of motor vehicles and other products should include careful examination of the system recommended by Leonard S. Wegman which would require the imposition of a flat fee on all waste produced, with the revenue to be used to finance waste disposal and recovery facilities. This is a concept which might subsequently be demonstrated under section 204 of the Solid Waste Disposal Act.

Legislation offered to establish financial assistance to dispose of motor vehicles was not included because little evidence was available in the hearing record to substantiate the need for direct grants to the States to dispose of abandoned cars. Approximately 1 million motor vehicles are abandoned each year, amounting to 1 to 2 million tons of waste. Since urban waste amounts to approximately 180

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million tons annually, abandoned motor vehicles comprise only 0.6 to 1.1 percent of the Nation's urban solid waste problem. The committee was concerned that the Federal costs of a grant program would be borne by the general taxpayers, without transfering the costs of disposal to the vehicle owners who are responsible for creating this form of waste.

Title III authorizes the Secretary of Health, Education, and Welfare to perform all these studies. It is expected he would delegate this function to the Bureau of Solid Waste Management. The committee intends that when Reorganization Plan No. 3, 1970, takes effect, this study would be transferred with the other functions of the Bureau of Solid Waste Management to the new Environmental Protection Agency.

LEGISLATIVE HISTORY

The Solid Waste Disposal Act of 1965 (P.L. 89–272, Title II) authorized a program to develop efficient means of collecting and disposing of the millions of tons of solid wastes generated by our society each year.

Under that legislation the Secretary of Health, Education and Welfare was authorized

1. Research, training, demonstrations, surveys, and studies relating to the operation and financing of solid waste disposal programs, development and application of new and improved methods of solid waste disposal programs, development and application of new and improved methods of solid waste disposal and the reduction

of the amount of such waste and unsalvageable waste materials, and

2. To make grants to states and interstate agencies for developing solid waste disposal plans.

The Secretary of the Interior was authorized under the Solid Waste Disposal Act to conduct research on problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels.

In 1968 a simple 1-year extension of the Solid Waste Disposal Act was authorized by P.L. 90–574, title V.

NEED FOR LEGISLATION

Solid wastes are defined in the Solid Waste Disposal Act as "garbage, refuse, and other discarded materials, including solid waste materials resulting from industrial, commercial, and agricultural operations, and from community activities." As with other wastes (liquid and gaseous), solid wastes management can be separated into component activities including generation, storage, collection, transport, recovery of useful materials, and ultimate disposal.

The relationship between public health and improper disposal of solid wastes has long been recognized. Rats, flies, and other disease vectors breed in open dumps and in residential areas or other places where food and harborage are available. A recent literature search by the Public Health Service indicated association between solid wastes and 22 human diseases.

Implications for public health and other problems associated with water and air pollution have been linked to mismanagement of solid wastes. Leaching from open dumps and poorly engineered landfills has

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contaminated surface and groundwaters. Contamination of water from mineral tailings may be especially hazardous if the leachate contains such toxic elements as copper, arsenic, and radium. Open burning of solid wastes or incineration in inadequate facilities frequently results in gross air pollution. Many residues resulting from mismanagement of solid wastes are not readily eliminated or degraded. Some are hazardous to human health; others adversely affect desirable plant and animals.

The four major sources of solid wastes are urban wastes (domestic, commercial, and municipal), industrial, agricultural (vegetation and animal), and mineral. Altogether, over 3.6 billion tons of solid waste are produced in this Nation every year (Table I). This amounts to 100 pounds per person per day and is expected to increase to 5 billion tons per day by 1980.

TABLE I.—GENERATION OF SOLID WASTES FROM 5 MAJOR SOURCES IN 1967

Source	Solid wastes generated	
	Pounds capacity per day	Million tons per year
Urban:		
Domestic	3.5	128
Municipal	1.2	44
Commercial	2.3	84
Subtotal	7.0	256
Industrial	3.0	110
Agricultural:		
Vegetation	15.0	552
Animal	43.0	1,563
Subtotal	68.0	2,115
Mineral	30.8	1,126
Federal	1.2	43
Total	100.0	3,650

URBAN WASTES

Like other public services, solid waste management is related to population growth, density, and industrial and commercial zoning. Communities, however, are inclined to view solid waste collection and disposal activities as short-term problems. When communities begin to recognize solid waste collection and disposal as a community facility need in planning, steps can be taken to meet total area need for 25 to 50 years.

In 1967, $3.4 billion was spent for urban solid waste collection and disposal, which amounts to a collection and transport service cost of $30 to $50 per household per year.

Urban solid wastes amount to more than 180 million tons per year (5 pounds per person per day) and by 1980 may total 360 million tons per day (8 pounds per person per day).

A national survey of 6300 communities' approaches to the disposal of solid wastes revealed that almost half of the communities surveyed had no comprehensive plans with respect to handling their solid wastes. Some 53 percent of these communities exercise no control over on-site storage of household garbage. The degree of control over other kinds and sources of refuse is less, and existing statutory controls are not adequately enforced.

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These 6300 communities made use of about 8900 land disposal sites and approximately 1000 other disposal or waste reduction facilities. In a

separate investigation of 6000 land disposal sites, 79 percent of which were operated by public agencies, only 14 percent were judged by the interviewers to be "sanitary" landfills. A review of the survey forms suggests that less than 6 percent of them can truly be characterized as "sanitary landfills."

Domestic, household, and residential wastes

Urban domestic sources of wastes include household garbage, garden trimmings and leaves, and discarded clothing, furniture, and appliances. These materials amount to approximately 2.4 pounds per person per day at an annual collection and disposal cost of $6.80 of which $5.40 is for collection and $1.40 for disposal.

The previously mentioned national survey reports that for household collections, some 56 percent of community inhabitants are served by public agencies and 32 percent by private collectors, while 12 percent of the population perform their own refuse collection and transport.

Commercial wastes

Commercial wastes are frequently handled separate from household wastes. Originating from such sources as offices, hotels, restaurants, stores, and hospitals they include large quantities of paper, packaging material, and special materials of hazardous and pathological nature.

Two commercial wastes of particular interest are those emanating from demolition and hospital. Demolition wastes primarily result from renewal projects and interstate highway programs. Frequently the disposal of these wastes, a burden which falls on public disposal sites, is not considered during planning stages of the projects. Therefore, the costs are frequently borne by the public treasury and not reflected in estimated project costs. It is estimated that construction and demolition wastes generated in a community amounts to 0.2 pounds per person per day—4 percent of urban wastes.

Hospital wastes are of concern because of the potential presence of pathogenic materials. Frequently these materials are routinely passed on to the municipal solid waste collection and disposal facilities without identification of their hazardous nature.

There is a trend toward single-use items in hospitals which will increase the burden of hazardous wastes. At a recent national conference on single-use items for health care facilities, it was pointed out that some hospitals generate up to 20 pounds of solid wastes per patient per day. When the concept of single-use items is expanded to include all bed linens, food service, uniforms, and other items to which it may be applied, hospitals can be expected to generate 50 pounds of solid wastes per patient per day.

Municipal wastes

Urban municipal wastes represent a third major source of difficult to handle materials. Litter collected from parks and streets, tires, abandoned vehicles, sludge from sewage treatment plants, and incinerator residues, are common examples.

Abandoned automobiles are a major municipal problem amounting to approximately 500,000 cars a year. A major obstacle to an effective solution to this problem has been the difficulty municipalities have in acquiring title to abandoned or discarded vehicles while

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protecting the legitimate rights of owners. In 1967, the Council of State Governments recommended adoption of uniform State legislation, to solve the problem.

There are 180 million automobile tires produced in this country each year, of which many end up in municipal waste disposal systems. Efforts to date to recycle tires have not been effective in reducing the number of tires requiring disposal.

Incinerator residues are another bulky solid waste. The incineration of solid wastes may reduce the volume of organic solid wastes by 90 percent. In practice, a 60 to 80 percent reduction is achieved. Large volumes of incinerator residues require disposal. In addition, large volumes of fly ash are generated in electric power production.

The Bureau of Mines has reported that metal mineral resources are present in incinerator ash in such amounts as to justify exploration of the technology and economics of their recovery. It is estimated that if all refuse were burned in properly designed incinerators, the residue might contain some 10 million tons of iron; almost 1 million tons of nonferrous metal including aluminum, lead, zinc, copper, and tin; 14 million tons of glass; lesser amounts of nonmetallic minerals; and small quantities of precious metals such as tungsten, silver, and gold.

Urban solid wastes constitute only about one-twentieth of the national solid waste production, yet their management requires large and continuous effort. This is because they are visible heterogeneous wastes generated where people live, usually areas with limited storage or disposal space.

As pointed out by Professor Rolf Eliassen:

> The basic goals of urban solid waste management are to handle and dispose of solid wastes to the environment without deleterious effects and to recover and reuse as much material as is economically feasible. In approaching these goals, the following premises must be recognized: (1) that there is need for long-term operational planning to set aside land and provide facilities for solid waste systems; (2) that conservation of nonrenewable resources is neces-

sary; (3) that public acceptance of better solid waste practices requires that economics of scale, capital intensive processes, and other cost reduction measures will be fully identified and utilized; (4) that salvage and reclamation products must have a market and be competitive with other materials; (5) that efforts be made to utilize capital intensive concepts to reduce the per-unit cost of solid waste management; (6) that no method of ultimate solid waste disposal can be termed acceptable unless its long- and short-term impact on the environment are known and can be proven acceptable; (7) that federally supported research, development, and demonstration projects should be located in problem areas where scientific and technological talents and experience in various aspects of solid waste management can effect visible solution. The multidisciplinary approach offers maximum expectation of attaining usable results.

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INDUSTRIAL WASTES

Industrial wastes represent an estimated 115 million tons a year or approximately 3.0 pounds per person per day. Industrial wastes are the discarded solid materials resulting from industrial operations such as the chemical, textile, paper, food processing, general manufacturing and materials industries.

At present there is little data available on amounts of industrial wastes collected, transported, or disposed of, nor on amounts stored on company property. A rough estimate is that 21 percent are handled by private contractors, 4 percent by municipalities, and the remainder on site.

Due to their homogeneous nature, many industrial wastes exhibit a high potential for recovery and reuse.

Paper

The paper and paper product industry is a useful example of the potential for recycling solid wastes.

In 1969, the paper and paperboard industry produced about 58 million tons of product and in the process generated an estimated 30 million tons of paper and paper product wastes itself. The best figures available indicate that more than 80 percent of this production goes into one-time use and discard applications. A substantial portion became solid waste and contributed some 35 to 50 percent of domestic and commercial solid waste collections.

Although there has been a sharp rise in the use of recycled paper by the industry since World War II, there has been a decrease in the percentage of paper recycled. The N.A.E. *Ad Hoc* Committee recommended that the

paper industry, in effect, increase its percentage of recycled waste paper from the present 20 percent of the total tonnage of paper and paperboard used in the United States in 1969, to 35 percent in 1985. This is comparable to the 1946 figure of 37 percent and current practices in Holland, Germany, and Japan.

AGRICULTURAL WASTES

Agricultural wastes include animal manure, animal carcasses, crop trimmings, harvest residues, forest slash, etc. Major agricultural crop wastes account for 550 million tons per year, and animal wastes for an additional 1,560 million tons per year.

For example one cattle feedlot operation with 10,000 animals can produce 260 tons of manure per day, while a poultry operation with 100,000 birds produces 5 tons of waste daily.

Problems arising from present management of agricultural wastes are air pollution from burning, breeding of insects and rodents as a result of improper storage, generation of offensive odors and dusts through improper handling and surface and ground water pollution from indiscriminate dumping and spreading on land.

Accumulations of pesticide containers may occur in agricultural areas. This may constitute a hazard to humans and livestock.

There are few reports of experience with the disposal of agricultural wastes in combinations with other wastes of an urban-industrial-rural community. The rural sector has been generally responsible for agricultural wastes. Most attention has been given to control of odors, dust, flies, mosquitoes, and rodents.

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FOOD PROCESSING

The growing, harvesting, processing, and packaging of fruits, vegetables and other food crops, generate large tonnages of solid wastes. For example, it has been estimated, that of the total weight of corn crop grown for canning, about 50 percent is field waste, and about 30 percent is process waste, while less than 20 percent is corn in the can.

The fast developing technology in mechanical harvesting is causing a shift in the solid waste handling location from the rural to the urban setting. Former hand harvesting methods were more selective in sorting out the usable crop portion. Culls, plant parts, and other wastes were left in the field where they were simply disposed of by plowing in or burning. With more sophisticated mechanical harvesting, a greater percentage of waste is transported with the usable crop to a central processing location. Such wastes add to urban waste management problems and

complexity of solutions because plowing under and burning are no longer available options.

Production of processed foods has more than doubled in the past 25 years. Production and preservation of foods can be expected to continue to accelerate and will result in concomitant increases in the generation of solid waste. Solid wastes originating from forest and fiber crop production and processing are also considerable. These organic materials are more difficult to handle and manage than those from animal product and food crop processing.

MINERAL WASTES

Vast quantities of waste materials result from the mining of fossil fuels, metal ores, and nonmetallic minerals.

During the past 30 years, well over 20 billion tons of solid mineral wastes have resulted from mineral and fossil fuel mining, milling, metallurgical and chemical processing industries. In 1965, the United States production of mineral wastes had risen to 1.1 billion tons, or approximately 30 pounds per person per day.

Increased volumes of waste have resulted in part from the capability of industry to process lower grade ores. For example, in the copper industry, ores averaging 15 pounds of copper per ton are mined and smelted. The mining process produces two tons of waste per ton of ore while smelting produces about 125 tons of waste per ton of copper. Therefore, approximately 400 tons of waste material are produced per ton of copper.

The task of contending with the mineral solid wastes generated in the past or being generated now is serious, but the future promises even greater difficulty. By 1980 the Nation's mineral industries will generate an estimated 2 billion tons of solid waste annually. If ocean and oil shale mining is undertaken, approximately 4 billion tons of waste will be generated. Increased waste generation can be expected in nearly every commodity area, including coal, phosphate rock, clay, and mica among others, not only because of increased production but also because of the need for using lower-grade ores.

Although some 80 mineral industries generate wastes, 8 industries alone are responsible for 80 percent of the total. Of these, the copper industry contributes the largest tonnage, followed by the iron and steel, bituminous coal, phosphate rock, lead, zinc, alumina, and anthracite industries. Smelting, nonmetallic mineral mining including

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sand and gravel, gold dredging, stone, and clay, and the chemical processing of ores and products account for most of the remaining 20 percent of the mineral solid waste generated.

GENERATION BY TYPE OF SOLID WASTES FROM THE MINERAL AND FOSSIL FUEL INDUSTRIES (1965)

Industry	Mine waste	Mill tailings	Washing plant rejects	Slag	Processing plant wastes	Total (thousands of tons)
Copper	286,600	170,500		5,200		466,700
Iron and steel	117,599	100,589		14,689	1,000	233,877
Bituminous coal	12,800		86,800			99,600
Phosphate rock	72		54,823	4,030	9,383	68,308
Lead-zinc	2,500	17,811	970			20,311
Aluminum					5,350	5,350
Anthracite coal			2,000			2,000
Coal ash					24,500	24,500
Other [1]						229,284
Total	419,571	288,900	144,593	23,919	40,233	1,146,500

[1] Estimated waste generated by remaining mineral mining and processing industries.

SECTION-BY-SECTION ANALYSIS

TITLE I. RESOURCE RECOVERY

Section 202 (findings and purpose)

New language is added describing the purposes of the Act, to emphasize recycling, local planning, and training functions.

Section 203 (definitions)

The Department of Interior's responsibility under existing law for disposal of mineral solid waste is eliminated, and HEW assumes complete authority. Several new definitions are added, including municipality, intermunicipal agency, recovered resources and resource recovery systems, to which other provisions of this Act are keyed.

Section 204 (research)

This section adds new language to the on-going research program, shifting the emphasis from disposal to recycling and adding instructions to investigate the public health and welfare effects of solid waste.

Section 204(d) authorizes annual research appropriations of $15 million, $17 million, $19 million, and $20 million through fiscal 1974.

Section 205 (new-grant limitations)

This section provides that no grant under any program of the Solid Waste Act can be made to a profit-making organization. Note that Section 204(b) presently allows research contracts with such an organization.

Section 206 (interstate cooperation)

Unchanged (renumbered).

Section 207 (regional and local planning grants)

This replaces 50 percent State grants for planning activities with 66⅔ percent grants for planning solid waste programs in an area of more than one municipality or State.

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The grants may be used for (1) making surveys of solid waste problems, (2) preparing solid waste disposal plans for the area (especially those emphasizing recycling), (3) developing proposals for section 208 demonstration system grants, and (4) preparing plans for collecting and recovering abandoned motor vehicle hulks.

Section 208 (new-demonstration grants for resource recovery systems)

This section provides for grants to varying sizes of communities to demonstrate resource recovery systems. These systems have to be area-wide, reflecting a variety of solid waste problems (including those of smaller towns and rural areas). A system must be consistent with plans developed in accordance with Section 207(b)(2) and with Section 209 guidelines. A proposal for a system grant must also provide assurance that an equitable means exists for distributing the costs amount to users of the system.

The bill authorizes annual appropriations of $20 million, $30 million, $50 million and $55 million through Fiscal Year 1974.

Section 209 (new—recommended guidelines)

This section directs the Secretary to prepare guidelines on solid waste management practices for circulation to State and local governments. These guidelines are advisory except when such State or locality applies for a demonstration grant under Section 208. This Section also requires the Secretary to recommend model codes and ordinances, and to issue technical information on solid waste and resource recovery methods to solid waste agencies, and includes authority to transport models to various communities and funding of on-site review of solid waste disposal and resource recovery facilities by solid waste personnel.

Section 210 (new—training grants)

This section provides training grants to assist in the development of personnel trained in the design, operation and maintenance of solid waste disposal and recovery equipment and systems.

Section 210(d) directs a study within one year on the need for addi-

tional trained personnel and obstacles to employment or occupational advancement.

The Bureau of Solid Waste Management estimates the cost of this section to be about $8 million a year, but the bill provides no specific authorization.

Section 211 (new—cooperation by all Federal agencies in the control of solid waste pollution)

This section requires Federal installations and federally licensed activities to meet solid waste guidelines of Section 209. This would include ocean dumping activities licensed by the Corps of Engineers.

Section 212 (new—national disposal sites study)

This section authorizes a two-year study to create a system of national disposal sites for hazardous materials.

Section 213–215

Unchanged (renumbered).

Section 216 (appropriations)

This section authorizes "such sums as may be necessary", excluding the funds specifically provided for (1) research, and (2) resource recovery system demonstration grants. These two specific authoriza-

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tions provide for fiscal 1971 a $35 million authorization, fiscal 1972 a $47 million authorization, fiscal 1973 a $69 million authorization, and fiscal 1974 a $75 million authorization.

TITLE II (NATIONAL COMMISSION ON MATERIALS POLICY)

This title creates a Commission to develop a national materials policy. In developing this policy the Commission would study materials requirements (national and international), the relationship of materials policy to population and environmental quality, means for utilizing more materials "which are susceptible to recycling, reuse, or self-destruction", and general ways to improve or coordinate knowledge to materials usage. The Commission would be required to report by June 30, 1973, with an authorization of $2,000,000.

TITLE III (RESOURCE RECOVERY STUDY)

This title places special emphasis on the policy implications of a change from disposal to resource recovery. It authorizes a two-year study of

issues in resource recovery, including means of recovering materials and energy; examination of the economic impact of recovered resources; changes in production and packaging practices (including disposal charges) to reduce wastes; efficient solid waste facilities utilization; the use of Federal procurement to develop market demand for recovered resources; and incentives and disincentives to recycling (including tax policies).

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CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with subsection (4) of rule XXIX of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

TITLE II—SOLID WASTE DISPOSAL

SHORT TITLE

SEC. 201. This title (hereinafter referred to as "this Act") may be cited as the "Solid Waste Disposal Act".

FINDINGS AND PURPOSES

SEC. 202. (a) The Congress finds—

(1) that the continuing technological progress and improvement in methods of manufacture, packaging, and marketing of consumer products has resulted in an ever-mounting increase, and in a change in the characteristics, of the mass of material discarded by the purchaser of such products;

(2) that the economic and population growth of our Nation, and the improvements in the standard of living enjoyed by our population, have required increased industrial production to meet our needs, and have made necessary the demolition of old buildings, the construction of new buildings, and the provision of highways and other avenues of transportation, which, together with related industrial, commercial, and agricultural operations, have resulted in a rising tide of scrap, discarded, and waste materials;

(3) that the continuing concentration of our population in expanding metropolitan and other urban areas has presented these com-

munities with serious financial, management, intergovernmental, and technical problems in the disposal of solid wastes resulting from the industrial, commercial, domestic, and other activities carried on in such areas;

(4) that inefficient and improper methods of disposal of solid wastes result in scenic blights, create serious hazards to the public health, including pollution of air and water resources, accident hazards, and increase in rodent and insect vectors of disease, have an adverse effect on land values, create public nuisances, otherwise interfere with community life and development;

(5) that the failure or inability to salvage and reuse such materials economically results in the unnecessary waste and depletion of our natural resources; and

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(6) that while the collection and disposal of solid wastes should continue to be primarily the function of State, regional, and local agencies, the problems of waste disposal as set forth above have become a matter national in scope and in concern and necessitate Federal action through financial and technical assistance and leadership in the development, demonstration, and application of new and improved methods and processes to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid-waste disposal practices.

(b) The purposes of this Act therefore are—

[(1) to initiate and accelerate a national research and development program for new and improved methods of proper and economic solid-waste disposal, including studies directed toward the conservation of natural resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid wastes; and

[(2) to provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, and conduct of solid-waste disposal programs.]

(1) to promote the demonstration and application of solid waste management systems which preserve and enhance the quality of air, water, and land resources;

(2) to demonstrate on an areawide systematic basis techniques for resources recovery and the management of solid wastes, including systems for collection, separation, recovery, and recycling of solid wastes, and the environmentally safe disposal of nonrecoverable residues;

(3) to provide technical and financial assistance to States and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs;

(4) to promote a national research, development, and demonstration program for improved management techniques, more effective organizational arrangements, and new and improved methods of solid waste collection, transport, and disposal including studies with emphasis on conserving and reducing wastes by separation, recovery, and utilization of potential resources in solid wastes; and

(5) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems, and for training grants in occupations involving the design, operation, and maintenance of solid waste disposal systems.

DEFINITIONS

SEC. 203. When used in this Act—

(1) The term "Secretary" means the Secretary of Health, Education, and Welfare [; except that such term means the Secretary of the Interior with respect to problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production, or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities].

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(2) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(3) The term "interstate agency" means an agency of two or more municipalities in different States, or an agency established by two or more States, with authority to provide for the disposal of solid wastes and serving two or more municipalities located in different States.

(4) The term "solid waste" means 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, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants.

(5) The term "solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid waste.

(6) The term "construction", with respect to any project of construction under this Act, means (A) the erection or building of new structures and acquisition of lands or interests therein, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and (B) the acquisition and installation of initial

equipment of, or required in connection with, new or newly acquired structures or the expanded, remodeled, altered, modernized or extended part of existing structures (including trucks and other motor vehicles, and tractors, cranes, and other machinery) necessary for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and (C) the inspection and supervision of the process of carrying out the project to completion.

(7) The term "municipality" means a city, town, borough, county, parish, district, Indian tribe, or other public body created by or pursuant to State law and having jurisdiction over the disposal of solid wastes.

(8) The term "intermunicipal agency" means an agency established by two or more municipalities with responsibility for planning or administration of solid waste disposal or regional environmental protection systems.

(9) The term "recovered resources" means materials or energy recovered from solid wastes.

(10) The term "resource recovery system" means any solid waste management system which improves the application of technology for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues.

RESEARCH, DEMONSTRATIONS, TRAINING, AND OTHER ACTIVITIES

SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies,

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and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to—

[the operation and financing of solid-waste disposal programs, the development and application of new and improved methods of solid-waste disposal (including devices and facilities therefor), and the reduction of the amount of such waste and unsalvageable waste materials.]

(1) the health and welfare effects of the environmental release of material present in solid waste and methods to eliminate any adverse effects;

(2) the operation and financing of solid waste disposal programs;

(3) the reduction of the amount of such waste and unsalvageable waste materials;

(4) the development and application of new and improved methods of col-

lecting and disposing of solid waste and processing and recovering materials and energy from solid wastes; and

(5) the identification of solid waste components and potential materials and energy recoverable from such waste components.

(b) In carrying out the provisions of the preceding subsection, the Secretary is authorized to—

(1) collect and make available, through publications and other appropriate means, the results of, and other information pertaining to, such research and other activities, including appropriate recommendations in connection therewith;

(2) cooperate with public and private agencies, institutions, and organizations, and with any industries involved, in the preparation and the conduct of such research and other activities; and

(3) make grants-in-aid to public or private agencies and institutions and to individuals for research, training projects, surveys, and demonstrations (including construction of facilities), and provide for the conduct of research, training, surveys, and demonstrations by contract with public or private agencies and institutions and with individuals; and such contracts for research or demonstrations or both (including contracts for construction) may be made in accordance with and subject to the limitations provided with respect to research contracts of the military departments in title 10, United States Code, section 2353, except that the determination, approval, and certification required thereby shall be made by the Secretary.

(c) Any grant, agreement, or contract made or entered into under this section shall contain provisions effective to insure that all information, uses, processes, patents and other developments resulting from any activity undertaken pursuant to such grant, agreement, or contract will be made readily available on fair and equitable terms to industries utilizing methods of solid-waste disposal and industries engaging in furnishing devices, facilities, equipment, and supplies to be used in connection with solid-waste disposal. In carrying out the provisions of this section, the Secretary and each department, agency, and officer of the Federal Government having functions or duties under this Act shall make use of and adhere to the Statement of Government Patent Policy which was promulgated by the President in his memorandum of October 10, 1963. (3 CFR, 1963 Supp., p. 238.)

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[(d) Notwithstanding any other provision of this Act, the United States shall not make any grant to pay more than two-thirds of the cost of construction of any facility under this Act.]

(d) There is hereby authorized to be appropriated to carry out this section, not to exceed $31,500,000 for the fiscal year ending June 30, 1971, not to

exceed $40,500,000 for the fiscal year ending June 30, 1972, not to exceed $40,000,000 for the fiscal year ending June 30, 1973 and not to exceed $38,500,000 for the fiscal year ending June 30, 1974. Such sums as are appropriated shall remain available until expended.

LIMITATION ON GRANTS

SEC. 205. No grant-in-aid shall be made under this Act to any private profitmaking organization.

INTERSTATE AND INTERLOCAL COOPERATION

SEC. [205] *206*. The Secretary shall encourage cooperative activities by the States and local governments in connection with solid-waste disposal programs; encourage, where practicable, interstate, interlocal, and regional planning for, and the conduct of, interstate, interlocal, and regional solid-waste disposal programs; and encourage the enactment of improved and, so far as practicable, uniform State and local laws governing solid-waste disposal.

GRANTS FOR [STATE AND INTERSTATE] *STATE, REGIONAL, AND LOCAL* PLANNING

[SEC. 206. (a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State and interstate agencies of not to exceed 50 per centum of the cost of making surveys of solid-waste disposal practices and problems within the jurisdictional areas of such States or agencies, and of developing solid-waste disposal plans for such areas.]

SEC. 207. (a) The Secretary may from time to time, upon such terms and conditions as he finds appropriate make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of not to exceed 66⅔ per centum of the cost in the case of any single State or municipality, and not to exceed 75 per centum of the cost in the case of an area including more than one State or municipality (but less than an entire State), for the purpose of (1) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies, (2) developing and revising solid waste disposal plans as part of regional environmental protection systems for such areas, providing for recycling or recovery of materials from wastes whenever possible and including planning for the reuse of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites, (3) developing proposals for demonstration of resource recovery systems to be carried out pursuant to section 208 of this Act, and (4) planning programs for the removal and processing of abandoned motor vehicle hulks.

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[(b) In order to be eligible for a grant under this section the State, or the interstate agency, must submit an application therefor which—]

(b) Grants pursuant to this section shall be made upon application therefor which—

(1) designates or establishes a single [State] agency (which may be an interdepartmental agency) [or, in the case of an interstate agency, such interstate agency,] as the sole agency for carrying out the purposes of this [section;] *section for the area involved*;

(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to [statewide] *areawide* planning [(or in the case of an interstate agency jurisdiction-wide planning)] for proper and effective solid-waste disposal consistent with the protection of the public health *and welfare*, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, *technological change*, and the feasibility of regional disposal and *resource recovery* programs;

(3) sets forth [its] plans *and budget* for expenditure of such grant, [which plans provide reasonable assurance of carrying out] *indicating the compatibility of budget items with* the purposes of this section;

(4) provides for submission of [a final report] *such reports* of the activities of the [State or interstate] agency in carrying out the purposes of this section, [and for the submission of such other reports,] in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary to assure the [correctness and verification] *substantial accuracy* of such reports; and

(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the [State or interstate] agency under this section.

(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that *so far as practicable* the planning of solid-waste disposal will be coordinated [, so far as practicable,] with *and not duplicate* other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

DEMONSTRATION OF RESOURCE RECOVERY SYSTEMS

SEC. 208. (a) The Secretary is authorized to make grants pursuant to this section to any State, municipal, or interstate or intermunicipal agency for the demonstration of resource recovery systems (including the improvement of existing systems).

(b) Any such grant shall be made only if it (1) is consistent with any

plans for resource recovery systems developed in accordance with the requirements of section 207(b)(2) of this Act; (2) is consistent with any guidelines developed pursuant to section 209 of this Act; (3) is designed to provide areawide resource recovery systems consistent with the purposes of this Act, as determined by the Secretary, pursuant to regulations promulgated under subsection (c) of this section; and (4) provides an equitable

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system for distributing the costs associated with construction, operation, and maintenance of any resource recovery system among the users of such system.

(c) The Secretary, within ninety days after the effective date of this section, shall promulgate regulations establishing a procedure for awarding resource recovery system demonstration grants, which—

(1) provides that projects will be carried out in communities of varying sizes, under such conditions and in such localities as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions and rural areas, under representative geographic and environmental conditions; and

(2) provides a timetable for submission of plans and grants requests, and a timetable for approval of such plans and awarding of such grants.

(d) In determining the eligibility of demonstration systems for grants under this section, consideration shall be given by the Secretary to (1) the public benefits to be derived by the construction and the propriety of Federal aid in such construction; (2) the economic and commercial viability of the project including contractural arrangements with the private sector to market any resources recovered; and (3) the potential of such project for general application to community solid waste disposal problems.

(e) No grant for any demonstration system under this section shall exceed 75 per centum of the estimated total design, construction, and first-year operation and maintenance costs. No assistance under this section may be provided for operating or maintenance costs after the first year, nor shall any assistance be provided for land acquisition. The non-Federal share may be in any form, including, but not limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Secretary.

(f) There is hereby authorized to be appropriated to carry out this section, not to exceed $20,000,000 for the fiscal year ending June 30, 1971, not to exceed $30,000,000 for the fiscal year ending June 30, 1972, not to exceed $50,000,000 for the fiscal year ending June 30, 1973, and not to exceed $55,000,000 for the fiscal year ending June 30, 1974. Such sums as are appropriated shall remain available until expended.

RECOMMENDED GUIDELINES

SEC. 209. (a) The Secretary shall, in cooperation with appropriate State, Federal, interstate, regional, and local agencies, allowing for public comment

by other interested parties, as soon as practicable after enactment of this section, recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which shall be consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines shall apply to such systems whether on land or water and shall be revised from time to time.

(b) The Secretary shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act.

(c) (1) The Secretary shall issue to appropriate Federal, interstate, regional, and local agencies information on technically feasible solid waste collection, separation, disposal, recycling, and recovery methods,

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including data on the cost of construction, operation, and maintenance of such methods.

(2) In disseminating such information, the Secretary shall employ models and visual demonstrations which can be transported to communities where such demonstrations would be a useful addition to ordinary sources of technological information, and provide funds to representatives of public and private solid waste disposal agencies or corporations for useful on-site review of solid waste disposal and resource recovery facilities and methods.

TRAINING GRANTS

SEC. 210. (a) The Secretary is authorized to make grants to, and contracts with States and interstate agencies, municipalities, educational institutions, and to any other organization which is capable of effectively carrying out a project which may be funded by grant under subsection (b) of this section.

(b) (1) Subject to the provisions of paragraph (2), grants may be made to pay all or a part of the costs, as may be determined by the Secretary, of any project operated or to be operated by an eligible institution or organization, which is designed—

(A) to develop, expand, or carry out a program of training persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities;

(B) to train persons, including teachers, adult basic education personnel, and supervisory personnel, to train or supervise persons in occupations involving the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities; or

(C) to carry out occupational training projects which involve a combination of training, education, and employment in the design, operation, and maintenance of resource recovery systems.

(2) A grant or contract authorized by paragraph (1) of this subsection may be made only upon application to the Secretary at such time or times and containing such information as he may prescribe, except that no such application shall be approved unless it—

(A) provides such fiscal control and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this section, and provides for making available to the Secretary or his designate, for purposes of audit and examination, such books, documents, papers, and records as relate to any funds received under this section;

(B) provides for making such reports, in such form and containing such information, as the Secretary may require to carry out his functions under this section, for keeping such records, and for affording such access thereto as the Secretary may find necessary to assure the correctness and verification of such reports; and

(C) provides for (i) a periodic examination of the effectiveness with which the goals set forth in the application are being met while the project is in operation; (ii) the conducting of such examination by an organization not affiliated with the institution or organization whose project is being examined; and (iii) furnishing a report of the results of such examination to the Secretary within thirty days after such examination is completed.

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(c) The Secretary shall—

(1) encourage businesses with operations or products in the solid waste disposal and resource recovery field to participate in and cooperate with occupational training programs established with the assistance of grants or contracts made under subsection (b)(1)(C) of this section; and

(2) disseminate information which relates to teaching and training methods, materials, and curriculums developed by projects assisted under subsection (b) of this section.

(d) The Secretary shall make a complete investigation and study to determine—

(1) the need for additional trained State and local personnel to carry out plans assisted under this Act and other solid waste and resource recovery programs;

(2) means of using existing training programs to train such personnel; and

(3) the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field which may limit either available manpower or the advancement of personnel in such field.

He shall report the results of such investigation and study, including his recommendations to the President and the Congress not later than one year after enactment of this Act.

COOPERATION BY ALL FEDERAL AGENCIES IN THE CONTROL OF SOLID WASTE POLLUTION

SEC. 211. (a) Each Federal agency having jurisdiction over any real property, facility or activity of any kind, shall insure compliance with guidelines developed under section 209 and the purposes of this Act in the administration of such property, facility, or activity.

(b) Each Federal agency which leases any Federal property or facility of any kind or which contracts for the operation of any Federal property or facility or which contracts for the entire operation of any other facility or which permits or licenses the use of any Federal property shall insure compliance with guidelines developed under section 209 and the purposes of this Act in the administration of such lease, contract, license, or permit.

(c) Each Federal agency which issues any license or permit for disposal of solid waste, shall prior to the issuance of such license or permit consult with the Secretary to insure compliance with guidelines developed under section 209 and the purposes of this Act.

NATIONAL DISPOSAL SITES STUDY

SEC. 212. The Secretary shall submit to the Congress no later than two years after the effective date of this section, a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which may endanger public health or welfare. Such report shall include: (a) a list of materials which should be subject to disposal in any such site; (b) current methods of disposal of such materials; (c) recommended methods of reduction, neutralization, recovery, or disposal of such materials; (d) an inventory of possible sites, including existing land or water disposal sites operated or licensed by Federal agencies; (e) an estimate of the cost of developing and maintaining

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sites including consideration of means for distributing the short and long-term costs of operating such sites among the users thereof; and (f) such other information as may be appropriate.

LABOR STANDARDS

SEC. [207.] *213.* No grant for a project of construction under this Act shall be made unless the Secretary finds that the application contains or

is supported by reasonable assurance that all laborers and mechanics employed by contractors or subcontractors on projects of the type covered by the Davis-Bacon Act, as amended (40 U.S.C. 276a—276a–5), will be paid wages at rates not less than those prevailing on similar work in the locality as determined by the Secretary of Labor in accordance with that Act; and the Secretary of Labor shall have with respect to the labor standards specified in this section the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 5 U.S.C. 133z–15) and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c).

OTHER AUTHORITY NOT AFFECTED

SEC. [208.] *214.* This Act shall not be construed as superseding or limiting the authorities and responsibilities, under any other provisions of law, of the Secretary of Health, Education, and Welfare, the Secretary of the Interior, or any other Federal officer, department, or agency.

PAYMENTS

SEC. [209.] *215.* Payments of grants under this Act may be made (after necessary adjustment on account of previously made underpayments or overpayments) in advance or by way of reimbursement, and in such installments and on such conditions as the Secretary may determine.

APPROPRIATIONS

[SEC. 210. (a) There is hereby authorized to be appropriated to the Secretary of Health, Education, and Welfare, to carry out this Act, not to exceed $7,000,000 for the fiscal year ending June 30, 1966, not to exceed $14,000,000 for the fiscal year ending June 30, 1967, not to exceed $19,200,000 for the fiscal year ending June 30, 1968, and not to exceed $20,000,000 for the fiscal year ending June 30, 1969.

[(b) There is hereby authorized to be appropriated to the Secretary of the Interior, to carry out this Act, not to exceed $3,000,000 for the fiscal year ending June 30, 1966, not to exceed $6,000,000 for the fiscal year ending June 30, 1967, not to exceed $10,800,000 for the fiscal year ending June 30, 1968, and not to exceed $12,500,000 for the fiscal year ending June 30, 1969.]

SEC. 216. (a) *There is authorized to be appropriated for carrying out the provisions of this Act, other than those for which specific authorizations are made, such sums as may be necessary for the period ending June 30, 1974.*

(b) *Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other payments under any provision of this Act for any fiscal year beginning after June 30, 1970,*

shall be available for evaluation (directly, or by grants, or contracts) of any program authorized by this title.

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INDIVIDUAL VIEWS OF MR. GURNEY

I generally support the committee bill extending and amending the Solid Waste Disposal Act which provides financial assistance for the construction of solid waste disposal facilities, improves research programs in carrying out this act, and establishes a National Commission on Materials Policy.

However, I feel there is a major category from which solid waste is generated which deserves immediate and appropriate action. This is the category of junk motor vehicles.

The junked motor vehicle, which is the most obvious and noticeable solid waste disposal problem nationwide, includes the growing unsightly accumulation of junked automobiles, buses, and trucks encircling our cities, and scattered in fields and vacant lots in less populated areas. As President Richard M. Nixon stated in his message to Congress on environmental quality, February 10, 1970: "Few of America's eyesores are so unsightly as its millions of junk automobiles."

Unfortunately, when old cars die, they don't fade away. I suggest that the constant increase in per capita generation of solid wastes, stimulated by growth of production, and coupled with a rapidly increasing affluent population, is responsible for the Nation's present environmental crisis. As a result, more and more junk motor vehicles have become visible eyesores.

At the present time, there is a total of 105,403,557 registered vehicles in the United States. The current annual retirement rate is approximately 7.9 million motor vehicles. The number of motor vehicles processed for scrap each year is between 6 and 7 million. Therefore we can safely say approximately 1 million motor vehicles each year are added to the visible junkpiles around the country. Nobody knows exactly how many rusting hulks are strewn across the American countryside, but current estimates run between 15 and 20 million. The number of motor vehicles in auto wreckers' yards which have little or no parts value, added to the number of abandoned vehicles, added to the current number of motor vehicles annually retired which the scrap dealers don't process, comes to approximately 8 to 12 million hulks. Quite obviously, the "scrap gap" is widening.

In dealing with problems of air and water pollution, the sources we are trying to track down are sometimes elusive. This is not true in the case of solid wastes such as junk motor vehicles. The root of this problem is a tangible high concentration of salvageable material which we can subject to any kind of processing we choose. Although discarded motor

vehicle hulks constitute a small fraction of the waste disposal problem in terms of tonnage, they are higher in metal recycle value than most waste materials. They offer a tremendous incentive for the 33,000 auto wrecking yards and 1,800 scrap processors currently operating across the country. With the aid of these excellent facilities the problem can and must be solved.

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We must rid our country of the "use and discard" syndrome. Old motor vehicles not only detract from the beauty of our country but also represent a significant source of valuable material for which our national need is growing. Presently, 60 percent of all rubber, 20 percent of all steel, 10 percent of all aluminum, over 7 percent of copper, 13 percent of nickel, 35 percent of the zinc, and over 50 percent of the lead consumed in the United States is for automotive use. Quite obviously junk motor vehicles are truly "a resource out of place." We must take the necessary steps to channel these hulks into the recycling process at an increased rate.

I personally recommend that Congress act now to adopt a balanced, flexible, easy-to-administer plan of modest cost to assist the States to carry on this badly needed program of recycling the backlog of junk motor vehicles.

During consideration of S. 2005, I offered and we discussed briefly one approach which would offer Federal financial aid on a 50–50 basis to the States and extracontinental territories administered by the United States to execute programs to remove junk motor vehicles from public thoroughfares, junkyards, and remote rural areas. Under this plan, Federal guidelines are to be established to spell out requirements for State participation. The guidelines will include requirements to provide an efficient means of transfering title of junked motor vehicles (or other evidence of ownership of such vehicles in States not requiring title certification) to public agencies or private business concerns charged with the responsibility of processing such motor vehicles into reusable form.

With an assist from this plan, operators would be able to reach out for about-to-be-abandoned motor vehicles before they are scattered across the land. Within a few years the huge accumulation of junk hulks could be shrunk to nothing. The ultimate goal would be a smooth flow of old cars back to steelmaking facilities without intermediate stops on city streets, junkyard stockpiles, or the woods off a country road.

I personally feel this plan is a valuable approach, fundable and easy to understand. I think it is worthy of debate and passage.

EDWARD J. GURNEY.

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1.1d (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 91-1579, 91st Cong., 2d Sess. (1970)

RESOURCE RECOVERY ACT OF 1970

OCTOBER 7, 1970.—Ordered to be printed

Mr. STAGGERS, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H.R. 11833]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such Act, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following:

That this Act may be cited as the "Resource Recovery Act of 1970".

TITLE I—RESOURCE RECOVERY

SEC. 101. Section 202(b) of the Solid Waste Disposal Act is amended to read as follows:

"(b) The purposes of this Act therefore are—

"(1) to promote 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;

"(2) to provide technical and financial assistance to States and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs;

"(3) to promote a national research and development program for improved management techniques, more effective organizational arrange-

ments, and new and improved methods of collection, separation, recovery, and recycling of solid wastes, and the environmentally safe disposal of nonrecoverable residues;

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"(4) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems; and

"(5) to provide for training grants in occupations involving the design, operation, and maintenance of solid waste disposal systems."

SEC. 102. Section 203 of the Solid Waste Disposal Act is amended by inserting at the end thereof the following:

"(7) The term 'municipality' means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law with responsibility for the planning or administration of solid waste disposal, or an Indian tribe.

"(8) The term 'intermunicipal agency' means an agency established by two or more municipalities with responsibility for planning or administration of solid waste disposal.

"(9) The term 'recovered resources' means materials or energy recovered from solid wastes.

"(10) The term 'resource recovery system' means a solid waste management system which provides for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues."

SEC. 103. (a) Section 204(a) of the Solid Waste Disposal Act is amended to read as follows:

"SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to—

"(1) any adverse health and welfare effects of the release into the environment of material present in solid waste, and methods to eliminate such effects;

"(2) the operation and financing of solid waste disposal programs;

"(3) the reduction of the amount of such waste and unsalvageable waste materials;

"(4) the development and application of new and improved methods of collecting and disposing of solid waste and processing and recovering materials and energy from solid wastes; and

"(5) the identification of solid waste components and potential materials and energy recoverable from such waste components."

(b) Section 204(d) of the Solid Waste Disposal Act is repealed.

SEC. 104. (a) The Solid Waste Disposal Act is amended by striking out section 206, by redesignating section 205 as 206, and by inserting after section 204 the following new section:

"SPECIAL STUDY AND DEMONSTRATION PROJECTS ON RECOVERY OF USEFUL ENERGY AND MATERIALS

"SEC. 205. (a) The Secretary shall carry out an investigation and study to determine—

"(1) means of recovering materials and energy from solid waste, recommended uses of such materials and energy for national or international welfare, including identification of potential markets for such recovered resources, and the impact of distribution of such resources on existing markets;

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"(2) changes in current product characteristics and production and packaging practices which would reduce the amount of solid waste;

"(3) methods of collection, separation, and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes;

"(4) the use of Federal procurement to develop market demand for recovered resources;

"(5) recommended incentives (including Federal grants, loans, and other assistance) and disincentives to accelerate the reclamation or recycling of materials from solid wastes, with special emphasis on motor vehicle hulks;

"(6) the effect of existing public policies, including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives, upon the recycling and reuse of materials, and the likely effect of the modification or elimination of such incentives and disincentives upon the reuse, recycling, and conservation of such materials; and

"(7) the necessity and method of imposing disposal or other charges on packaging, containers, vehicles, and other manufactured goods, which charges would reflect the cost of final disposal, the value of recoverable components of the item, and any social costs associated with nonrecycling or uncontrolled disposal of such items.

The Secretary shall from time to time, but not less frequently than annually, report the results of such investigation and study to the President and the Congress.

"(b) The Secretary is also authorized to carry out demonstration projects to test and demonstrate methods and techniques developed pursuant to subsection (a).

"(c) *Section 204 (b) and (c) shall be applicable to investigations, studies, and projects carried out under this section.*"

(b) *The Solid Waste Disposal Act is amended by redesignating sections 207 through 210 as sections 213 through 216, respectively, and by inserting after section 206 (as so redesignated by subsection (a) of this section) the following new sections:*

"GRANTS FOR STATE, INTERSTATE, AND LOCAL PLANNING

"SEC. 207. (a) *The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of not to exceed 66⅔ per centum of the cost in the case of an application with respect to an area including only one municipality, and not to exceed 75 per centum of the cost in any other case, of—*

"(1) *making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and*

"(2) *developing and revising solid waste disposal plans as part of regional environmental protection systems for such areas, providing for recycling or recovery of materials from wastes whenever possible and including planning for the reuse of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites,*

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"(3) *developing proposals for projects to be carried out pursuant to section 208 of this Act, or*

"(4) *planning programs for the removal and processing of abandoned motor vehicle hulks.*

"(b) *Grants pursuant to this section may be made upon application therefor which—*

"(1) *designates or establishes a single agency (which may be an interdepartmental agency) as the sole agency for carrying out the purposes of this section for the area involved;*

"(2) *indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to areawide planning for proper and effective solid waste disposal consistent with the protection of the public health and welfare, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal and resource recovery programs;*

"(3) *sets forth plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;*

"(4) provides for submission of such reports of the activities of the agency in carrying out the purposes of this section, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary; and

"(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

"(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with and not duplicate other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

"GRANTS FOR RESOURCE RECOVERY SYSTEMS AND IMPROVED SOLID WASTE DISPOSAL FACILITIES

"SEC. 208. (a) The Secretary is authorized to make grants pursuant to this section to any State, municipal, or interstate or intermunicipal agency for the demonstration of resource recovery systems or for the construction of new or improved solid waste disposal facilities.

"(b)(1) Any grant under this section for the demonstration of a resource recovery system may be made only if it (A) is consistent with any plans which meet the requirements of section 207(b)(2) of this Act; (B) is consistent with the guidelines recommended pursuant to section 209 of this Act; (C) is designed to provide areawide resource recovery systems consistent with the purposes of this Act, as determined by the Secretary, pursuant to regulations promulgated under subsection (d) of this section; and (D) provides an equitable system for distributing the costs associated with construction, operation, and maintenance of any resource recovery system among the users of such system.

"(2) The Federal share for any project to which paragraph (1) applies shall not be more than 75 percent.

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"(c)(1) A grant under this section for the construction of a new or improved solid waste disposal facility may be made only if—

"(A) a State or interstate plan for solid waste disposal has been adopted which applies to the area involved, and the facility to be constructed (i) is consistent with such plan, (ii) is included in a comprehensive plan for the area involved which is satisfactory to the Secretary for the purposes of this Act, and (iii) is consistent with the guidelines recommended under section 209, and

"(B) the project advances the state of the art by applying new and

improved techniques in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials.

"(2) The Federal share for any project to which paragraph (1) applies shall be not more than 50 percent in the case of a project serving an area which includes only one municipality, and not more than 75 percent in any other case.

"(d)(1) The Secretary, within ninety days after the date of enactment of the Resource Recovery Act of 1970, shall promulgate regulations establishing a procedure for awarding grants under this section which—

"(A) provides that projects will be carried out in communities of varying sizes, under such conditions as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions, and rural areas, under representative geographic and environmental conditions; and

"(B) provides deadlines for submission of, and action on, grant requests.

"(2) In taking action on applications for grants under this section, consideration shall be given by the Secretary (A) to the public benefits to be derived by the construction and the propriety of Federal aid in making such grant; (B) to the extent applicable, to the economic and commercial viability of the project (including contractual arrangements with the private sector to market any resources recovered); (C) to the potential of such project for general application to community solid waste disposal problems; and (D) to the use by the applicant of comprehensive regional or metropolitan area planning.

"(e) A grant under this section—

"(1) may be made only in the amount of the Federal share of (A) the estimated total design and construction costs, plus (B) in the case of a grant to which subsection (b)(1) applies, the first-year operation and maintenance costs;

"(2) may not be provided for land acquisition or (except as otherwise provided in paragraph (1)(B)) for operating or maintenance costs;

"(3) may not be made until the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project (subject to paragraph (1)(B)); and

"(4) may be made subject to such conditions and requirements, in addition to those provided in this section, as the Secretary may require to properly carry out his functions pursuant to this Act.

For purposes of paragraph (1), the non-Federal share may be in any form, including, but not limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Secretary.

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"(f)(1) Not more than 15 percent of the total of funds authorized to be appropriated under section 216(a)(3) for any fiscal year to carry out this section shall be granted under this section for projects in any one State.

"(2) The Secretary shall prescribe by regulation the manner in which this subsection shall apply to a grant under this section for a project in an area which includes all or part of more than one State.

"RECOMMENDED GUIDELINES

"SEC. 209. (a) The Secretary shall, in cooperation with appropriate State, Federal, interstate, regional, and local agencies, allowing for public comment by other interested parties, as soon as practicable after the enactment of the Resource Recovery Act of 1970, recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which shall be consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines shall apply to such systems whether on land or water and shall be revised from time to time.

"(b)(1) The Secretary shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act.

"(2) The Secretary shall issue to appropriate Federal, interstate, regional, and local agencies information on technically feasible solid waste collection, separation, disposal, recycling, and recovery methods, including data on the cost of construction, operation, and maintenance of such methods.

"GRANTS OR CONTRACTS FOR TRAINING PROJECTS

"SEC. 210. (a) The Secretary is authorized to make grants to, and contracts with, any eligible organization. For purposes of this section the term 'eligible organization' means a State or interstate agency, a municipality, educational institution, and any other organization which is capable of effectively carrying out a project which may be funded by grant under subsection (b) of this section.

"(b)(1) Subject to the provisions of paragraph (2), grants or contracts may be made to pay all or a part of the costs, as may be determined by the Secretary, of any project operated or to be operated by an eligible organization, which is designed—

"(A) to develop, expand, or carry out a program (which may combine training, education, and employment) for training persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities; or

"(B) to train instructors and supervisory personnel to train or supervise persons in occupations involving the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities.

"(2) A grant or contract authorized by paragraph (1) of this subsection may be made only upon application to the Secretary at such time or times and containing such information as he may prescribe, except that no such application shall be approved unless it provides for the same procedures and reports (and access to such reports and to other records) as is required by section 207(b) (4) and (5) with respect to applications made under such section.

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"(c) The Secretary shall make a complete investigation and study to determine—

"(1) the need for additional trained State and local personnel to carry out plans assisted under this Act and other solid waste and resource recovery programs;

"(2) means of using existing training programs to train such personnel; and

"(3) the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field which may limit either available manpower or the advancement of personnel in such field.

He shall report the results of such investigation and study, including his recommendations to the President and the Congress not later than one year after enactment of this Act.

"APPLICABILITY OF SOLID WASTE DISPOSAL GUIDELINES TO EXECUTIVE AGENCIES

"SEC. 211. (a)(1) If—

"(A) an Executive agency (as defined in section 105 of title 5, United States Code) has jurisdiction over any real property or facility the operation or administration of which involves such agency in solid waste disposal activities, or

"(B) such an agency enters into a contract with any person for the operation by such person of any Federal property or facility, and the performance of such contract involves such person in solid waste disposal activities,

then such agency shall insure compliance with the guidelines recommended under section 209 and the purposes of this Act in the operation or administration of such property or facility, or the performance of such contract, as the case may be.

"(2) Each Executive agency which conducts any activity—

"(A) which generates solid waste, and

"(B) which, if conducted by a person other than such agency, would require a permit or license from such agency in order to dispose of such solid waste,

shall insure compliance with such guidelines and the purposes of this Act in conducting such activity.

"(3) Each Executive agency which permits the use of Federal property for purposes of disposal of solid waste shall insure compliance with such guidelines and the purposes of this Act in the disposal of such waste.

"(4) The President shall prescribe regulations to carry out this subsection.

"(b) Each Executive agency which issues any license or permit for disposal of solid waste shall, prior to the issuance of such license or permit, consult with the Secretary to insure compliance with guidelines recommended under section 209 and the purposes of this Act.

"NATIONAL DISPOSAL SITES STUDY

"SEC. 212. The Secretary shall submit to the Congress no later than two years after the date of enactment of the Resource Recovery Act of 1970, a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which

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may endanger public health or welfare. Such report shall include: (1) a list of materials which should be subject to disposal in any such site; (2) current methods of disposal of such materials; (3) recommended methods of reduction, neutralization, recovery, or disposal of such materials; (4) an inventory of possible sites including existing land or water disposal sites operated or licensed by Federal agencies; (5) an estimate of the cost of developing and maintaining sites including consideration of means for distributing the short- and long-term costs of operating such sites among the users thereof; and (6) such other information as may be appropriate."

(c) Section 215 of the Solid Waste Disposal Act (as so redesignated by subsection (b) of this section) is amended by striking out the heading thereof and inserting in lieu thereof "GENERAL PROVISIONS"; by inserting "(a)" before "Payments"; and by adding at the end thereof the following:

"(b) No grant may be made under this Act to any private profitmaking organization."

SEC. 105. Section 216 of the Solid Waste Disposal Act (as so redesignated by section 104 of this Act) is amended to read as follows:

"SEC. 216. (a)(1) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare for carrying out the provisions of this

Act (including, but not limited to, section 208), not to exceed $41,500,000 for the fiscal year ending June 30, 1971.

"(2) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out the provisions of this Act, other than section 208, not to exceed $72,000,000 for the fiscal year ending June 30, 1972, and not to exceed $76,000,000 for the fiscal year ending June 30, 1973.

"(3) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out section 208 of this Act not to exceed $80,000,000 for the fiscal year ending June 30, 1972, and not to exceed $140,000,000 for the fiscal year ending June 30, 1973.

"(b) There are authorized to be appropriated to the Secretary of the Interior to carry out this Act not to exceed $8,750,000 for the fiscal year ending June 30, 1971, not to exceed $20,000,000 for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973. Prior to expending any funds authorized to be appropriated by this subsection, the Secretary of the Interior shall consult with the Secretary of Health, Education, and Welfare to assure that the expenditure of such funds will be consistent with the purposes of this Act.

"(c) Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other payments under any provision of this Act for any fiscal year beginning after June 30, 1970, shall be available for evalution (directly, or by grants or contracts) of any program authorized by this Act.

"(d) Sums appropriated under this section shall remain available until expended."

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And the Senate agree to the same.

HARLEY O. STAGGERS,
JOHN JARMAN,
PAUL G. ROGERS,
WILLIAM L. SPRINGER,
ANCHER NELSEN,
Managers on the Part of the House.

JENNINGS RANDOLPH,
EDMUND S. MUSKIE,
THOMAS F. EAGLETON,
J. CALEB BOGGS,
HOWARD H. BAKER, JR.,
Managers on the Part of the Senate.

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STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes, submit the following statement in explanation of the effect of the action agreed upon by the conferees and recommended in the accompanying conference report:

The Senate amendment struck out all of the House bill after the enacting clause and inserted a new text. The House recedes from its disagreement to the amendment of the Senate, with an amendment which is a substitute for both the House bill and the Senate amendment.

Except for minor, technical, or conforming provisions, this statement explains the action of the managers on the part of the House.

Section 202 of act (findings and purpose)

The Senate amendment added new language to describe the purposes of the Solid Waste Disposal Act in order to emphasize recycling, local planning, and training functions. The House bill contained no comparable provision. The conference report incorporates these provisions of the Senate amendment.

Section 203 of act (definitions)

The House bill amended section 203 of the Solid Waste Disposal Act by adding a definition of the term "municipality." The Senate amendment amended this section of the act to eliminate the Department of the Interior's responsibility under existing law for disposal of mineral solid waste and to add to the act definitions of municipality, intermunicipal agency, recovered resources, and resource recovery systems. The Senate definition of municipality included Indian tribes.

The conference report includes the additional definitions, as added by the Senate amendment.

Under the conference agreement the Department of the Interior would retain its responsibilities; however, the Secretary of the Interior is required by new section 216(b) of the act to consult with the Secretary of Health, Education, and Welfare prior to expending any Department of the Interior appropriations under the act.

It should be noted in this context that under Reorganization Plan No. 3 of 1970 the functions of the Secretary of the Interior under the Solid Waste Disposal Act will not be transferred; however, the functions

of the Secretary of Health, Education, and Welfare under the act (including any new functions he obtains by reason of the bill) will be transferred under the reorganization plan to the Administrator of the Environmental Protection Agency. The transfer will take effect on the date determined under section 7 of the reorganization plan (in early December 1970).

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Section 204 of act (objectives of studies)

The House bill amended section 204 of the Solid Waste Disposal Act so as to emphasize (1) reduction of the amount of solid waste, (2) new and improved methods of collecting and disposing of solid waste, and (3) recovery of usable materials or energy from solid waste, as the multiple objectives of studies, research, experiments, training, and demonstrations to be conducted by the Secretary of Health, Education, and Welfare.

The Senate amendment incorporated the same provisions as the House bill and added two additional factors to be considered in the studies, demonstrations, etc.: (1) any adverse health and welfare effects of the release into the environment of material present in solid waste and methods to eliminate such effects; and (2) the identification of solid waste components and potential materials and energy recoverable from such waste components. The Senate amendment also provided a specific authorization of appropriations to carry out section 204.

The conference agreement incorporates all of the Senate amendments to section 204 except the specific authorization of appropriations.

New section 205 of act (special study and demonstration projects on recovery of useful energy and materials)

The House bill inserted a new section 205 into the act, which directed the Secretary of Health, Education, and Welfare to carry out an investigation and study of—

(1) economical means of recovering useful materials from solid waste, and the uses and market impact of, such materials;

(2) incentive programs for solving the problems of solid waste disposal problems;

(3) changes in current production and packaging practices; and

(4) methods of collection and containerization.

The Secretary was directed to report on the study to the President and Congress and was authorized to carry out demonstration projects to test and demonstrate techniques developed as a result of the study.

Under the Senate version of the bill, title III was essentially similar to the section 205 of the act as added by the House bill, with the following exceptions:

(1) The Senate provision specified several additional factors to be

studied (in particular, the use of Federal procurement to develop market demand for recovered resources, economic incentives and disincentives for recycling, and disposal charges).

(2) The Senate provided for a study to be completed within 2 years.

(3) No specific authority was provided for demonstration projects to test and demonstrate the techniques developed in the study.

The conference agreement incorporates the provisions of the House bill, and in addition directs the Secretary to conduct studies on the factors specified in paragraph (1), supra.

New section 207 of act (planning grants)

The House bill added a new section 207 to the Solid Waste Disposal Act (a revision of section 206 of existing law) which authorized planning grants to public agencies and councils of government. The

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Federal share was up to 66⅔ percent in the case of a grant for an area including only one municipality and up to 75 percent in any other case. The planning grants were to be available for (1) making surveys of solid waste disposal practices and problems and (2) developing solid waste disposal plans as part of regional environmental protection systems. The House bill also authorized grants to pay up to 50 percent of the cost of overseeing the implementation, enforcement, and modification of such plans.

The Senate amendment added a section 207 to the act which differed from the House provision principally in that no provision was made for Federal assistance for overseeing the implementation, etc., of the plans, and that more emphasis was given in the Senate provision to planning for recycling and resource recovery and for removal of abandoned automobile hulks. The conference agreement contains the substantive provisions of the Senate amendment in these respects.

New section 208 of act (grants for resource recovery systems and improved solid waste disposal systems)

Under the House bill, this section provided for grants to public agencies for the construction of projects utilizing new and improved techniques of demonstrated usefulness in reducing the environmental impact of solid waste disposal, promoting the recovery of energy or resources, or the recycling of useful materials.

In the case of grants to a single municipality, the Federal share was limited to 50 percent. In other cases, the Federal share could be 75 percent. In either case, however, grants shall be made only if—

(1) funds could not be obtained from other sources upon equally favorable terms;

(2) the applicant had made satisfactory provision for operation and maintenance of the project; and

(3) the project was consistent with the purposes of the Federal Water Pollution Control Act and the Clean Air Act.

Under the House bill not more than 15 percent of the total of funds appropriated for the purposes of this section in any fiscal year could be granted for projects in any one State, and not more than 10 percent of the allotment to the State for any one project.

The Senate amendment provided for grants to varying sizes of communities to demonstrate resource recovery systems. (Sec. 203(10) of the act, as added by the Senate, defines "resource recovery system" as a solid waste management system which provides for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues.) These systems were required to be areawide, and grants were to be made so that a variety of solid waste problems (including those of smaller towns and rural areas) would be dealt with. A system was required to be consistent with plans developed in accordance with section 207(b)(2) and with the section 209 guidelines. A proposal for a system grant had to provide assurance that an equitable means exists for distributing the costs among the users of the system. The Senate amendment specifically authorized annual appropriations of $20 million, $30 million, $50 million, and $55 million through fiscal year 1974 for the programs under this section.

The conference substitute combines these provisions of the House and Senate versions. The substitute authorizes the Secretary to make

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grants to public agencies for the demonstration of resource recovery systems ("demonstration grants") or for the construction of new or improved solid waste disposal facilities ("construction grants").

A grant may not be made for either kind of project unless the project meets certain planning requirements and is consistent with the section 209 guidelines.

A demonstration grant may be made only if it is designed to provide areawide resource recovery systems consistent with the purposes of the act, and it provides an equitable procedure for allocating the costs of the system among the users. The Federal share of a demonstration grant is 75 percent.

A construction grant may be made only if the project advances the state of the art by applying new and improved techniques in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials. The Federal share of a construction grant is up to 50 percent for a project area which includes only one municipality, and up to 75 percent in any other case.

The Secretary is directed to promulgate regulations relating to the award of grants within 90 days. The regulations would provide among other things that projects would be carried out in communities of varying sizes, under such conditions as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions, and rural areas, under representative geographic and environmental conditions.

In acting on grant applications the Secretary is directed to consider, among other things, the economic and commercial viability of the project, and the potential of such project for general application to community solid waste disposal problems.

Grants under this section are to be made subject to the following limitations:

(1) A grant may be made only in the amount of the Federal share of the estimated total design and construction costs, plus (in the case of a demonstration grant) the first-year operation and maintenance costs. The non-Federal share may be in any form, including lands or interests therein, or personal property or services (to be valued by the Secretary).

(2) A grant may not be provided for land acquisition.

(3) The applicant must make satisfactory provision for operation and maintenance of the project.

Section 216(a)(3) of the act, as added by the conference substitute, authorizes to carry out section 208 the sum of $80 million for fiscal year 1972, and $140 million for fiscal year 1973. No amount is specified for fiscal year 1971; however, appropriations authorized by section 216(a)(1) (which are generally available to carry out the act) would be available for section 208 in fiscal year 1971. Not more than 15 percent of the authorization for section 208 for any fiscal year (other than fiscal year 1971) could be granted for projects in any one State.

New section 209 of act (solid waste disposal guidelines)

Section 209 as added by the House bill directed the Secretary, within 18 months following date of enactment, to recommend to the appropriate agencies standards for solid waste collection and disposal systems (including systems for private use) which are consistent with health, air, and water pollution standards and can be adapted to

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applicable land-use plans. Such standards were to be developed in cooperation with appropriate State, interstate, and regional and local agencies. The Secretary was also authorized to recommend model codes to implement this section.

Section 209 as added by the Senate amendment directed the Secretary as soon as practicable after the enactment of the bill to recommend to

appropriate agencies guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which are consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines would apply to such systems whether on land or water and would be required to be revised from time to time.

The Secretary was directed to recommend model codes as in the House bill, and in addition to issue technical information.

The conference substitute incorporates the principal provisions of the Senate version of section 209.

New section 210 of act (training grants)

The Senate amendment inserted a new section 210 in the act, which authorized the Secretary to make grants for the purposes of providing training in the field of solid waste disposal. The House bill had no comparable provision. The conference substitute incorporates the principal provisions of the Senate amendment in this regard.

The new section 210 authorizes the Secretary to make grants to, and contracts with, eligible organizations. An eligible organization is a public agency, educational institution, and any other organization which is capable of effectively carrying out a project under this section. Grants or contracts may be made to pay all or a part of the costs of any project, operated by an eligible organization, to train persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities; or to train instructors and supervisory personnel to train or supervise persons in such occupations.

The section contains provisions relating to applications, reports, and records.

In addition the Secretary is directed to make a 1-year study of personnel needs in solid waste and resource recovery programs; of means of using existing training programs to train such personnel; and of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field.

New section 211 of act (applicability of section 209 guidelines to Executive agencies)

The Senate amendment inserted a new section 211 in the act which generally provided that Federal agencies would insure compliance with the section 209 guidelines in carrying out their functions. The House bill contained no comparable provision. The conference substitute incorporates a modification of the Senate provision.

Section 211(a)(1) of the act, as added by the conference substitute, would provide that if an Executive agency has jurisdiction over any real

property or facility the operation or administration of which involves such agency in solid waste disposal activities, or if the agency enters into a contract with any person for the operation by such person of any Federal property or facility, the performance of which involves such person in solid waste disposal activities, then the

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agency must insure compliance with the section 209 guidelines and the purposes of the act in the operation or administration of such property or facility, or the performance of such contract.

Section 211(a)(2) requires that each Executive agency conducting an activity which generates solid waste, and which, if conducted by a person other than such agency, would require a permit or license from such agency in order to dispose of such solid waste, shall insure compliance with such guidelines and the purposes of the act in conducting such activity.

Paragraph (3) of section 211(a) requires each Executive agency which permits the use of Federal property for purposes of disposal of solid waste to insure compliance with such guidelines and the purposes of this act in the disposal of such waste.

Paragraph (4) of section 211(a) directs the President to prescribe regulations to carry out section 211(a).

Section 211(b) requires each Executive agency which issues any license or permit for disposal of solid waste to consult with the Secretary to insure compliance with the section 209 guidelines and the purposes of the act, prior to the issuance of the license or permit.

New section 212 of act (national disposal sites study)

The Senate amendment inserted a new section 212 in the act, which provided for a 2-year national disposal sites study. The Secretary was directed to make a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which may endanger public health or welfare. The report would include (1) a list of materials subject to disposal; (2) current methods of disposal of such materials; (3) recommended methods of disposal of such materials; (4) an inventory of possible sites; and (5) cost estimates.

The House bill had no comparable provision. The House recedes on this provision.

New section 215(b) of act (grant restrictions)

The Senate amendment prohibited the Secretary from making grants under the Solid Waste Disposal Act to private profitmaking organizations. The House bill contained no comparable provision. The conference substitute contains this provision (new section 215(b) of the act).

New section 216 of act (authorization of appropriations)

The House bill authorized separate appropriations to the Secretary of Health, Education, and Welfare and to the Secretary of the Interior to carry out the act for fiscal years 1971, 1972, and 1973.

The Senate amendment contained specific authorizations to carry out sections 204 and 208 for fiscal years 1971, 1972, 1973, and 1974, and open-ended authorizations for those years to carry out all other provisions of the act. It also authorized specific sums to carry out titles II and III of the bill.

The conference substitute contains (1) specific authorizations of appropriations to the Secretary of Health, Education, and Welfare to carry out the act (including sec. 208) for fiscal year 1971, and separate authorizations to carry out section 208 and the other provisions of the act for fiscal years 1972 and 1973, (2) authorizations of appro-

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priations to the Secretary of the Interior to carry out his functions through fiscal year 1973, and (3) an authorization for title III of the bill. The following table compares the appropriations authorized by the House bill, the Senate amendment, and the conference substitute:

COMPARISON OF AUTHORIZATIONS

[Dollar amounts in millions]

		Fiscal year 1971	Fiscal year 1972	Fiscal year 1973	Fiscal year 1974
House Bill	HEW Functions	$83	$152	$216	No Authorization.
	Interior Functions	$17.5	$20	$22.5	
Senate Amendment	§ 204 of Act	$31.5	$40.5	$40	$38.5.
	§ 208 of Act	$20	$30	$50	$55.
	All other provisions of Act.	No limit	No limit	No limit	No limit.
	Title II of bill	$2 for duration of Commission.			
	Title III of bill	$2 for duration of study.			
Conference Substitute	HEW Functions	$41.5			
	§ 208 of Act	(Above amount available both for § 208 and other HEW functions).	$80	$140	No Authorization.
	All other HEW functions under Act.		$72	$76	
	Interior functions	$8.75	$20	$22.5	
	Title II of bill	$2 for duration of Commission.			

Both bills contain authority to evaluate programs under this Act. Such evaluation should include examination of individual training grants and contracts to assure that desired results are being achieved.

HARLEY O. STAGGERS,
JOHN JARMAN,
PAUL G. ROGERS,
WILLIAM L. SPRINGER,
ANCHER NELSEN,
Managers on the Part of the House.

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1.1d (4) CONGRESSIONAL RECORD, VOL. 116 (1970)

1.1d (4)(a) June 23: Considered and passed House, pp. 20878–20893

RESOURCE RECOVERY ACT OF 1970

Mr. PEPPER. Mr. Speaker, by direction of the Committee on Rules, I call up H.R. 1068 and ask for its immediate consideration.

The Clerk read the resolution as follows:

H. RES. 1068

Resolved, That upon the adoption of this resolution it shall be in order to move that the House resolve itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such Act, and for other purposes. After general debate, which shall be confined to the bill and shall continue not to exceed one hour, to be equally divided and controlled by the chairman and ranking minority member of the Committee on Interstate and Foreign Commerce, the bill shall be read for amendment under the five-minute rule. It shall be in order to consider the amendment in the nature of a substitute recommended by the Committee on Interstate and Foreign Commerce now printed in the bill as an original bill for the purpose of amendment under the five-minute rule. At the conclusion of such consideration, the Committee shall rise and report the bill to the House with such amendments as may have been adopted, and any Member may demand a separate vote in the House on any amendment adopted in the Committee of the Whole to the bill or committee amendment in the nature of a substitute. The previous question shall be considered as ordered on the bill and amendments thereto to final passage without intervening motion except one motion to recommit with or without instructions.

Mr. PEPPER. Mr. Speaker, I yield 30 minutes to the distinguished gentleman from Ohio (Mr. LATTA), pending which I yield myself such time as I may consume.

Mr. Speaker, House Resolution 1068 provides an open rule with 1 hour of general debate for consideration of H.R. 11833, the Resource Recovery Act of 1970. The resolution further provides that it shall be in order to consider the committee substitute as an original bill for the purpose of amendment.

The purposes of H.R. 11833 are: First, to expand and intensify the development of new technologies for solid waste disposal; second, to promote greater initiative on the part of the States in assuming increasing responsibilities for solid waste disposal programs; third, to stimulate the construction by States and municipalities of pilot facilities utilizing new and improved waste disposal technologies; and fourth, to conduct studies to determine economical means of and appropriate incentives for recovering useful materials and energy from solid waste and reducing the amount of such waste and facilitating the disposability thereof through improved production and packaging practices.

The objectives are to be achieved through studies, investigations, and demonstration projects conducted by the Secretary of Health, Education, and Welfare and construction grants to State and municipalities as well as interstate and intermunicipal agencies to contribute to the financing of pilot facilities.

Appropriations would be authorized to the Secretary of Health, Education, and Welfare for fiscal year 1971 in the amount of not more than $83 million, for fiscal year 1972 not more than $152 million and for fiscal year 1973 not more than $216 million.

Appropriations would be authorized to the Secretary of the Interior for fiscal year 1971 in the amount of not more than $17.5 million, for fiscal year 1972 not more than $20 million and for fiscal year 1973 not more than $22.5 million.

Mr. Speaker, I urge the adoption of House Resolution 1068.

Mr. LATTA. Mr. Speaker, as the able gentleman from Florida has stated, House Resolution 1068 provides an open rule, 1 hour of debate on the bill, H.R. 11833, the Resource Recovery Act of 1970. The rule also makes in order the committee substitute as an original bill for the purpose of amendment.

The purpose of the bill is to amend the Solid Waste Disposal Act in a number of significant areas. The bill will: First, expand and intensify the development of new techniques for solid waste disposal; second, stimulate the construction by the several States and municipalities of pilot projects utilizing new and improved waste disposal technologies; and, third, provide for conducting studies to determine economical means of and appropriate incentives for recovering useful materials and energy from solid waste and a way to reduce the amounts of such waste which should be disposed of.

Studies, demonstrations, and pilot projects will be funded through grants from the Secretary of Health, Education, and Welfare. Construction grants to States and municipalities are also available to enable these agencies to construct and improve waste disposal facilities. The United States generates approximately 360 million tons of industrial, municipal, and commercial waste each year. We spend $4.5 billion annually to dispose of it and yet we are not doing a satisfactory job. New techniques must be developed to dispose of waste and reclaim from it valuable products and sources of energy. In order to develop new techniques, pilot projects must be undertaken. The bill funds such projects.

The authorization covers 3 years, fiscal years 1971 through 1973. Total authorizations for 1971 are $100.5 million; for 1972, $172 million and for 1973, $238.5 million.

I support the rule and the bill.

I compliment the committee for bringing this bill forward.

Mr. Speaker, I have no requests for time, and reserve the remainder of my time.

Mr. PEPPER. Mr. Speaker, I have no further requests for time.

I move the previous question on the resolution.

The previous question was ordered.

The resolution was agreed to.

A motion to reconsider was laid on the table.

Mr. STAGGERS. Mr. Speaker, I move that the House resolve itself into the Committee of the Whole House on the State of the Union for the consideration of the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes.

The SPEAKER. The question is on the motion offered by the gentleman from West Virginia.

The motion was agreed to.

IN THE COMMITTEE OF THE WHOLE

Accordingly the House resolved itself into the Committee of the Whole House on the State of the Union for the consideration of the bill H.R. 11833, with Mr. ABERNETHY in the chair.

The Clerk read the title of the bill.

By unanimous consent, the first reading of the bill was dispensed with.

The CHAIRMAN. Under the rule, the gentleman from West Virginia (Mr. STAGGERS) will be recognized for 30 minutes, and the gentleman from Illinois (Mr. SPRINGER) will be recognized for 30 minutes.

The Chair recognizes the gentleman from West Virginia (Mr. STAGGERS).

Mr. STAGGERS. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, there is outstanding need for this legislation. This Nation is generating approximately 360 million tons of industrial, municipal, and commercial solid waste. This amount is ex-

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pected to double by 1980. To manage this waste, we spend $4.5 billion annually. While these expenditures are increasing steadily, we are failing to do a satisfactory job. The greatest amount of the moneys spent goes for collecting solid waste and transporting it to some place where it may be dumped or burned.

The most prevalent method for disposing of solid waste is open dumping. Yet, 94 percent of the open dumping facilities used are inadequate, since the dumped waste either is not covered daily with dirt as it properly should, or is being burned, or creates water pollution problems. Incineration is the second most frequently employed method. Yet, 75 percent of all municipal incinerators are inadequate because they are inefficient in reducing solid wastes, or create air pollution problems, or both. If present collection methods are not improved we shall not be able to build and operate enough trucks to collect the growing volume of waste materials.

Improved collection and disposal methods, however, will not suffice to take care of the steadily growing volume of solid waste materials. We shall have to develop new technologies for reclaiming and recycling usable materials and energy from such solid waste. We shall also have to improve production and packaging methods of products which end up as solid waste so as to reduce the amount of such waste and to facilitate the disposal thereof.

The development of such technologies is difficult and costly. The present level of funding of research to take care of a $4.5 billion problem is entirely inadequate. One such technology which holds out the greatest promise is the generating of electric power from solid wastes and adequate funds should be made available promptly to reduce the leadtime in the case of this particular technology as much as possible. Beyond the development of such technologies, however, we shall have to provide adequate economic incentives to make the recapture and recycling of useful materials and energy attractive to those private industries which produce the products which are not used up but end up as solid waste.

Additionally, the responsibility for the development of improved solid waste disposal programs cannot be left to individual municipalities, small and large, which traditionally have shouldered the responsibility for solid waste disposal, but the States must demonstrate increasing concern in this area. Prior to 1965, the year when the Solid Waste Disposal Act first was enacted by the Congress, few States assumed any responsibility for formulating solid waste disposal programs. While the number of States which have been willing to develop action programs has increased greatly since that year, the time now has come to stimulate through a highly selective grant program the construction of advanced disposal facilities designed to carry out such State plans on an area-by-area basis.

The legislation reported by your committee is designed to further all of these various objectives, and only through the pursuit of these several objectives is there any hope that the steadily mounting problem of solid waste management can be dealt with successfully.

In summary then, the purposes of the legislation are, first, to expand and intensify the development of new technologies for solid waste disposal; second, to promote greater initiative on the part of the State in assuming increasing re-

sponsibilities for solid waste disposal programs; third, to stimulate the construction by States and municipalities of pilot facilities utilizing new and improved waste disposal technologies; and fourth, to conduct studies to determine economical means of and appropriate incentives for, first, recovering useful materials and energy from solid waste and, second, reducing the amount of such waste and facilitating the disposability thereof through improved production and packaging practices.

These objectives are to be achieved through, first, studies, investigations, and demonstration projects conducted by the Secretary of Health, Education, and Welfare, and, second, construction grants to States and municipalities as well as interstate and intermunicipal agencies to contribute to the financing of pilot facilities utilizing new and improved technologies if the construction of such facilities is part of a State or interstate plan setting forth a comprehensive plan for solid waste disposal in the particular area or areas involved.

This is the second piece of environmental legislation which the Interstate and Foreign Commerce Committee is bringing to the floor immediately following the Clean Air Act amendments. Solid waste disposal programs are not anywhere near as far advanced as the clean air program. The need however is urgent and we shall have to make fast progress. The legislation therefore provides for a steep increase in authorized funds through the fiscal year 1973. The legislation authorizes funds for two Departments which share responsibilities under this legislation—the Department of Health, Education, and Welfare and the Department of the Interior.

The bill provides for HEW not to exceed $83 million for the fiscal year ending June 30, 1971, not to exceed $152 million for the fiscal year ending June 30, 1972, and not to exceed $216 million for the fiscal year ending June 30, 1973.

For the Department of the Interior it provides sums not to exceed $17,500,000 for the fiscal year ending June 30, 1971, not to exceed $20 million for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973.

Mr. Chairman, I hope the House will support this legislation which will greatly benefit the American people. I might say that when it came out of the committee the vote was 21 to 1. The one vote in opposition was because of some particular aspect of the bill.

Now, Mr. Chairman, there are many products that can be reclaimed in this solid waste disposal program and one of the most important of these is the generating of electric energy which would be generated by a new technique which they are developing by burning waste materials. Certainly, Mr. Chairman, many other products can be reclaimed from these waste products.

Mr. Chairman, in my opinion the bill has been fully considered by the subcommittee and by the full committee and the House should pass the bill.

Mr. NELSEN. Mr. Chairman, will the gentleman yield?

Mr. STAGGERS. I am happy to yield to my friend, the gentleman from Minnesota (Mr. NELSEN).

Mr. NELSEN. Is there any provision in this bill to the effect that they must spend the money that is authorized?

Mr. STAGGERS. No, I would say in response to the question of the gentleman from Minnesota; there is not.

Mr. NELSEN. I thank the gentleman from West Virginia.

Mr. SPRINGER. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, as concerned as we are about the air we breathe and its effect on public health, we stand a good chance of being engulfed by a tidal wave of trash before air pollution gets to us. Our way of life has brought about a flood of convenient packages which can neither be consumed or successfully disposed of. Solid waste disposal systems are primitive at best and certainly were never designed to cope with the sophisticated trash we now impose on them. We are presently in the predicament of the Aus-

tralian who went crazy trying to throw away his old boomerang.

Having come to the point where present methods are patently inadequate and alternatives seem to be few we must reach out for completely new approaches. The thrust of the bill before us today is in exactly that direction. In addition to searching for and trying new methods of collecting and disposing of solid waste it contemplates efforts to reduce the amount of solid waste and the recycling and reuse of whatever useful substances might be extracted from it. First of all it calls for studies along all of these lines with reports to the President and to Congress.

If any good ideas are developed in the course of the studies the Secretary is authorized to give them a whirl in the form of demonstration projects to test and show off the new techniques.

Recognizing that not all good ideas come from the top and that the eventual operation of waste disposal systems will be local, the bill provides for planning grants to States, municipalities, or combinations of either. These grants will pay up to two-thirds of the cost of planning activities by a single municipality or three-fourths of the cost where a combination of entities is involved. If plans are developed, continuing 50–50 grants will be available to implement them and then oversee the operations.

It is one thing to make plans and it is another to carry them out with the necessary physical facilities. Waste disposal presumes equipment and even large installations, particularly where resources are to be salvaged for reuse. So where plans have been successfully

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made and new techniques are available there is good reason to encourage the use of these techniques. Communities which are willing to make use of them and apply their own resources to the effort can get grant assistance in the actual construction of facilities. It is not a general grant program with allocations to all States on a formula basis but rather one which rewards the acceptance of responsibility and willingness to take on the new ideas. The Secretary is given fairly wide discretion in the acceptance of applications to see that the projects funded are also contributing something to the overall progress in solid waste disposal and are consistent with the aims of the act as well as consistent with all other environmental considerations. Limitations upon the amount available for any one project will insure against undue concentration of the funds provided. As knowledge is gained standards can be set for disposal systems, and it is contemplated that this will be done starting within the next 18 months.

Two departments of the Federal Government are vitally interested in solid waste disposal, and the authorizations contained in the bill recognize this fact. The Department of Interior is responsible for programs involving minerals and fossil fuels. The Department of Health, Education, and Welfare has the large responsibility of working with the communities and administering the grants. These authorizations amount to $83 million for fiscal 1971, $152 million for fiscal 1972 and $216 million for fiscal 1973.

This legislation is necessary and in my opinion well designed to make an impact upon the problem in the shortest possible time. We must gain on the trash soon. This should do it. I recommend the bill to the House.

Mr. McCLURE. Mr. Chairman, if the gentleman will yield.

I notice there is a provision here for an appropriation both to the Department of Health, Education, and Welfare, and the Department of the Interior.

Is there anything in this legislation which would prohibit interdepartmental agreements which would allow the Department of Agriculture, for instance, to use a portion of those funds on ongoing programs which the U.S. Forest Service has in this field.

Mr. SPRINGER. May I say, I will yield to the gentleman from North Carolina on that point. He had a proposed amendment this morning which I am not sure he introduced, but nevertheless he has gone

into this in detail and perhaps can answer the gentleman.

Mr. BROYHILL of North Carolina. I will discuss this matter later.

Mr. GROSS. Mr. Chairman, will the gentleman yield?

Mr. SPRINGER. I yield to the gentleman.

Mr. GROSS. I am surprised not to find any departmental reports in this report accompanying the bill. Why are there no departmental reports?

Mr. SPRINGER. I am unable to answer the gentleman on that particular point. Perhaps the chairman of the subcommittee can answer the question of the gentleman from Iowa.

Mr. GROSS. I will say it becomes a pretty acute problem.

Mr. JARMAN. Mr. Chairman, if the gentleman will yield further so that I may respond to the gentleman, the administration bill was an open-ended provision and simply provided for such funds as may be needed.

The figures to which you refer are figures the committee put into the bill as the program.

Mr. GROSS. Well, let me ask the gentleman this question.

Did the committee attempt to ascertain from the Bureau of the Budget the amount of funds that they thought would be necessary or should be used for this purpose and does this bill have the support of the administration?

Mr. SPRINGER. It did.

Mr. GROSS. Perhaps someone else can elucidate further.

Mr. JARMAN. Mr. Chairman, I yield myself such time as I may consume.

Mr. Chairman, in looking at our environmental problems, the Subcommittee on Public Health and Welfare determined that next to air pollution control, the problem of solid waste disposal and recycling was the most important problem to which the Congress should give its attention. Tremendously large sums are spent annually; namely, $4.5 billion, to manage solid waste. Such waste is generated by industry, by households and by commercial establishments. At the present time, the methods of solid waste disposal and the collecting of solid waste are entirely inadequate. Most of this waste is either dumped or burned.

Therefore, it is imperative that we develop new and improved disposal methods as well as methods designed to reclaim usable materials or energy from such solid waste.

Our committee first became concerned with the problems of solid waste disposal in 1965 and, as a result of this concern, Congress enacted during that year the Solid Waste Disposal Act. While under this act a small beginning has been made, we must now push ahead much faster because if present collection and disposal methods are not improved, we shall not be able to dispose of solid waste which is expected to double by 1980.

Since the able chairman of our full committee, the gentleman from West Virginia (Mr. STAGGERS), has already touched on the highlights of this legislation, let me concentrate on some of the important provisions contained in this legislation. The bill calls for a special study and demonstration projects on recovery of useful energy and materials. Section 4 directs the Secretary of Health, Education, and Welfare to carry out an investigation and study to determine:

First, economical means of recovering useful materials from solid waste, recommended uses of such materials for national or international welfare, and the market impact of such recovery;

Second, appropriate incentive programs —including tax incentives—to assist in solving the problems of solid waste disposal;

Third, practicable changes in current production and packaging practices which would reduce the amount of solid waste; and

Fourth, practicable methods of collection and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes.

The Secretary is directed to report the results of such investigation and study to the President and the Congress.

The Secretary is authorized to carry out demonstration projects to test and demonstrate techniques developed as a result of the study. The provisions contained in section 204 of the act relating to patents and information resulting from Government-financed research activities are applicable to such demonstration projects.

Next, the legislation would authorize planning grants to State, interstate, municipal, and intermunicipal agencies as well as metropolitan, regional, or district councils of government of not to exceed 66⅔ percent in the case of a project serving an area which does not include more than one municipality and not to exceed 75 percent in any other case, and not to exceed 50 percent of the cost of overseeing the implementation, enforcement, and modification of such plans. Such planning grants are to be available for making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and developing solid waste disposal plans as part of regional environmental protection systems for such areas, including planning for the reuse, as appropriate, of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal site.

To qualify for planning grants, an applicant must meet the following conditions:

First, designate or establish a single agency as the sole agency to discharge for the area involved the responsibilities contemplated by this section;

Second, indicate how an areawide planning of effective solid waste disposal programs provision will be made for the consideration of such public health factors as population growth, urban and metropolitan development, land use planning, water and air pollution control, and the feasibility of regional disposal programs;

Third, set forth how the grant will be expended so as to carry out the purposes of this section;

Fourth, provide for submission of a final report by the agency on its activities, and for submission of such other reports and information as the Secretary may prescribe; and

Fifth, provide for appropriate fiscal control and accounting procedures.

Grants under this section shall be made only if the Secretary finds that the planning will not duplicate, but will be coordinated with, other related planning activities.

Perhaps the most important provisions of this legislation are those authorizing construction grants to any State, munic-

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ipality or interstate or intermunicipal agency for the construction of projects utilizing new and improved techniques of demonstrated usefulness in reducing the environmental impact of solid waste disposal, promoting the recovery of energy or resources, or the recycling of useful materials.

The program contemplated by this section is not a general grant-in-aid program entitling each State to a share in available grant funds. The program is an experimental one designed to assist in the financing of advanced solid waste disposal facilities within those States which have demonstrated a willingness to assume responsibilities for formulating comprehensive solid waste disposal programs for intrastate or interstate areas within their territories. Within the framework of such plans, municipalities may apply singly or jointly for grants for pilot projects utilizing new and improved techniques of solid waste disposal. Since it can reasonably be expected that different techniques will be suitable for municipalities of different sizes, in different locales and having different characteristics, such comprehensive State plans are expected to call for a number of different facilities to be constructed concurrently. If more than 10 eligible projects are applied for, the funds are to be distributed among at least 10 applicants. If grants for fewer than 10 such projects are applied for, the Secretary may use the funds for those eligible municipalities which have applied.

In the case of construction grants to a single municipality, the amounts of such

grants shall not exceed 50 percent of the estimated reasonable cost of the project as determined by the Secretary. In the case of construction grants to more than one municipality, the amounts may be increased by an additional 25 percent of such cost. In either case, however, grants shall be made only if—

First, the applicant is unable to obtain such amounts from other sources upon terms and conditions equally favorable;

Second, the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project after completion; and

Third, the project is consistent with the purposes of the Federal Water Pollution Control Act and the Clean Air Act.

The Secretary may impose such additional conditions as he deems necessary to carry out his functions pursuant to this act.

In determining the desirability of projects and of approving Federal financial aid in connection therewith, consideration shall be given by the Secretary to the public benefits to be derived by the construction and the propriety of Federal aid in such construction, the relation of the ultimate cost of the project to the public interest and to the public necessity for the project and the use by the applicant of comprehensive regional or metropolitan area planning.

Not more than 15 percent of the total of funds appropriated for the purpose of this section in any fiscal year shall be granted for projects in any one State, and not more than 10 percent of the allotment to the State for any one project—except that if fewer than 10 applicants apply, each applicant must receive at least 10 percent. In the case of a grant for a program in an area crossing State boundaries, the Secretary shall determine the portion of such grant which is chargeable to the percentage limitation under this subsection for each State into which such area extends.

In order to make possible these new programs, the legislation authorizes substantially increased appropriations for the two departments which have responsibilities under this legislation—the Secretary of Health, Education, and Welfare and the Secretary of Interior. The Secretary of Health, Education, and Welfare has been given the primary responsibility for dealing with solid waste disposal problems. The Secretary of the Interior's responsibilities are limited to "problems of solid waste resulting from the extraction, processing, or utilization of minerals or fossil fuels where the generation, production or reuse of such waste is or may be controlled within the extraction, processing, or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities."

The amounts authorized to be appropriated to the Secretary of Health, Education, and Welfare are as follows: For the fiscal year ending June 30, 1971, not to exceed $83 million; for the fiscal year ending June 30, 1972, not to exceed $152 million; for the fiscal year ending June 30, 1973, not to exceed $216 million.

The amounts authorized to be appropriated for the Secretary of Interior are as follows: For the fiscal year ending June 30, 1971, not to exceed $17.5 million; for the fiscal year ending June 30, 1972, not to exceed $20 million; for the fiscal year ending June 30, 1973, not to exceed $22.5 million.

I hope the House will support this important environmental legislation because the problems presented by the tremendous increase in solid waste which our economy generates have to be met if our communities and our people are not to face disaster during the next decade. Unlike the Clean Air Act, this is not regulatory legislation. It is legislation pure and simple to generate new technologies at the earliest possible date for disposing of solid waste and for recycling usable wastes and to build pilot plants where these new technologies can be demonstrated. Our subcommittee has worked hard on this legislation and I believe it merits the full support of this House.

Mr. SPRINGER. Mr. Chairman, I yield as much time as he might consume to the gentleman from North Carolina (Mr. BROYHILL).

The CHAIRMAN. The gentleman from North Carolina is recognized.

Mr. BROYHILL of North Carolina. Mr. Chairman and members of the committee, I rise in support of this legislation, which can go a long way and do a great deal in helping to shed light on this problem of coming up with ways to reclaim waste material. Of the 50 or more millions of tons of paper and paperboard which are produced in the United States each year, only a very small percentage is reclaimed or recycled. The amount which is reclaimed and recycled today is largely the paper material which is clean, homogeneous, and concentrated in one place, such as an industrial location or what we might call commercial wastepaper. There is almost no paper reclaimed from municipal use, although half of such refuse consists of paper products.

I have figures before me which show that doubling the reuse of wastepaper alone, we could save 15 million cords of wood per year or the annual growth of 15 million acres of timberland. Of course, millions of tons of wood from urban sources are also discarded annually and systems for recovering and reusing these resources should be devised.

I would like to describe to the committee a project which is now going on at the Forest Products Laboratory in Madison, Wis. This is a cooperative project of the Department of Agriculture, the Department of the Interior, and the Department of Health, Education, and Welfare. This project is aimed at recycling wastepaper from raw urban solid waste through the development of more efficient recovery processes and, of course, trying to come up with a wider variety of end-product uses.

As I said, the Department of the Interior is cooperating in this project, the Department of HEW is cooperating with it, and work is being done at the Forest Products Laboratory at Madison, Wis.

I have in my hand a sheet of paper. Thirty percent of the fibers which were used to make this sheet of paper came from the Madison, Wis., city dump. It was reclaimed by the Forest Service research project there at Madison, and it was combined with the regular pulp-making process.

I would like to have the attention of the gentleman from Oklahoma and the gentleman from Florida (Mr. ROGERS) to comment on the role that the Department of Agriculture will be playing in this program.

The gentleman from Idaho has already been on his feet and has called to our attention the fact that the Department of Agriculture is not included by name in this legislation. Both in the old act as well as in the legislation we are considering today, it seems to me the Department of Agriculture should have a role to play because solid wastes are of great concern to agriculture and rural areas. I have described here a program in which the Department of Agriculture is cooperating with the two departments named in the bill. The Department of Agriculture does have a role to play, they are, of course, vitally interested in the producing and processing and transportation and marketing of farm and forest products, as well as in the viability and attractiveness of farm communities below 5,000 in population, as well as in

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the public health and well-being of the population in rural areas.

There are many areas in which the Department of Agriculture would be interested in the waste disposal program. One example is the urban disposal system which is in use in so many cities today, which is to get landfill sites out of sight into the countryside, and this, of course, is of great concern to rural America.

I would hope we could add an amendment to this bill which would give the Department of Agriculture its rightful recognition so they could share in some of the appropriations that will be made possible by this bill.

I will yield now to the gentleman from Florida for any comments he might wish to make.

Mr. ROGERS of Florida. Mr. Chairman, I appreciate the gentleman yielding.

The gentleman has made some very valid points. We had discussed this before the debate began and had come to substantial agreement that the Department of Agriculture does play a very substantial role in trying to meet this problem of solid waste disposal.

I would refer the gentleman to the intent of the committee which is in the original law in section 204(a) regarding research, demonstrations, training, and other activities. Here it states that the Secretary of HEW will cooperate and will consult and try to work together not only with Agriculture but also with other departments of Government which are involved in trying to help solve this problem. For instance, as I am sure the gentleman knows, it will include not only HEW, but also Interior, which is involved, and Agriculture, and the Department of Housing and Urban Development, as well as the Department of Commerce and the Department of State, and the Department of Defense, and some other departments.

What we said in the original bill certainly does make clear the intent that we expect the Secretary to consult with the Secretary of Agriculture as well as the Secretary of Defense and these other departments to try to have a coordinated attack.

We have centered responsibility in the Secretary of HEW, and we allow Interior to come in on it, but still HEW is the central force, and he is to consult, as the gentleman has suggested, and it should be well to recognize the role of the Department of Agriculture also.

Mr. BROYHILL of North Carolina. I thank the gentleman for his comments.

Mr. Chairman, earlier I obtained permission to include extraneous matter with my remarks, and I include at this point material setting forth the role of the Department of Agriculture in this overall area, listing the number of projects they have ongoing at this time and their tremendous interest in and the tremendous amount of work they do in this area. Also I include the Department of Agriculture testimony before the Senate Committee on Public Works in regard to a similar Senate bill.

The material referred to follows:

AGRICULTURE RELATED SOLID WASTES

Solid wastes are of great significance to agriculture—to producing, processing, transporting, and marketing farm and forest products; to the viability and attractiveness of rural communities; to public health and well being; to recreation; and to the utility and esthetic quality of the countryside. In addition to the vast quantities of solid waste resulting from agriculture and agribusiness, the urban disposal system with its many sites being in the countryside is a concern of rural America.

Programs of USDA and its cooperators at State and local levels relating to solid wastes include programs of research, education and information, technical assistance, cost-sharing and loans and grants. In addition, the Department deals with growing solid waste problems due to increased use of the Federal lands and facilities the Department administers. The Department's cooperative programs relate to (1) urban and industrial wastes produced in communities under 5,500 population, (2) wastes from industrial processing of raw agricultural and forestry products, (3) agricultural wastes associated with farm, forest and ranch production processes; e.g., animal wastes, forest and crop residues, and pesticide containers, and (4) urban and industrial wastes from which raw agricultural materials may be reclaimed. In addition to these activities oriented to agriculture-derived wastes, USDA has (5) a broad base of technical competence for dealing with land management aspects of rural disposal sites receiving solid wastes from all sources.

The Department's long-standing cooperative research programs with land grant colleges and universities and other institutions include studies of ways to reduce, control, use or dispose of such solid wastes as animal manure, forest slash and excess straw and wastes from plants which process raw agricultural commodities. In addition, research is underway on ways to economically recover agricultural raw materials from urban solid wastes; e.g., wood fibers from discarded paper products. The research includes studies of effective means for returning wastes to the soil where they are produced and the disposal of processing wastes in areas away from the processing plants. These programs also include the development of information leading to new and improved processing methods to more fully utilize raw materials and byproducts. Associated with the farm, forest, and processing plant approaches are efforts to modify the inherent characteristics of raw agricultural commodities to reduce solid wastes originating with those commodities.

USDA and State education and information programs utilize a nationwide agricultural extension service organization to bring the latest knowledge and methodology to enterprises and individuals

whose activities or ownerships lead to solid wastes production.

Technical assistance in resource development and use is provided nationwide. In many situations this includes help for developing solid waste disposal practices. This assistance is available to local communities; cooperatives; nonprofit associations; landowners and operators in Soil and Water Conservation Districts; State and private forests; and food and fiber processing plants.

Project measures included in Resource Conservation and Development Projects often involve the problems of solid waste disposal. The Department provides technical assistance in the interpretation of soil survey information for use in locating suitable disposal sites.

The Department may share up to 50 percent of the cost of basic facilities required for health, safety, use and access to public recreation and fish and wildlife developments in small watershed projects. This may include facilities for collection and disposal of solid waste such as trash and garbage. All sanitary and waste disposal facilities must comply with State and local health standards and regulations.

Some of the practices cost-shared under the Agricultural Conservation Program are useful to farmers in the safe management of animal wastes. Many vegetative cover practices and erosion control structures can serve multiple purposes by helping to use up such wastes when they are diverted to or spread on the land. Or erosion control or water management structures may divert wastes away from streams. Among such ACP practices are the establishment of buffer or filter strips and fields, terrace systems, or diversions into erosion control or water spreading structures and areas or into woodland.

The Department of Agriculture has requested authority to use some Agricultural Conservation Program funds for pollution control practices which also have soil or water conservation benefits. This authority was granted by P.L. 91-127. Related authority was included in P.L. 91-118.

The Department of Agriculture makes and insures loans and grants to associations, including corporations not operated for profit, and public and quasi-public agencies to provide for the installation or improvement of waste disposal facilities in rural areas. These loans and grants may include facilities for the collection, treatment, or disposal of human, animal, and other wastes. They may involve collection lines, treatment plants, outfall lines, disposal fields, stabilization ponds, storm sewers, garbage trucks and equipment, sanitary landfills, and incinerators. Rural areas are defined as areas which do not include any area in any city or town which has a population in excess of 5,500 inhabitants.

Financial assistance is also provided in the form of loans to individuals to purchase equipment and install facilities to properly dispose of domestic, animal, and crop and forest residues.

The Department of Agriculture now has an on going program whereby grant assistance can be provided in amounts up to 50 percent of the development cost of a waste disposal system. Since this authority was granted in 1965, more than 700 waste disposal systems requiring approximately $125 million in loans and $40 million in grants, have been financed by the Department of Agriculture. USDA also has an on going grant program for comprehensive area planning of the development of water and sewer systems in rural areas. Grants authorized by this Department can be made up to 100 percent of the cost of water and sewer planning.

The Department has more than 3000 county offices throughout the United States. The employees in these offices know the community leaders and their problems and are trained to provide assistance in developing waste disposal facilities and coordinating their development with the development of other facilities in the area. With its many years of experience in working with rural communities, and with the many Department representatives available to help local people solve their problems, the Department of Agriculture is in a better position to provide technical and financial assistance for waste disposal facilities needed in rural areas than any other agency.

The Department's authority and responsibility for research, education, and action programs concern the countryside—the people and renewable resources of rural America. In addition, those programs concern several aspects of urban America, such as erosion control and drainage in new housing and industrial developments and the many types

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of vegetation that enhance our streets, lawns, and parks. USDA programs vitally affect the conservation and management of the bulk of the Nation's land, water, and related biological, recreational, and esthetic resources.

Solid waste problems associated with or related to agriculture and the countryside fall into three distinct categories:

1. Those wastes originating on farms and in rural communities.

2. Those wastes originating in urban areas but which are disposed of in the countryside.

3. Urban and industrial wastes (derived from agricultural raw materials) that can be recycled and reused.

Ultimately the greatest need for all these wastes is the recycling and reuse of them to the fullest extent possible.

The most pressing problems of concern to the Department of Agriculture include:

1. Animal wastes;

2. Sediment, a waste in solid form when it comes to rest;

3. Wastes from industrial processing of raw agricultural produets;

4. Urban and industrial wastes from which agricultural materials may be reclaimed or used;

5. Waste disposal sites;

6. Solid wastes from rural communities;

7. Forest and crop residues;

8. Trash and garbage discarded indiscriminately in the countryside; and

9. Unusable pesticides and containers.

USDA objectives are to prevent or minimize production of agriculture-related wastes, and to improve the handling, treating, storing, and disposal of these wastes. We want to use, reclaim, and reuse as much waste material as is possible. Underlying the objectives is the goal of minimizing the adverse impact of solid wastes on the environment, and enhancing the environment wherever possible.

The U.S. Department of Agriculture has competency in solution of many of these waste problems among which are the following:

1. Handling animal wastes in such a way as to keep them out of lakes, streams and other unwanted areas and to control odors and other esthetic problems.

2. Preventing sedimentation and other erosional debris which creates serious waste disposal problems in rural and urban areas alike.

3. Managing solid wastes arising from processing of raw agricultural products.

4. Recovering and reusing agriculturally-derived raw materials from urban and industrial wastes; e.g., wood fiber from the more than half of such trash that is paper.

5. Site or facility selection and development, management and rehabilitation of landfills, lagoons and other means of disposing of solid wastes in the soils of the countryside. This includes soil survey, analysis, and interpretation to determine assimilative capacity of various soil types of solid wastes without serious contamination.

6. Minimizing damage from burning or otherwise disposing of forest and crop residues and other organic refuse.

APPROPRIATE SOLID WASTE ROLE FOR THE DEPARTMENT OF AGRICULTURE

USDA's appropriate role in dealing with solid waste problems is to cooperate with and assist State and local governments and their agencies and institutions, quasi public agencies, cooperatives, nonprofit associations, industry, and private citizens by providing the following:

Results of research and development (*R&D*);

Extension education (*Edn.*);

Technical assistance (*Tech. Asst.*);

Financial assistance (*Fin. Asst.*): Cost-sharing, Grants, and Loans; and

Criteria for developing standards (Based on R&D and experience gained through action programs).

Further, the Department will continue to deal with solid waste aspects of managing the Federally-owned lands under its jurisdiction (*Mgmt. Fed. lands*).

DEPARTMENT OF AGRICULTURAL SOLID WASTE PROGRAMS AND RESPONSIBILITIES

USDA solid waste programs relate to:

Animal wastes (R&D, Edn., Tech. Asst., Fin. Asst.);

Forest and crop residues (R&D, Edn., Tech. Asst., Fin. Asst., Mgmt. Fed. Lands);

Wastes from industrial processing of raw agricultural materials (R&D, Tech. Asst.);

Urban and industrial wastes produced in communities under 5,500 population (Fin. Asst.);

Discarded products derived from raw agricultural materials (R&D);

Unusable pesticides and containers (R&D);

Site or facility selection and development, management and rehabilitation from landfills, lagoons and other means of disposing of solid wastes in the countryside (R&D, Edn., Tech. Asst., Fin. Asst., Mgt. Fed. lands);

Trash, garbage, and other people wastes deposited in the countryside (Edn., Tech. Asst., Fin. Asst., Mgmt. Fed. lands); and

Sediment, as a waste in solid form when it comes to rest (R&D, Edn., Tech. Asst., Fin. Asst., Mgmt. Fed. Lands).

Objectives of these activities are:

Preventing or minimizing production of agriculture-related solid wastes;

Handling, treating, or storing agriculture-related solid wastes or those from small communities and the countryside;

Utilizing agriculture-related solid wastes from all sources: a. Directly; and b. Reclamation and reuse of agricultural raw materials.

Disposing of all kinds of solid wastes with minimum assault upon the environment or with the potential of enhancing it; and

Preventing or minimizing erosion from all sources to control sediment deposition.

The problems that USDA programs address themselves to are described briefly:

Animal Wastes.—The volume of wastes from livestock, and poultry production is estimated at 1.7 billion tons annually. Increasingly, animals are produced in large feedlots and other points of concentration raising major waste handling and disposal problems. Animal wastes are a concern in the abatement of water, air, and soil pollution. They may be associated with pollution of lakes, fishkills, nitrate contamination of soil and aquifers, off flavors, annoying odors and dusts, dissemination of infectious agents to animals and man, depreciation of recreational values of land and streams and reproduction of insect pests.

Forest and Crop Residues.—The annual accumulation of forest and crop residues has been estimated to be about 575 million tons. These residues result from harvesting operation and natural accumulations, including pest damage and natural deterioration. Forest and crop residues can be serious contributors to air, soil, and water pollution. They serve as reservoirs of plant diseases, insects and rodents, and, if burned, contribute great quantities of smoke.

Wastes from Industrial Processing of Raw Agricultural Materials.—The total load of pollutants produced by the agricultural and forestry processing industries of food, textiles, leather, pulp, paper, wood products, and industrial chemicals is estimated at 25 to 50 percent of the raw materials entering the plant. Large amounts of the solid portions of these wastes are returned to the land, often times with the land serving as a convenient nearby sink. The effectiveness of available methods and equipment for processing the total raw mate-

rials and often the nature of the raw materials themselves have much to do with the value and marketability of raw agricultural materials.

Urban and Industrial Wastes Produced in Communities under 5,500 Population.—The well being and development potential of small rural communities are closely linked with the adequacy of basic community services. Financial and other assistance is needed for meeting the solid waste problems of rural communities that lack adequate resources to do the full job.

Discarded Products Derived from Raw Agricultural Materials.—A major portion of the nation's solid wastes are products derived from raw agricultural materials. Recycling of these materials has great significance as an approach to solid waste problem. Wood fiber is a case in point.

Fifty million tons of wood fiber in the form of waste paper products are discarded in municipal trash each year in the United States. Eighty percent of this is disposed of by incineration, composting or landfill resulting in a waste of a potential source of wood fiber, and the pollution of air, water, and land with a particular impact on potential agricultural land. The Department of Agriculture has a vital interest in re-using this paper to abate pollution, enhance our economy and self-sufficiency and to conserve timber. The annual volume of unused waste paper in the U.S. is equivalent to 80 million cords of wood or the annual growth of from 80 million acres of timber land.

Unusable Pesticides and Containers.—Large concentrations of industrial pesticide wastes and smaller amounts of despoiled pesticides pose extremely difficult disposal problems. Likewise, millions of empty pesticide containers add to the potential for polluting the environment. Decontamination, destruction or other disposal of unusable pesticides and containers are major unsolved problems.

Site or Facility Selection and Development, Management and Rehabilitation of Landfills, Lagoons, and other Means of Disposing of Solid Wastes in the Countryside.—There are numerous examples of a lack of adequate technical assistance for locating, constructing, and operating solid waste disposal systems in the countryside. Failure to take into account inherent soil characteristics and other definable environmental considerations and the lack of comprehensive land use plans usually lead to unsightliness and pollution, with undesirable consequences for surrounding areas.

Trash, Garbage and Other People Wastes Deposited in the Countryside.—Ever growing numbers of people are visiting the countryside—national forests, lakes, streams and other scenic and recreational areas and facilities. These ever-increasing activities add to solid waste accumulations. These require organized collection and disposal efforts.

Sediment as a Waste in Solid Form When It Comes to Rest.—Sediment is defined as solid material, both mineral and organic, that has been moved from site of origin by water, ice, air or gravity. When sediment comes to rest in unwanted places, it becomes a solid waste. On the average 4 billion tons of soil material are moved from place to place each year. A major portion of it comes to rest in areas where it is considered a harmful solid waste material.

In quantity sediment constitutes the Nation's greatest single solid waste material. To control it means keeping soil in place.

STATEMENT OF NED D. BAYLEY, DIRECTOR OF AGRICULTURE, BEFORE THE SUBCOMMITTEE ON AIR AND WATER POLLUTION, COMMITTEE ON PUBLIC WORKS, UNITED STATES SENATE, ON S. 2005, RESOURCE RECOVERY ACT OF 1969, ON OCTOBER 1, 1969

Mr. Chairman and Members of the Committee:

Solid waste disposal and natural resource recovery are of vital concern to the programs and responsibilities of the Department of Agriculture. Thank you for this opportunity

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to present the views of USDA as part of your consideration of S. 2005 and related legislation.

Although the Department of Agriculture supports the objectives of S. 2005, we recommend that only an extension of the present authorities in the Solid Waste Act be enacted. Because our responsibilities for nonrenewable materials are limited, we have no comment on proposed Amendment No. 153 to S. 2005. The report of the Department of Agriculture on S. 2005 points out that we believe existing authorities available to USDA and other Federal Departments generally can give appropriate emphasis to solid waste disposal.

I would like to describe for you the ongoing solid waste efforts of the Department of Agriculture, and briefly discuss our various waste disposal programs.

The Department of Agriculture is the principal Federal Department with authority and responsibility for programs concerned with Rural America—its people and its resources. We are charged not only with assuring a continuing supply of food and fiber to meet America's needs, but with maintaining a healthful, viable and attractive countryside for the benefit of urban and rural people alike.

This mandate directly involves us in the solid waste problem. The production, processing, transportation, and marketing of farm and forest products creates vast quantities of solid wastes. Disposal of these wastes, and those brought to the countryside from urban areas, directly affects the beauty and utility of rural areas.

There are several kinds of solid wastes and related pollutants we have to deal with.

According to our understanding of the definition of solid wastes as set forth in the Solid Waste Act, the most pressing problems of concern to the Department of Agriculture include:

1. Forest and crop residues;
2. Waste from industrial processing of raw agricultural products;
3. Animal wastes;
4. Unusable pesticides and containers;

5. Solid wastes from rural communities;

6. Trash and garbage discarded in the countryside;

7. Urban and industrial wastes from which agricultural materials may be reclaimed or used; and

8. Waste disposal sites.

Our objectives are to prevent or minimize production of agriculture-related wastes, and to improve the handling, treating, storing, and disposal of these wastes. We want to use, reclaim, and reuse as much waste material as is possible. Underlying the objectives is the goal of minimizing the adverse impact of solid wastes on the environment, and enhancing the environment wherever possible.

We use various mechanisms in carrying out our solid waste disposal programs. There are both direct and cooperative programs of research, as well as education, information, technical and financial assistance including cost sharing. Under our financial assistance authorities, loans and grants have been made to local communities, nonprofit associations and others in rural areas for solid waste handling and disposal. We also deal directly with growing solid waste problems arising from lands and facilities administered by the Department of Agriculture—including the 187 million acre National Forest System.

Most of our solid waste programs are described in the appendix to our report on S. 2005. I will highlight a few of these for you to illustrate how we are using the various program mechanisms to solve specific solid waste problems.

Forest and Crop Residues.—The annual accumulation of forest and crop residues has been estimated to be about 575 million tons. These residues result from harvesting operations and natural accumulations, such as pest damage and natural deterioration. Forest and crop residues can be serious contributors to air, soil, and water pollution. They serve as reservoirs of plant diseases, insects and rodents.

Our research on this solid waste problem includes: breeding of crop and tree varieties and improvement of culture practices to minimize residues; methods of decomposition of crop residues; more efficient methods for disposal of logging waste; and ways to use greater amounts of logging and wood manufacturing wastes.

Our action program on disposal of forest and crop residues includes: prescribed burning of residues in National Forests to prevent wildfire; cost sharing conservation measures which utilize crop residues; and education and information activities—instruction, training, publications and visual aids—that combine up-to-date technology with day-to-day agricultural practices.

We are assisting victims of hurricane Camille through the Emergency Conservation Program by providing financial assistance up to 80 percent of the cost for removing debris from crop and pasture lands, orchards, and forests.

Animal Wastes.—The animal waste problem is massive. It involves land, water, and air pollution. Corrective technology must not only meet increasingly stringent environmental quality criteria and assure no interference with product wholesomeness but it also must be within production costs that the consumer is willing to pay.

Some of our cooperative USDA and State Agricultural Experiment Station research is directed to the development of needed new technology. We are working on the disposal of wastes from swine, poultry, beef, and dairy operations. We are investigating means by which greater use may be made of agricultural cropland and other land sources in the disposal of animal wastes. Other uses of animal wastes are also being explored.

Within our overall financial assistance programs, we have made loans and grants for animal waste disposal systems. Our educational and technical assistance programs involving such agencies as the Cooperative Extension Service and the Soil Conservation Service have been working closely with livestock producers and pollution control officials to bring about ameliorization of pollution through existing technology.

Solid Wastes From Rural Communities.—The well-being and development potential of small rural communities are closely linked with the adequacy of basic community services. In planning and developing these services for communities lacking adequate resources to do the full job on their own, we consider the need for financial and other assistance to meet solid waste problems.

USDA grant assistance can be provided to communities under 5,500 population in amounts up to 50 percent of the development cost of a waste disposal system. Grants can also be made up to 100 percent of the cost of comprehensive area planning of development of water and sewer systems in rural areas. To dovetail Federal waste disposal assistance programs, we joined other Departments in developing an effective coordination system. This includes the use of a common, uniform grant application form that not only simplifies grant applications but avoids overlapping and duplication of various agency programs.

Reclaiming Raw Materials.—Fifty million tons of wood fiber in the form of waste paper products are discarded in municipal trash each year in the United States. Eighty percent of this is disposed of by incineration, composting or landfill resulting in a waste of a potential source of wood fiber, and the pollution of air, water, and land with a particular impact on potential agricultural land. The Department of Agriculture has a vital interest in re-using this paper to abate pollution, enhance our economy and self-sufficiency and to conserve timber. The annual volume of unused waste paper in the United States is equivalent to 80 million cords of wood or the annual growth of from 80 million acres of timber land.

Our research program is developing practical ways to recover usable wood fiber from waste paper in municipal trash. The proposed system consists of shredding and pulping raw unsorted trash as it comes from the home to the collection point. This research, in its beginning stages, is proving workable and useful in complementary research activities of HEW and the Bureau of Mines. Research has also developed comprehensive knowledge of the physical nature and

mechanical properties of packaging and other materials derived from agriculture and forestry. We also have the capabilities to study decomposability and destructability of these materials.

I hope these few examples and the information in our report on S. 2005 will be useful to your Committee.

Agricultural and forestry enterprises have always borne the cost of disposing of wastes such as manure and forest slash. To the extent that these activities are intensified or new constraints are involved, our Nation must have new technology in order not to place undue burdens on production costs and on the ultimate costs to consumers. Capital investment requirements for some pollution abatement and solid waste agricultural and forestry handling operations have necessitated Federal assistance programs in the past and this need will grow in the future. Research programs must be properly oriented and supported to meet the resource management and recovery demands of the future.

I believe that I have described the involvement of the Department of Agriculture in conducting, planning, and coordinating the Federal solid wastes program. The Department is represented on a Solid Wastes Committee that was recently created by President Nixon's Environmental Quality Council. Through the mechanisms of this committee and other working groups, we are contributing our resources and talents in the solid wastes field to a total Federal effort directed at this pressing environmental problem.

Mr. McCLURE. Mr. Chairman, will the gentleman yield?

Mr. BROYHILL of North Carolina. I yield to the gentleman from Idaho.

Mr. McCLURE. Mr. Chairman, I commend the gentleman for raising the issue which I had some reference to earlier in calling to the attention of the House the role which the Department of Agriculture through the United States Forest Service and the Forest Products Laboratory at Madison, Wis., has been playing in the development of techniques by which wastes can be recycled. I have been to the laboratory and have seen the work they have been doing and have been told of other experimental work which includes automatic mechanical separation of waste products in the ordinary run of garbage going to the disposal site and the separation of those parts of it which are susceptible of recycling into paper.

The example the gentleman gives and the paper he showed the House just now is the result of that kind of very forward looking research on the part of the Forest Products Lab in Madison, Wis.

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It strikes me that the rather advanced technology which they have done on a rather experimental basis at that laboratory should have been recognized by specific appropriation to the Department of Agriculture. I am aware, as the gentleman from Florida stated, that there is a general provision in this bill for cooperation with other agencies by the Secretary of HEW, but there is a certain amount of realism necessary in respect to parochial jealousies between Departments of the Federal Government which may not bode well for the rather advanced role I believe the Department of Agriculture is capable of playing.

Again I commend the gentleman from North Carolina for bringing this matter to the attention of the House. It is a very significant contribution on his part.

Mr. WHITE. Mr. Chairman, will the gentleman yield?

Mr. BROYHILL of North Carolina. I am delighted to yield to the gentleman from Texas.

Mr. WHITE. I should like to call attention to what may be an omission in the bill.

On page 6 of the report there is language relating to communities and States wherein there are not at least 10 applications. The language reads:

If more than 10 eligible projects are applied for, the funds are to be distributed among at least 10 applicants. If grants for fewer than 10 such projects are applied for, the Secretary may use the funds for those eligible municipalities which have applied.

Then going over to page 14 of the report of the committee, which relates to section 208, subsection (d)(2) it says:

Of the sum granted for projects in any one State in any fiscal year, not more than 10 per centum shall be granted in such year for any single project in such State; except that in the case of a State for which less than 10 project applications which meet the requirements of this section have been submitted (prior to such date as the Secretary shall prescribe) for a fiscal year, at least 10 per centum of such sum shall be granted for each such project.

I believe that the committee has failed to put in there that in such event there are fewer than ten applications in such

a State then the amount shall be divided among the applicants, instead of limiting it to 10 percent. In the case of, let us say, Nevada or Wyoming, where they do not have many large communities, there may be only three or four applications. If we confine them to 10 percent, with only three applications there would be 70 percent of the funds sitting there that could not be used in that State for the particular period.

Mr. BROYHILL of North Carolina. I appreciate the gentleman's contribution. I should like to yield the floor and let the gentleman from Florida, the gentleman from Oklahoma and the gentleman from West Virginia respond.

Mr. WHITE. I believe the intention is probably set forth in the descriptive language earlier in the report, and that the intention is to divide it, but I believe it needs to be in the language of the bill.

Mr. BROYHILL of North Carolina. I thank the gentleman.

Mr. STAGGERS. Mr. Chairman, I yield myself such time as I may consume.

In response to the gentleman from Texas, I should like to say I thank him for making legislative history on the bill. This was put into the report to amplify the provision in the bill:

> If grants for fewer than 10 such projects are applied for, the Secretary may use the funds for those eligible municipalities which have applied.

This particular problem was referred to in committee by the gentleman from Illinois. I believe he used Chicago as an example. He wanted to prevent Chicago from taking all the funds, without other applicants getting any. We amended the bill and we agreed to add this language in the report.

Mr. WHITE. The gentleman does not feel it needs to be in the language of the bill?

Mr. STAGGERS. No; I do not.

Mr. Chairman, I yield such time as he may consume to the gentleman from Florida (Mr. ROGERS).

Mr. ROGERS of Florida, Mr. Chairman, I thank the gentleman for yielding.

I rise in support of this legislation. I believe Members will find that the public in their districts feel that this is one of the most significant pieces of legislation this Congress will pass.

We have not yet realized in this country, although a realization is coming about very quickly, the significance and the extent of the solid waste problem. We annually throw away in this country over 3.6 billion tons of waste, and it is costing us over $4.5 billion a year. We must have new techniques because we are simply running out of places and ways to handle the waste.

The administration testified that we can expect to double the amount of waste thrown away in this Nation within 8 to 10 years and there will be so much that we will not be able to build enough trucks to cart it away. So it is a very pressing problem that lives with every family in this Nation every day.

Now, there may be some areas in the Nation where they do not have too much of an air pollution problem, there may be some places in the Nation where they do not have too much of a water pollution problem—there may be no water or lakes around them—but you can be certain in every part of the Nation there is a problem of solid waste disposal.

We know that if we do not dump untreated wastes into our waters and if we halt runoff, then water pollution will stop. And we have the technology to greatly cut back on air pollution.

But as to this point in time, we do not have the technology to make our garbage disappear without leaving some unsavory byproduct. We still dump, burn or bury our solid waste. And we are running out of places to do this.

H.R. 11833 amends the Resource Recovery Act in order to provide financial assistance for the contruction of solid waste disposal facilities, to improve research programs in the realm of solid waste disposal and recycling methods, to establish special study and demonstration projects on recovery of useful energy and materials which have been discarded as solid waste, and to establish standards for solid waste collection and disposal systems.

Mr. Chairman and colleagues, it is estimated that more than 3.5 billion tons of solid wastes are being thrown away in this country every year and that the annual cost of handling and disposing of these wastes amounts of $4.5 billion. Annually, more than 360 million tons of industrial, municipal, and commercial solid waste are being generated and this amount is expected to double by 1980. It is also estimated that within a few years, Americans will discard each year more than 30 million tons of paper, 4 million tons of plastics, 48 billion cans, and 26 billion bottles.

During the past 30 years, solid wastes have been deposited by mining, milling, and processing to the extent that some 7,000 square miles of land have been covered or damaged—an area six times the size of Rhode Island.

In the most advanced, prosperous society man has ever known, I find it at best ironic and at worst inexcusable that at this point in time we are a nation capable of aiming rockets at the moon while we stand knee deep in garbage, surrounded by polluted air and water—all of which we have created ourselves.

We have in effect conquered the atom and outer space, but we are still stumped by the tin can and plastic bottle. American ingenuity has found it financially beneficial to involve itself with heavy packaging of its products and commodities so that often, the amount of material used in the packaging takes up more space than the product enclosed. We have dish detergents for a week's use in the kitchen, packaged in plastic containers which apparently may outlive all of us unless we develop more sophisticated methods of disposing and recycling solid wastes.

We may be passing the age of packaging drinks in returnable bottles which could be reused, and now are in the phase of throwaway bottles and flip-top cans. This trend toward convenience packaging is creating new problems for solid waste disposal which has changed the overall picture in our Nation in regards to the effectiveness of our present law in dealing with the problems. In every State of the Union, garbage and solid waste is being carted off as best as possible considering the present form of the law, and present methods of disposal. But, we have reached the point where we must find a major breakthrough in our handling of the problem if we want to live in a clean environment.

Most of the $4.5 billion spent annually in our Nation goes for collecting solid waste and transporting it to some place where it is dumped or burned, and most of the disposed solid waste goes to open dumps. Ninety-four percent of these dumps are inadequate to handle the large volume of wastes. Since the dumps are not always covered daily with dirt, they contribute extensively to water pollution of nearby streams, lakes, and rivers. Their burning of wastes also contributes heavily to air pollution, as does the mu-

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nicipal incinerator, which usually does not have antipollution devices, on its smokestacks. It is estimated that 75 percent of our municipal incinerators are inadequate to handle the disposal of the large volume of solid wastes.

If present collection and disposal methods are not improved, we will never solve our Nation's pollution problems. We must develop new technologies for disposing, reclaiming, and recycling materials in solid waste. We must also investigate the possibility of using solid wastes as a possible source of energy. We must also develop new methods of product packaging in order to reduce the amount of such waste disposed and to facilitate the disposal thereof.

Research and the development of new technologies to handle the problems of solid waste disposal is costly and our present level of funding for these programs is grossly inadequate to meet the needs of the próblem.

The purpose of H.R. 11833 is: First, to expand and intensify the development of new technologies for solid waste disposal; second, to promote greater initiative on the part of the States in assuming increas-

ing responsibilities for solid waste disposal programs; third, to stimulate the construction by States and municipalities of pilot facilities utilizing new and improved waste disposal technologies, and fourth, to conduct studies to determine economical means of and appropriate incentives for recovering useful materials and energy from solid waste, reducing the amount of such waste and facilitating the disposability of that waste through improved production and packaging practices.

The solid waste bill now on the floor will achieve these objectives through: First, studies, investigations, and demonstration projects conducted by the Secretary of Health, Education, and Welfare; and second, by construction grants to States and municipalities as well as interstate and intermunicipal agencies to contribute to the financing of pilot facilities utilizing new and improved technologies if the construction of such facilities is part of a State or interstate plan for solid waste disposal and is included in any comprehensive plan for the particular area or areas involved.

H.R. 11833 authorizes appropriations for a 3-year extension of the Solid Waste Disposal Act. Sums are authorized to be appropriated to the Secretary of Health, Education, and Welfare in amounts up to $83 million for fiscal 1971, $152 million for fiscal 1972, and $216 million for fiscal 1973. Sums are authorized to be appropriated to the Secretary of the Interior in amounts up to $17.5 million for fiscal 1971, $20 million for fiscal 1972, and $22.5 for fiscal 1973.

These sums represent drastically needed authorization levels to effectively meet the problems encountered by solid waste disposal. These sums are to be used for research, special study and demonstration projects, interstate and intermunicipal projects for solid waste disposal, grants for local, State, and interstate planning, and major construction grants to States, municipalities, or interstate and intermunicipal agencies to be used to build solid waste disposal and resource recovery facilities or to expand and improve existing facilities.

H.R. 11833 embodies several new sections to accomplish the purposes I have stated a few minutes ago. Section 205 would direct the Secretary of Health, Education, and Welfare to establish special study and demonstration projects on recovery of useful energy and materials, and to report the results of these investigations to the President and the Congress. Also new, section 207 authorizes planning grants to State, interstate, municipal, and intermunicipal agencies. These grants can be made for up to two-thirds of the costs for a project serving an area which does not include more than one municipality and up to three-fourths of the cost of a project which serves an area of two or more municipalities. An amount up to 50 percent of the cost of overseeing the implementation, enforcement, and modification of any project plan or proposal is authorized, in this section. Grants under this section are to be made if the Secretary of Health, Education, and Welfare finds that planning will not duplicate, but will be coordinated with other related planning activities.

Another new section is section 208 of the act which will provide grants to any State, municipality, or interstate or intermunicipal agency for the construction of projects utilizing new and improved techniques of demonstrated usefulness in reducing the environmental impact of solid waste disposal, promoting the recovery of energy or resources, or the recycling of useful materials. Such grants to a single municipality can be made up to 50 percent of the estimated cost of the project as determined by the Secretary and can be increased by an additional 25 percent in the case of more than one municipality sharing or benefiting from the project.

An additional very important new section is section 209 which directs the Secretary of Health, Education, and Welfare, within 18 months following enactment of this act, to recommend to the appropriate agencies standards for the collecting and disposing of solid waste materials, including systems for private use, which are consistent with health, air, and water pollution standards and which can be

adopted to applicable land use plans. These standards are to be developed in cooperation with appropriate State, interstate, regional, and local agencies.

If future generations of Americans are to inherit adequate, economical supplies of our natural resources, we must find new methods of disposing of solid waste materials more efficiently and more safely so that our environment will not be harmed during the disposal process. We must also encourage new design of material in packaging from a disposable standpoint. Lastly, we must realize that we are the source of solid waste; we are the litterers and polluters; and only we can help solve the problems of solid waste pollution and other forms of pollution by our attitudes and awareness of the problem. The individual must do what he can in an effort to refrain from adding to the solid waste problem. Congress at the same time, must give the Nation a comprehensive and effective program, and finances to support that program, to act as a means to enable our cities and rural areas to maintain a clean and safe environment for us to live in.

This bill is trying to solve that problem in a realistic manner. I urge the support of this measure.

Mr. HALL. Mr. Chairman, will the gentleman yield?

Mr. ROGERS of Florida. I will be glad to yield to the gentleman.

Mr. HALL. Mr. Chairman, I appreciate the gentleman yielding and I appreciate his statement.

I think that whether we call this the Reclamation and Recycling Act or the Resource Recovery Act or the Solid Waste Disposal Act—or whatever we call it—we do need to do some study and research to determine whether we are going to burn it up, or plow it under, or recycle it, or use it again like the Chinese have for hundreds of centuries, or whatnot. There is much good about this bill, and I want that understood before I comment further.

I think I have determined after careful review of the hearings and the committee report, why there are no departmental views in the report. This is simply because we are considering H.R. 11833 instead of H.R. 15847 or H.R. 15848. There is much deposition and there are many statements about different bills all through the hearings, as the gentleman himself pointed out to me on page 2. Then it refers to what the Surgeon General of the United States said; however, when you turn to that, he was not referring to solid waste disposal at all, but referring to the Clean Air Act. Then you turn to what the former Secretary of Health, Education, and Welfare stated, and he was not referring to this bill at all, but he was referring to the bill H.R. 15847.

Now, I do not want to quibble over words or testimony, but there is a great deal of difference in the administration's views which are missing in the committee report, and there is a question about the budget as well as the moneys that are capable of being expended. Nowhere in the hearings does it say that this is budgeted or is within the capability of either the Department of the Interior or the Department of Health, Education, and Welfare to expend wisely in the first year, second year, or whatever the authorization of these funds. It does say that they will continue as authorized until expended. The committee very wisely limited in the next 3 years the amounts that shall be spent unless, indeed, they are excessive. We have no testimony to the contrary from any of the departments.

Could the gentleman from Florida explain whether or not there was in fact any testimony or departmental views or Bureau of the Budget statement at any time about H.R. 11833 as such?

Mr. ROGERS of Florida. Well, actually they had prepared their statement on H.R. 15847; which Mr. Finch presented to the committee on page 284. This covered the whole subject. He also, of course, talks about other bills, but mainly

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it is geared to this testimony on H.R. 15847—Solid Waste Disposal—and H.R. 15848—the Clean Air Act.

These bills were considered at the same time and dealt with the subject of clean air and solid waste. We received the state-

ments on both of these bills for the convenience of the Department at one time. We have covered the Department's position in the testimony of the witnesses, and it is extensive testimony that I think the gentleman will find in the hearings for developing the program. Also, we asked the Department to present how the moneys would be spent. Now they have presented this information to the committee, some of which is found in the report.

So they have outlined for us how this money would be spent, what could be done, and it has been gone into, I feel, very thoroughly. I think the gentleman from Missouri will be pleased with the legislation. It is necessary. It is a continuation, I am sure the gentleman knows, of ongoing programs.

Mr. HALL. Mr. Chairman, if the gentleman will yield further, I, too, have read in detail the page cited by the gentleman, which is directed toward H.R. 15847 and which deals with solid waste disposal, while H.R. 15848 deals with clean air.

Mr. ROGERS of Florida. That is exactly what I said. I said the Department presented the two statements together.

Mr. HALL. Well, then, would the gentleman please outline for me the total differences between H.R. 15847 and H.R. 11833, or tell me there is no difference?

Mr. ROGERS of Florida. Well, there are some differences. The committee wrote the bill it wanted. We did not accept all of the administration's recommendations.

Mr. HALL. But the gentleman is not willing to delineate what the differences are, if any, inasmuch as the testimony from the Department is all in favor of one bill and you come out with a predated bill?

Mr. ROGERS of Florida. The Department had no construction program in the administration bill at all—no construction grants—and there is in the committee bill such grants in order to permit new techniques to be developed as was explained by the gentleman from Illinois (Mr. SPRINGER) in his discussion of exactly what the bill does. I would say that is the major difference. It is, however, not the intention of the committee that grants be used to duplicate techniques which private industry has already developed and operating in a reasonable and feasible manner.

Mr. HALL. Mr. Chairman, if the gentleman will yield further, then it does follow, of necessity, that the committee is seeking a comment on the later bill, H.R. 15847, which it did not accept, but used its own predated bill, H.R. 11833, which added the construction and "brick and mortar" portion on which the Departments have not commented; is that a correct statement?

Mr. ROGERS of Florida. I think the gentleman will find there was a discussion with witnesses of all this, as to what needed to be done.

I might say for the enlightenment of the gentleman that the Secretary himself did not appear, unfortunately, but he did have his Department people appear. In my opinion the committee has gone into a thorough discussion with all the experts in the field.

Mr. HALL. Mr. Chairman, if the gentleman will yield further, I am willing to admit—and I am not being just the Devil's advocate; I am simply trying to learn, because as I said in the beginning, I think I am in favor of this bill, but, we do not want any more legerdemain that will lead to a possible vote coming up here as the result of quick action at a sparsely attended session of the Committee of the Whole House on the State of the Union. I am simply trying to find out because the Secretary himself did not testify, although I am willing to accept Mr. Veneman's testimony as substitute testimony on behalf of the Secretary before this distinguished committee. However, he simply ends up by saying he wants to reaffirm the passage of the administration bill which does not contain "brick and mortar," and therefore we end up in the same position we are in otherwise, a dubious one at best.

Mr. ROGERS of Florida. Well, that is basically the difference. I might say this—that the committee in the bricks and mortar section tried to stress that there should be new techniques, and not just the old way of going out and burning in an open field, but to try to bring in new technologies.

Mr. HALL. I am familiar with some of the new techniques. Could the gentleman tell us how much difference there is in the funding of the committee bill, H.R. 11833, and that on which the Secretary testified, H.R. 15847?

Mr. ROGERS of Florida. I thought the point had been made earlier, but I will restate it: The Department is open ended, and they do not have any figure, just as much as they want, but our committee does not operate that way.

Mr. HALL. But you do not have the bricks and mortar here.

Mr. ROGERS of Florida. But inasmuch as their program is open ended in all that they ask for, what we have done is put in a limitation. And we do this in our committee because, rather than coming to the House and saying it is going to be open ended, and whatever the Department wants it may have, we do not believe in operating that way. And I think the gentleman feels that we certainly should not, and therefore the committee put on a limitation, and we can let them come back to us and explain what they are doing, and whether they need to go over the limitation, or if it is not used, then we can reduce it at a later time. That is the approach we try to take.

Mr. HALL. I agree with the point that the gentleman makes that it should never be open ended, and I am sure personally that we should not say that the funds should be authorized until expended.

Mr. ROGERS of Florida. I think the gentleman is correct on that statement also.

Mr. McCLURE. Mr. Chairman, will the gentleman yield?

Mr. ROGERS of Florida. I yield to the gentleman from Idaho.

Mr. McCLURE. Mr. Chairman, I thank the gentleman for yielding, and I want to thank the gentleman for the assurances that were made a few moments ago with respect to interdepartmental cooperation that would guarantee further support for the on-going efforts of the U.S. Forest Service and the Forest Products Laboratory at Madison, Wis., and other programs of the Department of Agriculture. I would like to ask a few questions on another subject. Was the committee able to conclude or draw any conclusion from the testimony as to at what point in the cycle assistance can best be given in the recovery of scrap automobiles?

Mr. ROGERS of Florida. Yes; this was gone into, and I think we are making considerable progress in this regard. There have been a number of companies that have developed a machine that can crush the automobiles. Some of the techniques first strip the automobiles and then crush them so that they can be reused by the steel industry. This is now being done.

Also there is work going on to try to remove copper. Some of the copper that is used in the automobiles, which really prevents the automobiles from being crushed down and used right off by the steel industry. To remove copper from autos will reduce the cost of reclaiming autos because the steel industry says that too much copper in the waste material is harmful to their process. So they are doing research now, very active research in trying to see if this problem can be answered. We are making great progress into new methods to get to the problem of disposing of automobiles, and this bill I think will advance this very rapidly.

Mr. McCLURE. Mr. Chairman, will the gentleman yield further?

Mr. ROGERS of Florida. I yield further to the gentleman from Idaho.

Mr. McCLURE. Mr. Chairman, I would thank the gentleman for yielding me this additional time, and then state to the gentleman that I have spent a good deal of time in the last several months studying this problem, and the economics of scrap recovery from used automobiles, such as the problem of transportation, the problem of capital investment in the baler or crusher, as well as the shredder, and also the capital investment required for the smelting and refining process.

The Bureau of Mines has recently come up with a new burning process that is said to eliminate the threat of air pollution, and which would require, however, the capital investment that is inherent in any such procedure. It struck me that

there are a number of critical points, one being transportation, one being capital investment, and one the technology itself, which can yield the highest degree of recovery with the least amount of side effects such as air pollution. I am hopeful that this program that is outlined in this bill will lead to pinpointing the points at which the Government can stimulate the economic activities to indeed get these junkyards cleaned up and get the scrap materials back into the mainstream of industry.

Mr. ROGERS of Florida. I thank the gentleman and I want to assure him that it is the intent of the legislation.

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Mr. McCLURE. I thank the gentleman.

Mr. STAGGERS. Mr. Chairman, I yield to the gentleman from Texas, a member of the committee.

Mr. PICKLE. Mr. Chairman, I rise in support of the bill, H.R. 11833.

Mr. Chairman, this legislation today bears the imprint and the thought of the Interstate and Foreign Commerce Committee. Throughout the hearings and during the executive sessions, I have been privileged, as a member of the committee, to work with a group of dedicated legislators who can readily translate their concern for the environment into legislative action.

This bill today is one of several that have originated within our committee. In the last few weeks, we have enacted legislation setting up the Joint Committee on Environment, which I cosponsored, and the Clean Air Act.

This Resource Recovery Act was successfully drafted with the same intent as the other bills. We need this bill we are considering today. By our action, we are amending the Solid Waste Disposal Act so that funds will be provided for the construction of solid waste disposal facilities—and for much needed research programs.

Through the Department of Health, Education, and Welfare, we have the opportunity to use this legislation to reach our objectives. We can set up study programs, investigations and demonstration projects. Then, we can supplement what we learn in these projects with the construction grants to State, regional and local governments. In this way, the Federal Government is directly sharing the responsibility to finance pilot projects using our new-found technology.

Just perhaps through the machinery set up in this bill, just perhaps we can find a use for some of the 369 million tons of solid waste materials. We had better, because our waste tonnage is expected to double by 1980.

Mr. Chairman, this legislation is tangible proof that the Commerce Committee is not content to talk about the problems of our environment. Rather, we are actively engaged in finding solutions.

Ironically, in this age of such technological skills available through computers, too many look at the stars and try and count them on their fingers. To my thinking, we have plugged in some long-needed technical help today.

Mr. BENNETT. Mr. Chairman, I rise in support of this measure, and congratulate the gentleman from Florida (Mr. ROGERS), for his leadership in this important field of disposal of solid wastes; a problem which has long needed closer scrutiny by our Government. The challenge is to eliminate the solid wastes, to reuse the natural resources involved, and to cut the costs now being experienced in the abortive procedures that are now being used in this field. Hopefully all of these objectives can be achieved by the legislation before us. I was one of the original introducers of legislation in this field and I sincerely hope that this perfected legislation may become law.

Mr. SKUBITZ. Mr. Chairman, solid waste disposal has emerged in the last few years as a major problem both from the standpoint of the environment and the economy. Local governments are more and more finding themselves incapable of coping with the vastly increased volume of solid waste. All of the known and tried methods of handling trash are out of date and inadequate. Landfills and incinerators create as many problems as they solve. Junked automobiles, throw-away contain-

ers, and plastic packages are substances which defy disintegration. Aluminum beer cans loom in the headlights of automobiles forever after.

The bill before us today, H.R. 11833, is aimed at reducing the amount of solid waste, finding new ways to handle it and perhaps recover useful material therefrom. To do any of these things we must first of all know considerably more about the problem than we do today. The bill, therefore, provides for a comprehensive study which will explore the means of recovering useful materials from discarded items. It will also include a study of better packaging methods and ways to create incentives for research, industries, and governments to handle the problems more effectively.

As new methods emerge, demonstration projects will be carried out by the Federal Government to take the kinks out of them. Money will be available to States and cities if they will make serious efforts at planning waste disposal programs. All of these things thus far described will not happen overnight and there is no point in assisting or encouraging the methods which today are not working.

As methods become available and plans are made, grants will be available to cities or combinations of cities to build installations using these new methods. The bill does provide that funds for construction grants may not be concentrated in any one area and that not more than 15 percent of available funds may go to any one State. Within one State the money must be spread around if there are several suitable projects worthy of assistance.

The bill divides the authorizations in two parts. The Department of the Interior gets funds to use in the area of minerals and fossil fuels. This amounts to $60 million over a 3-year period. The Department of Health, Education, and Welfare which will administer the bulk of the grant programs I have described will be authorized to request a total of $451 million over the 3-year period.

This program like others to protect and preserve our environment must go forward. Unlike many such programs this one does not deal with invisible and insidious dangers but with readily evident and increasingly annoying junk. As a member of the Committee on Interstate and Foreign Commerce from which this bill was reported I want to lend my support, and recommend it to the House.

Mr. TIERNAN. Mr. Chairman, to date, Americans have shown too little concern for the preservation of the natural resources that God gave us in such abundance. We have polluted our air and our water and now we are threatened with being buried in our own solid waste. We are in desperate need of innovative outlooks on the problem of resource recovery and solid waste disposal.

We have passed the time for debate and dialog on this issue; we must now take action to insure that technology is put to use to reclaim and recycle usable materials and energy from such solid waste. Back in 1969, I introduced a bill on solid waste very similar to H.R. 11833. At that time there was little interest for this type of innovative bill. Today I hope we better understand the dimensions of the problem.

The figures are overwhelming. It is estimated that Americans, in a typical year, throw away 48 billion cans, 26 billion bottles, 100 million rubber tires, 30 million tons of paper, and 4 million tons of plastic. In addition, more and more items are coming in plastics which do not decompose and cause noxious fumes when they are burned.

H.R. 11833 is aimed at finding the best ways to reuse solid waste material. Try as we might, we cannot continue indefinitely to burn, bury, or throw away our solid waste material. Effective management of this problem is absolutely necessary. By recycling our solid waste products, we might eventually live in a junkless civilization. We buy, we use, and we throw away. If we continue with this same process, we will soon drown in our own trash.

I support H.R. 11833, for it attempts to expand and intensify the development of new technologies for solid waste disposal and attempts to promote greater initiative on the part of the States in assuming

increasing responsibilities for solid waste disposal programs. In addition, the bill will try to stimulate the construction by States and municipalities of pilot facilities utilizing new and improved waste disposal technologies.

The time has come for us to devise new and more effective means of resource recovery. This bill is a step in that direction and can serve as the vehicle which may save us from our own lack of foresight. Billions of dollars in raw materials are now being wasted. We can no longer afford this waste. This bill will help us meet this pressing problem. I urge my colleagues to join with me in supporting this vital legislation.

Mr. MINISH. Mr. Chairman, I strongly advocate passage of the Resource Recovery Act before the House today.

This measure amends the Solid Waste Disposal Act to stimulate pilot facilities using improved waste disposal technologies, in addition to expanding technologies appropriate for solid waste disposal and developing incentive programs for the recovery and recycling of solid waste into energy and usable matter.

Although this Nation is generating solid waste at a rate estimated to be 360 million tons, we are told that this amount will double within the next decade. Moreover, although we are spending $4.5 billion annually to manage this waste, the sum is inadequate to cope with the problem.

Presently, expenditures serve mainly to provide for solid waste collection and transportation. While open dumping is

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the most prevalent method for disposing of solid waste, studies have indicated that 94 percent of the open dumping facilities are inadequate since the waste is either improperly covered or else creates a water pollution problem. Incineration, the second most frequently used method employs municipal incinerators, 75 percent of which are estimated to be inadequate, or air polluters or both.

A new approach and new technology may prove to be the answer; it is doubtful that more trucks or land-fill areas can suffice for long.

The Congress recognized the need for a concerted program in 1965 when it enacted the Solid Waste Disposal Act to accompany efforts to reduce air pollution. The legislation we are considering today would amend the 1965 legislation by strengthening it by providing more funds to regions of the country requiring assistance, and by increasing the percentage of Federal money for relevant projects and construction grants. Moreover, today's legislation calls for appropriate standards for the development of solid waste collection and disposal systems by the Secretary of Health, Education, and Welfare within 18 months following enactment of this measure. Private systems would be included. Such standards would be consistent with health, air, and water pollution standards. Additionally, the Health, Education, and Welfare Secretary would be authorized to recommend model codes to implement such recommendations.

In order to contend with the growing amount of solid waste we must not only develop and apply new methods to collection and disposal, but must discover how to process and recover usable energy and materials as well. The only way to reduce the amount of waste and unsalvageable materials is to recover and utilize the resources within solid waste. This legislation is a step in the right direction.

It is important that we act swiftly, for the rate of solid waste increment seems to rise geometrically and there is no time to lose.

Mr. NELSEN. Mr. Chairman, I sincerely hope that every Member of Congress has had the opportunity to read the report which accompanies H.R. 11833, the Resource Recovery Act of 1970, to the House floor today.

The facts brought out in this report, compiled by the House Interstate and Foreign Commerce Committee on which I serve, point compellingly to the need for the type of legislation which we are recommending. As the report indicates, the United States is generating some 360 million tons of industrial, municipal, and

commercial solid waste, an amount that is expected to double by 1980. It is costing the Nation $4.5 billion annually in an effort to treat this waste, primarily by burial or burning.

Yet, alarmingly, present modes of solid waste treatment are not adequate, and are often inferior. Insofar as open dumping facilities are concerned, for example, 94 percent are considered substandard, tending to worsen air and water pollution through ineffective burning or burial techniques. As to municipal incineration, 75 percent of all municipal incinerators have been found to be inadequate due to inefficiency in reducing solid wastes to ashes as well as to resultant air pollution.

As our population grows, the present system of disposal for garbage, trash, and other solid wastes will obviously worsen unless new techniques and technologies can be developed. New ways must be found to recycle and reuse those materials, such as wood, metal, and plastics, which can be salvaged.

In order to carry out these urgent objectives, the Resource Recovery Act is designed to expand and intensify research and construction of experimental pilot programs connected with solid waste disposal, and to promote greater initiative within the 50 States in meeting solid waste pollution problems.

There is great awareness throughout the Nation of the need to move diligently to clean up our polluted environment. The measure before you today is one of the means required to do the job with any degree of success. As such, it is of major importance to the American people. I am proud of the role played in its development by the public health and welfare subcommittee on which I serve as ranking minority member, and I urge your support for its provisions.

Mr. MONAGAN. Mr. Chairman, I support H.R. 11833, the Resource Recovery Act of 1970. I have long been concerned with the threat presented by the problem of the disposal of solid wastes, and I view with increasing alarm the danger these pose to our environment and to our national health. Earlier in this session of Congress I pointed out that our present high standard of living is dependent upon the capacity of the American people to consume products, and the consumption of these products necessarily generates wastes. As our level of affluence rises, and greater sums are spent to purchase more and more goods, the net result is the creation of even larger amounts of trash and garbage.

The United States generates approximately 360 million tons of solid waste every year. Every man, woman, and child in this country creates 5.3 pounds of garbage a day, and that figure is expected to rise to 8 pounds per day by 1980. In my own State of Connecticut, the production of solid waste will almost double in the next decade, rising from 2,970,000 tons this year to an estimated 5,573,000 tons in 1980. In our attempts to eliminate this avalanche of rubbish we in the United States spend $4.5 billion per year on the collection and disposal of waste materials; despite this vast expenditure we only rid ourselves of half the waste we produce, and existing disposal methods are extremely harmful to the environment. By burying our garbage, we have corrupted our soil to the extent that an area almost one and one-half times as large as my own State of Connecticut has been rendered near useless by garbage dumpings.

Buried garbage seeps into underground streams, polluting our waters as well. If current projections are correct, it will soon be very difficult to dump any garbage at all, for within the next 5 to 10 years our major cities will have completely used up their garbage burial areas. Because the burning of rubbish is one of the major causes of air pollution in the United States today, incineration presents no real practical solution to the problem. Garbage is thus finding its way into our air, our soil, our streams and rivers, and by destroying our environment it is directly affecting our physical well-being. The U.S. Public Health Service has established that a direct link exists between solid waste materials and 22 human diseases. Solid wastes present a clear and present danger to the Nation's health, and the immediacy

of the danger demands the development of new techniques and methods to bring about its elimination.

To combat the danger I have several times urged that the Federal Government, in conjunction with State and local governments, take positive steps toward finding a true solution to the problem of solid waste disposal. I have recommended that a solid waste management program to coordinate all research now being done on that subject be established under the aegis of the Secretary of Health, Education, and Welfare. I have asked, too, that the Secretary be requested to compile a national inventory of both solid waste management needs and problems of solid waste management technology. Title III of my H.R. 13826 provided for the establishment of just such a coordinating effort.

I feel that H.R. 11833 is a further step in the right direction. First of all, it confronts the problem with the most effective weapon which this Government can wield —the use of funds. As I have often pointed out in the past, the only true solution to the problem of pollution is the allocation of moneys with which new programs may be undertaken, and new methods devised. H.R. 11833 accomplishes both of these objectives.

By authorizing the spending of $800 million over a 5-year period, it provides a firm financial base upon which to construct research and development programs to tackle the problem head on. The research programs proposed in the bill encompass all three aspects of the solid waste situation. First, in what may be called an attempt at preventive medicine, it authorizes studies to determine how the enormous amount of waste produced each year might be decreased; secondly, it provides for the examination of new techniques which would improve both the collection and the efficient and safe disposal of what waste matter does exist; finally, it sets up investigations into the possibilities of utilizing waste materials as a source of fuel and raw materials for industry. Research alone is not enough, however; programs are required to put into effect those methods which the research has brought forth. To this end, H.R. 11833 also provides for Federal grants to States and municipalities which seek to establish programs and projects designed to test out new and improved techniques of solid waste disposal. Most importantly, too, the bill directs the Secretary of Health, Education, and Welfare to create uniform national standards for solid waste collection and disposal.

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The answer to the entire problem of waste disposal lies in the ultimate reuse of most of what is discarded today, and I am pleased that this bill focuses on that key point. If we are successful in devising a system in which solid wastes are recycled into reusable raw materials, we not only will have met a serious threat to the Nation's health, but at the same time we will have done much to preserve the natural resources of the Nation for generations to come.

In accordance, therefore, with my previously set forth position of supporting legislation which will repair and protect our natural environment, and which will safeguard our health, I applaud H.R. 11833, and urge its prompt and speedy passage.

Mr. RYAN. Mr. Chairman, it has been estimated that in the 35-year period between 1965 and the year 2000, 10 billion tons of solid wastes will have been accumulated. Refuse, already at a level of 100 pounds per capita daily from all sources, will continue to increase as our population grows and our economy permits our citizens to acquire even more consumer goods.

Recognizing the seriousness of the problem, Congress in 1965 passed the Solid Waste Disposal Act, which authorized research, demonstration, training, and planning grants. However, it did not include grants for the construction of solid waste disposal facilities.

Since 1965, public awareness about the problem of solid wastes has vastly increased. Americans are now aware of the devastation of quality of their environ-

ment. They have begun to realize that there is a total responsibility—of the Nation as a whole—for the condition of our earth; that garbage and refuse in the streets, in the parks, in the waters, and elsewhere is the result of an unwillingness to make the commitment necessary to end pollution.

The 1965 act was not enough. For this reason, I introduced legislation to provide grants for planning and also to provide Federal financial assistance to municipal, intermunicipal, State, and interstate agencies for the construction of solid waste disposal facilities. In the 91st Congress, it is H.R. 642.

H.R. 642 recognizes the problem of solid waste disposal as a regional one. As with the problem of air pollution, the solid waste situation cannot be resolved by one political jurisdiction exclusive of its neighbor. With literally thousands of municipalities growing up next to each other, it is impossible in this day and age to use the town next door as a trash dump. Instead, areawide planning is necessary.

My bill assists local governments in developing solid waste disposal plans, but it requires them to cooperate with each other in establishing an areawide solution.

My bill aims at another problem of solid waste disposal—the fact that too many of our existing solid waste facilities are far from adequate. According to the Bureau of Solid Waste Management, today "approximately 12 percent of the residential population receives no formalized collection services, and that another 11 percent only partial service."

My bill provides for the Secretary of Health, Education, and Welfare to make grants for the construction of solid waste disposal facilities, including the completion and improvement of existing ones.

The two most common methods of disposal are dumping and incineration. Only 6 percent of the sites used for dumping can qualify for the term "sanitary landfill"—which means that there is a daily covering of dirt, no open burning, and no water pollution problems. If the rest of the Nation's landfills were to be upgraded, it is estimated that some $244 million of capital funds would have to be invested over a period of 10 years for equipment alone.

Incinerators present a picture that is not much brighter. Three-fourths of the municipal incinerators are inadequate from an air pollution standpoint or from the point of being reducers of masses of solid wastes.

H.R. 11833, the bill reported out of the Committee on Interstate and Foreign Commerce, which is before us today, is similar to H.R. 642 in that it takes an areawide approach and provides grants for planning. However, the construction grant program contemplated by the bill is too limited.

H.R. 11833 requires that a grant shall be made for a project "only if it utilizes new and improved techniques of demonstrated usefulness" for solid waste disposal, resource recovery, or recycling.

The language of the report—Report No. 91-1155—shows that the committee intends to restrict the construction grant program to pilot facilities utilizing new and improved technologies. The report speaks of a "highly selective grant program" to stimulate the construction of advanced disposal facilities—page 4. It states that the program is not a general grant-in-aid program but "an experimental one designed to assist in the financing of advanced solid waste facilities"—page 5.

While I believe the most advanced technology should be utilized, I do not believe this should be only a pilot or experimental program. Adequate technology is at hand so that perfectly acceptable facilities can be constructed for general use.

As my bill, H.R. 642 provides, there should be a Federal grant-in-aid program to assist in the cost of constructing solid waste disposal facilities, including completion and improvement of existing facilities.

The committee bill would authorize construction grants up to 50 percent of the cost of a project. Our local governments today are in severe financial straits. Many of them are virtually unable to make up 50 percent of such construction costs. Rising interest rates, dwindling municipal bond markets, and soaring construction

costs make it very difficult for municipalities to come up with the needed matching funds. For this reason, my bill provided that the Federal Government would pay up to 66⅔ percent of the construction cost. Although our cities still would have a difficult time making up the difference, I think the 66⅔-percent approach is far more realistic. In addition, both my bill and the committee bill provide Federal matching up to 75 percent if a project serves more than one municipality.

Unfortunately, the committee bill contains an unfair 15-percent restriction on the amount of funds which may be granted for projects in any one State. Such percentage limitations discriminate against the large industrial States with the most serious problems and should not be included in this or any other legislation.

Lastly, my legislation authorizes expenditures of $219 million more in fiscal years 1971 and 1972 than the committee bill—almost twice as much. Once again, we have the problem of whether Congress is going to back up its legislation with needed funds.

It is essential in solving the solid waste problem to spend the type of money that is necessary to tackle the problem. We must make that commitment if future generations are not to inherit a nation of garbage.

Mr. DON H. CLAUSEN. Mr. Chairman, I rise today in strong support of the legislation now before the House, the Resource Recovery Act of 1970.

The disposal of solid waste materials is placing a fantastic economic burden on local government—a burden, by the way, that few local governmental units can afford at this point in time.

We can and must provide the means whereby space-age technology can be employed to relieve the tremendous burden of solid waste disposal. Present facilities and methods are simply ineffectual and inadequate.

Each year, we are told, this Nation develops over 360 million tons of solid waste and we spend nearly $4½ billion annually to dispose of it. And yet, even with this tremendous expenditure, we are still doing an inadequate job of disposal.

We are polluting the air with the smoke from open burning and polluting the water by dumping in open areas and covering with dirt.

This is obviously totally unwise and unacceptable.

The majority of the funds expended for solid waste disposal are for collection and transportation of the waste to a dumping or burning area. We must now change the priorities and allocate sufficient funds to increase the current level of research into reclaiming and recycling of solid waste materials.

In addition, we must provide adequate economic incentives to make these activities attractive to private sector enterprises who manufacture those materials that end up as solid waste.

New and expanding technological advances can have a tremendous effect on the improvement of our environment for future living. This legislation, along with the Clean Air Act extension passed by the House 2 weeks ago, can be the catalysts that translate words into action proposals.

Each and every one of us have recognized the vital needs to clean up our environment, but all too often, we fail

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to provide the ways and means to accomplish those programs we espouse.

We have before us an opportunity to meet the commitment of assuring all Americans safe, healthful, productive, and aesthetically pleasing surroundings.

In the final analysis, we must, by our action here today, renew our dedication to creating an environment worthy of this and future generations.

Mr. SPRINGER. Mr. Chairman, I have no further requests for time.

Mr. STAGGERS. Mr. Chairman, I have no further requests for time.

The CHAIRMAN. Pursuant to the rule, the Clerk will now read the substitute committee amendment printed in the reported bill as an original bill for the purpose of amendment.

The Clerk read as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Resource Recovery Act of 1970".

SEC. 2. Section 203 of the Solid Waste Disposal Act is amended by inserting at the end thereof the following:

"(7) The term 'municipality' means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law and having jurisdiction over the disposal of solid wastes."

SEC. 3. (a) Section 204(a) of the Solid Waste Disposal Act is amended by striking out all that follows "solid-waste disposal programs," in such subsection and inserting in lieu thereof the following: "the reduction of the amount of such waste and unsalvageable waste materials, and the development and application of new and improved methods of collecting and disposing of solid waste and processing and of recovering usable energy and materials from solid waste (including devices and facilities therefor)."

(b) Section 204(d) of such Act is repealed.

SEC. 4. (a) The Solid Waste Disposal Act is amended by striking out section 206, by redesignating section 205 as 206, and by inserting after section 204 the following new section:

"SPECIAL STUDY AND DEMONSTRATION PROJECTS ON RECOVERY OF USEFUL ENERGY AND MATERIALS

"SEC. 205. (a) The Secretary of Health, Education and Welfare shall carry out an investigation and study to determine—

"(1) economical means of recovering useful energy and materials from solid waste, recommended uses of such energy and materials for national or international welfare, and the market impact of such recovery;

"(2) appropriate incentive programs (including tax incentives) to assist in solving the problems of solid waste disposal;

"(3) practicable changes in current production and packaging practices which would reduce the amount of solid waste; and

"(4) practicable methods of collection and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes. The Secretary shall from time to time, but not less frequently than annually, report the results of such investigation and study to the President and the Congress.

"(b) The Secretary is also authorized to carry out demonstration projects to test and demonstrate methods and techniques developed pursuant to subsection (a).

"(c) Section 204 (b) and (c) shall be applicable to investigations, studies, and projects carried out under this section."

(b) The Solid Waste Disposal Act is amended by redesignating sections 207 through 210 as sections 210 through 213, respectively, and by inserting after section 206 (as so redesignated by subsection (a) of this section) the following new sections:

"GRANTS FOR STATE, INTERSTATE, AND LOCAL PLANNING

"SEC. 207. (a) The Secretary of Health, Education, and Welfare may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of—

"(1) not to exceed 66⅔ per centum of the cost in the case of an application with respect to an area including only one municipality, and not to exceed 75 per centum of the cost in any other case, of—

"(A) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and

"(B) developing solid waste disposal plans as part of regional environmental protection systems for such areas, including planning for the reuse, as appropriate, of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites; and

"(2) not to exceed 50 per centum of the cost of overseeing the implementation, including enforcement, and modification of plans developed under paragraph (1)(B).

"(b) Grants pursuant to this section shall be made upon application therefor which—

"(1) designates or establishes a single agency as the sole agency for carrying out the purposes of this section for the area involved;

"(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to areawide planning for proper and effective solid waste disposal consistent with the protection of the public health, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal programs;

"(3) sets forth plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

"(4) provides for submission of a final report of the activities of the agency in carrying out the purposes of this section, and for the submission of such other reports, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary to assure the correctness and verification of such reports; and

"(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

"(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with, and not duplicative of, other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

"GRANTS FOR CONSTRUCTION

"SEC. 208. (a) The Secretary of Health, Education, and Welfare is authorized to make grants pursuant to this section to any State, municipality, or interstate or intermunicipal agency for the construction of solid waste disposal and resource recovery facilities, including improvement of existing facilities.

"(b) Any such grant—

"(1) shall be made for a project only if—

"(A) a State or interstate plan for solid waste disposal has been adopted which applies to the area involved, and the project is consistent with such plan, is included in a comprehensive plan for the area involved which is satisfactory to the Secretary for the purposes of this Act, and is consistent with any standards developed pursuant to section 209, and

"(B) it utilizes new and improved techniques of demonstrated usefulness in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials.;

"(2) shall be made (A) in amounts not exceeding 50 per centum of the estimated reasonable cost of the project as determined by the Secretary in the case of a project serving an area which includes only one municipality and not exceeding 75 per centum of such cost in any other case, and (B) only if the applicant is unable to obtain such amounts from other sources upon terms and conditions equally favorable;

"(3) shall not be made until the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project after completion;

"(4) shall not be made unless such project is consistent with the purposes of the Federal Water Pollution Control Act and the Clean Air Act; and

"(5) may be made subject to such conditions and requirements, in addition to those provided in this section, as the Secretary may require to properly carry out his functions pursuant to this Act.

"(c) In determining the desirability of projects and of approving Federal financial aid in connection therewith, consideration shall be given by the Secretary to the public benefits to be derived by the construction and the propriety of Federal aid in such construction, the relation of the ultimate cost of the project to the public interest and to the public necessity for the project, and the use by the applicant of comprehensive regional or metropolitan area planning.

"(d) (1) Not more than 15 per centum of the total of funds appropriated for any fiscal year and available for purposes of this section shall be granted for projects in any one State.

"(2) Of the sums granted for projects in any one State in any fiscal year, not more than 10 per centum shall be granted in such year for any single project in such State; except that, in the case of a State for which less than 10 project applications which meet the requirements of this section have been submitted (prior to such date as the Secretary shall prescribe) for a fiscal year, at least 10 per centum of such sums shall be granted for each such project.

"(3) The Secretary shall prescribe by regulation the manner in which this subsection shall apply to a grant under this section for a project in an area which includes all or part of more than one State.

"RECOMMENDED STANDARDS

"SEC. 209. (a) The Secretary of Health, Education, and Welfare shall, in cooperation with appropriate State, interstate, and regional and local agencies, within eighteen months following the date of enactment of the Resource Recovery Act of 1970, recommend to appropriate agencies standards for solid waste collection and disposal systems (including systems for private use) which are consistent with health, air, and water pollution standards and can be adapted to applicable land use plans.

"(b) In addition, the Secretary of Health, Education, and Welfare shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act."

SEC. 5. (a) Section 213(a) of the Solid Waste Disposal Act (as so redesignated by

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this Act) is amended by striking out "and" after "1969," and by inserting before the period at the end thereof the following:

", not to exceed $83,000,000 for the fiscal year ending June 30, 1971, not to exceed $152,000,000 for the fiscal year ending June 30, 1972, and not to exceed $216,000,000 for the fiscal year ending June 30, 1973. The sums so appropriated shall remain available until expended".

(b) Section 213(b) of such Act (as so redesignated) is amended by striking out "and" after "1969," and by inserting before the period at the end thereof the following:

", not to exceed $17,500,000 for the fiscal year ending June 30, 1971, not to exceed $20,000,000 for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973".

(c) Section 213 of such Act (as so designated) is further amended by adding at the end thereof the following new subsection:

"(c) Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other pay-

ments under any provision of this Act for any fiscal year beginning after June 30, 1970, shall be available for evaluation (directly, or by grants, or contracts) of any program authorized by this title."

SEC. 6. The amendments made by this Act shall be effective for fiscal years beginning after June 30, 1970.

Mr. GROSS. Mr. Chairman, I move to strike out the last word.

Mr. Chairman, I would like to get one thing completely clear from someone on this committee—and that is, whether the Bureau of the Budget approves the spending contained in this bill?

Mr. STAGGERS. Mr. Chairman, will the gentleman yield?

Mr. GROSS. I yield to the gentleman.

Mr. STAGGERS. The Bureau of the Budget does not express themselves one way or the other on the spending in this bill.

All of the views that were given and all of the testimony was generally on the administration bill as introduced by myself and the gentleman from Illinois (Mr. SPRINGER).

After hearing all of the witnesses and all of the testimony, the subcommittee came up with a new bill which they thought would be in the best interest of the Nation. That was done after hearing all of the testimony.

So the Bureau of the Budget did not express themselves one way or another.

Mr. GROSS. Yes, and that seems perfectly obvious even from a casual reading of the hearings. The Committee considered H.R. 15847 and H.R. 15848 and then came back to H.R. 11833 and brought that bill to the House floor.

Mr. STAGGERS. That is what the subcommittee did after their deliberations and it was certainly within their rights to do so after hearing all of the testimony and deciding that it was the best bill to bring to the floor, I am sure, in this instance.

Mr. GROSS. Well, we do not know whether events in the future will dictate a veto of this bill, on the basis that it exceeds the budget. We do not know what the future holds for this legislation in the way of acceptance at the White House.

Mr. STAGGERS. We have no indication of any such thing as a veto. We have consulted with the administration about the bill and I would certainly not think there would be a veto.

Mr. GROSS. Well, pollution and environment are fast becoming sacred cows. I would not know what to look forward to in the future.

The CHAIRMAN. The question is on the committee amendment in the nature of a substitute.

The committee substitute amendment was agreed to.

The CHAIRMAN. Under the rule, the Committee rises.

Accordingly the Committee rose; and the Speaker having resumed the chair, Mr. ABERNETHY, Chairman of the Committee of the Whole House on the State of the Union, reported that that Committee, having had under consideration the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes, pursuant to H.R. 1068, he reported the bill back to the House with an amendment adopted by the Committee of the Whole.

The SPEAKER. Under the rule, the previous question is ordered.

The question is on the amendment.

The amendment was agreed to.

The SPEAKER. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed and read a third time, and was read the third time.

The SPEAKER. The question is on the passage of the bill.

The question was taken; and the Speaker announced that the ayes appeared to have it.

Mr. SPRINGER. Mr. Speaker, I object to the vote on the ground that a quorum is not present and make the point of order that a quorum is not present.

The SPEAKER. Evidently a quorum is not present.

The Doorkeeper will close the doors, the Sergeant at Arms will notify absent Members, and the Clerk will call the roll.

The question was taken; and there were —yeas 339, nays 0, not voting 90, * * *.

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* * * * *

So the bill was passed.

* * * * *

The result of the vote was announced as above recorded.

The doors were opened.

A motion to reconsider was laid on the table.

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1.1d (4)(b) July 31, Aug. 3: Considered and passed Senate, amended, pp. 26696–26706, 26942

RESOURCE RECOVERY ACT OF 1970

The Senate proceeded to consider the bill (S. 2005) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes, which had been reported from the Committee on Public Works, with an amendment, to strike out all after the enacting clause and insert:

That this Act may be cited as the "Resource Recovery Act of 1970".

TITLE I—RESOURCE RECOVERY

SEC. 101. Section 202(b) of the Solid Waste Disposal Act is amended to read as follows:

"(b) The purposes of this Act therefore are—

"(1) to promote the demonstration and application of solid waste management systems which preserve and enhance the quality of air, water, and land resources;

"(2) to demonstrate on an areawide systematic basis techniques for resources recovery and the management of solid wastes, including systems for collection, separation, recovery and recycling of solid wastes, and the environmentally safe disposal of nonrecoverable residues;

"(3) to provide technical and financial assistance to States and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs;

"(4) to promote a national research, development, and demonstration program for improved management techniques, more effective organizational arrangements, and new and improved methods of solid waste collection, transport, and disposal including studies with emphasis on conserving and reducing wastes by separation, recovery, and utilization of potential resources in solid wastes; and

"(5) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems, and for training grants in occupations involving the design, operation, and maintenance of solid waste disposal systems."

SEC. 102. (a) Section 203(1) of the Solid Waste Disposal Act is amended to read as follows:

"(1) The term 'Secretary' means the Secretary of Health, Education, and Welfare."

(b) Section 203 of the Solid Waste Disposal Act is amended by inserting at the end thereof the following:

"(7) The term 'municipality' means a city, town, borough, county, parish, district, Indian tribe, or other public body created by or pursuant to State law and having jurisdiction over the disposal of solid wastes.

"(8) The term 'intermunicipal agency' means an agency established by two or more municipalities with responsibility for planning or administration of solid waste disposal or regional environmental protection systems.

"(9) The term 'recovered resources' means materials or energy recovered from solid wastes.

"(10) The term 'resource recovery system' means any solid waste management system which improves the application of technology for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues."

SEC. 103. (a) Section 204(a) of the Solid Waste Disposal Act is amended to read as follows:

"SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to—

"(1) the health and welfare effects of the environmental release of material present in solid waste and methods to eliminate any adverse effects;

"(2) the operation and financing of solid waste disposal programs;

"(3) the reduction of the amount of such waste and unsalvageable waste materials;

"(4) the development and application of new and improved methods of collecting and disposing of solid waste and processing and recovering materials and energy from solid wastes; and

"(5) the identification of solid waste components and potential materials and energy recoverable from such waste components."

(b) Section 204(d) of the Solid Waste Disposal Act is amended to read as follows:

"(d) There is hereby authorized to be appropriated to carry out this section, not to exceed $31,500,000 for the fiscal year ending June 30, 1971, not to exceed $40,500,000 for the fiscal year ending June 30, 1972, not to exceed $40,000,000 for the fiscal year ending June 30, 1973, and not to exceed $38,500,000 for the fiscal year ending June 30, 1974. Such sums as are appropriated shall remain available until expended."

SEC. 104. The Solid Waste Disposal Act is amended by redesignating sections 205 and 206 as sections 206 and 207, respectively, and by inserting after section 204 a new section as follows:

"LIMITATION ON GRANTS

"SEC. 205. No grant-in-aid shall be made under this Act to any private profitmaking organization."

SEC. 105. Section 207 of the Solid Waste Disposal Act, as redesignated by the previous section of this Act, is amended to read as follows:

"GRANTS FOR STATE, REGIONAL, AND LOCAL PLANNING

"SEC. 207. (a) The Secretary may from time to time, upon such terms and conditions as he finds appropriate make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of not to exceed 66⅔ per centum of the cost in the case of any single State or municipality, and not to exceed 75 per centum of the cost in the case of an area including more than one State or municipality (but less than an entire State), for the purpose of (1) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies, (2) developing and revising solid waste disposal plans as part of regional environmental protection systems for such areas, providing for recycling or recovery of materials from wastes whenever possible and including planning for the reuse of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites, (3) developing proposals for demonstration of resource recovery systems to be carried out pursuant to section 208 of this Act, or (4) planning programs for its removal and processing of abandoned motor vehicle hulks.

"(b) Grants pursuant to this section shall be made upon application therefor which—

"(1) designates or establishes a single agency (which may be an interdepartmental agency) as the sole agency for carrying out the purposes of this section for the area involved;

"(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to areawide planning for proper and effective solid waste disposal consistent with the protection of the public health and welfare, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, technological change, and the feasibility of regional disposal and resource recovery programs;

"(3) sets forth plans and budget for expenditure of such grant, indicating the compatibility of budget items with the purposes of this section;

"(4) provides for submission of such reports of the activities of the agency in carrying out the purposes of this section, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary to assure the substantial accuracy of such reports; and

"(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

"(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that so far as practicable, the planning of solid waste disposal will be coordinated with and not duplicate other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954."

SEC. 106. The Solid Waste Disposal Act is further amended by redesignating the last four sections in such Act as sections 213 through 216, respectively, and by inserting after section 207, as redesignated by this Act, the following new sections:

"DEMONSTRATION OF RESOURCE RECOVERY SYSTEMS

"SEC. 208. (a) The Secretary is authorized to make grants pursuant to this section to any State, municipal, or interstate or intermunicipal agency for the demonstration of resource recovery systems (including the improvement of existing systems).

"(b) Any such grant shall be made only if it (1) is consistent with any plans for resource recovery systems developed in accordance with the requirements of section 207(b)(2) of this Act; (2) is consistent with any guidelines developed pursuant to section

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209 of this Act; (3) is designed to provide areawide resource recovery systems consistent with the purposes of this Act, as determined by the Secretary, pursuant to regulations promulgated under subsection (c) of this section; and (4) provides an equitable system for distributing the costs associated with construction, operation, and maintenance

of any resource recovery system among the users of such system.

"(c) The Secretary, within ninety days after the effective date of this section, shall promulgate regulations establishing a procedure for awarding resource recovery system demonstration grants, which—

"(1) provides that projects will be carried out in communities of varying sizes, under such conditions and in such localities as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions and rural areas, under representative geographic and environmental conditions; and

"(2) provides a timetable for submission of plans and grant requests, and a timetable for approval of such plans and awarding of such grants.

"(d) In determining the eligibility of demonstration systems for grants under this section, consideration shall be given by the Secretary to (1) the public benefits to be derived by the construction and the propriety of Federal aid in such construction; (2) the economic and commercial viability of the project including contractural arrangements with the private sector to market any resources recovered; and (3) the potential of such project for general application to community solid waste disposal problems.

"(e) No grant for any demonstration system under this section shall exceed 75 per centum of the estimated total design, construction, and first-year operation and maintenance costs. No assistance under this section may be provided for operating or maintenance costs after the first year, nor shall any assistance be provided for land acquisition. The non-Federal share may be in any form, including, but not limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Secretary.

"(f) There is hereby authorized to be appropriated to carry out this section, not to exceed $20,000,000 for the fiscal year ending June 30, 1971, not to exceed $30,000,000 for the fiscal year ending June 30, 1972, not to exceed $50,000,000 for the fiscal year ending June 30, 1973, and not to exceed $55,000,000 for the fiscal year ending June 30, 1974. Such sums as are appropriated shall remain available until expended.

"RECOMMENDED GUIDELINES

"SEC. 209. (a) The Secretary shall, in cooperation with appropriate State, Federal, interstate, regional, and local agencies, allowing for public comment by other interested parties, as soon as practicable after enactment of this section, recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which shall be consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines shall apply to such systems whether on land or water and shall be revised from time to time.

"(b) The Secretary shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act.

"(c) (1) The Secretary shall issue to appropriate Federal, interstate, regional, and local agencies information on technically feasible solid waste collection, separation, disposal, recycling, and recovery methods, including data on the cost of construction, operation, and maintenance of such methods.

"(2) In disseminating such information, the Secretary shall employ models and visual demonstrations which can be transported to communities where such demonstrations would be a useful addition to ordinary sources of technological information, and provide funds to representatives of public and private solid waste disposal agencies or corporations for useful on-site review of solid waste disposal and resource recovery facilities and methods.

"TRAINING GRANTS

"SEC. 210. (a) The Secretary is authorized to make grants to, and contracts with State and interstate agencies, municipalities, educational institutions, and to any other organization which is capable of effectively carrying out a project which may be funded by grant under subsection (b) of this section.

"(b) (1) Subject to the provisions of paragraph (2), grants may be made to pay all or a part of the costs, as may be determined by the Secretary, of any project operated or to be operated by an eligible institution or organization, which is designed—

"(A) to develop, expand, or carry out a program of training persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities;

"(B) to train persons, including teachers, adult basic education personnel, and supervisory personnel, to train or supervise persons in occupations involving the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities; or

"(C) to carry out occupational training projects which involve a combination of training, education, and employment in the design, operation, and maintenance of resource recovery systems.

"(2) A grant or control authorized by paragraph (1) of this subsection may be made only upon application to the Secretary at such time or times and containing such information as he may prescribe, except that no such application shall be approved unless it—

"(A) provides such fiscal control and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant under this section, and provides for making available to the Secretary or his designate, for purposes of audit and examination, such books, documents, papers, and records as relate to any funds received under this section;

"(B) provides for making such reports, in such form and containing such information, as the

Secretary may require to carry out his functions under this section, for keeping such records, and for affording such access thereto as the Secretary may find necessary to assure the correctness and verification of such reports; and

"(C) provides for (i) a periodic examination of the effectiveness with which the goals set forth in the application are being met while the project is in operation; (ii) the conducting of such examination by an organization not affiliated with the institution or organization whose project is being examined; and (iii) furnishing a report of the results of such examination to the Secretary within thirty days after such examination is completed.

"(c) The Secretary shall—

"(1) encourage business with operations or products in the solid waste disposal and resource recovery field to participate in and cooperate with occupational training programs established with the assistance of grants or contracts made under subsection (b)(1)(C) of this section; and

"(2) disseminates information which relates to teaching and training methods, materials, and curriculums developed by projects assisted under subsection (b) of this section.

"(d) The Secretary shall make a complete investigation and study to determine—

"(1) the need for additional trained State and local personnel to carry out plans assisted under this Act and other solid waste and resource recovery programs;

"(2) means of using existing training programs to train such personnel; and

"(3) the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field which may limit either available manpower or the advancement of personnel in such field.

He shall report the results of such investigation and study, including his recommendations to the President and the Congress not later than one year after enactment of this Act.

"COOPERATION BY ALL FEDERAL AGENCIES IN THE CONTROL OF SOLID WASTE POLLUTION

"SEC. 211. (a) Each Federal agency having jurisdiction over any real property, facility or activity of any kind, shall insure compliance with guidelines developed under section 209 and the purposes of this Act in the administration of such property, facility, or activity.

"(b) Each Federal agency which leases any Federal property or facility of any kind or which contracts for the operation of any Federal property or facility or which contracts for the entire operation of any other facility, or which permits or licenses the use of any Federal property shall insure compliance with guidelines developed under section 209 and the purposes of this Act in the administration of such lease, contract, license, or permit.

"(c) Each Federal agency which issues any license or permit for disposal of solid waste, shall prior to the issuance of such license or permit consult with the Secretary to insure compliance with guidelines developed under section 209 and the purposes of this Act.

"NATIONAL DISPOSAL SITES STUDY

"SEC. 212. The Secretary shall submit to the Congress no later than two years after the effective date of this section, a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which may endanger public health or welfare. Such report shall include: (a) a list of materials which should be subject to disposal in any such site; (b) current methods of disposal of such materials; (c) recommended methods of reduction, neutralization, recovery, or disposal of such materials; (d) an inventory of possible sites, including existing land or water disposal sites operated or licensed by Federal agencies; (e) an estimate of the cost of developing and maintaining sites including consideration of means for distributing the short- and long-term costs of operating such sites among the users thereof; and (f) such other information as may be appropriate."

SEC. 107. Section 216 of the Solid Waste Disposal Act, as redesignated by this Act, is amended to read as follows:

"APPROPRIATIONS

"SEC. 216. (a) There is authorized to be appropriated for carrying out the provisions of this Act, other than those for which specific authorizations are made, such sums as may be necessary for the period ending June 30, 1974.

"(b) Such portion as the Secretary may determine, but not more than 1 per centum, or any appropriation for grants, contracts,

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or other payments under any provision of this Act for any fiscal year beginning after June 30, 1970, shall be available for evaluation (directly, or by grants, or contracts) of any program authorized by this title."

SEC. 108. The amendments made by this title shall be effective for fiscal years beginning after June 30, 1970.

TITLE II—NATIONAL MATERIALS POLICY

SEC. 201. This title may be cited as the "National Materials Policy Act of 1970".

DECLARATION OF PURPOSE

SEC. 202. It is the purpose of this title to enhance environmental quality and conserve materials by developing a national materials policy to utilize present resources and technology more efficiently, to anticipate the future materials requirements of the Nation and the world, and to make recommendations on the supply, use, recovery, and disposal of materials.

ESTABLISHMENT OF COMMISSION

SEC. 203. (a) There is hereby created the National Commission on Materials Policy (hereafter referred to as the "Commission") which shall be composed of seven members chosen from Government service and the private sector for their outstanding qualifications and demonstrated

competence with regard to matters related to materials policy, to be appointed by the President with the advice and consent of the Senate, one of whom shall be designated as Chairman.

(b) The members of the Commission shall serve without compensation, but shall be reimbursed for travel, subsistence, and other necessary expenses incurred by them in carrying out the duties of the Commission.

DUTIES OF THE COMMISSION

SEC. 204. (a) The Commission shall make a full and complete investigation and study for the purpose of developing a national materials policy which shall include, without being limited to, a determination of—

(1) national and international materials requirements, priorities, and objectives, both current and future, including economic projections;

(2) the relationship of materials policy to (a) national and international population size and (b) the enhancement of environmental quality;

(3) recommended means for the extraction, development, and use of materials which are susceptible to recycling, reuse, or self-destruction, in order to enhance environmental quality and conserve materials;

(4) means of exploiting existing scientific knowledge in the supply, use, recovery, and disposal of materials and encouraging further research and education in this field;

(5) means to enhance coordination and cooperation among Federal departments and agencies in materials usage so that such usage might best serve the national materials policy; and

(6) the feasibility and desirability of establishing computer inventories of national and international materials requirements, supplies, and alternatives.

(b) In order to carry out the purposes of this title, the Commission is authorized—

(1) to request the cooperation and assistance of such other Federal departments and agencies as may be appropriate;

(2) to appoint and fix the compensation of such staff personnel as may be necessary, without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of such title relating to classification and General Schedule pay rates; and

(3) to obtain the services of experts and consultants, in accordance with the provisions of section 3109 of title 5, United States Code, at rates for individuals not to exceed $100 per diem.

(c) The Commission shall submit to the President and to the Congress a report with respect to its findings and recommendations no later than June 30, 1973, and shall terminate not later than ninety days after submission of such report.

(d) Upon request by the Commission, each Federal department and agency is authorized and directed to furnish, to the greatest extent practicable, such information and assistance as the Commission may request.

SEC. 205. When used in this title, the term "materials" means natural resources intended to be utilized by industry for the production of goods, with the exclusion of food.

AUTHORIZATION OF APPROPRIATIONS

SEC. 206. There is hereby authorized to be appropriated the sum of $2,000,000 to carry out the provisions of this title.

TITLE III—RESOURCE RECOVERY INVESTIGATIONS

SEC. 301. (a) The Secretary of Health, Education, and Welfare shall as soon as practicable carry out an investigation and study to determine—

(1) means of recovering materials and energy from solid waste, recommended uses of such materials and energy for national or international welfare, including identification of potential markets for such recovered resources, and the impact of distribution of such resources on existing markets;

(2) changes in current product characteristics and production and packaging practices which would reduce the amount of solid waste;

(3) methods of collection, separation, and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes;

(4) the use of Federal procurement to develop market demand for recovered resources;

(5) recommended incentives and disincentives (including Federal grants, loans, and other assistance) to accelerate the reclamation or recycling of materials from solid wastes, with special emphasis on motor vehicle hulks;

(6) the effect of existing public policies, including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives, upon the recycling and reuse of materials, and the likely effect of the modification or elimination of such incentives and disincentives upon the reuse, recycling, and conservation of such materials; and

(7) the necessity and method of imposing disposal charges on packaging, containers, vehicles, and other manufactured goods, which charges would reflect the cost of final disposal, the value of recoverable components of the item, and any social costs associated with nonrecycling or uncontrolled disposal of such items.

The Secretary shall report the results of such investigation and study to the President and the Congress no later than two years after the enactment of this Act.

(b) There is hereby authorized to be appropriated to carry out this section, not to exceed $2,000,000 for the period ending June 30, 1972.

TRIBUTE TO SENATOR MUSKIE AND SENATOR RANDOLPH FOR RESOURCE RECOVERY ACT OF 1970

Mr. MANSFIELD. Mr. President, as the Senate considers this highly important measure it should have the benefit of the thoughts and remarks of the two Members

of this body who have provided the outstanding leadership that has been vital to this aspect of our environmental campaign. I refer, of course, to Senators ED MUSKIE of Maine and JENNINGS RANDOLPH of West Virginia.

By necessity, both Senators are occupied on business away from the Chamber this morning. They have prepared statements, however, which address every feature of the Resource Recovery Act with great depth and understanding. In summing it up, I note that Senator MUSKIE says:

> The intent of this bill is to stimulate the development of resource recovery methods which will provide for the more economic use of wastes.

That is truly a worthy goal, and, it must be said, that when achieved—when we solve the problems created by residue, by unusable byproducts, by litter and by all the useless materials that clutter our lives—it will have been because of the efforts of men like ED MUSKIE and JENNINGS RANDOLPH. The Senate is deeply grateful.

I ask unanimous consent, Mr. President, that these excellent statements of Senator MUSKIE and Senator RANDOLPH on this measure, along with certain attachments be printed at this point in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

STATEMENT BY SENATOR EDMUND S. MUSKIE, CHAIRMAN, SUBCOMMITTEE ON AIR AND WATER POLLUTION

Mr. MUSKIE. Mr. President, today the Senate considers the Resource Recovery Act of 1970, S. 2005. This bill marks a major new Federal commitment to recycling of materials and energy as an alternative to the wasteful and often environmentally damaging solid waste disposal practices of the past.

Solid waste is the residue of production and consumption—a by-product of air and water pollution control—the litter that people promiscuously discard on the countryside—the "unusable" over-burden of mining operations and the inedible remainder of agricultural production.

Solid waste falls into two categories: (1) planned disposal materials which are part of the Nation's production and consumption patterns, and (2) resources which have no known or economic use. In both instances solid waste is almost always a resource which, with ingenuity, can be used and re-used.

This Nation has always enjoyed resource abundance and has acted as though that abundance would last forever. Studies prepared for the Senate Committee on Public Works, testimony before the Subcommittee on Air and Water Pollution, and information generally available suggest that anticipation of continued resource abundance is not only unwise—it is folly.

Our resources fall in three categories—renewable, nonrenewable, and recoverable. Many, including forest and agricultural resources, and renewable resources. Nonrenewable (energy) resources produce only small amounts of solid waste while contributing substantially to air and water pollution problems if uncontrolled. Recoverable resources are those which maintain useful physical or chemical properties throughout their process of use and therefore can be continuously recycled in the production-consumption process.

And the nation has no choice. Consumption increases at a greater rate than population growth. Exhaustion of the Nation's resource base is a very real possibility. Already some industries see recycled waste as a more economic source of materials than primary sources.

But this recognition has neither reversed the trend toward greater waste generation nor reduced the burden on communities

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and other units of government which have assumed, albeit unwillingly, in the same cases, the task of waste disposal.

Community waste disposal has, for centuries, been solved by a simple method—combustion. Open burning dumps in less urban areas and huge incinerators in major communities have provided major sources of stench and air pollution.

Today few communities are allowed the luxury of simple waste combustion. Most areas of the nation have turned to sanitary landfills (most of which are not at all sanitary) and "clean" incinerators (many of which are not at all clean). In both cases a solid waste problem is solved, but often air and water pollution problems result, and resources are always wasted.

This legislation is designed to develop systems which will change the present method of dealing with solid waste problems of communities, of farms, and of industries. The intent of this bill is to stimulate the development of resource recovery methods which will provide for more economic use of wastes.

The bill would authorize intensified research and demonstration of methods to improve collection and transportation of wastes, and development of environmentally safe methods to dispose of nonreusable waste residues. In those cases where wastes are too toxic for traditional disposal methods, the bill would authorize a study of the development of national toxic waste disposal sites. And, for those wastes which can be converted to energy, the bill would authorize development of efficiency energy conversion units.

The Committee carefully evaluated the de-

sirability of legislation to provide direct financial assistance to communities to construct solid waste disposal facilities. This provision, included in S. 2005 as originally introduced, was rejected for three reasons: (1) construction grants at this time could lock in existing conventional technology, (2) even clean incinerators and sanitary landfills would not conserve resources, and (3) a large Federal grant authorization program at this time might retard present community efforts unless appropriations kept pace with authorizations, which is not likely.

As the reported bill clearly reflects, there is an urgent need to redirect the thrust of waste management from disposal to the maximum recovery of reusable materials and energy. The authorization of a construction grant program at this time could result in a massive commitment to presently available technology oriented towards disposal. To avoid stimulating investment in inadequate technology the Committee has substituted a systems demonstration provision for the proposed construction grant provision.

Consistent with the judgment that the Nation cannot afford merely to dispose of the tremendous volume of material that is generated by an industrial and consuming society, especially in urban concentrations, and recognizing further that a great deal of research has been done on resources recovery, the Committee has substituted for the construction grant proposal a new program of grants to municipalities to achieve demonstration of resources recovery systems on an areawide basis. This program is designed to stimulate, in the shortest time, the development of systems designed to manage growing volumes of community wastes and achieve maximum recovery of materials and energy from such wastes.

Throughout the hearings on resources recovery, testimony was received describing various technologies and systems to achieve resources recovery. The Committee believes it is urgent national policy to move these proposals into actual application and operation in as many different areas, from large metropolitan complexes to smaller communities, as necessary to demonstrate demonstrative innovation and responsive resources recovery systems. Such systems can then be applied, as appropriate, to all areas of the country in which similar problems exist.

The program would provide 75 percent Federal assistance to develop and construct advanced systems of resources recovery in various categories of communities established by the Secretary in order to demonstrate systems applicable in different urban and rural conditions.

It is the Committee's intent that the program authorized shall be one which will, in many respects, parallel the type of research and development procurement conducted by the Department of Defense and the National Aeronautics and Space Administration in the sense that the Secretary is authorized to promulgate regulations describing the categories of systems for which applications will be received, specifying that such applications are to be received by a certain date and further establishing guidelines for review of such applications.

Grants are to be awarded only to those applications which the Secretary finds to be clearly superior with respect to the system of resource recovery proposed, the economics of the system, and the potential for general application for solution of the myriad of waste problems. It should be emphasized that the selection procedure thereby established is not competition based strictly upon low cost, but rather is competition to stimulate innovative systems, which recover the maximum amount of materials and energy.

The Committee looks upon the proposed demonstration grant program as a method of stimulating not just the development of technology, and its areawide application, but it will also cause communities to study their own circumstances with respect to waste management. Through such studies, communities will be able to provide better public service to their citizens in the future and be in a position to apply systems that are developed pursuant to these demonstration grants, as they become available. The Committee hopes that communities will take immediate advantage of this program, and seeks to encourage that result by Section 207(a)(3) of the reported bill, which would authorize Federal assistance to develop proposals for resource recovery demonstration grants for submission to the Secretary.

The Committee believes that future Federal financial assistance to communities for construction of facilities may be necessary. Demonstration systems developed pursuant to this act will provide guidance as to what kinds of construction should be assisted, what recovery techniques will be most economical, and what collection innovations will most effectively reduce the cost of waste handling.

Further, other studies authorized by this bill will provide insights into methods to reduce the production of waste in packaging in manufacturing of goods, design of vehicles and other consumer goods which are discarded after use.

This provision, in Title III of the bill would require a study of recommended incentives and disincentives (including grant programs) to accelerate recycling, with special emphasis in motor vehicle hulks, and on examination of the necessity and method of imposing disposal charges on vehicles, as well as on packaging, containers, and other manufactured goods. The latter concept, proposed by Senator Nelson, would require the imposition of disposal charges on products reflecting the cost of final disposal, the value of recoverable components of the item, and any social costs associated with noncycling or uncontrolled disposal of such goods.

Senator Nelson's proposal, as well as Senator Javits' amendment which would have imposed a fee on motor vehicles sufficient to cover the cost of disposal of vehicle hulks, were of great interest to the Committee. However, both the Nelson and Javits legislation would require consideration by the

Senate Committees on Finance and Commerce prior to enactment. It was the conclusion of the Committee that these two proposals should be referred to these Committees for comment and later action. This action of the Committee on Public Works should not be interpreted as rejection of the concepts included in S. 3665 and amendment 705. Evidence presented at the hearings suggests that some products will require disposal charges in order to assure orderly marketing and recovery. Identification of the specific amount of any charge and the manner in which it might be levied is, however, beyond the jurisdiction of the Senate Committee on Public Works.

The study required by this section should include a discussion of the above question in order that the appropriate congressional committees can carry out their responsibilities.

Also, the study of disposal charges and other incentives to accelerate recycling of motor vehicles and other products should include careful examination of the system recommended by Leonard W. Wegman which would require the imposition of a flat fee on all waste produced, with the revenue to be used to finance waste disposal and recovery facilities. This is a concept which might subsequently be demonstrated under section 204 of the Solid Waste Disposal Act.

Legislation offered by Senator Gurney in Committee to establish a program of financial assistance to dispose of motor vehicles was not included in this bill because little evidence was available in the hearing record to substantiate the need for direct grants to the States to dispose of abandoned cars. Approximately 1 million motor vehicles are abandoned each year, amounting to 1 to 2 million tons of waste. Since urban waste amounts to approximately 180 million tons annually, abandoned motor vehicles comprise only 0.6 to 1.1 percent of the Nation's urban solid waste problem. The Committee was concerned that the Federal costs of a grant program would be borne by the general taxpayers, without transferring the costs of disposal to the vehicle owners who are responsible for creating this form of waste.

The Committee on Public Works sees merit in the proposals by Senators Javits and Gurney on solutions to the growing problem of abandoned motor vehicle hulks. Therefore, in order to more fully explore this particular aspect of solid waste, the Subcommittee will hold hearings, August 18 and 19 on Senator Javits' and Senator Gurney's legislation.

At these hearings, the Subcommittee will invite the views of the Administration, the Council of State Governments, the Automobile Manufacturers' Association, and the Institute of Scrap Iron and Steel, as well as other interested parties. This will allow the Subcommittee to examine in greater detail the questions raised above.

A study under title III of the bill, proposed by Senator Eagleton will examine the interrelationship between efforts to encourage recycling and a broad range of public policies, including subsidies, percentage depletion allowances, capital gains treatment, and other inducements to the exploitation of raw materials. The study will indicate how such policies might be altered to encourage, rather than discourage, the recycling of materials and recovery of energy.

This bill expands the planning grant programs presently contained in the Solid Waste Disposal Act, including an eligible recipients municipalities, intermunicipal agencies, and metropolitan councils of governments. Also it increases the Federal share from 50 percent to 66⅔ percent for single State or

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municipality planning units and 75 percent for multi-jurisdictional interstate or intermunicipal planning areas.

New planning activities are embraced in this bill: developing proposals for demonstration resource recovery systems to be funded under this Act, and planning programs for the removal and processing of abandoned motor vehicle hulks.

The bill contains an amended form of the training grant program proposed by Senator Javits in Amendment Number 652. This provides grants for training personnel in the design, operation, and maintenance or resource recovery and solid waste disposal facilities. It also authorizes a study of the need for additional trained personnel and obstacles to employment or occupational advancement in the solid waste field.

Title II of the bill is the National Materials Policy Act, which Senator Boggs proposed in Amendment Number 153. This title creates a National Commission on Materials Policy, which would report within two years on future materials requirements and means for the extraction, development and use of materials susceptible to recycling or nonpolluting disposal.

S. 2005, as reported, would authorize $309.5 million over four years in specific program authorizations and such additional sums as may be necessary for administrative expenses and the other programs in the Act. This open-ended authorization is estimated to require about $114 million total over the four fiscal years.

Of the $309.5 million in specified authorizations, $2 million is authorized for the National Commission on Materials Policy under title II and $2 million for the two year resource recovery investigations carried out under title III.

Out of the balance, demonstration grants for resource recovery systems would receive $20 million in fiscal year 1971, $30 million in fiscal year 1972, $50 million in fiscal year 1973, and $55 million in fiscal year 1974, for a total of $155 million.

The research program under the Act, expanded to emphasize recycling, would receive $31.5 million in fiscal year 1971, $40.5 million in fiscal year 1972, $40 million in fiscal year 1973, and $38.5 million in fiscal year 1974, for a total of $150.5 million.

This compares to an authorization in existing law of $32 million for fiscal year 1970, primarily for research, planning grants, and administrative expenses. The House-passed bill, H.R. 11833, author-

S. 2005 AUTHORIZATIONS

[In millions]

Program	Fiscal year 1971	1972	1973	1974	Total
Sec. 204: (Research pilot programs, component demonstrations)	31.5	40.5	40.0	38.5	150.5
Sec. 208: (Resource recovery system demonstrations)	20.0	30.0	50.0	55.0	155.0
Title I total	51.5	70.5	90.0	93.5	305.5
Title II: (National Commission on Materials Policy)		2.0			2.0
Title III: (Resource recovery investigations)		2.0			2.0
Total: (Specific authorizations)	51.5	74.5	90.0	93.5	309.5
General authorizations (such sums as may be necessary, estimated by program):					
Training (sec. 210)	8.0	8.0	8.0	8.0	32.0
Planning (sec. 207)	8.6	14.9	12.9	10.8	47.2
Other activities	7.9	8.5	8.6	9.7	34.7
Total	24.5	31.4	29.5	28.5	113.9
House bill	100.5	172.0	238.5		511.0

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izes for all programs $100.5 million in fiscal year 1971, $172 million in fiscal year 1972, and $238.5 million in fiscal year 1973, a total of $511 million for the three year authorization period.

SECTION-BY-SECTION ANALYSIS

TITLE I. RESOURCES RECOVERY

Section 202 (findings and purpose).

New language is added describing the purposes of the Act, to emphasize recycling, local planning, and training functions.

Section 203 (definitions).

The Department of Interior's responsibility under existing law for disposal of mineral solid waste is eliminated, and HEW assumes complete authority. Several new definitions are added, including municipality, intermunicipal agency, recovered resources and resource recovery systems, to which other provisions of this Act are keyed.

Section 204 (research).

This section adds new language to the ongoing research program, shifting the emphasis from disposal to recycling and adding instructions to investigate the public health and welfare effects of solid waste.

Section 204(d) authorizes annual research appropriations of $31.5 million, $40.5 million, $40 million, and $38.5 million through fiscal 1974.

Section 205 (new-grant limitations).

This section provides that no grant under any program of the Solid Waste Act can be made to a profit-making organization. Note that Section 204(b) presently allows research contracts with such an organization.

Section 206 (interstate cooperation).

Unchanged (renumbered).

Section 207 (regional and local planning grants).

This replaces 50 percent State grants for planning activities with 66⅔ percent grants for single municipalities and States, and 75 percent grants for planning solid waste programs in an area of more than one municipality or State.

The grants may be used for (1) making surveys of solid waste problems, (2) preparing solid waste disposal plans for the area (especially those emphasizing recycling), (3) developing proposals for Section 208 demonstration system grants, and (4) preparing plans for collecting and recovering abandoned motor vehicle hulks.

Section 208 (new-demonstration grants for resource recovery systems).

This section provides for grants to varying sizes of communities to demonstrate resource recovery systems. These systems have to be area-wide, reflecting a variety of solid waste problems (including those of smaller towns and rural areas). A system must be consistent with plans developed in accordance with Section 207(b)(2) and with Section 209 guidelines. A proposal for a system grant must also provide assurance than an equitable means exists for distributing the costs amount to the users of the system.

The bill authorizes annual appropriations of $20 million, $30 million, $50 million and $55 million through Fiscal Year 1974.

Section 209 (new—recommended guidelines).

This section directs the Secretary to prepare guidelines on solid waste management practices for circulation to State and local governments. These guidelines are advisory except when such State or

locality applies for a demonstration grant under Section 208. This Section also requires the Secretary to recommend model codes and ordinances, and to issue technical information on solid waste and resource recovery methods to solid waste agencies, and includes authority to transport models to various communities and funding of on-site review of solid waste disposal and resource recovery facilities by solid waste personnel.

Section 210 (new—training grants).

This section provides training grants to assist in the development of personnel trained in the design, operation and maintenance of solid waste disposal and recovery equipment and systems.

Section 210(d) directs a study within one year on the need for additional trained personnel and obstacles to employment or occupational advancement.

The Bureau of Solid Waste Management estimates the cost of this section to be about $8 million a year, but the bill provides no specific authorization.

Section 211 (new—cooperation by all Federal agencies in the control of solid waste pollution).

This section requires Federal installations and federally licensed activities to meet solid waste guidelines of Section 209. This would include ocean dumping activities licensed by the Corps of Engineers.

Section 212 (new—national disposal sites study).

This section authorizes a two-year study to create a system of national disposal sites for hazardous materials.

Sections 213–215. Unchanged (renumbered).

Section 216 (appropriations).

This section authorizes "such sums as may be necessary", excluding the funds specifically provided for (1) research, and (2) resource recovery system demonstration grants. These two specific authorizations provide for fiscal 1971 a $51.5 million authorization, fiscal 1972 a $70.5 million authorization, fiscal 1973 a $90 million authorization, and fiscal 1974 a $93.5 million authorization.

TITLE II (NATIONAL COMMISSION ON MATERIALS POLICY)

This title creates a Commission to develop a national materials policy. In developing this policy the Commission would study materials requirements (national and international), the relationship of materials policy to population and environmental quality; means for utilizing more materials "which are susceptible to recycling, reuse, or self-destruction"; and general ways to improve or coordinate knowledge of materials usage. The commission would be required to report by June 30, 1973, with an authorization of $2,000,000.

TITLE III (RESOURCE RECOVERY STUDY)

This title places special emphasis on the policy implications of a change from disposal to resource recovery. It authorizes a two-year study of issues in resource recovery, including means of recovering materials and energy; examination of the economic impact of recovered resources, changes in production and packaging practices (including disposal charges) to reduce wastes; efficient solid waste facilities utilization; the use of Federal procurement to develop market demand for recovered resources; and incentives and disincentives to recycling (including tax policies).

STATEMENT BY SENATOR JENNINGS RANDOLPH, CHAIRMAN, COMMITTEE ON PUBLIC WORKS

Mr. RANDOLPH. Mr. President, the Solid Waste Disposal Act of 1965 launched a new program to develop efficient means of collecting and disposing of the millions of tons of solid wastes generated by our society each year. Although considerable progress was made in State and local planning under the 1965 act toward solutions of the solid wastes problems facing our country, it was apparent as early as 1967 that additional efforts were needed.

President Johnson, in his conservation message of March 11, 1968, called for a comprehensive review of current solid waste disposal technology by the Director of the Office of Science and Technology working with the appropriate Cabinet officers. This review was to consider two key problems: first, how to lower the present high costs of solid waste disposal, and second, how to improve and strengthen Government-wide research and development in this field.

In order to facilitate this study and to further action on the problem, the Congress provided a 1-year extension of the Solid Waste Disposal Act.

The Office of Science and Technology Task Force was chaired by Professor Rolf Eliassen of Stanford University. The Task Force report was entitled, "Solid Waste Management," and was released by the Office of Science and Technology on October 1, 1969.

Concurrently, a study was undertaken by the Ad Hoc Committee on Solid Waste Management for the National Academy of Engineering. The Committee's chairman was Donald N. Frey, president of the General Cable Corporation and its report was entitled, "Policies for Solid Waste Management."

Both of these reports stress the magnitude and crisis proportions of solid waste disposal problem facing the United States.

The average amount of solid waste actually collected in this country is over 5.3 pounds per person per day, or more than 190 millions tons per year. There are estimates that this will increase to 8 pounds per person per day of 1980. And this doesn't include industrial wastes amounting to another 3 pounds per person per day.

Presently, the Nation spends an estimated $4.5 billion a year to handle and dispose of this material from which, practically speaking, we do not recover anything of useful value.

As a matter of fact, in almost every area, the present methods of handling and disposing of solid waste are polluting our environment.

The problem in the District of Columbia is not greatly different from that which is being experienced in cities and urban areas throughout the Nation. Here, for instance, we are producing

875,000 tons of solid waste per year—an increase from 650,000 tons in 1965.

The problem, however, involves more than just dealing with large quantities of solid wastes. There is a long association between health hazards and inadequate collection and disposal of solid wastes.

For example, studies have demonstrated the relationship between poorly managed solid waste during collection, transport, and disposal operations and more than 22 diseases transmitted by cockroaches, rats, and flies. In the last 15 years in the District of Columbia alone the number of reported rat bites has been approximately 750, and 290 of these occurred in infants less than 2 years of age, and 151 in infants under 1 year of age.

In testimony, Dr. Paul Cornely, President of the American Public Health Association, discussed the adequacy of collection in the inner city and the implication of accumulating trash and garbage:

"It appears to me that in this country we have a great deal more concern about animals than we do about human beings.

"For instance, the standards for milk in this country, throughout the States, have requirements about the barns in which the milk cows shall live. They have standards as to the surroundings of these barns, and if one goes to any of these places, one never sees garbage and trash around these barns.

"Now if this is good for cattle it is good for the inner city person. It is interesting also that we have a Society for the Prevention of Cruelty to Animals in this country on a volunteer basis. But I would like to suggest that we should have a society for the prevention of cruelty to infants and children; let us be humane to human beings, and why should children be bitten by rats?"

The health of all our people is intimately connected with the home and its surroundings. External improvement around the home and neighborhood are more important in improving the quality of our lives than any other single factor.

Solutions to the solid wastes problems facing this Nation will require the full application of all knowledge and expertise of the public, private, and academic sectors of our economy. The Solid Waste Disposal Act of 1965 provided for research and demonstration of new and improved methods for solid waste collection, transport, recovery and reuse, and disposal.

Additional research is needed on methods for financing solid waste management systems and operating such systems efficiently and economically. Data are needed regarding the interrelationships of regional economics and amounts of solid wastes generated, the economics of large scale solid waste management systems, and the economics of those technologies now available or under development.

Methods must also be developed to reduce these growing volumes of wastes. Today, it is a staggering 5.3 pounds for each American every day of the year, and by 1980 it will be 8 pounds of waste a day. Studies indicate that the cost of removing these wastes are growing even faster.

The packaging and other container industries are accelerating the problem. In 1966, discarded packaging materials represented 13.3 percent of the 350 million tons of residential, commercial, and industrial waste generated in the United States.

Glass and metal package containers amount to 90 percent of typical municipal incinerator residues.

The American consumer and taxpayer could not only help relieve the problem, but could save himself money in the process. It is estimated that in 1970 if all soft drinks were purchased in returnable, money-back containers, American consumers could have saved an estimated $650,000,000. This was the cost for the convenience of using throw-away containers.

There is considerable potential for metal and mineral recovery and reuse from incinerator residues. Significant progress has been made in this regard by the College Park Metallurgy Research Center of the University of Maryland at College Park. Residue samples can be processed at a rate of approximately 1,000 pounds per hour. The process involves a series of mechanical operations including shredding, screening, grinding, and magnetic separation. The products are a metallic iron concentrate, a clean non-ferrous metal composite, clean fine glass fractions, and a fine carbonaceous ash tailing. Processes of this type hold significant potential for resource recovery and reuse and should be demonstrated as full scale operations.

Long-term solutions must rely on recycling; immediate improvements can be made in such subsystems as collection, transportation, processing (including separation and incineration), and salvage or disposal. The hearing record of our Public Works Committee reflects a significant potential. Solid wastes management must be approached systematically while increasing the options available to local and regional governments in planning, designing, and operating solid waste management systems.

The Resource Recovery Act of 1970, reported by the Committee on Public Works, provides a mechanism for the expeditious development of these options. The bill represents extensive deliberations by the members of the Subcommittee on Air and Water Pollution chaired by Senator Edmund S. Muskie and by the full Committee on Public Works. The bill reflects our understanding of the solid waste management problem facing us today, and in the future. I am pleased to have had an opportunity to contribute to its formulation.

Mr. COOPER. Mr. President, the Resource Recovery Act of 1970, S. 2005, which extends for 4 years and amends the Solid Waste Disposal Act of 1965, represents a significant step in the continuing effort to improve the quality of our environment. I am glad to support the bill, and urge its adoption by the Senate.

The Subcommittee on Air and Water

Pollution of the Public Works Committee, on which I serve, became aware very early in its consideration of air and water pollution problems that both were closely related to the problems of solid waste disposal. For example, open dump burning and inadequate incineration increase air pollution. Similarly, the filling of wetlands and dumping of solid waste in open water causes water pollution. Moreover, it has become increasingly clear that the concept of waste is environmentally unsound. We recognize now that wastes might better be considered as resources, diffuse and diverse though they may be—resources for which recovery techniques must be developed so that they may be returned to the flow of materials.

Automobile hulks, one-way glass bottles, aluminum cans, paper, and discarded packaging—all have received much attention, by the public and during the hearings of the committee. The quantities of material that we are wasting, literally, is a concern not only in terms of air, water and land pollution, and degradation of the environment, but also in terms of resource depletion. When we consider also our growing population and capacity for consumption, it becomes clear that our policy for the future must be to move from disposal of waste to the recovery and re-cycling of materials and energy. The Resource Recovery Act of 1970 has as its objective the establishment procedures which will encourage such a shift from disposal to recovery, necessary to an environmentally sound society.

In extending the research section, section 204 of the Solid Waste Disposal Act, S. 2005 gives new emphasis to the development of resource recovery techniques. Much work has already been done, and we hope that with the funds and authority provided by this act fully integrated recovery systems will be developed. Section 204 is provided with a specific authorization for appropriations of $31.5 million this fiscal year, and a total of $119 million during the following 3 fiscal years.

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In a new section 208, specifically designed to speed the development of and put into operation new resource recovery systems, the committee bill provides a demonstration program to be carried out through grants to State, interstate, municipal or intermunicipal agencies for up to 75 percent of the design, construction, and first-year operation cost of integrated recovery systems. It authorizes $20 million for such grants during this fiscal year, increasing to $55 million by fiscal 1974.

In addition to these two major sections, the measure we have recommended to the Senate addresses several other problems of waste materials management and recovery. It would continue, as section 207, the authorization of planning grants to State, interstate, municipal, and intermunicipal agencies increasing the Federal share from a 50 percent to 66⅔ percent, or to 75 percent in the case of interstate and intermunicipal grants.

The committee had before it, in S. 2005 as originally introduced, a full construction grant program for solid waste treatment and disposal. The administration testified in opposition to the construction grant provision, giving two principal reasons, both of which were recognized by the committee. First, a construction grant program at this time could result in investment in inadequate or outmoded systems, particularly in view of the fact that this act intends to redirect efforts in materials use management from disposal to recovery. Second, authorization of a massive Federal construction grant program would be inappropriate at this time of fiscal constraint.

Following generally the pattern of air and water pollution legislation, the committee bill, while recognizing fundamental differences between those programs and the problems of materials management, has proposed in section 209 the development of guidelines for solid waste recovery, collection, separation, and disposal systems. We believe the application of Federal research and experience in establishing such guidelines will help to develop better management systems in communi-

ties and States, and to assure that their systems meet public health and environmental requirements.

The bill, in new section 212 of the act, requires a study of the need for establishment of a national system for the disposal of hazardous wastes. A report is to be made to the Congress within 2 years. We would hope that the study may show how radioactive, biological, and highly toxic chemical wastes can be handled with minimum environmental damage and maximum protection of public health and safety.

The committee adopted an amendment offered by Senator JAVITS and others, providing training grant assistance to State and municipal agencies, educational institutions, and other private organizations to meet the growing manpower demands in the field of materials management and recovery. The provision, which will become section 210 of the act, is similar to that offered by Senator SCOTT and adopted earlier this year as part of the Water Quality Improvement Act of 1970.

Based again on the experience gained in the air and water pollution control areas, the subcommittee concluded that the activities of the Federal Government often contribute to solid waste problems. Consistent with the air and water legislation and the President's executive order in March, new section 211 requires Federal agencies to comply with the guidelines to be developed under section 209. This mandate is applied also to activities for which the Federal Government issues any license or permit for the disposal of solid waste, as well as to activities conducted on Federal property under contract or lease to private organizations.

Title II of the bill incorporates an amendment, introduced last year by Senator BOGGS, to establish a Commission on National Materials Policy. He had earlier asked the Library of Congress to examine materials policy as it relates to solid waste disposal and environmental quality. Senator BOGGS' request was met by an ad hoc committee in which the Library of Congress joined with the National Academy of Sciences, and which issued two reports, both of which have been printed as documents of the Senate Committee on Public Works. The principal recommendation was that a Commission on National Materials Policy be established to carry forward the work begun earlier by the Paley Commission during the Eisenhower administration. The committee received favorable testimony on this proposal, and we look forward to the results of the study of the Commission and its recommendations.

Mr. President, the Committee on Public Works has been engaged for a number of years in the effort to control the wasteful and discarded by-products of our industrial, largely urban, consuming society —which have been too long ignored and which are now the subject of widespread interest and intense concern. The committee is continuing its intensive work in the field, and will soon report to the Senate major proposals in the areas of air pollution, water pollution, and other environmental concerns. Our interest in improving the quality of life is constantly before us also in our consideration of highway, economic development, water resource, and nearly all other legislation that comes before the committee. We work together on these matters. As I have often done before, I call attention to the devotion of the chairman of the full committee, Senator RANDOLPH, and to the leadership and informed labor of the subcommittee chairman, Senator MUSKIE, in this important and challenging field. The ranking minority member of the Air and Water Pollution Subcommittee. Senator BOGGS, who gives this work such faithful attention, continues to contribute to every measure developed by the subcommittee, as does Senator BAKER in the most creative way. I can think of no member of the committee who has not had a part in this work, and we hope it will be productive and help meet the pressing problems of our time.

The bill before the Senate, the Resources Recovery Act of 1970, is important legis-

lation. I strongly endorse it. It proposes to improve significantly the means available to address the problems of materials use, recovery and disposal. I urge its adoption by the Senate.

Mr. BOGGS. Mr. President, I wish to express my full support for S. 2005. The distinguished chairman of the Subcommittee on Air and Water Pollution (Mr. MUSKIE), the chairman of the Committee on Public Works (Mr. RANDOLPH), and the ranking Republican member of the committee (Mr. COOPER) have stated clearly the great need for this legislation. I associate myself with their views.

This legislation accelerates our national effort to recycle wastes—to utilize our dumps and our garbage cans productively, so that we can reuse our material wealth, not discard it. The finite supply of materials necessitates that the United States move aggressively to increase the reuse of our wastes. Recycling will lessen the pollution of the environment and help to sustain our economic growth.

President Nixon, in his environmental message earlier this year, made this observation:

> As we look toward the long-range future—to 1980, 2000 and beyond—recycling of materials will become increasingly necessary not only for waste disposal but also to conserve resources.

The President's words are ones that chart a wise course for the future.

Several sections of this legislation that will prove effective as stimulants to the recycling of wastes. Section 207, dealing with planning grants, will encourage the States and communities to look to recycling. Many States have already received grants to make general planning surveys for that State. Planning should also be encouraged on a local and regional basis, whether intrastate or interstate. This legislation gives that encouragement.

It should be noted, Mr. President, that my own State of Delaware has moved aggressively toward recycling. Governor Peterson recently signed legislation that will lead to the construction of a plant that will daily recover from 500 tons of solid wastes and 70 tons of sewage sludge, reusable steel, copper, chemicals, and other materials and convert the residue into productive compost. That tonnage represents about half the wastes generated daily in our State's most populated county, New Castle County. To give my colleagues a further look at this important proposal, I ask unanimous consent that a newspaper article about the plant be printed in the RECORD at the conclusion of my remarks.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

(See exhibit 1.)

Mr. BOGGS. Mr. President, programs such as the Delaware project would be eligible for support under this bill's demonstration grant proposals of section 208. It authorizes funds for the construction of facilities that will convert solid wastes into reusable material. The legislation authorizes 75-percent grants for such projects as a method for demonstrating their feasibility and economy. Such demonstrations must be encouraged. This legislation gives that encouragement.

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Numerous other important proposals are incorporated within this legislation. It authorizes the preparation of solid waste disposal guidelines, on an advisory basis. The legislation, however, requires that Federal facilities comply with these guidelines, a provision that is essential. The Government must set a positive example in solid waste control and pollution abatement.

Training grants will be available under this bill to insure that we have the personnel available to design, operate, and maintain facilities that will process solid wastes. The bill authorizes a study of national disposal sites for hazardous materials, and another study, under title III, of the question of resource recovery and new methods to encourage recycling of materials.

My colleagues on the committee have evaluated in detail these aspects of the legislation. I support their views. Rather than go over these points again, I would

like to direct attention of my colleagues to title II, as I submitted the amendment that led to the inclusion of title II. The amendment, No. 153, was offered with the cosponsorship of several of our distinguished colleagues. Mr. BAKER, Mr. BAYH, Mr. COOPER, Mr. EAGLETON, Mr. INOUYE, Mr. MONTOYA, Mr. MUSKIE, Mr. PEARSON, Mr. RANDOLPH, and Mr. SPONG.

The title authorizes creation of a seven-member National Commission on Materials Policy to undertake a full study of the materials process: selection, extraction, processing, use, disposal, and reuse.

By mid-1973, the Commission will report to the President and the Congress on its conclusions and recommendations for creation of a national materials policy, as well as proposals for implementing such a policy.

This is a subject of great significance. Materials and the processing of materials are the basic source of the polution to our environment. If we are to enhance our environment, a policy on the utilization of materials must be considered.

Our concept approved by the committee foresees an examination by the Commission of several key points. One would be an evaluation of current and projected domestic demands for materials. Economic factors affecting materials selection would be an aspect of this study.

The Commission would also study the relationship between demand for materials and questions of population growth, seeking to identify how this relationship affects foreseeable supplies and the enhancement of the environment.

An important area of enquiry would be methods for enhancing the coordination and cooperation among Federal departments and agencies in relation to materials demand, use, and study. This should be a major topic for study, as nearly every agency of Government has a materials-related function, either in research, planning, pollution control, standards, or supply.

Another point should be an examination of the feasibility and desirability of creating—or fostering the creation of—computer inventories of national and international materials supplies and requirements.

The involvement of our subcommittee with this subject dates to 1965, when the first Federal solid waste legislation was adopted. Since that date, the Committee on Public Works has been the recipient of two informative studies on the subject of materials policy. One was titled, "Availability, Utilization, and Salvage of Industrial Materials." The other was called "Toward a National Materials Policy."

This second study, released last year, came to this conclusion:

> It is of the utmost importance that, from the initial stages of production of materials through their ultimate use and disposal, we conduct our operations and activities in such a way as to minimize pollution of air and water to avoid despoilation of the environment, both physical and biological.

It was suggested in this study that we can catch a lot of problems of environmental degradation before they occur if our Nation takes a hard look at our materials requirements and use. That is what the Committee on Public Works envisions in supporting the amendment to create a National Commission on Materials Policy. A Commission study and report seeking to identify and analyze the factors affecting the materials flow would include a suggested path for the United States to follow toward a national policy on materials, and how that policy might be implemented.

The committee also evaluated the question of what type of governmental unit should conduct such a study on the need for a national materials policy. After careful evaluation, we rejected the view that the study should be undertaken by an existing unit of Government. Among their tasks, the members of the Commission will be looking critically at existing organizational arrangements in matters related to materials policy. Therefore, we believe it appropriate that the evaluation and study should not become a function of an existing agency. An independent commission, we found, would be best able to examine effectively the full breadth of materials policy questions, then to chart a

policy on materials that would be implemented on a continuing basis by an existing agency of Government.

In addition, an evaluation of materials policy should properly be undertaken by experts from inside and outside the Federal Government. This would guarantee the broadest possible scope and study, which is vital if this study is to prove meaningful.

The Commission would, in effect, serve as the foundation upon which to raise the structure of a coordinated materials policy for our Nation.

The Director of the U.S. Geological Survey recently expressed a sentiment that I believe serves as an excellent summation of the need for a national policy for materials—not just minerals or energy or timber. I would like to share Dr. Pecora's words with my colleagues. He said:

> If we must, therefore, take from the earth to provide for ourselves, we must employ value judgment and trade-off concepts in deciding how much to take from our environment, where to take it, and how to leave it in the taking and using.

That is a persuasive argument for title II, as indeed it is for this entire legislation. I urge its adoption by the Senate.

Mr. President, I wish to commend all the members of the committee for their work in connection with this legislation. Also, I wish to thank the members of the committee staff for their efforts over many months during hearings and the markup of this legislation.

EXHIBIT 1

[From the Wilmington (Del.) Evening Journal, June 23, 1970]

STATE SELECTS HERCULES WASTE RECYCLING DESIGN

Hercules, Inc., will design and probably build and operate a solid-waste recycling plant in New Castle County which, the company claims, will pay for its operation through sale of reclaimed materials.

Gov. Russell W. Peterson announced he had selected Hercules' proposal as he signed House Bill 822 yesterday appropriating $1 million for design and engineering of the plant.

The plant, billed as the first in the world to reclaim all waste materials fed into it, would handle 500 tons of domestic and industrial waste and 70 tons of wet sewage sludge a day, or nearly half the solid waste generated in New Castle County.

The next step will be contract negotiations between Hercules and the state to iron out details concerning what exactly the state wants from Hercules in the way of design work. A Hercules official said these negotiations would probably be completed in from three to six weeks.

Construction and operation of the plant would require more negotiations—as well as more money. These negotiations would involve New Castle County government and, if hoped-for federal funds are available, the federal government.

Cost of the plant from initial design to start of operations would be about $10 million, according to John N. Sherman, director of advanced programs for Hercules' chemical propulsion division, which submitted the proposal.

Design of the plant allows for eventual doubling of capacity through expansion. After an initial shakedown phase, money realized from the sale of recycled waste products would pay the operating expenses of the plant, according to the Hercules proposal.

Members of the Governor's Committee on Solid Waste said that similar plants may be built in the Dover and Georgetown areas at a later date.

A bill to provide federal aid for pilot waste recycling projects is now being prepared by the U.S. Senate Committee on Public Works, of which Sen. J. Caleb Boggs, R-Del., is the ranking minority member.

The committee hopes to have the bill on the Senate floor for action next month. Delaware hopes to get some of that money to help finance the plant.

State Rep. Robert J. Berndt, R-Hillcrest, who sponsored the bill to fund design work and chaired the governor's committee, said a site for the plant must be chosen soon because Hercules designs will depend on the nature of the site.

The Hercules proposal included a completion schedule for the plant of 22 months from the date of site selection, barring unforeseen obstacles and assuming full financing of the project.

Committee members present when Peterson signed H.B. 822 were Berndt, George Dutcher, New Castle County public works director; Richard Weldon of Bear; Arthur W. Dobberstein of Dover; State Sen. J. Donald

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Isaacs, R-Townsend; and Rep. R. Glen Mears Sr., D-Seaford.

Berndt said the selection narrowed to Hercules from nine firms which filed proposals. Some withdrew their plans, he said.

Berndt said Hercules was chosen because "They have the talent to do it; they're way out in front of everybody else." He said the firm also has markets for the byproducts.

The proposed plant, designed to be operated by about 50 employees, is to have three major elements.

The first is a digester system for converting organic waste materials to a high quality humus product free from disease-producing organisms. A similar plant in San Juan, Puerto Rico, is currently processing 300 tons a day.

The second is the application of pyrolysis techniques—subjecting organic materials in a con-

tained-pressure vessel to high temperatures—for the controlled decomposition of organic solid wastes such as rubber and plastics.

The third is a residue separation system for the inorganic residue separated from the digester discharge. The separation of metals, glass and grit will be accomplished through a series of screeners, gravity tables and other equipment.

Hercules adapted the systems design knowledge of its chemical propulsion division to come up with its plan. Parts of the system designed by Hercules were the result of Hercules research, while other parts are patented products of other companies.

Mr. DOLE. Mr. President, I rise in support of S. 2005, the Resource Recovery Act of 1970. In his message on the environment, President Nixon stated:

> If we are ever truly to gain control of the problem (solid wastes) our goal must be . . . to reduce the volume of wastes and the difficulty of their disposal, and to encourage their constructive re-use.

S. 2005, a product of the joint efforts of the administration and the Air and Water Pollution Subcommittee of the Senate Public Works Committee, was written to achieve that goal. This legislation will effectively improve our national effort to reduce land pollution by recovering the enormous quantity of trash that is littering the landscape and straining the facilities of municipal governments.

There is one section of the bill that is particularly significant. That is section 207, which provides planning grants to governmental agencies at the State, local, and regional levels. Existing planning grants, on a 50–50 matching basis, provides States with financial assistance for surveys of local practices and problems, as well as funds for developing programs to solve solid waste management problems.

The new language approved by the committee would increase the Federal share of planning costs to 66⅔ percent for a State or a single municipality, and provide 75 percent support when two or more jurisdictions join to attack their mutual solid waste problems.

Economies can be achieved by increasing the size of resource recovery programs. Thus, a multiple-jurisdiction incentive should encourage communities to join with neighboring communities to meet the problem on a regional basis, and thus over the long run reduce costs.

The grants, I might add, would be available for any of four activities. One involves surveys of solid waste management practices and programs in an area, similar to existing law. A second authorizes grants for developing and revising plans for recycling and recovery of wastes. This emphasis is new and essential. The third provision would help to finance the development of proposals for resource recovery systems. The fourth area for which grants would be made available to State and local jurisdictions would be for planning programs for the removal and processing of abandoned motor vehicle hulks.

Section 207 planning grants for State, local, and regional agencies are of particular importance to Kansas. The 1970 Kansas Legislature passed the "Solid Waste Control Act" which makes it imperative that every city and county in Kansas begin at once to develop a workable plan for the regulation of solid waste collection, storage, transportation, processing, and disposal. Unfortunately, the Kansas Legislature did not provide the funds necessary to assist local government in developing their master plan. Section 207 provides authority for the Congress to appropriate funds which will allow local governments in Kansas and throughout the Nation to develop an organized and comprehensive approach to solid waste management.

I strongly recommend passage of S. 2005.

The ACTING PRESIDENT pro tempore. The question is on agreeing to the committee amendment.

The amendment was agreed to.

The bill was ordered to be engrossed for a third reading, read the third time, and passed.

The title was amended, so as to read:

> A bill to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, to establish a National Committee on Materials Policy, and for other purposes.

Mr. BOGGS. Mr. President, I move that the vote by which the bill was passed be reconsidered.

Mr. MANSFIELD. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

Mr. JAVITS subsequently said: Mr. President, I call the attention of the Senate to the adoption on the Consent Calendar of the solid waste disposal bill.

I had recently introduced a bill, Mr. President, which I proposed to make an amendment to the solid waste disposal bill, which dealt with the disposal of motor vehicles, and which was considered a rather ingenious plan toward that end. But I have agreed to let the bill go through on the Consent Calendar with a hearing on my plan, and also on another plan of the Senator from Florida (Mr. GURNEY) on the same subject.

But I ask unanimous consent, Mr. President, that a copy of the amendment which I would have proposed had I been aware of the opportunity be made a part of my remarks, and that my remarks appear in connection with the approval of the bill on the Consent Calendar.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. JAVITS. The amendment I would have sponsored would have been for myself and Senators CANNON, GOODELL, HATFIELD, MOSS, PELL, PERCY, SAXBE, and TYDINGS. I shall be pressing the measure through the hearing stage.

The amendment is as follows:

On page 31, line 10, add the following new title:

"TITLE IV—MOTOR VEHICLE DISPOSAL ACT

"SEC. 401. This title may be cited as the Motor Vehicle Disposal Act.

"DISPOSAL FEE REQUIRED

"SEC. 402. (a) Each person within any State who owns a motor vehicle on the effective date of this title shall, within three months after the effective date of this title, pay to the Secretary the motor vehicle disposal fee required by the provisions of this title, and affix to the motor vehicle a plate or other device, designed by the Secretary, stating that the motor vehicle disposal fee has been paid.

"(b) Every motor vehicles manufacturer shall pay for each motor vehicle manufactured by it after the effective date of this title the motor vehicle disposal fee required by the provisions of this title, and shall affix to the motor vehicle a plate or other device, designed by the Secretary, stating that the motor vehicle disposal fee for that vehicle has been paid.

"EVIDENCE OF PAYMENT OF DISPOSAL FEE

"SEC. 403. (a) The Secretary shall design a plate or other device suitable for easy and permanent installation in a conspicuous place on a motor vehicle on which the disposal fee required by this title has been paid.

"(b) The Secretary shall make available places at convenient locations throughout the country in which persons shall pay the disposal fee required under section 402 and receive the plates or other devices evidencing such payments together with instructions for the installation of such plates or other devices.

"(c) The Secretary shall make necessary arrangements with manufacturers required to pay the disposal fee under section 402 to receive the payment of such fees at such times as he determines to be convenient for such manufacturers and to furnish such manufacturers sufficient numbers of plates or other devices evidencing such payment.

"AMOUNT OF DISPOSAL FEE AND ESTABLISHMENT OF THE MOTOR VEHICLE DISPOSAL FUND

"SEC. 404. (a) The Secretary shall prescribe the amount of the disposal fee required under this title in an amount not less than $25 nor more than $50 per motor vehicle. In determining the amount of the disposal fee the Secretary may establish a schedule of fees after considering the size of the motor vehicle and the cost of removing motor vehicles. Any fee or fee schedule established under this section may not be established by the Secretary without proceedings including notice and an opportunity for a hearing held in accordance with the provisions of subchapter II of chapter 5, title 5, United States Code, and provisions of judicial review in the United States Court of Appeals for the District of Columbia in accordance with the provisions of chapter 7 of such title.

"(b) Any sums appropriated pursuant to section 412 of this title and any disposal fees collected pursuant to this title shall be deposited in a revolving fund which is hereby established in the Treasury of the United States and shall be known as the "Motor Vehicle Disposal Fund". Moneys in the fund shall be available, without fiscal year limitation, to the Secretary to make payments to

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persons certified to him by licensed motor vehicle disposal concerns in accordance with the pro-

visions of this title. Moneys in the fund not necessary for current operations shall be invested in bonds or other obligations of, or guaranteed by, the United States.

"MOTOR VEHICLE DISPOSAL CONCERNS LICENSED

"SEC. 405. (a) After the effective date of this title, any person engaged in the business of processing junked motor vehicles into established grades of scrap for remelting purposes may make application to the Secretary for a license under this section at such time, in such manner, and containing such information as the Secretary shall by regulation reasonably require.

"(b) Licenses issued under this section shall be in such form as the Secretary shall prescribe and shall continue in effect unless revoked pursuant to this title.

"(c) In issuing or refusing to issue any licenses under this section the Secretary shall conduct proceedings in accordance with the provisions of subchapter 2 of chapter 5 of title 5, United States Code. Such proceedings shall be reviewable in the appropriate United States court of appeals in accordance with chapter 7 of such title.

"(d) The Secretary shall issue a license to any applicant if he determines that—

"(1) the applicant is qualified and has the facilities necessary to process junked motor vehicles into established grades of scrap for remelting purposes;

"(2) agrees to certify to the Secretary the names and addresses of persons eligible to receive disposal payments under this title.

"(e) (1) The Secretary is authorized to enter the facility of any person authorized under this title or any person applying for a license under this title and to inspect the premises and facilities on such premises at reasonable times, within reasonable limits, and in a reasonable manner.

"(2) Every licensee shall establish and maintain such records, make such reports, and provide such information, including technical information, as the Secretary may reasonably require to enable him to carry out the provisions of this title. All information contained in any report received under this section shall be deemed to be confidential information for the purposes of section 1905 of title 18 of the United States Code.

"(f) Persons licensed under this section shall receive from the Secretary a fee, in the amount subject to such terms and conditions as the Secretary may by regulations prescribe, for each car processed, to cover the cost of removal of the plate or device required by this title and the keeping of necessary records as required by this title: *Provided*, That such fee shall be not less than $1 nor more than $5 per automobile.

"REVOCATION OF LICENSES

"SEC. 406. (a) Any license issued pursuant to this title may be revoked by the Secretary if he determines that (1) the licensee has discontinued the business of disposing of motor vehicles as provided in the license, or (2) the licensee fails or refuses to make the certifications required by this title.

"(b) Before revoking any license pursuant to subsection (a) of this section, the Secretary shall serve upon the licensee an order to show cause why an order of revocation should not be issued. Any such order to show cause shall contain a statement of the basis thereof, and shall call upon such licensee to appear before the Secretary at a time and place stated in the order, but in no event less than thirty days after the date of receipt of such order, and give evidence upon the matter specified therein. The Secretary may in his discretion suspend any license simultaneously with the issuance of an order to show cause, in cases where he finds that the public interest requires such suspension. Such suspension shall continue in effect until the conclusion of any revocation proceeding, including judicial review thereof, unless sooner withdrawn by the Secretary, or dissolved by a court of competent jurisdiction. If, after hearing, default, or waiver thereof by the licensee, the Secretary determines that an order of revocation should issue, he shall issue such order, which shall include a statement of his findings and the grounds and reasons therefor and shall specify the effective date of the order and he shall cause such order to be served on the licensee. In any case, where a hearing is conducted pursuant to the provisions of this section, both the burden of proceeding with the introduction of evidence and the burden of proof shall be on the Secretary. Proceedings under this section shall be independent of, and not in lieu of, any other proceeding under this title or any other provision of law.

"MOTOR VEHICLE DISPOSAL PAYMENTS

"SEC. 407. (a) Each person who owns a motor vehicle on which the motor vehicle disposal fee has been paid is entitled to receive a disposal payment in an amount equal to the motor vehicle disposal fee whenever such vehicle is transferred to, and presented for disposal to, a concern licensed under the provisions of this title.

"(b) If an owner, in violation of State law, abandons a motor vehicle on which the motor vehicle disposal fee has been paid, and such vehicle is thereafter presented to a concern licensed under the provisions of this title by a public agency authorized by State or local law to confiscate and dispose of such abandoned vehicle, the public agency so presenting and transferring such abandoned vehicle shall be entitled to receive a disposal payment equal to the motor vehicle disposal fee.

"(c) Whenever a motor vehicle is properly presented to a motor vehicle disposal concern as provided in paragraph (a) or (b) of this section, such concern shall issue to the person or agency presenting and transferring such vehicle a receipt therefor, on a form prescribed by the Secretary, stating that such vehicle has been properly disposed of under this title and that such person or agency is entitled to receive the disposal payment.

"(d) The Secretary shall redeem, by payment of the disposal payment, under whatever arrangements he deems appropriate, receipts properly issued under paragraph (c) of this section.

"UNLAWFUL ACTIVITIES

"SEC. 408. It shall be unlawful for any person—

"(1) to fail or refuse to pay the motor vehicle disposal fee required by section 402 or to fail to affix the evidence of such payment to the motor vehicle in accordance with the provisions of this title;

"(2) to manufacture for sale, offer for sale, introduce or deliver for introduction in interstate commerce any motor vehicle manufactured on or after the effective date of this title without the payment of the disposal fee for such vehicle under section 402 and a plate or other device evidencing such payment being affixed to such vehicle in accordance with the provisions of this title;

"(3) who is licensed under the provisions of this title, to fail or refuse access to or copying of records or fail to make reports or furnish information or fail to permit entry or inspection as required under section 405; or

"(4) to manufacture or furnish to any other person a plate or other device designed by the Secretary for the purposes of this title unless such person is authorized by the Secretary to do so.

"(5) to remove, destroy, or otherwise dispose of the plate or device evidencing payment of the disposal fee provided in section 402, except as authorized by this title or by regulations promulgated by the Secretary pursuant to this title.

"PENALTIES

"SEC. 409. (a) Any person who is required to pay the disposal fee pursuant to section 402 of this title and who willfully and knowingly fails to make such payment shall be subject to a penalty of not to exceed $500 for such violation.

"(b) Any person who violates the provisions of section 403 or paragraph (3), (4), or (5) of section 408, or regulations issued thereunder, shall be subject to a civil penalty not to exceed $500 for each such offense except that the maximum penalty shall not exceed $100,000 for any related series of violations committed by the same person.

"(c) Any person who willfully and knowingly makes a false statement of any information required under this title shall be deemed to have violated the provisions of section 1001 of title 18, United States Code.

"(d) Any such civil penalty under this section may be compromised by the Secretary and shall be recoverable in a civil action in any district court in the district in which any such person resides or is doing business.

"(e) In addition to the civil penalties provided hereunder, any person who willfully violates the provisions of paragraphs (4) or (5) of section 408 shall be subject to imprisonment of not more than six months for each such violation.

"ADMINISTRATION

"SEC. 410. (a) In order to carry out the objectives of this title, the Secretary is authorized to—

"(1) promulgate such rules and regulations as may be necessary;

"(2) appoint such advisory committees as he may deem advisable;

"(3) to procure the services of experts and consultants in accordance with section 3109 of title 5, United States Code;

"(4) use the services, personnel, facilities, and information of any other Federal department or agency, or any agency of any State, or political subdivision thereof, or any private research agency with the consent of such agencies, with or without reimbursement therefor; and

"(5) manufacture the plates or devices designed by him for the purposes of this title at the expense of the United States.

"(b) Upon request by the Secretary each Federal department and agency is authorized and directed to make its services, personnel, facilities, and information, including suggestions, estimates, and statistics available to the greatest practicable extent to the Secretary in the performance of his functions under this title.

"(c) The Secretary, the Comptroller General of the United States, or any of their duly authorized representatives shall have access, for the purpose of audit and examination, to any books, documents, papers, and records that are pertinent to the payments certified to by any licensee under this Act.

"(d) The Secretary shall have discretion, based on market or other conditions in any locality or area of the country causing an inability or unwillingness of a licensed disposal concern or concerns to accept vehicles for disposal, to license an automobile wrecker or wreckers, including a public agency of a State or political subdivision thereof acting as an automobile wrecker, to accept vehicles for disposal and issue receipts under Section 407, on condition that such wrecker undertakes to deposit such vehicles with an authorized disposal concern within 12 months after the Secretary determines that such market or other local conditions have abated.

"(e) The Secretary shall have discretion, if business practices make it advisable in a particular locality or area of the country, to authorize any person engaged in the business of hauling scrapped motor vehicles, after crushing, to authorized disposal concerns, to issue receipts under Section 407, provided that such persons satisfy the Secretary of their undertaking to deposit such vehicles as required by this Act and applicable regulations issued by the Secretary.

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"DEFINITIONS

"SEC. 11. As used in this title—

"(1) The term 'person' includes any individual, corporation, company, association, firm, partner-

ship, society, joint stock company, or public agency.

"(2) The term 'motor vehicle' means any vehicle driven or drawn by mechanical power manufactured primarily for use on the public streets, roads, and highways, except any vehicle operated exclusively on a rail or rails. The Secretary may exclude classes of motor vehicles other than passenger automobiles from the definition of motor vehicle for the purposes of this title upon a finding that to do so is in the public interest.

"(3) The term 'manufacturer' means any person engaged in the manufacturing or assembly of motor vehicles including any person importing motor vehicles for resale.

"(4) The term 'State' includes each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, the Canal Zone, and American Samoa.

"(5) The term 'interstate commerce' means commerce between any place in a State and any place in another State, or between places in the same State through another State.

"(6) The term 'Secretary' means the Secretary of Transportation.

"AUTHORIZATION AND APPROPRIATIONS

"SEC. 412. There is hereby authorized to be appropriated to the Secretary to carry out the provisions of this title not to exceed $500,000 for the fiscal year ending June 30, 1971.

NATIONAL MOTOR VEHICLE DISPOSAL COUNCIL

SEC. 413. (a) The Secretary shall establish a National Motor Vehicle Disposal Council which shall consist of seven members, including three members who shall be representatives of businesses engaged in processing junked motor vehicles into established grades of scrap for remelting purposes, three members representing the general public, and one member representing automobile wreckers; provided, that the representatives of the general public may include representatives of Federal, State or Municipal agencies working in the fields of environmental protection and control.

(b) The Secretary shall consult with the National Motor Vehicle Disposal Council with respect to all matters subject to regulation which may be promulgated under this title.

(c) Members of the National Motor Vehicle Disposal Council may be compensated at a rate not to exceed $100 per diem (including travel time) when engaged in the actual duties of the Advisory Council. Such members, while away from their homes or regular places of business, may be allowed travel expenses, including per diem in lieu of subsistence as authorized by section 5703 of title 5, United States Code, for persons in the Government service employed intermittently. Payments under this section shall not render members of the Advisory Council employees or officials of the United States for any purpose.

"EFFECTIVE DATE

"SEC. 414. The provisions of this title shall take effect on September 1, 1971, except that sections 403, 410, 411, 412, and 413 shall become effective on the date of enactment of this title."

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RESOURCE RECOVERY ACT OF 1970

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the Senate reconsider the vote by which it passed S. 2005, to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes, which had been reported from the Committee on Public Works, as amended.

This matter has been cleared on the other side of the aisle.

The PRESIDING OFFICER (Mr. JORDAN of North Carolina). Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the Committee on Public Works be discharged from further consideration of H.R. 11833.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of H.R. 11833.

The PRESIDING OFFICER. The bill will be stated by title.

The RULE CLERK. A bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent to strike out all after the enacting clause of H.R.

11833 and to insert in lieu thereof the text of S. 2005, as passed by the Senate on Friday, July 31, 1970.

The PRESIDING OFFICER. Without objection it is so ordered.

The question is on agreeing to the amendment in the nature of a substitute.

The amendment was agreed to.

The PRESIDING OFFICER. The question is on the engrossment of the amendment and third reading of the bill.

The amendment was ordered to be engrossed and the bill to be read a third time.

The bill (H.R. 11833) was read a third time and was passed.

Mr. BYRD of West Virginia. Mr. President, I move the reconsider the vote by which the bill was passed.

Mr. STENNIS. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

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1.1d (4)(c) Oct. 7: Senate agreed to conference report, pp. 35511–35516

RESOURCE RECOVERY ACT OF 1970—CONFERENCE REPORT

Mr. RANDOLPH. Mr. President, I submit a report of the committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such Act, and for other purposes. I ask unanimous consent for the present consideration of the report.

The PRESIDING OFFICER (Mr. CRANSTON). Is there objection to the present consideration of the report?

There being no objection, the Senate proceeded to consider the report, as follows:

CONFERENCE REPORT (H. REPT. No. 91-1579)

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such Act, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows: In lieu of the matter proposed to be inserted by the Senate amendment insert the following: That this Act may be cited as the "Resource Recovery Act of 1970".

TITLE I—RESOURCE RECOVERY

SEC. 101. Section 202(b) of the Solid Waste Disposal Act is amended to read as follows:

"(b) The purposes of this Act therefore are—

"(1) to promote the demonstration, construction, and application of solid waste management and resources recovery systems which preserve and enhance the quality of air, water, and land resources;

"(2) to provide technical and financial assistance to States and local governments and interstate agencies in the planning and development of resource recovery and solid waste disposal programs;

"(3) to promote a national research and development program for improved management techniques, more effective organizational arrangements, and new and improved methods of collection, separation, recovery, and recycling of solid wastes, and the environmentally safe disposal of nonrecoverable residues;

"(4) to provide for the promulgation of guidelines for solid waste collection, transport, separation, recovery, and disposal systems; and

"(5) to provide for training grants in occupations involving the design, operation, and maintenance of solid waste disposal systems."

SEC. 102. Section 203 of the Solid Waste Disposal Act is amended by inserting at the end thereof the following:

"(7) The term 'municipality' means a city, town, borough, county, parish, district, or other public body, created by or pursuant to State law with responsibility for the planning or administration of solid waste disposal, or an Indian tribe.

"(8) The term 'intermunicipal agency' means an agency established by two or more municipalities with responsibility for planning or administration of solid waste disposal.

"(9) The term 'recovered resources' means materials or energy recovered from solid wastes.

"(10) The term 'resource recovery system' means a solid waste management system which provides for collection, separation, recycling, and recovery of solid wastes, including disposal of nonrecoverable waste residues."

SEC. 103. (a) Section 204(a) of the Solid Waste Disposal Act is amended to read as follows:

"SEC. 204. (a) The Secretary shall conduct, and encourage, cooperate with, and render financial and other assistance to appropriate public (whether Federal, State, interstate, or local) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of, and promote the coordination of, research, investigations, experiments, training, demonstrations, surveys, and studies relating to—

"(1) any adverse health and welfare effects of the release into the environment of material present in solid waste, and methods to eliminate such effects;

"(2) the operation and financing of solid waste disposal programs;

"(3) the reduction of the amount of such waste and unsalvageable waste materials;

"(4) the development and application of new and improved methods of collecting and disposing of solid waste and processing and recovering materials and energy from solid wastes; and

"(5) the identification of solid waste components and potential materials and energy recoverable from such waste components."

(b) Section 204(d) of the Solid Waste Disposal Act is repealed.

SEC. 104. (a) The Solid Waste Disposal Act is amended by striking out section 206, by redesignating section 205 as 206, and by inserting after section 204 the following new section:

"SPECIAL STUDY AND DEMONSTRATION PROJECTS ON RECOVERY OF USEFUL ENERGY AND MATERIALS

"SEC. 205. (a) The Secretary shall carry out an investigation and study to determine—

"(1) means of recovering materials and energy from solid waste, recommended uses of such materials and energy for national or international welfare, including identification of potential markets for such recovered resources, and the impact of distribution of such resources on existing markets;

"(2) changes in current product characteristics and production and packaging practices which would reduce the amount of solid waste;

"(3) methods of collection, separation, and containerization which will encourage efficient utilization of facilities and contribute to more effective programs of reduction, reuse, or disposal of wastes;

"(4) the use of Federal procurement to develop market demand for recovered resources;

"(5) recommended incentives (including Federal grants, loans, and other assistance) and disincentives to accelerate the reclamation or recycling of materials from solid wastes, with special emphasis on motor vehicle hulks;

"(6) the effect of existing public policies, including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives, upon the recycling and reuse of materials, and the likely effect of the modification or elimination of such incentives and disincentives upon the reuse, recycling, and conservation of such materials; and

"(7) the necessity and method of imposing disposal or other charges on packaging, containers, vehicles, and other manufactured goods, which charges would reflect the cost of final disposal, the value of recoverable components of the item, and any social costs associated with nonrecycling or uncontrolled disposal of such items.

The Secretary shall from time to time, but not less frequently than annually, report the results of such investigation and study to the President and the Congress.

"(b) The Secretary is also authorized to carry out demonstration projects to test and demonstrate methods and techniques developed pursuant to subsection (a).

"(c) Section 204 (b) and (c) shall be applicable to investigations, studies, and projects carried out under this section."

(b) The Solid Waste Disposal Act is amended by redesignating sections 207

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through 210 as sections 213 through 216, respectively, and by inserting after section 206 (as so redesignated by subsection (a) of this section) the following new sections:

"GRANTS FOR STATE, INTERSTATE, AND LOCAL PLANNING

"SEC. 207. (a) The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State, interstate, municipal, and intermunicipal agencies, and organizations composed of public officials which are eligible for assistance under section 701(g) of the Housing Act of 1954, of not to exceed 66⅔ per centum of the cost in the case of an application with respect to an area including only one municipality, and not to exceed 75 per centum of the cost in any other case, of—

"(1) making surveys of solid waste disposal practices and problems within the jurisdictional areas of such agencies and

"(2) developing and revising solid waste disposal plans as part of regional environmental protection systems for such areas, providing for recycling or recovery of materials from wastes whenever possible and including planning for the reuse of solid waste disposal areas and studies of the effect and relationship of solid waste disposal practices on areas adjacent to waste disposal sites;

"(3) developing proposals for projects to be carried out pursuant to section 208 of this Act, or

"(4) planning programs for the removal and processing of abandoned motor vehicle hulks.

"(b) Grants pursuant to this section may be made upon application therefor which—

"(1) designates or establishes a single agency (which may be an interdepartmental agency) as the sole agency for carrying out the purposes of this section for the area involved;

"(2) indicates the manner in which provision will be made to assure full consideration of all aspects of planning essential to areawide planning for proper and effective solid waste disposal consistent with the protection of the public health and welfare, including such factors as population growth, urban and metropolitan development, land use planning, water pollution control, air pollution control, and the feasibility of regional disposal and resource recovery programs;

"(3) sets forth plans for expenditure of such grant, which plans provide reasonable assurance of carrying out the purposes of this section;

"(4) provides for submission of such reports of the activities of the agency in carrying out the purposes of this section, in such form and containing such information, as the Secretary may from time to time find necessary for carrying out the purposes of this section and for keeping such records and affording such access thereto as he may find necessary; and

"(5) provides for such fiscal-control and fund-accounting procedures as may be necessary to assure proper disbursement of and accounting for funds paid to the agency under this section.

"(c) The Secretary shall make a grant under this section only if he finds that there is satisfactory assurance that the planning of solid waste disposal will be coordinated, so far as practicable, with and not duplicate other related State, interstate, regional, and local planning activities, including those financed in part with funds pursuant to section 701 of the Housing Act of 1954.

"GRANTS FOR RESOURCE RECOVERY SYSTEMS AND IMPROVED SOLID WASTE DISPOSAL FACILITIES

"SEC. 208. (a) The Secretary is authorized to make grants pursuant to this section to any State, municipal, or interstate or intermunicipal agency for the demonstration of resource recovery systems or for the construction of new or improved solid waste disposal facilities.

"(b) (1) Any grant under this section for the demonstration of a resource recovery system may be made only if it (A) is consistent with any plans which meet the requirements of section 207(b)(2) of this Act; (B) is consistent with the guidelines recommended pursuant to section 209 of this Act; (C) is designed to provide areawide resource recovery systems consistent with the purposes of this Act, as determined by the Secretary, pursuant to regulations promulgated under subsection (d) of this section; and (D) provides an equitable system for distributing the costs associated with construction, operation, and maintenance of any resource recovery system among the users of such system.

"(2) The Federal share for any project to which paragraph (1) applies shall not be more than 75 percent.

"(c) (1) A grant under this section for the construction of a new or improved solid waste disposal facility may be made only if—

"(A) a State or interstate plan for solid waste disposal has been adopted which applies to the area involved, and the facility to be constructed (i) is consistent with such plan, (ii) is included in a comprehensive plan for the area involved which is satisfactory to the Secretary for the purposes of this Act, and (iii) is consistent with the guidelines recommended under section 209, and

"(B) the project advances the state of the art by applying new and improved techniques in reducing the environmental impact of solid waste disposal, in achieving recovery of energy or resources, or in recycling useful materials.

"(2) The Federal share for any project to which paragraph (1) applies shall be not more than 50 percent in the case of a project serving an area which includes only one municipality, and not more than 75 percent in any other case.

"(d) (1) The Secretary, within ninety days after the date of enactment of the Resource Recovery Act of 1970, shall promulgate regulations establishing a procedure for awarding grants under this section which—

"(A) provides that projects will be carried out in communities of varying sizes, under such conditions as will assist in solving the community waste problems of urban-industrial centers, metropolitan regions, and rural areas, under representative geographic and environmental conditions; and

"(B) provides deadlines for submission of, and action on, grant requests.

"(2) In taking action on applications for grants under this section, consideration shall be given by the Secretary (A) to the public benefits to be derived by the construction and the propriety of Federal aid in making such grant; (B) to the extent applicable, to the economic and commercial viability of the project (including contractual arrangements with the private sector to market any resources recovered); (C) to the potential of such project for general application to community solid waste disposal problems; and (D) to the use by the applicant of comprehensive regional or metropolitan area planning.

"(e) A grant under this section—

"(1) may be made only in the amount of the Federal share of (A) the estimated total design and construction costs, plus (B) in the case of a grant to which subsection (b)(1) applies, the first-year operation and maintenance costs;

"(2) may not be provided for land acquisition or (except as otherwise provided in paragraph (1)(B)) for operating or maintenance costs;

"(3) may not be made until the applicant has made provision satisfactory to the Secretary for proper and efficient operation and maintenance of the project (subject to paragraph (1)(B)); and

"(4) may be made subject to such conditions and requirements, in addition to those provided to in this section, as the Secretary may require to properly carry out his functions pursuant to this Act.

For purposes of paragraph (1), the non-Federal share may be in any form, including, but not

limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Secretary.

"(f) (1) Not more than 15 percent of the total of funds authorized to be appropriated under section 216(a) (3) for any fiscal year to carry out this section shall be granted under this section for projects in any one State.

"(2) The Secretary shall prescribe by regulation the manner in which this subsection shall apply to a grant under this section for a project in an area which includes all or part of more than one State.

"RECOMMENDED GUIDELINES

"SEC. 209. (a) The Secretary shall, in cooperation with appropriate State, Federal, interstate, regional, and local agencies, allowing for public comment by other interested parties, as soon as practicable after the enactment of the Resource Recovery Act of 1970, recommend to appropriate agencies and publish in the Federal Register guidelines for solid waste recovery, collection, separation, and disposal systems (including systems for private use), which shall be consistent with public health and welfare, and air and water quality standards and adaptable to appropriate land-use plans. Such guidelines shall apply to such systems whether on land or water and shall be revised from time to time.

"(b) (1) The Secretary shall, as soon as practicable, recommend model codes, ordinances, and statutes which are designed to implement this section and the purposes of this Act.

"(2) The Secretary shall issue to appropriate Federal, interstate, regional, and local agencies information on technically feasible solid waste collection, separation, disposal, recycling, and recovery methods, including data on the cost of construction, operation, and maintenance of such methods.

"GRANTS OR CONTRACTS FOR TRAINING PROJECTS

"SEC. 210. (a) The Secretary is authorized to make grants to, and contracts with, any eligible organization. For purposes of this section the term 'eligible organization' means a State or interstate agency, a municipality, educational institution, and any other organization which is capable of effectively carrying out a project which may be funded by grant under subsection (b) of this section.

"(b) (1) Subject to the provisions of paragraph (2), grants or contracts may be made to pay all or a part of the costs, as may be determined by the Secretary, of any project operated or to be operated by an eligible organization, which is designed—

"(A) to develop, expand, or carry out a program (which may combine training, education, and employment) for training persons for occupations involving the management, supervision, design, operation, or maintenance of solid waste disposal and resource recovery equipment and facilities; or

"(B) to train instructors and supervisory personnel to train or supervise persons in occupations involving the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities.

"(2) A grant or contract authorized by paragraph (1) of this subsection may be made only upon application to the Secretary no such application shall be approved unless at such time or times and containing such information as he may prescribe, except that it provides for the same procedures and reports (and access to such reports and to other records) as is required by section 207(b)

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(4) and (5) with respect to applications made under such section.

"(c) The Secretary shall make a complete investigation and study to determine—

"(1) the need for additional trained State and local personnel to carry out plans assisted under this Act and other solid waste and resource recovery programs;

"(2) means of using existing training programs to train such personnel; and

"(3) the extent and nature of obstacles to employment and occupational advancement in the solid waste disposal and resource recovery field which may limit either available manpower or the advancement of personnel in such field.

He shall report the results of such investigation and study, including his recommendations to the President and the Congress not later than one year after enactment of this Act.

"APPLICABILITY OF SOLID WASTE DISPOSAL GUIDELINES TO EXECUTIVE AGENCIES

"SEC. 211. (a) (1) If—

"(A) an Executive agency (as defined in section 105 of title 5, United States Code) has jurisdiction over any real property or facility the operation or administration of which involves such agency in solid waste disposal activities, or

"(B) such an agency enters into a contract with any person for the operation by such person of any Federal property or facility, and the performance of such contract involves such person in solid waste disposal activities,

then such agency shall insure compliance with the guidelines recommended under section 209 and the purposes of this Act in the operation or administration of such property or facility, or the performance of such contract, as the case may be.

"(2) Each Executive agency which conducts any activity—

"(A) which generates solid waste, and

"(B) which, if conducted by a person other than such agency, would require a permit or license from such agency in order to dispose of such solid waste, shall insure compliance with such guidelines and the purposes of this Act in conducting such activity.

"(3) Each Executive agency which permits the use of Federal property for purposes of disposal of solid waste shall insure compliance with such guidelines and the purposes of this Act in the disposal of such waste.

"(4) The President shall prescribe regulations to carry out this subsection.

"(b) Each Executive agency which issues any license or permit for disposal of solid waste shall, prior to the issuance of such license or permit,

consult with the Secretary to insure compliance with guidelines recommended under section 209 and the purposes of this Act.

"NATIONAL DISPOSAL SITES STUDY

"SEC. 212. The Secretary shall submit to the Congress no later than two years after the date of enactment of the Resource Recovery Act of 1970, a comprehensive report and plan for the creation of a system of national disposal sites for the storage and disposal of hazardous wastes, including radioactive, toxic chemical, biological, and other wastes which may endanger public health or welfare. Such report shall include: (1) a list of materials which should be subject to disposal in any such site; (2) current methods of disposal of such materials; (3) recommended methods of reduction, neutralization, recovery, or disposal of such materials; (4) an inventory of possible sites including existing land or water disposal sites operated or licensed by Federal agencies; (5) an estimate of the cost of developing and maintaining sites including consideration of means for distributing the short- and long-term costs of operating such sites among the users thereof; and (6) such other information as may be appropriate."

(c) Section 215 of the Solid Waste Disposal Act (as so redesignated by subsection (b) of this section) is amended by striking out the heading thereof and inserting in lieu thereof "GENERAL PROVISIONS"; by inserting "(a)" before "Payments"; and by adding at the end thereof the following:

"(b) No grant may be made under this Act to any private profitmaking organization."

SEC. 105. Section 216 of the Solid Waste Disposal Act (as so redesignated by section 104 of this Act) is amended to read as follows:

"SEC. 216. (a) (1) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare for carrying out the provisions of this Act (including, but not limited to, section 208), not to exceed $41,500,000 for the fiscal year ending June 30, 1961.

"(2) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out the provisions of this Act, other than section 208, not to exceed $72,000,000 for the fiscal year ending June 30, 1972, and not to exceed $76,000,000 for the fiscal year ending June 30, 1973.

"(3) There are authorized to be appropriated to the Secretary of Health, Education, and Welfare to carry out section 208 of this Act not to exceed $80,000,000 for the fiscal year ending June 30, 1972, and not to exceed $140,000,000 for the fiscal year ending June 30, 1973.

"(b) There are authorized to be appropriated to the Secretary of the Interior to carry out this Act not to exceed $8,750,000 for the fiscal year ending June 30, 1971, not to exceed $20,000,000 for the fiscal year ending June 30, 1972, and not to exceed $22,500,000 for the fiscal year ending June 30, 1973. Prior to expending any funds authorized to be appropriated by this subsection, the Secretary of the Interior shall consult with the Secretary of Health, Education, and Welfare to assure that the expenditure of such funds will be consistent with the purposes of this Act.

"(c) Such portion as the Secretary may determine, but not more than 1 per centum, of any appropriation for grants, contracts, or other payments under any provision of this Act for any fiscal year beginning after June 30, 1970, shall be available for evaluation (directly, or by grants or contracts) of any program authorized by this Act.

"(d) Sums appropriated under this section shall remain available until expended."

Mr. RANDOLPH. Mr. President, I invite the Senate's attention to the conference report on the Resource Recovery Act of 1970. This legislation, passed by the Senate in early August, represents a

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dramatic reorientation of the Federal effort in solid waste management.

This bill, H.R. 11833, extends for 3 years and extensively rewrites the Solid Waste Disposal Act of 1965. By shifting the emphasis from conventional waste disposal to the recycling and recovery of materials and energy from solid waste, this act represents an important step toward the alleviation of current solid waste problems and the long-range conservation and protection of the environment.

The Senate and House versions were similar in content and approach. The Senate bill originally was S. 2005, introduced by Senator MUSKIE, chairman of the Subcommittee on Air and Water Pollution, myself, and other members of the Committee on Public Works. The House bill was introduced by Representative PAUL ROGERS. The primary differences were in authorization figures, in the Senate's treatment of the Bureau of Mines involvement in solid waste, and in the contrast between the House's program for the construction of solid waste disposal facilities and the Senate's demonstration of areawide resource recovery systems.

The conference substitute authorizes $460,750,000 over 3 fiscal years for new and expanded programs under the Solid Waste Disposal Act, as well as $2 million to support a 2-year study by the National Commission on Materials Policy proposed by Senator BOGGS.

The Bureau of Mines in the Department

of the Interior would continue its role in research on metal and mineral solid waste problems, subject to consultation with the Administrator of the Environmental Protection Agency to assure consistency with the purposes of the Solid Waste Disposal Act. The conference substitute authorizes for the Secretary of the Interior $8.75 million in fiscal year 1971, $20 million in fiscal year 1972, and $22.5 in fiscal year 1973.

As reported by the conference, the legislation follows the House and Senate mandate in expanding the basic Federal research program to emphasize resource recovery, and in authorizing in a new section 205 a study of important issues related to recycling. These issues—means of recovering materials and energy, changes in production and packaging practices, including disposal charges, to reduce wastes; the use of Federal procurement to develop market demand for recovered resources; and incentives and disincentives to recycling, including tax policies—were part of a 2-year study in a separate title in the Senate bill. The conference substitute makes it an ongoing study with annual reports. It should be clear that under this language, the Administrator would have authority comparable to that in section 204 to demonstrate at pilot scale any of the fruits of this study.

The conference substitute also provides for an expanded planning grant program which combines the similar language of the two bills. Grants for planning activities would be extended to municipal and intermunicipal agencies, where only State and interstate agencies are presently aided. These grants would include funds to prepare proposals for resource recovery systems demonstration grants and programs for the removal and processing of abandoned motor vehicle hulks. Grants for the implementation of plans, proposed by the House bill, have been dropped. The Federal share of planning grants is 66⅔ percent for single municipalities and 75 percent in all other cases.

The Senate bill proposed to add several sections to the act, which have been adopted in substance by the conference: a program of training grants for personnel in the design, operation, and maintenance of solid waste disposal and resource recovery equipment and facilities; a national disposal sites study; guidelines and technical information on solid waste handling to be published by the Administrator of the Environmental Protection Agency; and a requirement of compliance by Federal facilities and federally licensed activities with these guidelines.

The most important element of the conference report is the treatment of demonstration and construction grants. Rather than stay with a program of demonstrating resource recovery systems, as the Senate proposed, or a categorical construction grant program as in the House bill, the conferees blended the two into a sharply focused program for funding innovations in solid waste management.

The conference substitute authorizes grants for the construction of new or improved solid waste disposal facilities and the demonstration of resource recovery systems. These grants could reach 75 percent of the total design and construction costs, except that a single municipality constructing a facility—rather than a system—could receive only 50 percent. In the system demonstration projects, first-year operation and maintenance costs would also be eligible for funding.

All projects under this combined section 208 approach must be consistent with the guidelines called for by this act and with any planning for the area involved.

The combination of these approaches gives the solid waste disposal program maximum flexibility. Long-term solutions must rely on recycling; immediate improvements can be made in such subsystems as collection, transportation, processing, separation, and recovery or disposal.

In fiscal 1971, the conference substitute authorizes $41.5 million to carry out this section 208 and the other activities under the act. This will also give the Administrator the greatest possible flexibility to commit as much money as possible in

fiscal 1971 for resource recovery systems and solid waste disposal facilities, yet utilize as much as necessary for other functions.

In fiscal year 1972, $80 million is authorized specifically for section 208 demonstration and construction grants, with $72 million for other activities. For fiscal 1973, $140 million is authorized for section 208, and $76 million for the remainder of the act. Of this money, no more than 15 percent of the authorization for section 208 in any 1 year can be granted in any one State.

Title II of the conference substitute is the amendment Senator BOGGS offered originally to the Senate bill. This creates a National Commission on Materials Policy, which would report by June 23, 1973, on future materials requirements, means for the extraction, development and use of materials susceptible to recycling or nonpolluting disposal, and the proper governmental agency to implement the national materials policy it recommends.

Mr. President, this conference report represents a valuable accommodation of the different approaches of the House and Senate. As chairman of the conference and of the Committee on Public Works, I wish to personally and officially stress that we have given an important redirection of the Federal effort in solid waste management from conventional disposal to innovative techniques of management and recycling of resources.

STATEMENT BY SENATOR MUSKIE

Mr. President, the knowledgeable chairman of our Subcommittee on Air and Water Pollution is necessarily absent this afternoon.

At the request of the distinguished junior Senator from Maine (Mr. MUSKIE), I ask unanimous consent that there be printed at this point in the RECORD a statement prepared by the Senator from Maine with reference to this matter. The Senator from Maine was one of the conferees.

There being no objection, Senator MUSKIE'S statement was ordered to be printed in the RECORD, as follows:

STATEMENT OF SENATOR MUSKIE

Mr. President, the conference report on the Resource Recovery Act of 1970 combines the most useful and imaginative approaches to solid waste management included in the House bill, sponsored by Representative Paul Rogers, and the Senate bill, which I initially introduced and which was improved by the Subcommittee on Air and Water Pollution and the Senate Committee on Public Works.

Section 208 of the conference substitute for H.R. 11833 reflects the concern of the Rogers bill for funding innovative solid waste disposal facilities as well as the need to demonstrate areawide resource recovery systems.

Under Section 208 grants would be available to municipalities, States, or interstate or intermunicipal agencies to construct improved solid waste disposal facilities or to demonstrate areawide resource recovery systems. An improved solid waste disposal facility is one which advances the state of the art by applying new or improved techniques for reducing the environmental impact of solid waste. These facilities would be eligible for a Federal grant of 50% of the cost of construction in the case of a single municipality and 75% for other projects.

Resource recovery systems are eligible for 75% of the costs of design, construction, and first-year operation and maintenance costs. They must also include a means for distributing the costs among the users of the system.

The conferees authorized $80 million for fiscal 1972 and $140 million in fiscal 1973. No more than 15% of the annual authorization could be granted in any one State. While the conference bill does not specifically authorize funds for Section 208 in fiscal 1971, funds are available from the $41.5 million authorization for Section 208 grants to be allocated among States as demands require.

The total authorization figures in the conference substitute are basically those proposed by Representative Rogers' bill, scaled to what will be needed in fiscal 1971. In addition to the $41.5 million in fiscal 1971 and

[p. 35514]

the specific sums for section 208, the bill authorizes $72 million for fiscal 1972 and $76 million for fiscal 1973 for the remainder of the programs under the Solid Waste Disposal Act.

The Senate bill had eliminated the Act's separate authorization to the Secretary of the Interior for the Bureau of Mines' research in metal and mineral solid waste problems. The conference substitute accepts the position of the House, and authorizes for the Secretary of the Interior $8.75 million in fiscal 1971, $20.0 million in fiscal 1972, and $22.5 million in fiscal 1973, but requires that the Secre-

tray consult with the Administrator of EPA before committing funds to any solid waste disposal project.

Several sections which the Senate bill added to the Act were accepted by the conference. These included a program of training grants, a national disposal sites study, and a requirement for compliance, with solid waste guidelines included in both House and Senate proposals, by Federal facilities and Federally licensed activities.

The language of the House and Senate bills was similar on amendments to the research and planning grants section of the Act. The conference agreement generally follows the House language for planning grants, except to add provision for grants to develop proposals for demonstration and construction grants and provision to plan programs for the removal of abandoned motor vehicles, which the Senate bill proposed. The conference agreement deleted provision for grants for the implementation of plans included in the House bill.

The conference also accepted Title II of the Senate bill, establishing the National Commission on Materials Policy. This was the amendment offered by Senator J. Caleb Boggs. It authorized the Commission to study and report by June 30, 1973 on materials policy and to ascertain which agency of the government should be responsible, on a continuing basis for implementing that policy. The Title includes an authorization of $2 million.

Senator Jennings Randolph, Chairman of the Senate Committee on Public Works and Chairman of the conference committee, deserves special recognition for his effort both in the formulation of the original Senate bill and in this agreement.

The Resource Recovery Act of 1970 will be a major weapon in the battle against the "third pollution." If adequate funding and manpower are provided for this program important steps can be taken to abate a growing menace to our water, air and land resources. The diseases that inadequate solid waste management foster and the aesthetic blight of litter and dumps can be eliminated.

These are the goals of this legislation. Its importance should be underscored. Once again Congress has taken the lead to deal with a difficult environmental problem. I urge adoption of the conference report.

Mr. BOGGS. Mr. President, will the Senator yield?

Mr. RANDOLPH. Mr. President, I am delighted to yield to the distinguished Senator from Delaware.

Mr. BOGGS. Mr. President, I rise to express my support for the report by the committee on conference on H.R. 11833, the Resource Recovery Act of 1970.

There are numerous aspects of this legislation that are of great importance to the Nation. However, I should like to confine my remarks to two aspects in the legislation.

First, I wish to discuss the funds authorized under section 208 for grants to demonstrate and construct innovative facilities and systems for resource recovery systems and solid waste disposal. No specific sum is authorized for this program during the current fiscal year. This decision was taken due to the uncertainty as to the number of States and cities that could prepare proposals in the remaining few months of fiscal year 1971. A total of $41,500,000, however, is authorized for the entire bill during fiscal year 1971. I anticipate that the Bureau of Solid Waste Management would seek a significant sum, possibly as much as $20 million, to support section 208 projects this fiscal year, for section 208 lies at the heart of what this legislation seeks to accomplish.

There is a great need to seek technologically innovative systems and facilities for the purpose of resource recovery and solid waste disposal. The need was amply demonstrated during extensive hearings on the subject by our Committee on Public Works, and I am convinced we must move ahead rapidly on this subject.

In addition, Mr. President, I wish to note title II of this bill. This title appeared in the bill passed by the Senate. It creates a National Commission on Materials Policy to examine and analyze the need for a national materials policy. The committee on conference added to the Senate language a requirement that the Commission make recommendations on which Federal agency is best equipped to oversee, on a continuing basis, the implementation of the national materials policy once the Commission's activities cease. This directive was implicit in the original Senate bill. Nevertheless, I believe the new language is helpful as it makes this directive more specific.

Again, Mr. President, I wish to commend the members of the committee on conference for their work on this bill. The chairman of the full committee (Mr. RANDOLPH) was particularly effective in his arguments in support of the Senate

position. I commend him. I also wish to thank the Members of the House who served on the committee on conference for their most helpful and effective effort in seeking to resolve the differences between our two bills.

This bill, H.R. 11833, should prove to be a landmark in our effort to reduce solid waste and thus enhance our environment, I commend it to my colleagues.

Mr. COOPER. Mr. President, although not a member of the conference committee on the bill, H.R. 11833, the Resource Recovery Act of 1970, as ranking minority member of the Committee on Public Works, I want to commend the Senate conferees for bringing back this important bill in basically the same form as it passed the Senate.

This represents the second major piece of environmental legislation coming from the Committee on Public Works this session, the other being the Water Quality Improvement Act of 1970 signed into law in April. In addition, the committee is presently in conference with the House on the National Ambient Air Quality Standards Act of 1970 which passed the Senate last month.

As the environmental problems grow, the legislative response becomes more difficult and complex and the committee has been steadfastly working toward providing responsive legislation. I expect that when we resume after the elections we will consider water pollution legislation, thus rounding out a very successful and historically significant session of Congress with respect to the environment.

The committee, particularly the chairman, Senator RANDOLPH, the subcommittee chairman, Senator MUSKIE, and Senator BOGGS, the ranking minority member of the Subcommittee on Air and Water Pollution, all of whom served as conferees, and Senators BAKER and EAGLETON, who were also conferees deserve special credit. One of the trademarks of the Committee on Public Works has been the bipartisan nature of its activity and the fact that all members participate fully. Even in these difficult times this pattern has been adhered to and the entire committee stands as an outstanding example of how the legislative process can and should work.

Mr. BAKER, Mr. President, the Senate members of the conference committee on H.R. 11833 have brought back to the Senate a bill which in all substantial respects parallels the bill passed by the Senate on July 31.

As several members of the Committee on Public Works pointed out on the floor when the bill was passed, this is very important legislation in that it recognizes the urgent needs of the country in the management of solid waste while being, at the same time, fiscally responsible. The conference bill is consistent with these purposes. In only one respect has there been significant change from the Senate version of the bill, and that change results from the incorporation of certain elements of the House bill providing for the construction of new and improved solid waste facilities. There is no intention on the part of the conference committee that this bill be construed as establishing a new categorical grant-in-aid program under which every community in the Nation would be eligible for Federal construction assistance. The bill does provide, however, for Federal assistance designed to stimulate the development of new systems and technology necessary to respond to the growing solid waste crisis. Following the experience gained under this federally assisted research and development program, systems and technology will be available for general application at a later date.

The conference bill is consistent with the report of the Public Works Committee that accompanied the Senate bill. I ask unanimous consent that there be printed at this point in the RECORD pertinent excerpts from that report.

There being no objection, the excerpts from the report were ordered to be printed in the RECORD, as follows:

RESOURCE RECOVERY SYSTEMS

After analysis of the completed hearing record on pending solid waste legislation, particularly

testimony on Section 208 of the bill, the Committee determined that the authorization of a new unrestricted construction grant program for solid waste disposal is not justified at this time. As the bill reported from the Committee clearly reflects, there is an urgent need to redirect the thrust of waste management from disposal to the maximum recovery of reusable materials and energy. The authorization of a construction grant program at this time could result in a massive commitment to presently available technology oriented towards disposal. To avoid stimulating investment in inadequate technology the Committee has substituted a system demonstration provision for the proposed construction grant provision.

At the same time the Committee recognizes that many communities across the Nation, particularly rural and small municipalities, have severe waste disposal problems, with constraints on past practices of waste management resulting from compliance with air and water quality standards. The cost and administration of disposal techniques such as sanitary land fill and modern incineration are expenses that should be borne by the producers of such waste, whether industrial or residential household.

The Committee does recognize that information regarding technology developed in part pursuant to the Solid Waste Disposal Act of 1965 regarding sanitary landfill and improved incineration has not been generally available to the communities throughout the Nation. Therefore, Section 209(c) of the reported bill would authorize a greatly expanded information dissemination function for the Secretary, so that all areas of the Nation can benefit from knowledge of sound waste management practices and technology currently available.

Consistent with the judgment that the Nation cannot afford merely to dispose of the tremendous volume of material that is generated by our industrial and consuming society, especially in urban concentrations, and recognizing further that a great deal of research has been done on resources recovery, the Committee has substituted for the construction grant proposal a new program of grants to municipalities to achieve demonstration of resources recovery systems on an areawide basis. This program is designed to stimulate, in the shortest time, the development of systems of technology necessary to manage growing volumes of community wastes and achieve maximum recovery of materials and energy from such wastes.

Throughout the hearings on resources recovery, testimony was received describing various technologies and systems to achieve resources recovery. The Committee believes it is urgent national policy to move these proposals into actual application and operation in as many different areas, from large metropolitan complexes to smaller communities, as necessary to demonstrate innovative and responsive resources recovery systems. Such systems can then be applied, as appropriate, to all areas of the country in which similar problems exist.

The program would provide 75 percent Federal assistance to develop and construct advanced systems of resources recovery in various categories of communities established by the Secretary in order to demonstrate systems applicable in different urban and rural conditions.

It is the Committee's intent that the program authorized shall be one which will, in many respects, parallel the type of research and development procurement conducted by the Department of Defense and the National Aeronautics and Space Administration in the sense that the Secretary is authorized to promulgate regulations describing the categories of systems for which applications will be received, specifying that such applications are to be received by a certain date and further establishing guidelines for review of such applications.

Grants are to be awarded only to those applications which the Secretary finds to be clearly superior with respect to the system of resources recovery proposed, the economics of the system and, the potential for general application for solution of the myriad of waste problems. It should be emphasized that the selection procedure, thereby established is not competition based strictly upon low cost, but rather is competition to stimulate innovative systems, of general application which are both economically and commercially viable and which recover the maximum amount of materials and energy.

The Committee was particularly impressed with testimony received in San Francisco describing a proposed municipal resources recovery system for the San Francisco Peninsula area, and the advanced state of development which that system proposes. The Committee received many other impressive descriptions and displays. It is the Committee's judgment that well researched methods, similar to those described in California, should be given an on-site demonstration application as soon as possible. The Nation can no longer afford to await more study and analysis and must move from the great deal of information presently available to full scale demonstration of recovery systems.

It is expected by the Committee that responsible government officials in municipalities and communities across the country will take advantage of the program proposed in the bill and will develop proposals for the most advanced and responsive systems imaginable, for consideration by the Secretary. The Committee encourages such municipalities to work very closely with relevant private industry talent and resources through contract or otherwise, to develop systems which will provide increased public service in waste management, combined with maximum recovery of materials and energy in such waste and economic viability through the use of user charges and markets for recovered material and energy.

The Committee looks upon the proposed demonstration grant program as a method of stimulating not just the development of technology and its areawide application, but it will also cause communities to study their own circumstances with respect to waste management. Through such studies, communities will be able to provide better public service to their citizens in the future and be in a position to apply systems that are developed pursuant to these demonstration grants as

they become available. The Committee hopes that communities will take immediate advantage of this program, and seeks to encourage that result by Section 207(a)(3) of the reported bill, which would authorize Federal assistance to develop proposals for resource recovery demonstration grants for submission to the Secretary.

The PRESIDING OFFICER. The question is on agreeing to the conference report.

The conference report was agreed to.

[p. 35516]

1.1d (4)(d) Oct. 13: House agreed to conference report, pp. 36587–36588

CONFERENCE REPORT ON H.R. 11833, RESOURCE RECOVERY ACT OF 1970

Mr. STAGGERS. Mr. Speaker, I call up the conference report on the bill (H.R. 11833) to amend the Solid Waste Disposal Act in order to provide financial assistance for the construction of solid waste disposal facilities, to improve research programs pursuant to such act, and for other purposes, and ask unanimous consent that the statement of the managers on the part of the House be read in lieu of the report.

The Clerk read the title of the bill.

The SPEAKER. Is there objection to the request of the gentleman from West Virginia?

There was no objection.

The Clerk read the statement.

(For conference report and statement, see proceedings of the House of Oct. 7, 1970.)

Mr. STAGGERS (during the reading). Mr. Speaker, I ask unanimous consent that the statement of the managers be considered as read.

The SPEAKER. Is there objection to the request of the gentleman from West Virginia?

There was no objection.

The SPEAKER. The gentleman from West Virginia is recognized for 1 hour.

Mr. STAGGERS. Mr. Speaker, this legislation passed the House on June 23, 1970, by a vote of 377 to 0. The Members of the House will be glad to learn that the Members of the other body have already agreed to accept four of the most important features of the Resource Recovery Act of 1960, as passed by the House.

First, the program will be limited to a 3-year period—fiscal years 1971, 1972, and 1973—instead of a 4-year period as called for in the bill originally passed by the other body. This shorter period will give the Congress an opportunity to review the program after it has been operating for about 2 years before deciding whether it should be extended in its present form or modified in some respects.

Second, the other body accepted the appropriation authorizations provided for in the House bill for fiscals 1972 and 1973, but agreement was reached to cut appropriations for fiscal year 1971 by 50 percent. This is justified in view of the fact that only approximately 6 months are still left of the present fiscal year, and therefore, few if any funds are likely to be needed to pay for major construction projects that would be authorized by this legislation.

[p. 36587]

Third, the other body agreed to authorize construction grants for new or improved solid waste disposal facilities. Such projects must advance the state of the art by applying new and improved techniques designed to reduce the environmental impact of solid waste disposal, to achieve recovery of energy or resources or to recycle useful materials. The projects would be carried out in communities of varying sizes in order to assure that the state of the art be developed so as to solve community waste problems of urban-industrial centers, metropolitan regions as well as rural areas, under representative geographic and environmental conditions.

Fourth, the bill agreed to by the con-

ferees would retain the present authority of the Secretary of the Interior with regard to solid waste disposal research related to fossil fuels and minerals as was provided in the House bill. The bill as passed by the other body would have eliminated this separate authority and placed responsibility for all solid waste activities in the Secretary of Health, Education, and Welfare.

The House conferees have agreed to accept provisions which were contained in the bill as passed by the other body and which provide for the following:

Demonstration grants for resource recovery systems,

Grants for training of personnel,

A national disposal sites study, and

The creation of a temporary National Commission on Materials Policy.

I firmly believe that the bill agreed to by the conferees constitutes an improvement over the bills passed by the two bodies, and I urge Members of the House to approve the conference report. In so doing we shall take an important step in advancing the handling of solid waste in this country. The increasing amounts of solid waste present difficult problems for our citizens throughout the country regardless of the size of the communities in which they live. These problems must be tackled energetically and the legislation before us will make this possible.

Mr. Speaker, I yield such time as he may use to the gentleman from Illinois (Mr. SPRINGER).

Mr. SPRINGER. Mr. Speaker, this is what would be known in better parlance as the Solid Waste Disposal Act of 1970. It was debated at great length on the floor as to how we would go about handling solid wastes of all kinds. I will admit that most of this problem occurs in the cities. I am talking about the towns of 20,000 to 25,000 on up to those with millions of people. I do not mean that it is of no importance in communities of less than that, because I think we will be able to adapt some of these recycling devices which we are experimenting with now for use in communities of all sizes. However, it is in the larger cities that we are having the most argument on how to cope with this problem.

I believe that we made what I deem to be a fair compromise with the Senate. This is substantially the House bill. We did keep the emphasis on improvement. In other words, if a grant is made, then that amount of money must be spent in an effort to improve a technique already in existence. We have not yet reached the point where we are making grants to communities to follow on with what somebody else has done but are still in the experimental stage of making grants in order to improve systems. We are not making grants to copy systems already in existence.

Mr. Speaker, we made only one change in this whole effort. The change was that if there is a grant made to improve an existing system, then they could install the existing system if they had an effort made also to improve on that system and make it show that through that effort it would be done.

The authorization is $48.25 million less than it was when it left the House.

I believe we made a good compromise with the Senate. I believe this is a good conference report and ought to be approved.

Mr. HALL. Mr. Speaker, will the gentleman yield?

Mr. SPRINGER. I will be glad to yield to the gentleman from Missouri.

Mr. HALL. Mr. Speaker, I wanted to ask the distinguished gentleman, my colleague from Illinois, if he can confirm the statement that in this conference report there is no delegation of the powers of the Congress and that anything added by the other body is germane? The gentleman has already confirmed the fact that there is no increase in cost. In fact, there is a decrease.

Mr. SPRINGER. The gentleman is correct. There is no extraneous matter in this conference report.

Mr. STAGGERS. Mr. Speaker, I yield 3 minutes to the gentleman from Florida (Mr. ROGERS).

Mr. ROGERS of Florida. Mr. Speaker, I rise to urge the House to adopt the con-

ference report on H.R. 11833, the Solid Waste *Disposal Act.*

All too little attention has been given to the problem of land misuse and the resulting spoilage of our environment because of the mismanaged and obsolete disposal of our solid waste.

Despite the enormous amount of solid waste we annually produce, we have been overlooking the eventual consequences that will result if we do not halt the present practice of dumping our garbage and other wastes in dumps and other such areas.

In H.R. 11833 I think we have preserved the main points in the House bill. We give the main thrust of the legislation to finding new and innovative methods of disposing of our solid waste and at the same time put this theory, if sound, to practical use through construction grants to the States and municipalities.

I think that this bill will prove to be the first step of significance in bringing into control the mountains of waste which we, as an affluent, user-Nation are producing. Of course the main object is to produce some type of recycling which will allow us to become more complete users and thus eliminate waste altogether.

I hope that my colleagues will join with me and the committee in voting for passage of the conference report with the same enthusiasm as when this House passed the original bill.

Mr. STAGGERS. Mr. Speaker, I move the previous question on the conference report.

The previous question was ordered.

The conference report was agreed to.

A motion to reconsider was laid on the table.

[p. 36588]

1.2 CONTRACTS: ACQUISITION, CONSTRUCTION, OR FURNISHING OF TEST FACILITIES AND EQUIPMENT, AS AMENDED

10 § 2353

(a) A contract of a military department for research or development, or both, may provide for the acquisition or construction by, or furnishing to, the contractor, of research, developmental, or test facilities and equipment that the Secretary of the military department concerned determines to be necessary for the performance of the contract. The facilities and equipment, and specialized housing for them, may be acquired or constructed at the expense of the United States, and may be lent or leased to the contractor with or without reimbursement, or may be sold to him at fair value. This subsection does not authorize new construction or improvements having general utility.

(b) Facilities that would not be readily removable or separable without unreasonable expense or unreasonable loss of value may not be installed or constructed under this section on property not owned by the United States, unless the contract contains—

(1) a provision for reimbursing the United States for the fair value of the facilities at the completion or termination of the contract or within a reasonable time thereafter;

(2) an option in the United States to acquire the underlying land; or

(3) an alternative provision that the Secretary concerned considers to be adequate to protect the interests of the United States in the facilities.

(c) Proceeds of sales or reimbursements under this section shall be paid into the Treasury as miscellaneous receipts, except to the extent otherwise authorized by law with respect to property acquired by the contractor. Aug. 10, 1956, c. 1041, 70A Stat. 134.

1.2a AN ACT TO REVISE, CODIFY, AND ENACT INTO LAW, TITLE X OF THE UNITED STATES CODE

August 10, 1956, §2353 70A Stat. 134

§2353. Contracts: acquisition, construction, or furnishing of test facilities and equipment

(a) A contract of a military department for research or development, or both, may provide for the acquisition or construction by, or furnishing to, the contractor, of research, developmental, or test facilities and equipment that the Secretary of the military department concerned determines to be necessary for the performance of the contract. The facilities and equipment, and specialized housing for them, may be acquired or constructed at the expense of the United States, and may be lent or leased to the contractor with or without reimbursement, or may be sold to him at fair value. This subsection does not authorize new construction or improvements having general utility.

(b) Facilities that would not be readily removable or separable without unreasonable expense or unreasonable loss of value may not be installed or constructed under this section on property not owned by the United States, unless the contract contains—

(1) a provision for reimbursing the United States for the fair value of the facilities at the completion or termination of the contract or within a reasonable time thereafter;

(2) an option in the United States to acquire the underlying land; or

(3) an alternative provision that the Secretary concerned considers to be adequate to protect the interests of the United States in the facilities.

(c) Proceeds of sales or reimbursements under this section shall be paid into the Treasury as miscellaneous receipts, except to the extent otherwise authorized by law with respect to property acquired by the contractor.

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1.2a (1) HOUSE COMMITTEE ON THE JUDICIARY

H.R. REP. No. 970, 84th Cong., 1st Sess. (1955)

REVISION OF TITLE 10, U.S. CODE, ENTITLED "ARMED FORCES", AND TITLE 32, U.S. CODE, ENTITLED "NATIONAL GUARD"

JUNE 28, 1955.—Committed to the Committee of the Whole House on the State of the Union ordered to be printed

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MR. WILLIS, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany H. R. 7049]

The Committee on the Judiciary, to whom was referred the bill (H.R. 7049) to revise, codify, and enact into law title 10 of the United States Code, entitled "Armed Forces", and title 32, United States Code, entitled "National Guard", having considered the same, report favorably thereon and recommend that the bill do pass.

I. EXPLANATION OF REVISED TITLE 10, ARMED FORCES, AND TITLE 32, NATIONAL GUARD

[p. 1]

5. Restatement of substance

The object of the new titles has been to restate existing law, not to make new law. Consistently with the general plan of the United States Code, the pertinent provisions of law have been freely reworded and rearranged, subject to every precaution against disturbing existing rights, privileges, duties, or functions. Adherence to the substance of existing law, however, has not always meant adherence to the letter of the statute. Where court decisions, opinions of officials such as the Attorney General or the Comptroller General, executive orders, regulations, or well-established administrative practice have established authoritative interpretations clarifying ambiguities in the law, the text has been reworded to express those interpretations. These changes have been explained in the applicable revision notes.

[p. 8]

SECTION 2353

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
2353 (a)	5:235c (1st sentence; and 2d sentence, less 2d and last provisos) 5:475j (1st sentence; and 2d sentence, less 2d and last provisos) 5:628e (1st sentence; and 2d sentence, less 2d and last provisos)	July 16, 1952, ch. 882, § 4 (less 3d and last sentences), 66 Stat. 725.
2353 (b)	5:235e (2d proviso of 2d sentence) 5:475j (2d proviso of 2d sentence) 5:628e (2d proviso of 2d sentence)	
2353 (c)	5:235e (last proviso of 2d sentence) 5:475j (last proviso of 2d sentence) 5:628e (last proviso of 2d sentence)	

In subsection (a), the words "furnished to" and "for the use thereof" are omitted as surplusage.

In subsections (a) and (b), the words "United States" are substituted for the word "Government".

In subsection (b), the introductory clause is substituted for 5:235e (words of 2d proviso before clause (1)), 475j, and 628e. The words "that . . . considers" are substituted for the words "as will in the opinion". The words "an alternative" are substituted for the words "such other".

In subsection (c), the words "Proceeds of" are substituted for the words "That all moneys arising from".

[p. 139]

1.2a (2) SENATE COMMITTEE ON THE JUDICIARY

S. REP. No. 2484, 84th Cong., 2d Sess. (1956)

REVISION OF TITLE 10, U.S. CODE, ENTITLED "ARMED FORCES", AND TITLE 32, U.S. CODE ENTITLED "NATIONAL GUARD"

JULY 9, 1956.—Committed to the Committee of the Whole Senate on the State of the Union ordered to be printed

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From the Committee on the Judiciary, submitted the following

REPORT

[To accompany H. R. 7049]

SECTION 2353

Revised Section	Source (U.S. Code)	Source (Statutes at Large)
2353 (a)	5:235e (1st sentence; and 2d sentence, less 2d and last provisos) 5:475j (1st sentence; and 2d sentence, less 2d and last provisos) 5:628e (1st sentence; and 2d sentence, less 2d and last provisos)	July 16, 1952, ch. 882, § 4 (less 3d and last sentences), 66 Stat. 725.
2353 (b)	5:235e (2d proviso of 2d sentence) 5:475j (2d proviso of 2d sentence) 5:628e (2d proviso of 2d sentence)	
2353 (c)	5:235e (last proviso of 2d sentence) 5:475j (last proviso of 2d sentence) 5:628e (last proviso of 2d sentence)	

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"that . . . considers" are substituted for the words "as will in the opinion". The words "an alternative" are substituted for the words "such other".

In subsection (c), the words "Proceeds of" are substituted for the words "That all moneys arising from".

[p. 149]

1.2a (3) CONGRESSIONAL RECORD

1.2a (3)(a) Vol. 101 (1955), Aug. 1: Amended and passed House, p. 12719

Mr. WILLIS. Mr. Speaker, this bill is intended to codify the existing laws relating to the Armed Forces and the National Guard. It is part of the comprehensive program inaugurated by the committee on Revision of the Laws, and continued under the Legislative Reorganization Act by the Committee on the Judiciary, to enact into law all 50 titles of the United States Code.

It is purely and simply a codification of existing law and has been reported favorably by unanimous vote of the Committee on the Judiciary after consultation with the Committee on Armed Services and has been sponsored by the Department of Defense with the approval of the Bureau of the Budget.

Please let me state as emphatically as I am able that this bill is not designed to make a single substantive change in existing law.

As a matter of fact we have gone to the extreme of inserting in the bill a provision—section 50— that it is the legislative purpose to restate the existing law without substantive change. Moreover, there is a line of United States Supreme Court decisions applying the well-known canon of statutory construction that in this type of bill even though Congress changes the language of the existing law the court will construe it as a continuation of existing law without substantive change unless Congress clearly manifests an intention to make such substantive changes.

Any undue fears about this bill on that score should be allayed in view of the following:

First. The canon of statutory construction just referred to will be applied;

Second. The interpretation clause contained in § 50 and in other savings provisions in the bill, together with similar statements contained in the committee report, clearly manifest the intention of Congress to make no substantive change; and

Third. The bill has been most carefully prepared over a period of almost 8 years. During that period the several military departments and the Department of Defense have assigned from time to time extremely capable and expert personnel.

[p. 12719]

1.2a (3)(b) Vol. 102 (1956), July 23: Amended and passed Senate, p. 13953

[No Relevant Discussion on Pertinent Section]

1.2a (3)(c) Vol. 102 (1956), July 25: House concurs in Senate amendments, p. 14455

[No Relevant Discussion on Pertinent Section]

§ 461. Comprehensive planning—Grants by Secretary; authorization

(a) In order to assist State and local governments in solving planning problems, including those resulting from the increasing concentration of population in metropolitan and other urban areas and the out-migration from and lack of coordinated development of resources and services in rural areas; to facilitate comprehensive planning for urban and rural development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs and techniques on an areawide basis, and to engage private consultants where their professional services are deemed appropriate by the assisted governments, the Secretary is authorized to make planning grants to—

(1) State planning agencies for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided,* That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are with metropolitan areas, only if (i) the Secretary finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after September 2, 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection, and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

(2) State, metropolitan, and regional planning agencies for metropolitan or regional planning, and to cities, within metropolitan areas, for planning which is part of comprehensive metropolitan planning and which shall supplement and be coordinated with State, metropolitan, and regional planning;

(3) (A) economic development districts designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, and

(B) cities, other municipalities, and counties which (i) are situated in redevelopment areas or economic development districts designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, or (ii) have suffered substantial damage as a result of a major disaster as determined by the President pursuant to the Disaster Relief Act of 1970;

(4) official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation, or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community under section 1749cc—1 of Title 12 or title IV of the Housing and Urban Development Act of 1968 or under part B of the Urban Growth and New Community Development Act of 1970;

(5) States for State and interstate comprehensive planning and for research and coordination activity related thereto, including technical and other assistance for the establishment and operation of intrastate and interstate planning agencies;

(6) State planning agencies for assistance to district planning, or planning for areas within districts, carried on by or for district planning agencies;

(7) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

(8) official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

(9) tribal planning councils or other tribal bodies desig-

nated by the Secretary of the Interior for planning for an Indian reservation;

(10) the various regional commissions established by the Appalachian Regional Development Act of 1965 or under the Public Works and Economic Development Act of 1965 for comprehensive planning for the regions established under such Acts (or State agencies or instrumentalities participating in such planning); and

(11) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small muncipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs.

Planning assisted under this section shall, to the maximum extent feasible, cover entire areas having common or related development problems. The Secretary shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other areas and reducing transportation needs. Planning carried out with assistance under this section shall also include a housing element as part of the preparation of comprehensive land use plans, and this consideration of the housing needs and land use requirements for housing in each comprehensive plan shall take into account all available evidence of the assumptions and statistical bases upon which the projection of zoning, community facilities, and population growth is based, so that the housing needs of both the region and the local communities studied in the planning will be adequately covered in terms of existing and prospective in-migrant population growth. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other federally aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Transportation under section 307 of Title 23.

Maximum amount of grant; terms and conditions; advances or progress payments; appropriations; grants for research on State statutes affecting local governments

(b) A planning grant made under subsection (a) of this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be made for up to 75 per centum of such estimated cost when made for planning primarily for (1) redevelopment areas, local development districts, or economic development districts, or portions thereof, described in paragraph (3)(A) and (B)(i) and paragraph (11) of subsection (a) of this section, (2) areas described in subsection (a)(4) or subsection (a)(8) of this section, and (3) the various regions, as described in subsection (a) (10) of this section. All grants made under this section shall be subject to terms and conditions prescribed by the Secretary. Except for planning for areas described in subsection (a)(4) of this section, no portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Secretary is authorized, notwithstanding the provisions of section 529 of Title 31, to make advance or progress payments on account of any grant made under this section. There are authorized to be appropriated for the purposes of this section not to exceed $265,000,000 prior to July 1, 1969, and not to exceed $420,000,000 prior to July 1, 1972. Of the amount available prior to July 1, 1969, $20,000,000 may be used only for district planning grants under subsection (a)(6) of this section, which amount shall be increased by $10,000,000 on July 1, 1969. Any amounts appropriated under this section shall remain available until expended: *Provided*, That, of any funds appropriated under this section, not to exceed an aggregate of $10,000,000 plus 5 per centum of the funds so appropriated may be used by the Secretary for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

Encouragement of planning on a unified regional, district, or metropolitan basis

(c) The Secretary is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified regional, district, or metropolitan basis and to

provide technical assistance for such planning and the solution of problems relating thereto.

Comprehensive planning

(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties, metropolitan areas, districts, regions, and Indian reservations and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Secretary may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. The Secretary is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities, and to Indian tribal bodies, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems.

Consultation with officials of Federal Government; technical assistance

(e) In the exercise of his responsibilities under this section, the Secretary shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities and other comprehensively planned activities. He shall, particularly, consult with the Secretary of Agriculture prior to his approval of any district planning grants under subsections (a)(6) and (g) of this section, and with the Secretary of Commerce prior to his approval of any planning grants which include any part of an economic development district as defined and designated under the Public Works and Economic Development Act of 1965. The Secretary of Agriculture and the Secretary of Commerce, as appropriate, may provide technical assistance, with or without reimbursement, in connection with the establishment of districts by the Secretary of Housing and Urban Development and the carrying out of planning by such districts.

Consent of Congress to agreements or compacts between States for cooperative efforts and mutual assistance in comprehensive planning

(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative effort and mutual assistance in the comprehensive planning for the growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.

Grants to organizations composed of elected officials representative of political jurisdictions within metropolitan area, region, or district; studies, data, plans, programs, related activities; maximum grants

(g) In addition to the planning grants authorized by subsection (a) of this section, the Secretary is further authorized to make grants to organizations composed of public officials representative of the political jurisdictions within the metropolitan area, region, or district for the purpose of assisting such organizations to undertake studies, collect data, develop metropolitan, regional, and district plans and programs, and engage in such other activities, including implementation of such plans, as the Secretary finds necessary or desirable for the solution of the metropolitan, regional, or district problems in such areas, regions, or districts. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area, region, or district including, but not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made.

Grants for surveys of historic structures

(h) In addition to the other grants authorized by this section, the Secretary is authorized to make grants to assist any city, other municipality, or county in making a survey of the structures and sites in such locality which are determined by its appropriate authorities to be of historic or architectural value. Any such survey shall be designed to identify the historic structures and sites in the locality, determine the cost of their rehabilitation or restoration, and provide such other information as may be necessary or appropriate to serve as a foundation for a balanced and effective program of historic preservation in such locality. The aspects of any such survey which relate to the identification of historic and architectural values shall be conducted in accordance with criteria found by the Secretary to be comparable to those used in establishing the national register maintained by the Secretary of the Interior under other provisions of law; and the results of each such survey shall be made available to the Secretary of the Interior. A grant under this subsection shall not exceed two-thirds of the cost of the survey for which it is made, and shall be made to the appropriate agency or entity specified in paragraphs (1) through (11) of subsection (a) of this section or, if there is no such agency or entity which is qualified and willing to receive the grant and pro-

vide for its utilization in accordance with this subsection, directly to the city, other municipality, or county involved.

Definitions

(i) As used in this section—

(1) The term "metropolitan area" means a standard metropolitan statistical area, as established by the Bureau of the Budget, subject, however, to such modifications or extensions as the Secretary deems to be appropriate for the purposes of this section.

(2) The term "region" includes (A) all or part of the area of jurisdiction of one or more units of general local government, and (B) one or more metropolitan areas.

(3) The term "district" includes all or part of the area of jurisdiction of (A) one or more counties, and (B) one or more other units of general local government, but does not include any portion of a metropolitan area.

(4) The term "comprehensive planning" includes the following:

(A) preparation, as a guide for governmental policies and action, of general plans with respect to (i) the pattern and intensity of land use, (ii) the provision of public facilities (including transportation facilities) and other government services, and (iii) the effective development and utilization of human and natural resources;

(B) long-range physical and fiscal plans for such action;

(C) programing of capital improvements and other major expenditures, based on a determination of relative urgency, together with definite financing plans for such expenditures in the earlier years of the program;

(D) coordination of all related plans and activities of the State and local governments and agencies concerned; and

(E) preparation of regulatory and administrative measures in support of the foregoing.

Comprehensive planning for the purposes of districts shall not include planning for or assistance to establishments in relocating from one area to another or assist subcontractors whose purpose is to divest, or whose economic success is dependent upon divesting, other contractors or subcontractors of contracts theretofore customarily performed by them: *Provided,* That this limitation shall not be construed to prohibit assistance for the expansion of an existing business entity through the establishment of a new branch, affiliate, or subsidiary of such entity, if the Secretary finds that the establishment of such branch, affiliate, or subsidiary will not result in an increase in unemployment in the area of original location or in any other area where such entity conducts business

operations, unless the Secretary has reason to believe that such branch, affiliate, or subsidiary is being established with the intention of closing down the operations of the existing business entity in the area of its original location or in any other area where it conducts such operations.

(5) The term "State planning agencies" includes official State planning agencies and (in States where no such planning agency exists) agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Secretary.

(6) The terms "metropolitan planning agencies", "regional planning agencies", and "district planning agencies" mean official metropolitan, regional, and district planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning), and acceptable to the Secretary, empowered under State or local law or interstate compact to perform metropolitan, regional, or district planning, respectively: *Provided,* That such agencies and instrumentalities shall, to the greatest practicable extent, be composed of or responsible to the elected officials of the unit or units of general local government for whose jurisdictions they are empowered to engage in planning.

State, regional, and other multijurisdictional area planning

(j) In carrying out the provisions of this section relating to planning for States, regions, or other multijurisdictional areas whose development has significance for purposes of national growth and urban development objectives, the Secretary shall encourage the formulation of plans and programs which will include the studies, criteria, standards, and implementing procedures necessary for effectively guiding and controlling major decisions as to where growth should take place within such States, regions, or areas. Such plans and programs shall take account of the availability of and need for conserving land and other irreplaceable natural resources; of projected changes in size, movement, and composition of population; of the necessity for expanding housing and employment opportunities; of the opportunities, requirements, and possible locations for, new communities and large-scale projects for expanding or revitalizing existing communities; and of the need for methods of achieving modernization, simplification, and improvements in governmental structures, systems, and procedures related to growth objectives. If the Secretary determines that activities otherwise eligible for assistance under this section are necessary to the development or implementation of such plans and programs, he may make grants in support of such activities to any governmental agency or organization of public officials which

he determines is capable of carrying out the planning work involved in an effective and efficient manner and may make such grants in an amount equal to not more than 75 per centum of the cost of such activities.

Aug. 2, 1954, c. 649, Title VII, § 701, 68 Stat. 640; Aug. 7, 1956, c. 1029, Title III, §§ 307(d), 308, 70 Stat. 1102; July 12, 1957, Pub.L. 85–104, Title VI, § 606, 71 Stat. 305; Sept. 23, 1959, Pub.L. 86–372, Title IV, § 419, 73 Stat. 678; May 1, 1961, Pub.L. 87–27, § 15, 75 Stat. 58; June 30, 1961, Pub.L. 87–70, Title III, § 310, 75 Stat. 170; Sept. 2, 1964, Pub.L. 88–560, Title III, §§ 314–317, 78 Stat. 792, 793; Mar. 9, 1965, Pub.L. 89–4, Title II, § 213, 79 Stat. 17; Aug. 10, 1965, Pub.L. 89–117, Title XI, § 1102, 79 Stat. 502; Nov. 3, 1966, Pub.L. 89–754, Title IV, § 406, Title VI, § 604, Title X, § 1008, 80 Stat. 1273, 1279, 1286; May 25, 1967, Pub.L. 90–19, § 10(a), 81 Stat. 22; Oct. 11, 1967, Pub.L. 90–103, Title I, § 115, 81 Stat. 262; Aug. 1, 1968, Pub.L. 90–448, Title VI, § 601, 82 Stat. 526; Dec. 31, 1970, Pub.L. 91–606, Title III, § 301(a), 84 Stat. 1758; and amended Dec. 31, 1970, Pub.L. 91–609, Title III, § 302, Title VII, §§ 727(e), 735, 84 Stat. 1780, 1803, 1804.

1.3a HOUSING ACT OF 1954, AUGUST 2, 1954

P.L. 83-560, §701, 68 Stat. 640

TITLE VII—URBAN PLANNING AND RESERVE OF PLANNED PUBLIC WORKS

URBAN PLANNING

Sec. 701. To facilitate urban planning for smaller communities lacking adequate planning resources, the Administrator is authorized to make planning grants to State planning agencies for the provision of planning assistance (including surveys, land use studies, urban renewal plans, technical services and other planning work, but excluding plans for specific public works) to cities and other municipalities having a population of less than 25,000 according to the latest decennial census. The Administrator is further authorized to make planning grants for similar planning work in metropolitan and regional areas to official State, metropolitan, or regional planning agencies empowered under State or local laws to perform such planning. Any grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made and shall be subject to terms and conditions prescribed by the Administrator to carry out this section. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding $5,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

[p. 640]

1.3a (1) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 1429, 83rd Cong., 2d Sess. (1954)

HOUSING ACT OF 1954

MARCH 29, 1954.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. SPENCE, from the Committee on Banking and Currency, submitted the following

MINORITY REPORT

[To accompany H. R. 7839]

[p. 1]

XI. VOLUNTARY HOME MORTGAGE CREDIT PROGRAM

Title VII of the bill as reported includes a new title designed to encourage and facilitate the flow of mortgage credit into remote areas and small communities through the voluntary cooperation and effort of private lending institutions.

The provisions of this title, in general, follow the plan suggested on behalf of the American Life Convention and the Life Insurance Association of America and which presented testimony to your committee indicating that the plan had the support of a majority of the life insurance companies. The problem of assuring the general availability of adequate home mortgage credit in small communities and in the areas remote from large financial centers is a difficult one, and your committee feels that the life insurance companies should be highly commended for their efforts to assist in the development of a constructive solution to this important problem.

This new title would establish a National Voluntary Mortgage Credit Extension Committee consisting of the Housing and Home Finance Administrator as Chairman and fourteen other persons to be appointed by the Administrator representing each major type of mortgage, lending institution, the homebuilding industry and real estate boards. The Administrator, after consultation with the members of the National Committee, would also appoint regional subcommittees for regions conforming generally to the Federal Reserve Districts.

The National Committee would be empowered to solicit and obtain the cooperation of financing institutions in the voluntary program. It would study and review the demand for and supply of funds for residential mortgage loans in all parts of the country and would receive reports from and correlate the activities of the regional subcommittees.

It would maintain liaison with the Government housing agencies and with State and local housing officials to fully apprize them of the voluntary program.

Each regional subcommittee would study and review the demand for a supply of funds for residential mortgage loans in its region, would analyze cases of unsatisfied demand for mortgage credit, and would report to the National Committee the results of its study and analysis. It would also maintain liaison with officers of the FHA and VA within its own region and would request these officials to supply the subcommittee with information regarding cases of unsatisfied demand for mortgage credit involving loans eligible for FHA insurance or VA guaranty.

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TITLE VII—VOLUNTARY HOME CREDIT PROGRAM

Section 701: Declaration of policy

This section declares it to be the purpose of title VII to encourage and facilitate the flow of mortgage credit into remote areas and small communities through the voluntary cooperation and effort of private lending institutions, and to assist in the development of a program whereby private financing institutions engaged in mortgage lending can make a maximum contribution to the economic stability and growth of the Nation through extension of the market for insured or guaranteed mortgage loans.

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1.3a (2) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 1472, 83rd Cong., 2d Sess. (1954)

HOUSING ACT OF 1954

MAY 28, 1954. (legislative day, May 13), 1954.—Ordered to be printed.

From the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H. R. 7839]

[p. 1]

TITLE VII—URBAN PLANNING AND RESERVE OF PLANNED PUBLIC WORKS

Section 701. Urban planning

This section would provide Federal assistance to facilitate urban planning for smaller communities lacking adequate planning resources,

and to aid metropolitan and regional planning. It would authorize the Housing and Home Finance Administrator to make planning grants to State planning agencies for the provision of planning assistance to cities and other municipalities with populations of less than 25,000. To assure a broad and effective use of such grants, they would be made only to the State agencies and could not be passed on by such agencies to municipalities or other local groups. The Administrator would also be authorized to make grants to official State, metropolitan, or regional planning agencies empowered under State or local laws to perform planning work in metropolitan and regional areas. The planning which would be assisted would include surveys, land-use studies, urban renewal plans, technical services, and other planning work. Grants would not be made for planning specific public works. The grants under this section would not exceed 50 percent of the estimated cost of the work for which the grant is made. Five million dollars would be authorized to be appropriated for the grants, and appropriations would remain available until expended.

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1.3a (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 2271, 83rd Cong., 2d Sess. (1954)

HOUSING ACT OF 1954

JULY 17, 1954.—Ordered to be printed

Mr. WOLCOTT, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 7839]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 7839) to aid in the provision and improvement of housing, the elimination and prevention of slums, and the conservation and development of urban communities, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amend-

ment insert the following: *That this Act may be cited as the "Housing Act of 1954".*

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TITLE VII—URBAN PLANNING AND RESERVE OF PLANNED PUBLIC WORKS

URBAN PLANNING

SEC. 701. To facilitate urban planning for smaller communities lacking adequate planning resources, the Administrator is authorized to make planning grants to State planning agencies for the provision of planning assistance (including surveys, land use studies, urban renewal plans, technical services and other planning work, but excluding plans for specific public works) to cities and other municipalities having a population of less than 25,000 according to the latest decennial census. The Administrator is further authorized to make planning grants for similar planning work in metropolitan and regional areas to official State, metropolitan, or regional planning agencies empowered under State or local laws to perform such planning. Any grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made and shall be subject to terms and conditions prescribed by the Administrator to carry out this section. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding $5,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

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ADDITIONAL FHA PROVISIONS

The House bill contained a provision terminating the yield insurance program under title VII of the National Housing Act. The Senate amendment contained no comparable provision. The conference substitute retains the FHA title VII program.

Under existing law authority of the FHA to insure mortgages in connection with the defense housing program under title IX would expire August 1, 1954, except as to commitments issued prior to such date on loans to refinance existing insured loans. Under the House bill this authority would not be continued but the authority to insure as to commitments issued prior thereto was continued.

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1.3a (4) CONGRESSIONAL RECORD, VOL. 90 (1954)

1.3a (4)(a) April 1, 2: Debated, amended and passed House, pp. 4367, 4430, 4490

[No Relevant Discussion on Pertinent Section]

1.3a (4)(b) June 3: Debated, amended and passed Senate, pp. 7607, 7609, 7621

[No Relevant Discussion on Pertinent Section]

1.3a (4)(c) July 20: House agrees to conference report, p. 11071

[No Relevant Discussion on Pertinent Section]

1.3a (4)(d) July 28: Senate agrees to conference report, pp. 12333, 12377, 12381

[No Relevant Discussion on Pertinent Section]

1.3b HOUSING ACT OF 1956

August 7, 1956, P.L. 84-1020, Title III,§ §307(d), 308, 70 Stat. 1102

SEC. 307

* * * * * * *

(d) The second sentence of section 701 of the Housing Act of 1954 is amended to read as follows: "The Administrator is further authorized to make planning grants for similar planning work (1) in metropolitan and regional areas to official State, metropolitan, or regional planning agencies empowered under State or local laws to perform such planning; (2) to cities, other municipalities, and counties having a population of twenty-five thousand or more according to the latest decennial census which have suffered substantial damage as a

[p. 1102]

result of a flood, fire, hurricane, earthquake, storm, or other catastrophe which the President, pursuant to section 2 (a) of the Act entitled 'An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes' (Public Law 875, Eighty-first Congress, approved September 30, 1950), as amended, has determined to be a major disaster; and (3) to State planning agencies, to be used for the provision of planning assistance to the cities, other municipalities, and counties referred to in clause (2) hereof."

SEC. 308. The last sentence of section 701 of the Housing Act of 1954 is amended by striking out "$5,000,000" and inserting in lieu thereof "$10,000,000".

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1.3b (1) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 2363, 84th Cong., 2d Sess. (1956)

HOUSING ACT OF 1956

JUNE 15, 1956.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. SPENCE, from the Committee on Banking and Currency, submitted the *following*

REPORT

[To accompany H. R. 11742]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 11742) to extend and amend laws relating to the provision and improvement of housing and the conservation and development of urban communities, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

[p. 1]

Section 701 of the Housing Act of 1954 authorizes the Federal Government to make grants, not exceeding 50 percent of the estimated cost of the planning work, to assist community planning in small communities—less than 25,000 population—and to make similar grants to official State, metropolitan, or regional agencies for similar planning in metropolitan or regional areas. The bill would amend this section of the law so that in areas stricken by major disasters, the large cities as well as the smaller communities under 25,000 population could directly avail themselves of the planning grants authorized.

URBAN PLANNING AUTHORIZATION

As noted above, section 701 of the Housing Act of 1954 established a program of Federal assistance for community planning. This program was delayed at first by the inadequacy of many State enabling laws.

However, in 1955 there was considerable legislative activity on this problem in States throughout the country. In view of this new State legislation, many applications are now in preparation, and the program is rapidly gaining momentum. Present estimates indicate that the original authorization of $5 million for this limited grant program will be fully allocated by the end of the year. Section 403 of the bill would increase the authorization to $10 million. The increase in authorization appears warranted by the planning needs of smaller communities which cannot themselves support full-time planning staffs, by the continuing need to encourage metropolitan and regional planning which takes into account factors which cut across municipal and county political boundaries, and to assure that planning advances will be available for communities in areas stricken by major disasters.

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SECTION 403. URBAN PLANNING AUTHORIZATION

This section would increase the urban planning grant authorization under section 701 of the Housing Act of 1954 from $5 million to $10 million.

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SECTIONS 701 AND 703 OF THE HOUSING ACT OF 1954

TITLE VII—URBAN PLANNING AND RESERVE OF PLANNED PUBLIC WORKS

URBAN PLANNING

SEC. 701. To facilitate urban planning for smaller communities lacking adequate planning resources, the Administrator is authorized to make planning grants to State planning agencies for the provision of planning assistance (including surveys, land use studies, urban renewal plans, technical services and other planning work, but excluding plans for specific public works) to cities and other municipalities having a population of less than 25,000 according to the latest decennial census. The Administrator is further authorized to make planning grants for similar planning work (*1*) in the metropolitan and regional areas to official State, metropolitan, or regional planning agencies empowered under state or local laws to perform such planning; (*2*) *to cities, other municipalities, and counties having a population of twenty-five thousand or more according to the latest decennial census which have suffered substantial damage as a result of a flood, fire, hurricane, earthquake, storm, or other catastrophe which the President, pursuant to section 2 (a) of the Act entitled "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" (Public Law 875, Eighty-first Congress, approved September 30, 1950), as amended, has*

determined to be a major disaster; and (3) to State planning agencies, to be used for the provision of planning assistance to the cities, other municipalities, and counties referred to in clause (2) hereof. Any grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made and shall be subject to terms and conditions prescribed by the Administrator to carry out this section. The Administrator is authorized, nonwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding **[$5,000,000]** *$10,000,000* to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

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1.3b (2) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 2005, 84th Cong., 2d Sess. (1956)

HOUSING AMENDMENTS OF 1956

MAY 15 (legislative day MAY 7), 1956.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 3855]

The Committee on Banking and Currency having considered the same, report favorably a committee bill (S.) to extend and amend laws relating to the provision and improvement of housing, the elimination and prevention of slums, and the conservation and development of urban communities, and for other purposes, and recommend that the bill do pass.

INTRODUCTION

The Committee on Banking and Currency has held hearings on, and considered in executive session, the following bills: S. 1536, S. 2565, S. 2640, S. 2736, S. 2762, S. 2790, S. 2848, S. 3057, S. 3158, S. 3186, S. 3190, S. 3296, S. 3302, S. 3309, and S. 3346. From these bills, and

from amendments and suggestions received by the committee, an original bill was drafted by the committee and is reported for consideration of the Senate.

This is a comprehensive bill designed to increase and improve the housing supply for all segments of the population and for all parts of the Nation. The committee devoted a major portion of its time to the consideration of provisions to improve housing conditions for low- and middle-income families and for our elderly citizens.

[p. 1]

1.3b (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 2958, 84th Cong., 2d Sess. (1956)

HOUSING ACT OF 1956

JULY 27, 1956.—Ordered to be printed

Mr. SPENCE, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 11742]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11742) to extend and amend laws relating to the provision and improvement of housing and the conservation and development of urban communities, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following: *That this Act may be cited as the "Housing Act of 1956".*

[p. 1]

* * * * * * *

SEC. 307 (d) The second sentence of section 701 of the Housing Act of 1954 is amended to read as follows: "The Administrator is further authorized to make planning grants for similar planning work (1) in metro-

politan and regional areas to official State, metropolitan, or regional planning agencies empowered under State or local laws to perform such planning; (2) to cities, other municipalities, and counties having a population of twenty-five thousand or more according to the latest decennial census which have suffered substantial damage as a result of a flood, fire, hurricane, earthquake, storm, or other catastrophe which the President, pursuant to section 2 (a) of the Act entitled 'An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes' (Public

[p. 13]

Law 875, Eighty-first Congress, approved September 30, 1950), as amended, has determined to be a major disaster; and (3) to State planning agencies, to be used for the provision of planning assistance to the cities, other municipalities, and counties referred to in clause (2) hereof."

SEC. 308. The last sentence of section 701 of the Housing Act of 1954 is amended by striking out "$5,000,000" and inserting in lieu thereof "$10,000,000".

[p. 14]

1.3b (4) CONGRESSIONAL RECORD, VOL. 102 (1956)

1.3b (4)(a) July 25: Amended and passed House, p. 14468

[No Relevant Discussion on Pertinent Section]

1.3b (4)(b) July 25: Amended and passed Senate, pp. 14430

Mr. BUSH. I should like to say, in support of the Senator's motion, that I am very much disappointed, indeed, with the long delay in House action on the bill, thus placing this needed legislation in a position of danger. Also, I am very much disappointed by its attitude on public housing. I have consistently felt that the administration has not taken a broad enough view of the need for public housing, and I have consistently felt, with the Senator from New York, the Senator from Alabama, and other Senators on the committee, that the authorization for 35,000 units did not meet the situation realistically at all.

However, it is clear that only a day or two remain in the session, and that if the housing bill is to be passed, we may as well face the fact that we shall have to accept the 35,000-unit limitation. Otherwise, we may jeopardize the entire bill, which contains provisions relating to housing and urban renewal in disaster areas, which are extremely important to communities in my State.

[p. 14430]

1.3b (4)(c) July 27: Senate agrees to conference report, p. 15100

[No Relevant Discussion on Pertinent Section]

1.3b (4)(d) July 27: House agrees to conference report, p. 15262

[No Relevant Discussion on Pertinent Section]

1.3c HOUSING ACT OF 1957

July 12, 1957, P.L. 85-104, Title VI, §606, 71 Stat. 305

URBAN PLANNING GRANTS

SEC. 606. The second sentence of section 701 of the Housing Act of 1954 is amended by striking out "and (3) to State planning agencies, to be used for the provision of planning assistance to the cities, other municipalities, and counties referred to in clause (2) hereof" and by inserting in lieu thereof the following: "(3) to official governmental planning agencies for areas threatened with rapid urbanization as a result of the establishment or rapid and substantial expansion of a Federal installation; and (4) to State planning agencies, to be used for the provision of planning assistance to the cities, other municipalities, and counties referred to in clause (2) hereof and to the areas referred to in clause (3) hereof".

Approved July 12, 1957.

[p. 305]

1.3c (1) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 313, 85th Cong., 1st Sess. (1957)

HOUSING ACT OF 1957

APRIL 8, 1957.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. SPENCE, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H. R. 6659]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 6659) to extend and amend laws relating to the provision and improvement of housing, to improve the availability of mortgage credit, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

INTRODUCTION

H.R. 6659, referred to as the Housing Act of 1957, is an omnibus housing bill designed to meet a number of important objectives. As

one of its primary purposes it would provide much-needed assistance to help restore a sound home building industry by widening the market demand for homes and by improving the flow of mortgage credit into the housing field. Other important objectives which the bill seeks to achieve are better housing generally, improvement in the present programs designed to combat slums and blight, and special assistance to deserving and important housing programs such as military housing and college housing.

While your committee believes the bill to be carefully drawn and conceived, we would like to emphasize that H.R. 6659 is being reported against a backdrop of near-crisis in the home-construction field. Your committee believes strongly that the legislation contained in the bill is urgently needed to prevent further deterioration of an industry whose continued health is indispensable to the soundness of the overall economy, and whose continued growth is essential to meet the ever-expanding housing needs of our people.

[p. 1]

1.3c (2) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 368, 85th Cong., 1st Sess. (1957)

HOUSING ACT OF 1957

MAY 20, 1957.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H. R. 6659]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 6659) to extend and amend laws relating to the provision and improvement of housing, to improve the availability of mortgage credit, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

INTRODUCTION

The Committee on Banking and Currency has held hearings on and considered in executive session the following bills: S. 88, S. 467, S. 726,

S. 912, S. 929, S. 1090, S. 1230, S. 1479, S. 1515, S. 1531, S. 1553, S. 1569, S. 1609, S. 1618, S. 1633, S. 1679, S. 1694, S. 1711, S. 1737, and S. 1898. From these bills and from amendments and suggestions received by the committee from various sources, and after consideration of H.R. 6659, substitute language was drafted by the committee and an amended bill is reported for consideration of the Senate.

As has been its custom in the past, the committee has considered all recommendations made to it with respect to the matters under its jurisdiction and, following consideration, has consolidated into the amended bill those suggestions which were approved. Among the major recommendations contained in the bill are (1) authorizations to relieve a shortage of mortgage loan funds, (2) increased funds for slum clearance and urban renewal projects, and college housing loans, and (3) a new program to stimulate the construction of decent housing for families of moderate income.

[p. 1]

1.3c (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 659, 85th Cong., 1st Sess. (1957)

HOUSING ACT OF 1957

JUNE 27, 1957.—Ordered to be printed

Mr. SPENCE, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 6659]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 6659) to extend and amend laws relating to the provision and improvement of housing, to improve the availability of mortgage credit, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following: *That this Act may be cited as the "Housing Act of 1957".*

[p. 1]

1.3c (4) CONGRESSIONAL RECORD, VOL. 103 (1957):

1.3c (4)(a) May 8, 9: Debated, amended and passed House, pp. 6590, 6701, 6912

[No Relevant Discussion on Pertinent Section]

1.3c (4)(b) May 29: Debated, amended and passed Senate, pp. 8022, 8035

[No Relevant Discussion on Pertinent Section]

1.3c (4)(c) June 28: House agrees to conference report, p. 10558

[No Relevant Discussion on Pertinent Section]

1.3c (4)(d) July 1: Senate agrees to conference report, p. 10659

[No Relevant Discussion on Pertinent Section]

1.3d HOUSING ACT OF 1959

September 23, 1959, P.L. 86-372, Title IV, §419, 73 Stat. 678

URBAN PLANNING

SEC. 419. Section 701 of the Housing Act of 1954 is amended to read as follows:

"URBAN PLANNING

"SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from increasing concentration of population in metropolitan and other urban areas, including smaller communities, to facilitate comprehensive planning for urban development by State and local governments on a continuing basis, and to encourage State and local governments to establish and develop planning staffs, the Administrator is authorized to make planning grants to—

"(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to (A) cities, other municipalities, and counties having a population of less than 50,000 according to the latest decennial census, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems resulting from rapid urbanization, and (C) cities, other municipalities, and counties referred to in

paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection;

"(2) official State, metropolitan, and regional planning agencies empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

"(3) cities, other municipalities, and counties which have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of 'An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes', has determined to be a major disaster;

"(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation; and

"(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems.

"(b) A grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advances or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding $20,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

[p. 678]

"(c) The Administrator is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

"(d) It is the further intent of this section to encourage comprehensive planning for States, cities, counties, metropolitan areas, and urban regions and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Administrator may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning.

Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, together with long-range fiscal plans for such development; (2) programing of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) intergovernmental coordination of all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

"(e) In the exercise of his function of encouraging comprehensive planning by the States, the Administrator shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities."

[p. 679]

1.3d (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 924, 86th Cong., 1st Sess. (1959)

HOUSING ACT OF 1959

SEPTEMBER 8 (legislative day, SEPTEMBER 5), 1959.—Ordered to be printed

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Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 2654]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 2654) to extend and amend laws relating to the provision and improvement of housing and the renewal of urban communities, and for other purposes, and recommend that the bill do pass.

HISTORY OF S. 2654

There are many important public policy issues covered by S. 2654. The two issues which have figured most prominently in the development of this bill are urban renewal and low-rent public housing. These

two issues have contributed significantly to the difficulty of obtaining Presidential approval of general housing legislation in 1958 and 1959. Consequently, the history of S. 2654 should begin with a brief account of the background of these two programs.

The Housing Act of 1949 committed the Federal Government to a program of grants and loans to help State and local governments eliminate slums and renew urban areas. This same act also revitalized the program of Federal grants enabling the operation of local public housing projects occupied by low-income families and individuals, which program was originated by the Housing Act of 1937.

The low-rent public housing provisions of the act of 1949 have been continuously controversial since enactment, and particularly during the 83d, 84th, 85th, and 86th Congresses. On the other hand, the provisions for slum clearance, or urban renewal, while controversial, have been more widely accepted as necessary and desirable Federal activities. The Housing Act of 1954 made substantial changes in the urban renewal statute and introduced the concept that additional low-rent public housing projects should be available only in communi-

[p. 1]

ties with a "workable" plan for community conservation and redevelopment. Housing laws passed since 1954 have perfected and continued the urban renewal and low-rent housing programs, but have not made any fundamental changes in the goals and methods contemplated by the acts of 1937, 1949, and 1954.

During consideration of housing legislation in 1957, many members of the committee became alert to the need for projecting Federal participation in both those programs into future years on a sustained and predictable basis, and with emphasis upon local responsibility and autonomy. In the fall of 1957, the Subcommittee on Housing of the Committee on Banking and Currency held extensive hearings, in many parts of the country, designed to develop information regarding these Federal programs. Recommendations growing out of these hearings, and hearings held in May 1958, together with proposals from many bills, including administration bills, were combined in S. 4035, the proposed Housing Act of 1958.

S. 4035 passed the Senate on July 11, 1958, and was subsequently amended in several respects by the Committee on Banking and Currency of the House of Representatives. Under parliamentary conditions which required approval by two-thirds of the House, S. 4035 lacked six votes of the number required for passage; that is, two-thirds. As a result, there was no general housing bill in 1958.

S. 57 was introduced on January 9, 1959, and was identical in all major respects with S. 4035 as it passed the Senate on July 11, 1958.

S. 57 was thoroughly considered in hearings and executive sessions of the Committee on Banking and Currency, and in debate on the floor of the Senate. After modification in committee and on the floor, S. 57 passed the Senate on February 5, 1959, by a vote of 60 to 28.

Subsequently, the bill was considered and amended in the House of Representatives and was referred to a conference committee of the Senate and the House. The conference committee compromised their differences. The conference report was approved by the Senate on June 22, 1959, by a vote of 56 to 31, and by the House on June 23, 1959, by a vote of 241 to 177.

On July 7, the President returned S. 57 to the Senate without his approval, and his veto message has been printed as Senate Document 34. The President's message was referred to the committee on July 15, along with the bill S. 57. From July 23 through July 31, the Subcommittee on Housing held hearings on the President's message, which includes S. 57 and incorporates by reference the administration bills, S. 65 and S. 612. By request of its sponsor, the hearings also included consideration of S. 2378.

Subsequently, the committee considered S. 57, S. 65, S. 612, and S. 2378, and voted to recommend that the Senate pass S. 57, the President's disapproval to the contrary notwithstanding. This recommendation was considered in the Senate on August 12, 1959, and was defeated by a vote of 55 to 40. On August 13, 1959, the committee reconsidered the aforementioned bills and voted to report a new bill, S. 2539.

This compromise bill was debated, amended, and passed by the Senate on August 18, 1959, and was then sent to the House of Representatives. On August 24, 1959, S. 2539 was passed by the House of Representatives without amendment. On September 4, 1959, the bill was returned to the Senate by the President without his approval.

[p. 2]

On date of receipt, the President's disapproval of the bill was sustained by the Senate by a vote of 58 to 36. On September 8, 1959, the committee considered the President's veto message on S. 2539 and voted to report a new bill, S. 2654.

[p. 3]

Urban planning

Section 419.—(1) Rewrites existing law (sec. 701 of the Housing Act of 1954) to provide that grants-in-aid for planning assistance may be made to—

> State planning agencies, or in the absence of any such agency, to an agency or instrumentality of a State government designated by the Governor and approved by the Administrator;

[p. 21]

State planning agencies for statewide and interstate comprehensive planning;

Official State, metropolitan, and regional planning agencies empowered under State and local law or interstate compact to perform metropolitan or regional planning; and

Official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from establishment or increased activity of Federal installation.

(2) Extends urban planning to include—

Municipalities of less than 50,000 population;

Counties of less than 50,000 population;

Groups of adjacent communities with common planning problem having population of less than 50,000; and

Cities, other municipalities, and counties suffering from a catastrophe which the President declares a major disaster.

(3) Authorizes an additional appropriation of $10 million for the program.

(4) Authorizes the Administrator to encourage, in areas embracing several municipalities or political subdivisions, planning on a unified metropolitan basis and to provide technical assistance for planning and for solution of problems.

[p. 22]

TITLE VII—URBAN PLANNING AND RESERVE OF PLANNED PUBLIC WORKS

URBAN PLANNING

[SEC. 701. To facilitate urban planning for smaller communities lacking adequate planning resources, the Administrator is authorized to make planning grants to State planning agencies, for the provision of planning assistance (including surveys, land use studies, urban renewal plans, technical services and other planning work, but excluding plans for specific public works) to cities and other municipalities having a population of less than 25,000 according to the latest decennial census. The Administrator is further authorized to make planning grants for similar planning work (1) in metropolitan and regional areas to official State, metropolitan, or regional planning agencies empowered under State or local laws to perform such planning; (2) to cities, other municipalities, and counties having a population of twenty-five thousand or more according to the latest decennial census which have suffered substantial damage as a result of a flood, fire, hurricane, earthquake, storm, or other catastrophe which the President, pursuant to section 2(a) of the Act entitled "An Act to authorize Federal assistance to States and local governments in major disasters, and for other pur-

poses" (Public Law 875, Eighty-first Congress, approved September 30, 1950), as amended, has determined to be a major disaster; (3) to official governmental planning agencies for areas threatened with rapid urbanization as a result of the establishment or rapid and substantial expansion of a Federal installation; and (4) to State planning agencies, to be used for the provision of planning assistance to the cities, other municipalities, and counties

[p. 129]

referred to in clause (2) hereof and to the areas referred to in clause (3) hereof. Any grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made and shall be subject to terms and conditions prescribed by the Administrator to carry out this section. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding $10,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.]

SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from increasing concentration of population in metropolitan and other urban areas, including smaller communities, to facilitate comprehensive planning for urban development by State and local governments on a continuing basis, and to encourage State and local governments to establish and develop planning staffs, the Administrator is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to (A) cities, other municipalities, and counties having a population of less than 50,000 according to the latest decennial census, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems resulting from rapid urbanization, and (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection;

(2) official State, metropolitan, and regional planning agencies empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

(3) cities, other municipalities, and counties which have suffered substantial damage as a result of a catastrophe which the President,

pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes," has determined to be a major disaster;

(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation; and

(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems.

(b) A grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The

[p. 130]

Administrator is authorized, notwithstanding the provisions of section 3548 of the Revised Statutes, as amended, to make advances or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding $20,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

(c) The Administrator is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning for States, cities, counties, metropolitan areas, and urban regions and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Administrator may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, together with long-range fiscal plans for such development; (2) programing of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the

departments or subdivisions of the government concerned; (4) intergovernmental coordination of all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

(e) In the exercise of his function of encouraging comprehensive planning by the States, the Administrator shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities.

[p. 131]

1.3d (2) CONGRESSIONAL RECORD, VOL. 105 (1959)

1.3d (2)(a) Sept. 9: Debated and passed Senate, p. 18756

Urban planning

Section 419: (1) Rewrites existing law (sec. 701 of the Housing Act of 1954) to provide that grants-in-aid for planning assistance may be made to State planning agencies, or in the absence of any such agency, to an agency or instrumentality of a State government designated by the Governor and approved by the Administrator; State planning agencies for statewide and interstate comprehensive planning; official State, metropolitan, and regional planning agencies empowered under State and local law or interstate compact to perform metropolitan or regional planning; and official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from establishment or increased activity of Federal installation.

(2) Extends urban planning to include municipalities of less than 50,000 population; counties of less than 50,000 population; groups of adjacent communities with common planning problems having population of less than 50,000; and cities, other municipalities, and counties suffering from a catastrophe which the President declares a major disaster.

(3) Authorizes an additional appropriation of $10 million for the program.

(4) Authorizes the Administrator to encourage, in areas embracing several municipalities or political subdivisions, planning on a unified metropolitan basis and to provide technical assistance for planning and for solution of problems.

[p. 18756]

1.3d (2)(b) Sept. 10: Passed House, p. 18995

[No Relevant Discussion on Pertinent Section]

1.3e AREA DEVELOPMENT ACT

May 1, 1961, P.L. 87-27, §15, 75 Stat. 58

URBAN PLANNING GRANTS

SEC. 15. (a) Paragraph (3) of section 701(a) of the Housing Act of 1954 is amended by inserting after "counties which" the following: "(A) are situated in areas designated by the Secretary of Commerce under section 5(a) of the Area Redevelopment Act as redevelopment areas or (B)".

(b) Section 701(b) of such Act is amended by adding before the period at the end of the first sentence a colon and the following: "*Provided*, That a grant may be made under this section to a city, municipality, or county described in clause (A) of subsection (a) (3), or to a State planning agency (as provided in clause (C) of subsection (a) (1)) for the provision of planning assistance to such a city, municipality, or county, for not more than 75 per centum of such estimated cost".

[p. 58]

1.3e (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 61, 87th Cong., 1st Sess. (1961)

AREA REDEVELOPMENT—1961

MARCH 8, 1961.—Ordered to be printed

Mr. DOUGLAS, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 1]

The Committee on Banking and Currency, to whom was referred the bill (S. 1) to establish an effective program to alleviate conditions of substantial and persistent unemployment and underemployment in certain economically depressed areas, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

[p. 1]

URBAN PLANNING GRANTS

Section 15 of the bill would amend section 701 of the Housing Act of 1954 to permit an urban planning grant to be made directly to cities, other municipalities, and counties in a redevelopment area. As a general matter under present law, only cities, other municipalities, and counties having a population of less than 50,000 are eligible for an urban planning grant, and then only through a State planning agency. Larger cities and counties can generally receive the assistance of such grants only through the work of metropolitan or regional planning agencies.

[p. 22]

It is the intention of this section to encourage small cities and counties in a redevelopment area to take full advantage of the urban planning grant assistance program without the time-consuming delays that would be necessary if they had to comply with existing law and make their applications through a State planning agency. It is also intended to permit cities and counties with a population of 50,000 or more that are situated in a redevelopment area to share in the benefits of this program. This section also authorizes an increase in the amount of the grant to 75 percent of the estimated cost of the planning work. Since the communities sought to be assisted are generally least able to provide the local share of the planning costs, the committee believes that this liberalization of the sharing ratio for cities and counties located in a redevelopment area is necessary.

[p. 23]

SECTION 15. URBAN PLANNING GRANTS

Subsection (a) amends section 701 of the Housing Act of 1954 so as to make planning grants available to communities in redevelopment areas with a population in excess of 25,000.

(b) Grants may be made for not more than 75 percent of the cost of the planning.

[p. 31]

1.3e (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 186, 87th Cong., 1st Sess. (1961)

AREA REDEVELOPMENT ACT

MARCH 22, 1961.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. SPENCE, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 1]

The Committee on Banking and Currency, to whom was referred the bill (S. 1), to establish an effective program to alleviate conditions of substantial and persistent unemployment and underemployment in certain economically distressed areas, having considered the same,

report favorably thereon with an amendment and recommend that the bill as amended do pass.

The amendment is as follows: Strike out all after the enacting clause and insert the matter which appears in italic in the bill herewith reported to the House.

[p. 1]

BACKGROUND OF THE BILL

Proposals for area redevelopment legislation have been before the Congress for more than a decade. In the 84th Congress, 2d session, a bill was reported out by this committee but never reached the floor of the House. A similar bill passed the Senate later in that session, but was not acted upon by the House. In the 85th Congress, area redevelopment legislation passed both Houses of the Congress but was pocket vetoed by the President on September 6, 1958. In the 86th Congress, another bill, S. 722, was passed by both Houses but was also vetoed by the President on May 13, 1960.

In spite of these delays, it should be noted that the principle of Federal action to relieve unemployment in areas of persistent and substantial labor surplus has been endorsed in the platforms of both parties. It has also received wide support from labor, industry, municipal and private citizen groups. Shortly after his election last November, President-elect Kennedy appointed a special task force to consider the problem and recommend a program. President

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Kennedy has made it clear that he feels that action in this field deserves the highest priority and should be acted upon promptly.

Area redevelopment legislation was the first bill introduced in the Senate in the current session and was passed by that body on March 15 by a vote of 63 to 27. Meanwhile, a bill, H.R. 4569, was submitted to the Congress by President Kennedy and introduced by Hon. Brent Spence, chairman of the Committee on Banking and Currency. Two full weeks of hearings on this legislation were held before Subcommittee No. 2 (Hon. Wright Patman, chairman). This bill, as perfected by the committee, was ordered reported as an amendment to S. 1 on March 21 by a vote of 20 to 6.

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Urban renewal and planning aid

The committee amendment makes it possible for redevelopment areas to participate more fully in the Federal urban renewal program. Under existing law, this program is available to localities which have

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undertaken a program to clear and redevelop slums and to rehabilitate blighted areas. Upon compliance with the policies and procedures of the Housing and Home Finance Administrator, a locality may obtain Federal financial assistance in the form of advances, loans and grants for the planning and undertaking of urban renewal projects. Federal advances are used to defray planning and other initial expenses. Temporary loans are used as working capital, largely to acquire land and to pay administrative overhead, and both loans and advances are repaid from the proceeds of land and the Federal grant. Federal grants may not exceed two-thirds of the aggregate net project costs.

While the primary purpose of the urban renewal program is the elimination of residential slums, there is a growing recognition of the importance of nonresidential slum clearance projects. Sound city planning often requires that rundown business districts be rehabilitated or cleared and redeveloped if the city is to fulfill its proper functions. Such redevelopment provides new opportunities for employment and business expansion. Moreover, experience has shown that public revenues can be increased manyfold by eliminating blight and returning land to its highest and best use. By so increasing tax revenues, such projects enable the local government to meet its many other responsibilities toward its citizens.

Not more than 10 percent of future funds made available for capital grants under the urban renewal program can be used for projects assisted under the bill. Funds so used will not be charged to the existing 20 percent authorization for nonresidential projects.

The bill also amends section 701 of the Housing Act of 1954 to permit an urban planning grant to be made directly to cities; other municipalities, and counties in a redevelopment area. As a general matter under present law, only cities, other municipalities, and counties having a population of less than 50,000 are eligible for an urban planning grant, and then only through a State planning agency. Larger cities and counties can generally receive the assistance of such grants only through the work of metropolitan or regional planning agencies.

This provision will encourage small cities and counties in a redevelopment area to take full advantage of the urban planning grant assistance program without the time-consuming delays that would be necessary if they had to comply with existing law and make their applications through a State planning agency. It will also permit cities and counties with a population of 50,000 or more that are situated in a redevelopment area to share in the benefits of this program.

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Section 15. Urban planning grants

This section amends section 701 of the Housing Act of 1954 to make planning grants under that section available directly to counties, cities,

and other municipalities which are situated in areas designated as redevelopment areas under section 5(a) of the bill, without regard to their population and without going through a State planning agency.

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SECTION 701 OF THE HOUSING ACT OF 1954

URBAN PLANNING

SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from increasing concentration of population in metropolitan and other urban areas, including smaller communities, to facilitate comprehensive planning for urban development by State and local governments on a continuing basis, and to encourage State and local governments to establish and develop planning staffs, the Administrator is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to (A) cities, other municipalities, and counties having a population of less than 50,000 according to the latest decennial census, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems resulting from rapid urbanization, and (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection;

(2) official State, metropolitan, and regional planning agencies empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

(3) cities, other municipalities, and counties which (*A*) *are situated in areas designated by the Secretary of Commerce under section 5(a) of the Area Redevelopment Act as redevelopment areas or* (*B*) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" has determined to be a major disaster;

(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation; and

(5) State planning agencies for State and interstate compre-

hensive planning (as defined in subsection (d)) and for research and coordination activity related thereto.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems.

(b) A grant made under this section shall not exceed 50 per centum of the estimated cost of the work for which the grant is made: *Provided, That a grant may be made under clause (A) of paragraph (3) of subsection (a) of this section for not more than 75 per centum of such estimated cost.* All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the

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provisions of section 3648 of the Revised Statutes, as amended, to make advances or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding $20,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

(c) The Administrator is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning for States, cities, counties, metropolitan areas, and urban regions and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Administrator may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, together with long-range fiscal plans for such development; (2) programming of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) inter-governmental coordination of all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

(e) In the exercise of his function of encouraging comprehensive planning by the States, the Administrator shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities.

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1.3e (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 256, 87th Cong., 1st Sess. (1961)

AREA REDEVELOPMENT ACT

APRIL 20, 1961.—Ordered to be printed

Mr. SPENCE, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 1]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 1) to establish an effective program to alleviate conditions of substantial and persistent unemployment and underemployment in certain economically distressed areas, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following:

That this Act may be cited as the "Area Redevelopment Act".

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URBAN PLANNING GRANTS

Both the House and Senate versions of the bill contained identical language making it possible for urban planning grants to be made directly to areas designated under section 5(a) of the Area Redevelopment Act as redevelopment areas. It is our understanding that this provision is not intended to bypass State planning agencies. Rather it is our understanding that the intention is to provide an alternative route for extending this planning assistance where deemed necessary or advisable

but that existing State agencies will continue to be consulted and utilized wherever practicable.

The Senate bill also authorizes urban planning grants of up to 75 percent of cost for such areas. This provision was not included in the House amendment which kept the 50-percent limit applicable to urban planning grants under existing law. The House recedes. Under the substitute agreed to in conference, 75-percent grants could be made for such areas either directly or through State planning agencies.

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1.3e (4) CONGRESSIONAL RECORD, VOL. 107 (1961)

1.3e (4)(a) March 15: Debated and passed Senate, pp. 3998, 4017, 4044

[No Relevant Discussion on Pertinent Section]

1.3e (4)(b) March 28, 29: Debated, amended, and passed House, pp. 5047, 5221, 5254

[No Relevant Discussion on Pertinent Section]

1.3e (4)(c) April 20: Senate concurs in conference report, pp. 6392, 6399

[No Relevant Discussion on Pertinent Section]

1.3e (4)(d) April 26: House concurs in conference report, pp. 6719–6720

[No Relevant Discussion on Pertinent Section]

1.3f HOUSING ACT OF 1961

June 30, 1961, P.L. 87–70, Title III, §310, 75 Stat. 170

URBAN PLANNING ASSISTANCE

SEC. 310. (a) Section 701 of the Housing Act of 1954 is amended by—

(1) striking out "50 per centum" in the first sentence of subsection (b) and inserting in lieu thereof "two-thirds";

(2) striking out "20,000,000" in the last sentence of subsection (b) and inserting in lieu thereof "$75,000,000";

(3) inserting after "public facilities" in clause (1) of subsection (d) "including transportation facilities"; and

(4) adding at the end thereof the following new subsection:

"(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any

law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the physical growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts."

(b) Section 701 of such Act is further amended by—

(1) striking out the matter preceding paragraph (1) of subsection (a) and inserting in lieu thereof the following:

"SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs, the Administrator is authorized to make planning grants to—";

(2) inserting the following after "agencies" in paragraph (2) of subsection (a): ", or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning) and acceptable to the Administrator,";

(3) adding the following at the end of subsection (a): "The Administrator shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and

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goods in metropolitan and other urban areas and reducing transportation needs. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other Federally-aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Commerce under section 307 of title 23, United States Code."; and

(4) striking out the first sentence of subsection (d) and inserting in lieu thereof the following: "It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties, metropolitan areas, and urban regions and

the establishment and development of the organizational units needed therefor. The Administrator is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems."

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1.3f (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 281, 87th Cong., 1st Sess. (1961)

HOUSING ACT OF 1961

MAY 19, 1961.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 1922]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 1922) to assist in the provision of housing for moderate- and low-income families, to promote orderly urban development, to extend and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, and recommend that the bill do pass.

INTRODUCTION

GENERAL

The Subcommittee on Housing held hearings on April 4–7, April 10–14, and April 20, 1961, to consider S. 517, S. 518, S. 605, S. 608, S. 726, S. 766, S. 858, S. 1226, S. 1245, S. 1324, S. 1478, and S. 1481. These hearings resulted in a printed record of over 1,000 pages. In addition, on March 20, 21, and 22, 1961, the subcommittee held hearings to consider S. 345, a bill to provide for an urban mass transportation program. This hearing resulted in a printed record of some 450 pages. On April 26 and 27, the subcommittee, in executive session, considered these measures, the testimony received during the hearings, and all other matters presented to it in connection with 1961 housing legisla-

tion and subsequently made recommendations to the committee. After executive sessions on May 16, 17, and 18, 1961, during which the committee considered the subcommittee's recommendations and other bills and proposals, an original bill was drafted by the committee and is reported for the consideration of the Senate.

In general, the committee bill is designed (1) to bring about a realistic housing program for moderate-income families; (2) to encourage the rehabilitation and improvement of existing properties by

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establishing a long-term, low-interest rate improvement and rehabilitation program within the medium of FHA loan insurance; (3) to encourage research and development and the use of advanced technology in the construction industry by permitting the FHA Commissioner to insure mortgages on buildings which are constructed on an experimental basis with improved methods and materials; (4) to initiate a new program of Federal aid to communities for the acquisition of undeveloped land for preservation and use as open space; (5) to assist in the improvement of mass transit systems; and (6) to provide continuity for various existing housing programs and to make necessary technical amendments to insure that existing housing programs better serve the housing needs of the people.

Much of the legislation contained in this bill has particular significance because no general housing legislation was enacted during the second session of the 86th Congress.

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URBAN PLANNING

Planning assistance

Section 311 of the bill would change the urban planning grant program (sec. 701 of the Housing Act of 1954) to (1) increase the Federal share of costs of planning activities undertaken under that program from one-half to two-thirds, (2) increase the authorization for appropriations for grants from $20 million to $100 million, (3) clarify eligibility of transportation planning for assistance, and (4) facilitate interstate planning for metropolitan areas and other urban areas crossing state boundaries.

1. The increase in the Federal share from one-half to two-thirds would enable States to give broader assistance to planning in smaller communities and would stimulate metropolitan planning. The Housing Act of 1954 recognizes the need for State operations on

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behalf of smaller communities in the resolution of development problems

and the need, in larger urban areas, for an attack on such problems on a State, regional or metropolitan basis. An increase in the Federal share in the urban planning assistance program would facilitate such actions. The program was originally developed in part in recognition of the fact that local funds for planning are hardest to obtain in smaller cities and for areawide planning activities.

This increase is also designed to facilitate the coordination of highway planning and general urban planning by bringing the Federal share of costs of the latter closer to the level provided for highway planning.

2. The increase in the Federal share will in itself, of course, require some increase in authorization. However, heavily increased demands for planning assistance are expected to derive from several other sources, which will constitute the major need for increased authorization. These sources are:

(*a*) The broadened program under the Housing Act of 1959, providing assistance to communities with populations up to 50,000 (from a former 25,000 limit) to groups of adjacent small communities, to counties under 50,000 in population, and to States for State and interstate comprehensive planning. There has been an increasing participation and interest on the part of these newly eligible communities, counties, and States.

(*b*) The recent agreement between the Housing Agency and the Department of Commerce to jointly assist coordinated highway and general planning activities, particularly in urban areas. Although this is regarded as experimental, wide expressions of interest have been received from all over the country. The costs of these large-scale projects are expected to be substantially higher than those of typical section 701 projects.

(*c*) Increasing attention to the general planning aspects of mass transportation development in metropolitan areas. This type of planning is now possible under the present law if sufficient funds are available.

(*d*) Proposals for programs of assistance to depressed areas extending urban planning assistance to communities in such areas regardless of population.

Assurance of adequate funds will enable States to establish assistance programs for smaller communities on a more systematic basis and will permit metropolitan agencies to increase the scope and intensity of their planning activities. The uncertain availability of Federal funds in the past has been an inhibiting factor on such activities. Thus far, $16.4 million has been appropriated of the presently authorized $20 million.

3. Several amendments would be made to section 701 to make it

clear that the planning assisted by the Housing Administrator under that section may include mass transportation planning. Eligible planning would specifically include, but not be limited to, the preparation of surveys to determine the need for mass transportation and of plans for the development of comprehensive and coordinated mass transportation systems.

It would be specified that the section 701 program authority is in addition to and not in derogation of the authority of the Secretary of Commerce to make funds available for highway planning, surveys,

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and investigations, or of other such authority in connection with federally aided programs.

4. Blanket authorization for compacts between States for planning activities assisted by this program is to provide assurance to States that the constitutional prohibition on interstate compacts is not violated by agreements between States to engage in joint planning activities. It would relieve the States of having to obtain congressional consent for each such joint planning activity contemplated over a period of time. This blanket authorization would not, of course, run to other joint undertakings between States that might require congressional approval.

At the present time there are 215 standard metropolitan statistical areas of which 22 extend beyond a single State. There are, in addition, a variety of lesser urban areas lying across State lines which should be planned as entities. This general authorization for interstate planning will permit and encourage interstate planning activities eligible to be assisted under the urban planning assistance program.

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URBAN PLANNING ASSISTANCE

Planning assistance

Section 311(1).—Amends section 701 of the Housing Act of 1954 to change the amount of grant from one-half to two-thirds of the estimated cost of the work for which the grant is made.

Section 311(2).—Amends section 701 of such act to increase appropriation authorization from $20 million to $100 million.

Section 311(3).—Amends section 701 of such act to extend planning to include the preparation of comprehensive mass transportation surveys to help problems of mass transit in urban areas.

Section 311(4).—Amends section 701 of such act to permit grants to be made to interstate planning agencies formed by interstate compacts.

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1.3f (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 447, 87th Cong., 1st Sess. (1961)

HOUSING ACT OF 1961

JUNE 1, 1961.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. RAINS, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H. R. 6028]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 6028) to assist in the provision of housing for moderate and low income families, to promote orderly urban development, to extend and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill, as amended, do pass.

The amendment is as follows:

Strike out all after the enacting clause and insert the matter which appears in italic in the bill herewith reported to the House.

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The bill also expands the existing urban renewal planning grant program to enable communities to obtain professional advice in analyzing the demands which will be placed on them by population growth and to develop community plans to meet this growth. Additional funds are provided for urban planning and the Federal share of the cost would be raised from one-half to two-thirds.

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URBAN PLANNING

The bill would change the urban planning grant program (sec. 701 of the Housing Act of 1954) to (1) increase the Federal share of costs of planning activities undertaken under that program from one-half to two-thirds, (2) increase the authorization for appropriations for grants from $20 million to $50 million, (3) clarify eligibility of transportation

planning for assistance, and (4) facilitate interstate planning for metropolitan areas and other urban areas crossing State boundaries (sec. 310 of bill).

1. The increase in the Federal share from one-half to two-thirds would enable States to give broader assistance to planning in smaller communities and would stimulate metropolitan planning. The Housing Act of 1954 recognizes the need for State operations on behalf of smaller communities in the resolution of development problems and the need, in larger urban areas, for an attack on such problems on a State, regional, or metropolitan basis. An increase in the Federal share in the urban planning assistance program would facilitate such

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actions. The program was originally developed in part in recognition of the fact that local funds for planning are hardest to obtain in smaller cities and for area-wide planning activities.

This increase is also designed to facilitate the coordination of highway planning and general urban planning by bringing the Federal share of costs of the latter closer to the level provided for highway planning.

2. The increase in the Federal share will in itself, of course, require some increase in authorization. However, heavily increased demands for planning assistance are expected to derive from several other sources, which will constitute the major need for increased authorization. These sources are:

(*a*) The broadened program under the Housing Act of 1959, providing assistance to communities with populations up to 50,000 (from a former 25,000 limit) to groups of adjacent small communities, to counties under 50,000 in population, and to States for State and interstate comprehensive planning. There has been an increasing participation and interest on the part of these newly eligible communities, counties, and States.

(*b*) The recent agreement between the Housing Agency and the Department of Commerce to jointly assist coordinated highway and general planning activities, particularly in urban areas. Although this is regarded as experimental, wide expressions of interest have been received from all over the country. The costs of these large scale projects are expected to be substantially higher than those of typical section 701 projects.

(*c*) Increasing attention to the general planning aspects of mass transportation development in metropolitan areas. This type of planning is now possible under the present law if sufficient funds are available.

(*d*) Proposals for programs of assistance to depressed areas extending urban planning assistance to communities in such areas regardless of population.

Assurance of adequate funds will enable States to establish assistance programs for smaller communities on a more systematic basis and will permit metropolitan agencies to increase the scope and intensity of their planning activities. The uncertain availability of Federal funds in the past has been an inhibiting factor on such activities. Thus far, $16.4 million has been appropriated of the presently authorized $20 million.

3. The insertion of the phrase "including transportation facilities" into the urban planning law is intended to clarify the fact that transportation facilities are public facilities and, therefore, that transportation planning is eligible for assistance under that law.

4. Blanket authorization for compacts between States for planning activities assisted by this program is to provide assurance to States that the constitutional prohibition on interstate compacts is not violated by agreements between States to engage in joint planning activities. It would relieve such joint planning activity contemplated over a period of time. This blanket authorization would not, of course, run to other joint undertakings between States that might require congressional approval.

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At the present time there are 215 standard metropolitan statistical areas of which 22 extend beyond a single State. There are, in addition, a variety of lesser urban areas lying across State lines which should be planned as entities. This general authorization for interstate planning will permit and encourage interstate planning activities eligible to be assisted under the urban planning assistance program.

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Section 310. Urban planning assistance

This section amends section 701 of the Housing Act of 1954 to increase from one-half to two-thirds the Federal share of the cost of the urban planning activities undertaken thereunder, to increase the grant authorization from $20 million to $50 million, to emphasize the transportation aspect of comprehensive planning, and to facilitate interstate planning for metropolitan and other urban areas crossing State boundaries by giving blanket consent to interstate agreements or compacts for such purpose.

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SECTIONS 701 AND 702 OF THE HOUSING ACT OF 1954

URBAN PLANNING

SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from increasing concentration of population

in metropolitan and other urban areas, including smaller communities, to facilitate comprehensive planning for urban development by State and local governments on a continuing basis, and to encourage State and local governments to establish and develop planning staffs, the Administrator is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to (A) cities, other municipalities, and counties having a population of less than 50,000 according to the latest decennial census, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems resulting from rapid urbanization, and (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection;

(2) official State, metropolitan, and regional planning agencies empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

(3) cities, other municipalities, and counties which have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" has determined to be a major disaster;

(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation; and

(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems.

(b) A grant made under this section shall not exceed [50 per centum] *two-thirds* of the estimated cost of the work for which the grant is made. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the

provisions of section 3648 of the Revised Statutes, as amended, to make advances or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding [20 million] *$100 million* to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

(*c*) The Administrator is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning for States, cities, counties, metropolitan areas, and urban regions and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Administrator may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, *including transportation facilities*, together with long-range fiscal plans for such development; (2) programing of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) intergovernmental coordination of all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

(e) In the exercise of his function of encouraging comprehensive planning by the States, the Administrator shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the State and municipalities for various categories of public facilities.

(*f*) *The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the physical growth and development of interstate metropolitan or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.*

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1.3f (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 602, 87th Cong., 1st Sess. (1961)

HOUSING ACT OF 1961

JUNE 27, 1961.—Ordered to be printed

Mr. RAINS, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 1922]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 1922) to assist in the provision of housing for moderate and low income families, to promote orderly urban development, to extend and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

* * *.

[p. 1]

URBAN PLANNING ASSISTANCE

Grant authorization

The House bill would have authorized an increase of $30 million in the funds for urban planning grants. The Senate bill provided for an increase of $80 million. The conference substitute authorizes an increase of $55 million.

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1.3f (4) CONGRESSIONAL RECORD, VOL. 107 (1961)

1.3f (4)(a) June 1, 12: Debated, amended and passed Senate, pp. 9322, 9325

Urban planning assistance

Planning Assistance

Section 311(1): Amends section 701 of the Housing Act of 1954 to change the amount of grant from one-half to two-thirds of the estimated cost of the work for which the grant is made.

Section 311(2): Amends section 701 of such act to increase appropriation authorization from $20 million to $100 million.

Section 311(3): Amends section 701 of such act to extend planning to include the preparation of comprehensive mass transportation surveys to help solve problems of mass transit in urban areas.

Section 311(4): Amends section 701 of such act to permit grants to be made to interstate planning agencies formed by interstate compacts.

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MR. SPARKMAN.

* * * * *

Section 311 would change the urban planning grant program—section 701 of the Housing Act of 1954—to, first, increase the Federal share of the cost of planning activity undertaken under the program from one-half to two-thirds; second, increase the authorization for appropriations for grants from $20 to $100 million; and, third, facilitate interstate planning for metropolitan areas and other urban areas crossing State boundaries.

[p. 9325]

1.3f (4)(b) June 22: Amended and passed House, pp. 11113, 11125–11127

Urban planning assistance

SEC. 310. Section 701 of the Housing Act of 1954 is amended by—

(1) striking out "50 per centum" in the first sentence of subsection (b) and inserting in lieu thereof "two-thirds";

(2) striking out "$20,000,000" in the last sentence of subsection (b) and inserting in lieu thereof "$50,000,000";

(3) inserting after "public facilities" in clause (1) of subsection (d) ", including transportation facilities"; and

(4) adding at the end thereof the following new subsection:

"(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the physical growth and development of interstate metropolitan or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts."

[p. 11113]

MR. MAGNUSON

* * * * *

The time for thoughtful planning and bold action has arrived. In most areas of our country, open space is still available. However, our sprawling urban complexes are rapidly limiting this availability in their environs—cutting forests, polluting air and streams, constructing row upon row of crackerbox housing without consideration for the human values of the people who must live there. As our Secretary of Interior, Stewart Udall, has so wisely stated,

America's land and water are on the block. The highest bidder is seldom the wisest user. Short-term developments and short-term gains will be debited a thousandfold against the assets of future generations, whose claim on America is as valid as ours.

Mr. CAHILL. Mr. Chairman, I offer an amendment.

The Clerk read as follows:

Amendment offered by Mr. CAHILL:

* * * * *

And on page 107, line 4, insert "(a)" after "Sec. 310.".

On page 107, after line 24, insert the following:

(b) Section 701 of such Act is further amended by—

(1) striking out the matter preceding paragraph (1) of subsection (a) and inserting in lieu thereof the following:

"SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities, to facilitate comprehensive planning for urban development on a continuing basis by such governments for urban development and the coordination of transportation systems in urban areas, and to encourage such governments to establish and improve planning staffs, the Administrator is authorized to make planning grants to—"; and

(2) adding at the end of subsection (a) the following: "Planning which may be assisted under this section includes the preparation of comprehensive mass transportation surveys and plans to aid in solving problems of traffic congestion and facilitating the circulation of people and goods in urban and metropolitan areas through the development of comprehensive and coordinated mass transportation systems. Funds available under this section shall be in addition to funds available for planning surveys and investigations under other Federally aided programs, and nothing contained in this section shall be construed as affecting the

authority of the Secretary of Commerce under section 307 of title 23, United States Code."

[p. 11125]

Mr. CAHILL. Mr. Chairman, I would like to briefly state what these amendments provide.

First of all, let me say this has to do with mass transportation. It is a subject I would assume every one in the House, regardless of how they feel about the balance of the bill, will agree should be in the bill.

The amendments that you heard read briefly do these things:

* * * * *

Second, they authorize the Administrator to use money already authorized in the bill for urban planning for planning for mass transportation in communities.

* * * * *

Mr. Chairman, may I say very frankly I know there are many in the House who have introduced bills which will take care of mass transportation. I know the subcommittee headed by the gentleman from New York is presently working on this problem. But I would call the attention of the House to the fact that in the other body the housing bill by an amendment offered by the Senator from New Jersey included these provisions. Therefore, if we accept this amendment and pass the bill, as amended, we will be in a position to start our work on mass transportation right now. We will not have to wait until the committee reports the bill, the bill is printed, and is scheduled for consideration, which may well be in the next session of the Congress.

I need not tell the Members of the House of the need for studies and pilot projects in mass transportation. In every Member's district I dare say this problem exists. One has only to look at the city of Washington and every other city in America to realize the great need for some solution of this mass transportation problem.

It seems to me, Mr. Chairman, if we are going to develop urban communities and bring more people in there, we had better start finding a way to get them in and out.

Mr. Chairman, I urge the Members of the House to accept these amendments, that they pass the bill as amended, so that we can start immediately to solve this problem. I think the time for study is over and I think the time for action is here.

Mr. Chairman, I urge the adoption of the amendment.

Mr. RYAN. Mr. Chairman, will the gentleman yield?

Mr. CAHILL. I yield to the gentleman from New York.

Mr. RYAN. Is your amendment drawn in the same language as the amendment introduced in the Senate?

Mr. CAHILL. Yes. This is almost the identical language of the amendment introduced by Senator WILLIAMS.

Mr. Chairman, let me further say I do not suppose there is a Member in the House who will not admit that transportation is one of the most serious problems in his district. In my own district, we are faced at the present time with an application by a railroad to discontinue all passenger service in south Jersey. Our highway department is swamped with requests from irate citizens for immediate action in the construction of new highways and the modernization of old ones. Every avenue of ingress and egress to our cities is jammed with automobiles. One but has to think of the conditions of traffic here in Washington in the morning and in the evening to fully recognize the great need for a solution to mass transportation.

There is no great need for me to belabor the House with arguments in favor of these amendments. I am sure that every Member in the House agrees as to their need and that the only disagreement might come as to the manner in which it should be provided. The question, it seems to me, is, Shall we do it by amendment to the housing bill or shall we do it by separate legislation?

I would agree that a better plan might be a separate bill if we could vote on that bill today but contend with all of the sincerity and forcefulness I possess that even 1 more day's delay is inexcusable. I doubt very much if any separate transportation bill could be ready for floor action during this session of the Congress and thus whatever aids are necessary in the immediate future will be necessarily postponed for another year. This has been the history of mass transportation. Everybody agrees that something must be done but it is always put off until next year.

I would call the Members' attention to the fact that Senator WILLIAMS, in the other body, presented an amendment to the housing bill which was accepted by the other body and is now part of the Senate housing bill. In his statement Senator WILLIAMS forcefully and completely made the case for mass transportation. He pointed out the problems facing our citizens, the effect upon our merchants, and on real estate firms, how the failure to solve this problem has discouraged investment in big cities, how it has aided in spreading urban blight, how it has increased the cost of moving goods in interstate commerce, how it has increased accident insurance rates and costs, and most importantly, how it has deprived the individual citizen of peace of mind. As he said in his public statement:

> Never has anyone devised any more cunning device of human torture than the traffic jam.

I would agree completely with the Senator from New Jersey and say to the House that we should follow the example of the other Body and incorporate into our housing bill this amendment which would be the first step toward the solution of this vital problem.

I would call the attention of the House to the fact that the U.S. Conference of Mayors, the National Association of Home Builders, the AFL–CIO, the American Municipal Association, and, literally, hundreds of other civic-minded organizations have endorsed this type legislation. Studies by the hundreds have been made, all of which are in agreement that immediate action is essential. All that is happening by way of further studies is that traffic daily grows worse and the problem daily becomes more acute.

It seems to me absolutely ridiculous to suggest that we should have urban redevelopment, new homes for cities, and the other aids suggested in this Housing bill if we are not at the same time going to provide a way for people to get into and out of these cities. I suggest that this amendment would encourage the continuance rather than cause the abandonment of vital rail service, of necessary bus service. It would provide a ray of hope for people in the transportation field.

Among the existing problems that need immediate attention and solution we can, I think, include such things as modernization of railway cars and equipment, joint use of stations and terminals by all transportation agencies, coordination of parking facilities with mass transportation facilities so that outlying districts can be properly serviced and masses can be economically and speedily transported to urban employment. These are but a few of the multitudes of problems. Senator WILLIAMS in his speech before the other body presented

[p. 11126]

some 15 specific problems which, in his judgment, needed immediate solution. I would agree with the Senator and say that he listed only those which, in his judgment, were the most important.

I am sure Members of the House remember the recent NBC television show concerning the great problem of our railroads and our transportation system. Every national magazine and alert newspaper has been for many years pointing up this problem and suggesting means of solving it. We know that no city, that no State can solve this problem by itself. It is indeed a national problem and a national disgrace.

I again urge, therefore, the Members

of the House to accept this amendment so that immediate attention can be given to this pressing problem.

Mr. MULTER. Mr. Chairman, I rise in opposition to the amendment.

Mr. Chairman, during the course of the debate on the rule on this bill I caused to be inserted in the RECORD, and it appears on page 10941 of the RECORD of June 21, a statement indicating that the administration bill on mass transportation had been introduced; it is H.R. 7787. There you will find the bill and an explanation of the bill and my statement about it. On Tuesday next we start hearings on the bill before my subcommittee of the Committee on Banking and Currency. We now have scheduled witnesses for Tuesday, Wednesday, and Thursday of next week. We will continue hearings until we have completed them, and then go into executive session and report a bill to the full committee which I think will warrant reporting by the full committee to the House for action.

Mr. Chairman, no amendment was offered in the subcommittee to this bill along the lines of that just offered. There have been no hearings in the House or by any House committee on this subject. No such amendment was offered in the full committee. I think this House should not attempt to pass an amendment of this kind that calls for the expenditure of $100 million which will go to municipalities, to railroads and to others engaged in the mass transportation business. This may be the thing to do, but with the recommendation at this time of the administration for $10 million, I think certainly we need full hearings on the subject. After that we can come up with a bill which will cover this matter and nothing else. In that way we can devote the proper attention to it and do the job that needs doing.

Mr. CAHILL. Mr. Chairman, will the gentleman yield?

Mr. MULTER. I yield to the gentleman from New Jersey.

Mr. CAHILL. Am I not right and does the gentleman not agree that this amendment does not provide any additional money, but that it merely utilizes the money that is already in the bill and permits the administrator to utilize some of those funds for a mass-transportation study?

Mr. MULTER. I will take the gentleman's word that that is what he is doing here, but I do see staring me in the face an allocation of $100 million for mass transportation. I do not think we ought to allocate $100 million, whether it is already authorized or will be authorized or appropriated by this bill until we have had full and complete hearings, indicating what the problem is and how much money should be allocated to this program.

Mr. CAHILL. I want to assure the gentleman that this $100 million is coming out of the $500 million that is new money appropriated in the bill.

Mr. MULTER. I am sure the gentleman is in no position to assure the House that the $100 million allocated in another part of the housing bill is not needed for housing facilities. I would be the last one in the world to urge that we take that money out of the housing program and allocate it to mass transportation. If we need $100 million or any other sum for mass transportation, let the hearings that we will hold establish that fact and then come before this House with a bill that will do the job.

Mr. Chairman, I urge the defeat of the amendment.

Mrs. DWYER. Mr. Chairman, I move to strike out the last word.

Mr. Chairman, I strongly support the proposed amendment which would add to the committee bill a mass transportation program similar to that contained in the Senate bill.

As I stated in my remarks before the House yesterday, there is no more urgent national problem today than the need to free our cities and metropolitan areas from the choking conditions of modern traffic by developing comprehensive metropolitan mass transit systems.

I recognize that the House has held no hearings on mass transportation legislation

this year. As a sponsor of such a bill, I have urged the committee to hold hearings and I have regretted the committee's failure to do so. I remind the House, however, that hearings were held on similar legislation last year by the Committee on Banking and Currency. The Senate has also held extensive hearings on the subject for 2 successive years. Moreover, the platforms adopted last year by both the Republican and Democratic Conventions specifically recommended enactment of legislation similar to the pending amendment.

I can conceive of no subject upon which more attention and greater study has been lavished. The problem has been recognized increasingly to be one of the most serious domestic problems facing our Nation, and there is virtually no disagreement about the fundamental means of attacking it.

As evidence of this unanimity, Mr. Chairman, I consider it especially significant that the Advisory Commission on Intergovernmental Relations just 2 months ago strongly endorsed the purposes and provisions of the mass transportation bill—the same bill passed by the Senate and pending before the Banking and Currency Committee.

The bill and the pending amendment would authorize long-term loans up to $100 million, provide for Federal technical assistance and research, and make available to State and local agencies aid in planning and testing alternative ways of improving urban transportation systems. The program would be administered by the Housing and Home Finance Agency.

As the Commission and many other groups have recognized, the provision of loans and planning grants of moderate size will stimulate State and local governments to assume their rightful responsibilities with respect to mass transportation planning and development.

The time for action, Mr. Chairman, is now. The metropolitan area mass transportation problem is a national one. The economic loss due to traffic congestion in the 10 major urban centers of the country approaches $5 billion a year. The present decline in urban mass transportation facilities represents an immediate threat to the survival of metropolitan areas as we know them.

The need to strengthen commuter transportation service by improving facilities, stabilizing fares, providing more convenient schedules, and attracting more satisfied customers is probably the most important single problem facing heavily populated urban areas.

Equally important, however, is the need to balance all forms of urban transportation, to develop an overall transportation system which will serve effectively and efficiently the divers requirements of the entire area, and to integrate such a system with all other land-use considerations in the area.

This amendment faces up to these needs by providing sound criteria for essential long-term loans and by establishing the machinery necessary for better planning at local, State, and National levels—planning that will assure us the best use of our resources at lowest possible costs and with maximum advantages for all our people.

Mr. RAINS. Mr. Chairman, I move to strike out the last word.

Mr. Chairman, the gentleman from New York, who I know is as much concerned with this problem as anyone else, has well stated the case. There is to be some consideration of the legislation on it in the near future.

But certainly this frail bark is no place to put this type of amendment and I certainly hope those who want to case an economy vote will do so because here is a real good spot.

The CHAIRMAN. The question is on the amendment offered by the gentleman from New Jersey [Mr. CAHILL].

The amendment was rejected.

[p. 11127]

1.3f (4)(c) June 28: House agrees to conference report, p. 11510

[No Relevant Discussion on Pertinent Section]

1.3f (4)(d) June 28: Senate agrees to conference report, pp. 11566, 11577

[No Relevant Discussion on Pertinent Section]

1.3g HOUSING ACT OF 1964

September 2, 1964, P.L. 88-560, Title III, §§314-317, 78 Stat. 792, 793

URBAN AND REGIONAL PLANNING GRANTS

SEC. 314. (a) Section 701(a) of the Housing Act of 1954 is amended by striking out "resulting from rapid urbanization" in clause (B) of paragraph (1).

(b) Section 701(a) of such Act is further amended by—

(1) striking out "and" at the end of paragraph (4);

(2) striking out the period at the end of paragraph (5) and inserting in lieu thereof a semicolon; and

(3) adding two new paragraphs after paragraph (5) as follows:

"(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

"(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles of materials produced or manufactured in such area; and".

(c) Section 701(a) of such Act is further amended by striking out "(a)" after "section 5" in paragraph (3).

(d) Section 701(b) of such Act is amended by striking out the proviso in the first sentence and inserting in lieu thereof ": *Provided*, That such a grant may be in an amount not exceeding three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a) (7), or for planning being carried out for a city, other municipality, county, group of adjacent communi-

ties, or Indian reservation in an area designated by the Secretary of Commerce as a redevelopment area under section 5 of the Area Redevelopment Act".

PLANNING GRANTS FOR INDIAN RESERVATIONS

SEC. 315. (a) Section 701(a) of the Housing Act of 1954 is amended by—

(1) striking out "and" at the end of clause (B) of paragraph (1);

(2) inserting ", and (D) Indian reservations" before the semicolon at the end of paragraph (1); and

(3) inserting a new paragraph after paragraph (7) (added by section 314(b)) as follows:

"(8) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other agency or instrumentality is empowered to provide planning assistance under clause (D) of paragraph (1) above."

(b) Section 701(d) of such Act is amended by—

(1) striking out "and urban regions" in the first sentence and inserting in lieu thereof "urban regions, and Indian reservations"; and

(2) inserting after "instrumentalities" in the second sentence the following: ", and to Indian tribal bodies,".

ELIGIBILITY OF COUNTIES FOR PLANNING ASSISTANCE

SEC. 316. Section 701(a) of the Housing Act of 1954 is amended by striking out clause (A) of paragraph (1) and inserting in lieu thereof the following: "(A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Administrator finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section,".

PLANNING GRANT AUTHORIZATION

SEC. 317. Section 701(b) of the Housing Act of 1954 is amended by striking out "$75,000,000" in the last sentence and inserting in lieu thereof "$105,000,000".

[p. 793]

1.3g (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 1265, 88th Cong., 2d Sess. (1964)

HOUSING ACT OF 1964

JULY 29, 1964.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

together with

INDIVIDUAL VIEWS

[To accompany S. 3049]

The Committee on Banking and Currency, to whom was referred the bill (S. 3049) to extend and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

[p. 1]

URBAN AND REGIONAL PLANNING GRANTS

Section 210 would make various amendments to the program of urban planning grants carried on under the Housing Act of 1954 as follows:

Subsection (a). Planning grants to groups of adjacent communities

This subsection would permit a grant to be made for planning assistance to any group of adjacent communities of less than 50,000 total population and having common or related urban planning problems, whether or not "resulting from rapid urbanization," as now specified in the statute. Experience has shown that there are groups of communities

with declining, stable, or only normally increasing population which are in need of comprehensive planning assistance. There is no such rapid urbanization requirement in the case of grants for planning assistance to municipalities and counties of less than 50,000 population.

Subsection (b). Grants for local planning by metropolitan and regional planning bodies

This subsection would permit metropolitan and regional planning agencies to receive grants for the provision of planning assistance to certain small communities and Indian reservations when the State planning agency or Governor assents. Generally, these areas may now only receive planning assistance through a State planning agency, acting directly or through a contract with a metropolitan or regional planning agency. The availability of direct planning assistance from the metropolitan or regional planning agency would permit closer coordination between planning for such smaller areas and overall metropolitan or regional planning.

Subsection (c). Planning grants in section 5(b) redevelopment areas

This subsection would permit planning assistance, without regard to the otherwise applicable 50,000 population limitation, to all municipalities and counties in redevelopment areas designated under section 5 of the Area Redevelopment Act, rather than just those in areas designated under section 5(a). Since both section 5(a) and section 5(b) areas are economically depressed areas and would benefit from comprehensive planning, there appears to be no basis for not providing them equal treatment.

[p. 22]

Subsection (d). Three-fourths grants for planning within redevelopment areas

This subsection would permit three-fourths grants to be made for planning being carried out for a municipality, county, group of adjacent communities, or Indian reservation located in any redevelopment area. At present the higher grant is authorized only for planning being carried out for municipalities and counties in redevelopment areas designated under section 5(a) of the Area Redevelopment Act.

ELIGIBILITY OF COUNTIES FOR PLANNING ASSISTANCE

Section 211 would make all counties, regardless of population, eligible for comprehensive urban planning assistance under section 701 of the Housing Act of 1954. At present only counties with a population of less than 50,000 or those larger counties located in redevelopment or disaster areas are eligible for such assistance. Many other counties, especially suburban counties adjoining our major cities, have urgent unmet urban

planning needs. Under this section, such counties would be eligible for grants covering up to two-thirds of the cost of preparing land-use and public facilities plans, capital improvements programs, and other comprehensive planning activities. This assistance would be available through the State planning agency or, in accordance with the provisions of section 210(b) of this act, through a metropolitan or regional planning agency if the State planning agency assents.

No grants would be made under this new authority for counties with a population of 50,000 or more which are located in metropolitan areas, unless the Administrator finds that the plans and planning of the county will be coordinated with any program of comprehensive planning being carried out for the metropolitan area of which the county is a part. It is the intention of the committee that this requirement be strictly enforced, so that assisted county planning will be supplementary to metropolitan area planning rather than in conflict with it.

In addition, the aggregate amount of grants available for such larger metropolitan counties would be limited to 15 percent of the aggregate amount appropriated, after the date of enactment of this act, for grants under the section 701 program.

PLANNING PROBLEMS RESULTING FROM CHAMIZAL TREATY OF 1963

Section 212 would authorize the Administrator to make comprehensive urban planning grants, under section 701 of the Housing Act of 1954, to El Paso, Tex., to assist it in solving urban planning problems resulting from the Chamizal Treaty of 1963. This treaty between the United States and the Republic of Mexico and the resultant transfer of land between the two countries at El Paso will necessitate the displacement of many families and the relocation of many public facilities. However, because its population is over 50,000, El Paso is not now eligible for Federal planning grants under the section 701 program.

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The proposed grants to El Paso would be at the regular two-thirds level and would be subject to the same conditions and requirements applicable to other section 701 grants.

PLANNING GRANTS FOR INDIAN RESERVATIONS

Section 213 would make Indian reservations eligible for planning grants.

Subsection (a) of this section would authorize section 701 grants to be made to State planning agencies for the provision of planning assistance to Indian reservations. Where no State agency is so empowered, it would authorize such grants to a qualified tribal council or other

tribal body designated by the Secretary of the Interior. The amendment was developed jointly with the Bureau of Indian Affairs.

Subsection (b) of this section would make conforming changes in section 701(d) by adding "Indian reservations" to the list of areas where comprehensive planning is to be encouraged through section 701 grants; and by adding "Indian tribal bodies" to the list of local public bodies to which the Administrator may provide technical assistance in connection with comprehensive planning.

The amendment proposed above in section 310(d) of this bill would authorize three-quarter grants for planning for Indian reservations, where the reservation is located within a redevelopment area. As of April 1, 1963, there were 52 such reservations.

Although Indian tribes on reservations are in fact units of local government, they do not qualify for assistance under the various types of local political subdivisions which may now receive assistance under section 701, either directly or through State planning bodies. Moreover, it is doubtful whether some State planning agencies are authorized to assist Indian tribes, because of their special Federal status.

PLANNING GRANT AUTHORIZATION

Section 214 of the bill would increase the amount which can be appropriated for grants under the urban planning program (sec. 701 of the Housing Act of 1954) by $30 million, from $75 million to $105 million. The additional funds provided for this program are in keeping with other sections of the bill to provide funds to continue existing housing programs for approximately 15 months; that is, until October 1, 1965.

The committee believes that the planning grant program has been most helpful in assisting States and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including small communities; in facilitating comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments, and in encouraging such governments to establish and improve planning staffs.

The committee feels that the appropriation authority provided by this section of the bill will permit the urban planning program to continue at the same rate under which it has progressed during the last several months.

[p. 24]

Area and regional planning grants

Sec. 210.—Amends section 701(a) of the Housing Act of 1954 to have the following changes in the program of urban planning:

(1) Would permit a grant for planning assistance to any group

of adjacent communities of less than 50,000 population and having common or related urban planning problems, whether or not "resulting from rapid urbanization" as now specified in the statute.

(2) Would authorize grants (where the State planning agency or Governor assents) to regional or metropolitan planning bodies for direct planning assistance to smaller municipalities and other areas of under 50,000 population. Planning assistance

[p. 65]

may now generally be provided such areas only by a State planning agency.

(3) Would authorize planning assistance, without regard to the otherwise applicable 50,000 population limitation, to municipalities and counties in any redevelopment areas designated under section 5 of the Area Redevelopment Act. Such designation must now be under section 5(a) of that act.

(4) Would permit three-fourth grants for certain planning of any redevelopment areas designated under section 5 of the Area Redevelopment Act (rather than just under sec. 5(a)), and would make planning for Indian reservations and groups of adjacent communities eligible for such grants.

Eligibility of counties for planning assistance

Sec. 211.—Amends section 701(a) of the Housing Act of 1954 to authorize Federal grants for planning assistance to counties with regard to population (rather than only to counties with population of less than 50,000 as presently provided). Planning assistance in counties of 50,000 or more population which are within metropolitan areas would be provided only if the Housing Administrator finds that the planning for the county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area. In addition, the aggregate amount of grants available for counties of 50,000 or more population which are within metropolitan areas would be limited to 15 percent of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for grants under the section 701 program.

Planning problems resulting from Chamizal Treaty of 1963

Sec. 212.—Authorizes the Housing and Home Finance Administrator to make comprehensive urban planning grants, under section 701 of the Housing Act of 1954, to El Paso, Tex., to assist it in solving urban planning problems resulting from the Chamizal Treaty of 1954. Any such grants made to El Paso would be at the regular matching level and subject to the same conditions and requirements applicable to other section 701 grants.

Planning grants for Indian reservations

Sec. 213.—Amends section 701(a) of the Housing Act of 1954 to authorize grants to a State planning agency, or to a qualified tribal body designated by the Secretary of the Interior, for planning assistance to an Indian reservation.

Planning grant authorization

Sec. 214.—Amends section 701(b) of the Housing Act of 1954 to increase by $30 million the authorization of appropriations for urban planning grants.

[p. 66]

1.3g (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 1703, 88th Cong., 2d Sess. (1964)

HOUSING ACT OF 1964

AUGUST 5, 1964.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H. R. 12175]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 12175) to extend and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

WHAT THE BILL WOULD DO

Generally, the bill would provide additional authorizations and funds to continue existing federally assisted housing programs for another year. In addition, the bill contains a number of amendments designed to improve FHA sales and rental housing programs and to improve the operation of the urban renewal program. The bill's major features are as follows:

Title III would (*a*) authorize an additional $600 million for grants under the urban renewal program, (*b*) tighten the urban renewal pro-

gram requirements to encourage more rehabilitation and code enforcement, (*c*) provide a new program of rehabilitation loans to aid homeowners and businesses in urban renewal areas to improve their properties, and (*d*) tighten relocation requirements and provide additional relocation benefits to displaced businesses, nonprofit organizations, individuals, and families.

[p. 1]

Urban planning grant authorization

The bill would increase the amount which can be appropriated for grants under the urban planning program (sec. 701 of the Housing Act of 1954) by $30 million, from $75 million to $105 million. The committee believes that the planning grant program has been most helpful in assisting States and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including small communities, in facilitating comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments, and in encouraging such governments to establish and improve planning staffs.

Planning for counties of 50,000 or more

The bill would make all counties, regardless of population, eligible for comprehensive urban planning assistance under section 701 of the Housing Act of 1954. At present only counties with a population of less than 50,000 or those larger counties located in redevelopment or disaster areas are eligible for such assistance. Many other counties, especially suburban counties adjoining our major cities, have urgent unmet urban planning needs. Under the provisions of the bill, such counties would be eligible for grants covering up to two-thirds of the cost of preparing land-use and public facilities plans, capital improvements programs, and other comprehensive planning activities. This assistance would be available through the State planning agency or through a metropolitan or regional planning agency if the State planning agency assents.

No grants would be made under this new authority for counties with a population of 50,000 or more which are located in metropolitan areas, unless the Administrator finds that the plans and planning of the county will be coordinated with any program of comprehensive planning being carried out for the metropolitan area of which the county is a part.

In addition, the aggregate amount of grants available for such larger metropolitan counties would be limited to 15 percent of the aggregate amount appropriated after the date of enactment of this act, for grants under the section 701 program.

[p. 18]

Section 311. Urban and regional planning grants

Subsection (a) amends section 701(a) of the Housing Act of 1954 (the urban planning program) to permit a grant to be made to a State planning agency for planning assistance to any group of adjacent communities of less than 50,000 total population having common or related urban planning problems; under present law such a grant is authorized only where the problems result "from rapid urbanization."

Subsection (b) further amends section 701(a) of the 1954 act to permit metropolitan and regional planning agencies to receive direct grants for the provision of planning assistance to certain small communities (and Indian reservations) when the State planning agency or Governor assents; under present law such assistance must generally be provided through the State planning agency, either directly or by means of a contract with a metropolitan or regional planning agency.

Section 312. Planning grant authorization

This section amends section 701(b) of the Housing Act of 1954 to increase by $30 million (from $75 to $105 million) the authorization of appropriations for urban planning grants under section 701.

Section 313. Planning grants for Indian reservations

Subsection (a) amends section 701(a) of the Housing Act of 1954 to authorize urban planning grants to State planning agencies for the provision of planning assistance to Indian reservations, and authorizes such grants directly to an Indian tribal council or other tribal body designated by the Secretary of the Interior in cases where no State agency is empowered to provide such assistance.

Subsection (b) amends section 701(d) of the 1954 act to add Indian reservations to the list of areas where comprehensive planning is to be encouraged through urban planning grants, and to add Indian tribal bodies to the list of public bodies to which the Administrator may provide technical assistance in connection with comprehensive planning.

(The amendments made by sec. 311(b) of the bill (discussed above) authorize assistance to Indian reservations through metropolitan and regional planning agencies.)

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Section 314. Eligibility of counties for planning assistance

This section amends section 701(a) of the Housing Act of 1954 to authorize urban planning grants to counties of 50,000 or more, subject to the requirement that if such a county is within a metropolitan area the Administrator must find that the planning involved will be coordinated with the comprehensive planning program of the area. Not more than 15 percent of the funds appropriated for the urban planning program could be used for such grants to counties of 50,000 or

more in metropolitan areas. Under existing law a county of 50,000 or more would have to be situated in a redevelopment area or have suffered a major disaster in order to qualify for such a grant either directly or through the State planning agency.

Section 315. Planning problems resulting from treaties or other international agreements

This section amends section 701(a) (4) of the Housing Act of 1954 to authorize direct urban planning grants to official governmental agencies for areas where planning problems have resulted or are expected to result from the implementation of a Federal treaty or other international agreement or understanding (such as the Chamizal Treaty between the United States and Mexico).

[p. 43]

URBAN PLANNING

SEC. 701 (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs, the Administrator is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to [(A) cities, other municipalities, and counties having a population of less than 50,000 according to the latest decennial census,] (*A*) *cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: Provided, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if* (*i*) *the Administrator finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and* (*ii*) *the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section,* (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than

50,000 according to the latest decennial census and having common or related urban planning problems [resulting from rapid urbanization], [and] (C) cities, other municipalities, and counties, referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection, *and (D) Indian reservations;*

(2) official State, metropolitan, and regional planning agencies, or other agencies and instrumentalities designated by the Gov-

[p. 109]

ernor (or Governors in the case of interstate planning) and acceptable to the Administrator, empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

(3) cities, other municipalities, and counties which (A) are situated in areas designated by the Secretary of Commerce under section 5(a) of the Area Redevelopment Act as redevelopment areas or (B) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" has determined to be a major disaster;

[(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation; and]

(4) official governmental planning agencies for areas where (A) urban planning problems have resulted or are expected to result from the implementation of a Federal treaty or other international agreement or understanding, or (B) rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation;

(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto [.];

(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1); and

(7) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other agency or instrumentality

is empowered to provide planning assistance under clause (D) of paragraph (1).

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems. The Administrator shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other urban areas and reducing transportation needs. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other Federally-aided programs, and nothing contained in this section shall be

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construed as affecting the authority of the Secretary of Commerce under section 307 of title 23, United States Code.

(b) A grant made under this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided,* That a grant may be made under this section to a city, municipality, or county described in clause (A) of subsection (a)(3), or to a State planning agency (as provided in clause (C) of subsection (a)(1)) for the provision of planning assistance to such a city, municipality, or county, for not more than 75 per centum of such estimated cost. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advances or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated not exceeding [*$75,000,000*] *$105,000,000* to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

(c) The administrator is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties,

metropolitan areas, [and urban regions] *urban regions, and Indian reservations* and the establishment and development of the organizational units needed therefor. The Administrator is authorized to provide technical *assistance to* State and local governments and their agencies and instrumentalities, *and Indian tribal bodies*, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems. In extending financial assistance under this section, the Administrator may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, including transportation facilities, together with long-range fiscal plans for such development; (2) programming of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) inter-governmental coordination of all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

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1.3g (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 1828, 88th Cong., 2d Sess. (1964)

HOUSING ACT OF 1964

AUGUST 18, 1964.—Ordered to be printed

Mr. PATMAN, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 3049]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 3049) to extend

and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following: *That this Act may be cited as the "Housing Act of 1964".*

[p. 1]

URBAN AND REGIONAL PLANNING GRANTS

SEC. 314. (a) Section 701(a) of the Housing Act of 1954 is amended by striking out "resulting from rapid urbanization" in clause (B) of paragraph (1).

(b) Section 701(a) of such Act is further amended by—

(1) striking out "and" at the end of paragraph (4);

(2) striking out the period at the end of paragraph (5) and inserting in lieu thereof a semicolon; and

(3) adding two new paragraphs after paragraph (5) as follows:

"(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

"(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Govern-

[p. 25]

ment orders for the procurement of articles or materials produced or manufactured in such area; and".

(c) Section 701(a) of such Act is further amended by striking out "(a)" after "section 5" in paragraph (3).

(d) Section 701(b) of such Act is amended by striking out the proviso in the first sentence and inserting in lieu thereof ": Provided, That such a grant may be in an amount not exceeding three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a)(7), or for planning being carried out for a city, other municipality, county, group of adjacent communities, or Indian reservation in

an area designated by the Secretary of Commerce as a redevelopment area under section 5 of the Area Redevelopment Act".

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STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 3049) to extend and amend laws relating to housing, urban renewal, and community facilities, and for other purposes, submit the following statement in explanation of the effect of the action agreed upon by the conferees and recommended in the accompanying conference report:

The House struck out all of the Senate bill after the enacting clause and inserted a substitute amendment. The committee of conference has agreed to a substitute for both the Senate bill and the House amendment. Except for technical, clarifying, and conforming changes, the following statement explains the differences between the House amendment and the substitute agreed to in conference.

[p. 43]

Urban planning grants in redevelopment areas

The Senate bill contained a provision not in the House amendment making a limited number of counties in areas which are designated

[p. 46]

under section 5(b) of the Area Redevelopment Act eligible for section 701 urban planning grants without regard to population and providing three-fourths (rather than two-thirds) grants to these areas. The conference substitute includes the Senate provision.

1.3g (4) CONGRESSIONAL RECORD, VOL. 110 (1964)

1.3g (4)(a) July 31: Debated, amended and passed Senate, pp. 17584, 17586, 17598–17600

Mr. SPARKMAN. I yield myself 2 additional minutes.

PLANNING GRANT AUTHORIZATION

The committee bill would increase the amount which can be appropriated for grants under the urban planning program, that is section 701 of the Housing Act of 1954, by $30 million. Present appropriation authority under this bill is nearly exhausted—I believe the remaining balance of the appropriation authority is about $2.5 million—and here again, this additional authority will continue the program at its present level for the next 15 months.

[p. 17584]

* * * * *

EXPANSION OF URBAN PLANNING ASSISTANCE PROGRAM—SECTION 701

The bill would expand the urban planning assistance program to make eligible large counties—50,000 or more population—and other types of planning bodies which are not now eligible for this type of assistance.

Under this program, the Federal government makes grants, principally through State planning agencies, to help small cities and small counties carry out extensive planning programs. It is one of our most popular programs and has done an outstanding service in helping the small cities in their urban planning. The Federal Government pays two-thirds of the cost and the local government pays the other one-third.

[p. 17586]

Mr. KEATING. Mr. President, I call up my amendment.

The PRESIDING OFFICER. The clerk will state the amendment.

The LEGISLATIVE CLERK. On page 19, line 7, it is proposed to strike out "a new paragraph" and insert in lieu thereof "two new paragraphs".

On page 19, line 17, strike out all that follows the semicolon.

On page 19 between lines 17 and 18 insert the following:

(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (b) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area; and

On page 20, line 1, after "cost" insert "to an official governmental planning agency for an area described in subsection (a) (7), or".

[p. 17598]

On page 21, line 20, strike out "(6)" and insert "(7)".

On page 21, line 22, strike out "(7)" and insert "(8)".

Mr. KEATING. Mr. President, it is a very simple amendment. It proposes to authorize, not to require, but merely to authorize Federal planning grants for areas where a substantial reduction has occurred in employment opportunities as a result of the closing of a Federal activity, or a decline in the volume of Government orders.

Section 701 of the act already includes subparagraph (4).

There is already provision for planning by official Government planning agencies in areas where rapid urbanization has resulted or is expected to result from the establishment of or substantial expansion of a Federal project. In other words, there is now in the act provision for grants where a Federal installation is moving into an area. My proposal is a counterpart of that. Oftentimes the problem of planning is even more urgent, and the possibility of assuring adequate funds may be even more difficult in an area in which a Federal installation is moving out. In such communities—and, let me say very frankly that New York State has a number of such hard-hit communities—there is pressing need for action to avoid the urban and suburban blight that can strike an area when the jobs move out, but the community debt remains high, the community facilities have to be maintained, and the community has to catch its breath and figure out how to meet the challenge.

The first step that any such community must make, in my judgment, is to undertake a coordinated planning study of the resources available to it, the trends of population concentration, the transportation system, and the direction and financing of community development. This is precisely what is provided for under section 701 anyway, but my amendment would specifically authorize such assistance, up to 75 percent in areas of special need, in cases where the community dislocation is caused directly by the action of the Federal Government.

For instance, the first problem the community must often face is what use should be made of any property vacated by the Federal Government. Where a large

amount of land is involved, this can often be an important question, crucial to community planning efforts for decades to come.

Another immediate problem may concern the decline in Federal payments to school districts under the impacted areas program. The schools are still standing; the maintenance must still be paid for; the teachers must be compensated; and the school bondholders must still be paid off, even though the community tax rolls are depleted and the Federal payments reduced or cut off.

These are very serious problems of urban and community adjustment. The answer is not simply to let an area decay, but to encourage area leaders to sit down and draw up their plans to avoid community decay and to recognize the community responsibility on the highest level. Surely it is also right and equitable to recognize specifically the Federal responsibility to help meet a challenge created by Federal policies.

Mr. President, a number of different solutions have been offered to the problems created by Federal cutbacks, in jobs, installations, or contracts, and I do not suggest that this proposal is the whole answer by any means. But I believe very strongly that communities facing a sharp cutback in Federally supported jobs need, first, a morale booster. They need the assurance that the Federal Government has not moved out entirely, with no further concern for their welfare or community development. By putting specifically into the urban planning grant provisions of the Housing Act an authorization for Federal aid to these communities, we would be doing a lot for the initial morale of such communities and we would be taking a big step toward locating and promoting the long range objectives of such communities in urban planning and development.

I have been studying this problem for some time and in general I am convinced that regional action, through regional planning commissions and the like, is one of the most important ways for municipalities, counties, and States to meet the changing impacts of defense and other Federal spending. Several months ago in April I spoke at the Tri-County Labor Management Institute on Long Island and discussed the problem at some length. I suggested then that a Long Island Regional Commission be formed to study the existing economic resources of the island and make provision for community development to meet the problems of a steady decline in defense oriented jobs, which have hitherto played a very large role in the economy of the island. Now I am very glad to note that a meeting has been called for next week to set in motion a group very much along the lines I originally proposed, a regional planning body as described in section 701 of the Housing Act of 1954. These groups, in my view can play a most important role, in the kind of planning envisioned by the framers of this legislation, and it would in my view be most appropriate to recognize specifically the intent of the Congress to assist this kind of grassroots planning effort and to provide up to 75 percent Federal assistance to encourage this kind of planning.

I know that the Senator from Alabama has taken particular interest in this problem and has held a number of hearings on the problems of small business conversion to nondefense work. My amendment is directed toward another facet of what is basically the same problem. My amendment is particularly directed toward the kind of urban and community problems that must be faced and overcome when a Federal installation moves out or when federally supported jobs are eliminated.

The Federal Government has come to accept wider and wider responsibilities in the field of urban development, as the Senator well knows, for he has been a pioneer in this field. Yet in my judgment it is still something of an anomaly that the Federal Government is prepared to move so vigorously to solve all kinds of urban and community problems which the Federal Government has not in any way been responsible for creating, yet the Federal Government has been very slow indeed to recognize its responsibility to

take action or even to promote local action in cases where the community problem is the direct fault of Federal jobs or federally sponsored jobs being removed. This is one area surely where the Federal Government should not evade its own obligations to help a community which it has injured, for reasons which usually have nothing at all to do with the community that has been hurt.

This amendment would supply welcome recognition of Federal intent to help communities where the Federal Government is moving out. We are all familiar with the parable of the talents in the Bible. "To him who hath shall be given." At present that is what this bill provides, for the community which is getting a new Federal facility qualifies immediately for aid under section 701. The community which is losing what may be its main source of income does not specifically qualify. I believe it would be most appropriate and wise to add specific authorization for grants to communities affected by Federal installation or contract cutbacks.

Mr. CLARK. Mr. President, will the Senator yield?

Mr. KEATING. I yield to the distinguished Senator from Pennsylvania.

Mr. CLARK. Can the Senator give us an example of a city in which an installation is moving out? I must say that I am sympathetic generally with the Senator's objective, but it is hard for me to visualize an example in which some planning would be required because the city was shrinking instead of growing.

Mr. KEATING. It is more likely to be a smaller community, perhaps, but not necessarily. If the Senator will look at the wording of the amendment, he will observe that it would allow planning. I emphasize that no more money would be involved. The amendment is designed to make such an official Government planning agency eligible where there has occurred a substantial reduction in employment opportunities as a result of the closing of a Federal installation or a decline in the volume of Government orders for the procurement of articles.

Mr. CLARK. Mr. President, will the Senator yield further?

Mr. KEATING. I yield.

Mr. CLARK. The Senator will recall that in a study made by the Subcommittee on Employment and Manpower, which was published earlier this year, we expressed considerable concern as to what would happen in communities in which defense contractors had contracts terminated because the product they were making was obsolete or no longer needed.

I take it that the Senator's amendment would not include a situation of that sort, because that would not be a Federal installation. However, would it not come under (b), a decline in the volume of Government orders?

Mr. KEATING. It would come under (b).

[17599]

Mr. CLARK. Would something like the situation I am about to state be the kind of situation which the Senator has indicated: Suppose that we had no need for additional manned aircraft, which was the subject of some controversy the day before yesterday. Therefore, contracts for a superbomber or a follow-on bomber are canceled, and the installation moves out of the area. Then the provision of the Senator's amendment would authorize a planning grant to help that community rethink its future. Is that what the Senator has in mind?

Mr. KEATING. That is exactly the purpose of the amendment. To be specific with the Senator, and to state an exaggerated case, if it were decided to close the Philadelphia Navy Yard or the Brooklyn Navy Yard or greatly to reduce employment in those areas, if those communities had regional planning agencies to plan what to do, the amendment would permit—not require but permit—the grant for urban planning in that area.

Mr. President, since the amendment would not involve any additional funds, and since the Federal Government has indicated in a general way that it is receptive to the idea of helping communities in which defense installations, for example,

are either moving out or being reduced, I am hopeful that the committee will see its way clear to accept the amendment. I emphasize that the Department of Defense has set up a small unit, which is designed to assist communities in which defense activities in a particular area are reduced.

My colleague [Mr. JAVITS] and I have recently observed the problem in the city of Rome, N.Y. A move was made to move out of that modest-sized community the Rome Air Materiel activities. I have been advocating the formation of regional planning agencies—official governmental planning agencies—in various areas such as Rome, N.Y., so as to enable them to do their own planning.

All that the amendment would do would be to say, in effect, to such communities, "You have zoning problems; you have transportation problems; you have tax rate problems in order to bring in other activities; and therefore we will give you the authority"—and I emphasize the word "authority"—not the obligation, but the authority—"under the urban planning section of the bill to help you do your planning, just as we have the authority now to help a community do its urban planning when an activity is being moved in."

It strikes me that the need may be even more acute where unemployment and distressed conditions are being created by an installation being moved out than where the Federal Government is moving in.

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. KEATING. I am happy to yield to my colleague.

Mr. JAVITS. I, too, as a member of the committee would like to join my colleague in asking the chairman of the committee to take the action requested. It would be permissive. It is the reverse of a situation we have already taken care of in existing law. Only planning would be involved. It would not be a greater subsidization of any urban renewal project or other project. My colleague has had enormous and sad experience, as I have, with just such communities. I join with my colleague from New York, and hope that the chairman will accept the amendment.

Mr. KEATING. I am grateful to my colleague.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. KEATING. I yield.

Mr. DOMINICK. I appreciate the courtesy of the Senator from New York. I wish to support his amendment 100 percent. It seems to me that a part of the problem with which we are dealing all the way through in relation to defense contractors and defense installations is the idea that we have provided money for a national need. In many cases we have created whole new housing developments. New industries have come in, and the communities are dependent upon those. If for one reason or another those industries are cut off, we shall have created another type of national need by virtue of national action, and it seems to me perfectly proper that the proposed type of planning is what we should do. It seems to me perfectly proper that the type of planning proposed should fit into the bill in order to take care of a national need which was originally created, and then re-created by the reverse of the original installation.

Mr. KEATING. I am very grateful to my colleague for his remarks.

Mr. SPARKMAN. Mr. President, will the Senator yield?

Mr. KEATING. I yield.

Mr. SPARKMAN. The Senator is dealing with something for which I have a great deal of sympathy. The Senator may know that the Senate Small Business Committee is now in the course of holding hearings and making some studies relating to the impact on small business of the conversion program that we know must take place some time in the future. It seems to me that the Senator is looking forward to the increased unemployment that must take place in connection with those conversions. As I see it, a community that has a conversion problem certainly needs planning and will need help in making a plan. I am not sure, however, whether this 701 program is

set up to do the kind of planning that needs to be done in the situation to which the Senator refers. We have not had an opportunity to study the question in the committee. Nevertheless, I am willing to take the amendment to conference. I have consulted briefly with the Senator from Texas and I believe he is in accord with that procedure.

Mr. KEATING. I appreciate that very much.

Mr. SPARKMAN. When I say that I am willing to take it to conference, I mean I am willing to take it just as if it had been voted by a yea-and-nay vote into the bill by the Senate.

Mr. KEATING. I am sure that the Senator is sincere in that statement. I appreciate it very much. The Senator is quite correct. I do not like to bring up these questions when they were not considered in the committee. The proposal was drawn as a counterpart to the existing section in section 701 by the legislative counsel. I believe it is in good form, but perhaps it could be improved upon. I am glad to hear the Senator say that he is in accord with the general principle that is involved. Also I know of the fine work of the Senator from Alabama in the Small Business Committee and the concern of the committee in this problem.

I am very grateful to the Senator for accepting the amendment, and I ask for a vote on it.

Mr. SPARKMAN. Mr. President, I am prepared to yield back my time.

Mr. KEATING. I yield back my time.

The PRESIDING OFFICER. All time has been yielded back.

The question is on agreeing to the amendment of the Senator from New York [Mr. KEATING].

The amendment was agreed to.

[p. 17600]

1.3g (4)(b) Aug. 13: Amended and passed House, p. 19341

"*Urban and regional planning grants*

"SEC. 311. (a) Section 701(a) of the Housing Act of 1954 is amended by striking out 'resulting from rapid urbanization' in clause (B) of paragraph (1).

"(b) Section 701(a) of such Act is amended—

"(1) by striking out the period at the end of paragraph (5) and inserting in lieu thereof a semicolon; and

"(2) by adding after paragraph (5) the following new paragraph:

" '(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1); and'

"*Planning grant authorization*

"SEC. 312. Section 701(b) of the Housing Act of 1954 is amended by striking out '$75,000,000' in the last sentence and inserting in lieu thereof '$105,000,000.'

"*Planning grants for Indian reservations*

"SEC. 313. (a) Section 701(a) of the Housing Act of 1954 is amended—

"(1) by striking out 'and' at the end of clause (B) of paragraph (1);

"(2) by inserting ', and (D) Indian reservations' before the semicolon at the end of paragraph (1); and

"(3) by adding after paragraph (6) (as added by section 311(b) of this Act) the following new paragraph:

" '(7) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other agency or instrumentality is empowered to provide planning assistance under clause (D) of paragraph (1).'

"(b) Section 701(d) of such Act is amended—

"(1) by striking out 'and urban regions' in the first sentence and inserting in lieu thereof 'urban regions, and Indian reservations'; and

"(2) by inserting the following after 'instrumentalities' in the second sentence: ', and Indian tribal bodies,'.

"*Eligibility of counties for planning assistance*

"SEC. 314. Section 701(a) of the Housing Act of 1954 is amended by striking out clause (A) of paragraph (1) and inserting in lieu thereof the following: '(A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to

counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Administrator finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section,'.

"*Planning problems resulting from treaties or other international agreements*

"SEC. 315. Section 701(a) (4) of the Housing Act of *1954* is amended *to read as follows:*

" '(4) official governmental planning agencies for areas where (A) urban planning problems have resulted or are expected to result from the implementation of a Federal treaty or other international agreement or understanding, or (B) rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation:'

[p. 19341]

1.3g (4)(c) Aug. 19: Senate agreed to conference report, p. 20376

Mr. SPARKMAN. The conferees thought that it was a very good amendment, and forward looking. We had some discussion about the limited scope of the urban planning assistance program to do physical planning and that this program is not now set up to do economic or industrial planning. However, once this was explained there was no difficulty in getting the House to agree to it.

Mr. President, this is a good bill, remarkably so, in fact, when one considers the difficulties of getting action this late in the session.

Because of the time limitation, the bills passed by each House were relatively modest extender bills. In addition to extending programs already on the books, changes were made to improve and make more workable existing programs.

Despite the many similarities in the two bills, the conferees were faced with the problem of resolving 66 items of differences; most of them were small but there were a few important ones which involved significant changes in the effectiveness of existing housing programs.

The conferees worked well together with open minds to consider the best features of the two bills before us. I have not made a count but both sides seemed to be satisfied that the provisions finally agreed to were about equally divided between the two bills.

* * * * *

Some of the more important items in the Senate bill accepted by the conferees are:

* * * * *

Second, an expansion of the planning grant assistance program to help plan for communities suffering loss of Government contracts or closing of Federal installations;

* * * * *

[p. 20376]

1.3g (4)(d) Aug. 19: House agreed to conference report, p. 20195

[No Relevant Discussion on Pertinent Section]

1.3h APPALACHIAN REGIONAL DEVELOPMENT ACT OF 1965

March 9, 1965, P.L. 89-4, Title II, §213, 79 Stat. 17

AMENDMENTS TO HOUSING ACT OF 1954

SEC. 213. (a) Section 701(a) of the Housing Act of 1954 (40 U.S.C. 461(a)) is amended by striking the word "and" at the end of paragraph (7), by substituting for the period at the end of paragraph (8) the phrase "; and", and by adding a new paragraph (9) to read as follows:

"(9) the Appalachian Regional Commission, established by the

Appalachian Regional Development Act of 1965, for comprehensive planning for the Appalachian region as defined by section 403 of such Act."

(b) Section 701(b) of the Housing Act of 1954 (40 U.S.C. 461(b)), is amended by adding before the period at the end of the first sentence the following: ", to States participating in planning for Appalachian regional programs, for expenses incurred in the course of such planning, or to the Appalachian Regional Commission".

[p. 17]

1.3h (1) SENATE COMMITTEE ON PUBLIC WORKS

S. REP. No. 13, 89th Cong., 1st Sess. (1965)

APPALACHIAN REGIONAL DEVELOPMENT ACT OF 1965

JANUARY 27, 1965.—Ordered to be printed

Mr. RANDOLPH, from the Committee on Public Works, submitted the following

REPORT

together with

INDIVIDUAL VIEWS

[To accompany S. 3]

The Committee on Public Works, to whom was referred the bill (S. 3), to provide public works and economic development programs and the planning and coordination needed to assist in the development of the Appalachian region, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

[p. 1]

Section 213

This section amends section 701 of the Housing Act of 1954 so as to make the Appalachian Regional Commission an eligible agency to receive comprehensive planning grants under that act. This is done to allow the Housing and Home Finance Agency to take advantage of the research capabilities of the Commission. Contracts will be made with the Commission on the same terms as the law now authorizes. All funds for this section will come from HHFA's budget.

[p. 31]

1.3h (2) HOUSE COMMITTEE ON PUBLIC WORKS

H.R. REP. No. 51, 89th Cong., 1st Sess. (1965)

APPALACHIAN REGIONAL DEVELOPMENT ACT OF 1965

FEBRUARY 17, 1965.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. FALLON, from the Committee on Public Works, submitted the following

REPORT

[To accompany S. 3]

The Committee on Public Works, to whom was referred the bill (S. 3) to provide public works and economic development programs and the planning and coordination needed to assist in development of the Appalachian region, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

[p. 1]

Section 213

This section amends section 701 of the Housing Act of 1954 so as to make the Appalachian Regional Commission an eligible agency to receive comprehensive planning grants under that act. This is done to allow the Housing and Home Finance Agency to take advantage of the research capabilities of the Commission. The States are also made eligible to receive Federal grants under that act of up to 75 percent of their cost of planning for these regional programs. Contracts will be made with the Commission on the same terms as the law now authorizes. All funds for this section will come from HHFA's budget.

[p. 27]

1.3h (3) CONGRESSIONAL RECORD, VOL. 111 (1965)

1.3h (3)(a) Feb. 1: Debated and passed Senate, p. 1676

Mr. BREWSTER.

* * * * *

Sixteen million dollars would be authorized to construct sewage treatment works. Such facilities are essential to prevent the continued pollution of the region's streams. The pollution that now occurs almost always takes place above the water intake of most urban areas in the eastern half of our country.

The Housing Act of 1954 is amended to allow for comprehensive planning for the Appalachian region using 701 funds.

* * * * *

[p. 1676]

1.3h (3)(b) March 2: Debated and passed House, p. 3922

Mr. MORGAN.

* * * * *

Likewise, grants for sewage treatment works to Appalachian States under the Federal Water Pollution Control Act would be liberalized.

And the Housing Act of 1954 would be amended to make the Appalachian Regional Commission eligible to receive comprehensive planning grants under this act.

Mr. Chairman, as a representative in the Congress of the United States from the 26th Congressional District of Pennsylvania, a depressed area, I have observed the ravages of economic distress at first hand. It is my firm conviction that this suggested legislation, providing as it does for long-term economic growth, would be of great assistance not only to my own congressional district, but also to the entire Appalachian region and ultimately to the whole United States.

I, therefore, urge the Congress to take immediate affirmative action on this carefully thought out proposal for directing this 10-State region up the road of economic rehabilitation and long-term growth, as contained Senate bill 3.

[p. 3922]

1.3i HOUSING AND URBAN DEVELOPMENT ACT OF 1965

August 10, 1965, P.L. 89-117, Title XI, §1102, 79 Stat. 502

URBAN PLANNING GRANTS

SEC. 1102. (a) The fifth sentence of section 701(b) of the Housing Act of 1954 is amended by striking out $105,000,000" and inserting in lieu thereof $230,000,000".

(b) Section 701(b) of such Act is amended by striking out the period at the end and inserting in lieu thereof the following: ": *Provided*, That not to exceed 5 per centum of any funds so appropriated may be used by the Administrator for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section."

(c)(1) Section 701 of such Act is amended by adding at the end thereof a new subsection as follows:

"(g) In addition to the planning grants authorized by subsection (a), the Administrator is further authorized to make grants to organizations composed of public officials whom he finds to be representative of the political jurisdictions within a metropolitan area or urban region for the purpose of assisting such organizations to undertake studies, collect data, develop regional plans and programs, and engage in such other activities as the Administrator finds necessary or desirable for the solution of the metropolitan or regional problems in such areas or regions. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area or urban region, including, but

not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the

[p. 502]

general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made."

(2) Section 701(b) of such Act is amended—

(A) by inserting "planning" immediately before "grant" the first time it appears in the first sentence, and

(B) by striking out "planning" in the fourth sentence.

(d) Section 701(b) of such Act is amended by inserting after "Area Redevelopment Act" the following: "(or under any Act supplementary thereto)".

[p. 503]

1.3i (1) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 365, 89th Cong., 1st Sess. (1965)

HOUSING AND URBAN DEVELOPMENT ACT OF 1965

MAY 21, 1965.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H. R. 7984]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 7984) to assist in the provision of housing for low- and moderate-income families, to promote orderly urban development, to improve living environment in urban areas, and to extend and amend laws relating to housing, urban renewal, and community facilities, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

[p. 1]

TITLE X—MISCELLANEOUS

Urban planning grants—authorization

The bill would eliminate the existing $105 million ceiling on the authorization for appropriation of funds for urban planning grants under section 701 of the Housing Act of 1954. Additional funds would, of course, be made available only through appropriations. The bill would further provide a cutoff date of October 1, 1969, for the urban planning grant program. Thus far, $86 million of the existing authorization of $105 million has been appropriated. The estimated program level for fiscal year 1966 is $35 million.

Under section 701, the Housing Administrator is authorized to make grants (generally not to exceed two-thirds of the estimated costs) to States and local planning agencies to assist in preparing comprehensive development plans and programs. The program is designed to encourage and facilitate comprehensive planning for urban development on a continuing basis, including planning for open-space land and urban transportation. Surveys and analyses of population, economy, physiography, land use, transportation, and similar factors may be financed, as well as preparation of comprehensive development plans for the areas involved and maintenance of data on a current basis. Since its inception, more than 4,500 different localities have participated in the program.

[p. 48]

TITLE X—MISCELLANEOUS

Section 1001. Authorization for urban planning grants

This section amends section 701 of the Housing Act of 1954 to eliminate the existing $105 million ceiling on the total amount authorized to be appropriated for urban planning grants thereunder, at the same time adding a provision which terminates the program as of October 1, 1969.

[p. 65]

HOUSING ACT OF 1954

* * * * * * *

URBAN PLANNING

SEC. 701(a) * * *

(b) A grant made under this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided,* That such a grant may be in an amount not exceeding three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a)(7), or for planning being carried out for a city, other municipality, county, group of adjacent communities, or Indian reservation in an area designated by the Secretary of

Commerce as a redevelopment area under section 5 of the Area Redevelopment Act. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advances or progress payments on account of any planning grant made under this section. There is hereby authorized to be appropriated [not exceeding $105,000,000] *such amounts as may be necessary* to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended.

* * * * * * *

(g) No grant shall be made under this section after October 1, 1969, except pursuant to a contract or commitment entered into on or before such date.

[p. 160]

1.3i (2) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 378, 89th Cong., 1st Sess. (1965)

HOUSING AND URBAN DEVELOPMENT ACT OF 1965

JUNE 28 (legislative day, JUNE 25), 1965.—Ordered to be printed

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Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

together with

INDIVIDUAL AND MINORITY VIEWS

[To accompany S. 2213]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 2213) to assist in the provision of housing for low- and moderate-income families, to promote orderly urban development, to improve living environment in urban areas, and to extend and amend laws relating to housing, urban renewal, urban mass transportation, and community facilities, and recommend that the bill do pass.

[p. 1]

TITLE X—MISCELLANEOUS

URBAN PLANNING GRANTS—AUTHORIZATION

Section 1001 of the bill would raise the existing $105 million ceiling on the authorization for appropriation of funds for urban planning grants under section 701 of the Housing Act of 1954 to $230 million.

The committee has also added a provision to section 701 of the Housing Act of 1954 which will permit up to 5 percent of any funds appropriated under the authorization to be used by the Housing Administrator for studies and for demonstration projects for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of the urban planning grant program.

Under the section 701 urban planning grant program, the Housing Administrator is authorized to make grants (generally not to exceed two-thirds of the estimated costs) to States and local planning agencies to assist in preparing comprehensive development plans and programs. The program is designed to encourage and facilitate comprehensive planning for urban development on a continuing basis, including planning for open space land and urban transportation. Surveys and analyses of population, economy, physiography, land use, transportation, and similar factors may be financed, as well as preparation of comprehensive development plans for the areas involved and maintenance of data on a current basis. Since its inception, more than 4,500 different localities have participated in the program.

[p. 63]

This section would also provide assistance to the solution of metropolitan or regional problems.

One of the most urgent needs in developing and carrying out plans and programs for coordinated development of a metropolitan or other urban area is administrative machinery for cooperation among the jurisdictions within the area. An organization of policy and decision makers representing the various local governments within the area can serve as an effective forum for studying and resolving issues raised by metropolitan problems, for developing action programs for carrying out metropolitan comprehensive plans, and for determining regional policies affecting governmental and functional activities.

The need for such organizations is receiving increasing recognition by the political leaders within metropolitan regions, and within the past few years several areas have formed associations or conferences of elected officials—such as the metropolitan areas including Atlanta; Washington, D.C.; San Francisco, Calif.; Detroit, Mich.; Salem, Oreg.; Philadelphia, Pa.; and Seattle, Wash.

Because of the basic importance of this general kind of organization to achieving metropolitan cooperation and implementing compre-

hensive overall plans, including plans for many federally assisted facilities and programs, it is proposed that Federal financial assistance be made available to support their operations. Assistance is particularly needed to create an incentive for their establishment and to assist them during their early, formative years when adequate financing is a crucial problem.

The bill therefore authorizes Federal grants to be made by the Housing Administrator to metropolitan or regional organizations of local governmental representatives to assist them in working out mutually acceptable solutions to common problems affecting multijurisdictional urban areas.

This assistance would complement, and in some cases anticipate comprehensive metropolitan planning now eligible for assistance under the section 701 urban planning grant program.

The grants could cover up to two-thirds of the cost of a broad range of activities including, but not limited to, studies of legal, governmental, and administrative problems affecting the cooperating jurisdictions, the development of uniform coordinated regulatory measures, the development of interjurisdictional agreements and arrangements for jointly providing public services, and the development of programs, on a unified metropolitan basis where necessary, for providing and operating facilities proposed in comprehensive metropolitan plans. However, the main objective would be to foster metropolitan cooperation on a broad front, rather than being limited to comprehensive planning authorized by other parts of section 701 of the Housing Act of 1954. Hence, financial assistance would not be restricted to those urban areas that had developed a comprehensive plan or were carrying out a comprehensive metropolitan planning program.

Administrative procedures should be established: (1) to assure coordination of comprehensive planning activities carried out by a separate metropolitan or regional planning agency with those activities of the same metropolitan or urban area's organization of governmental officials supported by grants made under this new provision;

[p. 64]

and (2) to avoid duplication of planning activities financed under the section 701 urban planning grant program.

The administrative criteria governing eligibility for a grant under these provisions that should be directed at permitting a diversity of organizational structure and composition. However, it is the intent of this provision that the grants would be made only to organizations consisting of representatives of the general governmental authority of the participating jurisdictions, rather than to organizations of representatives of limited functional activities. Although the grants would be made to the eligible organization, it might, as is customary with

the existing section 701 urban planning program, carry out the proposed work either with its own staff or by contracting with private consultants or operating or functional agencies such as park departments, sewer and water commissions, or organizations of administrative officials.

[p. 65]

TITLE X—MISCELLANEOUS

Urban planning grants

Section 1001(a).—Amends section 701(b) of the Housing Act of 1954 to increase the limit on appropriations for urban planning grants from $105 million to $230 million.

[p. 87]

(*b*) Amends section 701(b) of the Housing Act of 1954 to permit up to 5 percent of funds appropriated for urban planning grants to be used for studies, research, and demonstration projects for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of the urban planning grant program.

(*c*) Amends section 701 of the Housing Act of 1954 to authorize the Housing Administrator to make two-thirds grants to organizations composed of elected officials who represent political jurisdictions within a metropolitan area to assist them to undertake studies, collect data, develop regional plans and programs, and engage in other activities desirable for the solution of the metropolitan or regional problems.

[p. 88]

1.3i (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 679, 89th Cong., 1st Sess. (1965)

HOUSING AND URBAN DEVELOPMENT ACT OF 1965

JULY 23, 1965.—Ordered to be printed

Mr. PATMAN, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 7984]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 7984) to assist

in the provision of housing for low- and moderate-income families, to promote orderly urban development, to improve living environment in urban areas, and to extend and amend laws relating to housing, urban renewal, and community facilities, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following: *That this Act may be cited as the "Housing and Urban Development Act of 1965".*

[p. 1]

URBAN PLANNING GRANTS

SEC. 1102. (a) The fifth sentence of section 701(b) of the Housing Act of 1954 is amended by striking out "$105,000,000" and inserting in lieu thereof "$230,000,000".

(b) Section 701(b) of such Act is amended by striking out the period at the end and inserting in lieu thereof the following: ": Provided, That not to exceed 5 per centum of any funds so appropriated may be used by the Administrator for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section."

(c)(1) Section 701 of such Act is amended by adding at the end thereof a new subsection as follows:

"(g) In addition to the planning grants authorized by subsection (a), the Administrator is further authorized to make grants to organizations composed of public officials whom he finds to be representative of the political jurisdictions within a metropolitan area or urban region for the purpose of assisting such organizations to undertake studies, collect data, develop regional plans and programs, and engage in such other activities as the Administrator finds necessary or desirable for the solution of the metropolitan or regional problems in such areas or regions. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area or urban region, including, but not limited to, land use,

[p. 54]

transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made."

(2) Section 701(b) of such Act is amended—

(A) by inserting "planning" immediately before "grant" the first time it appears in the first sentence, and

(B) by striking out "planning" in the fourth sentence.

(d) Section 701(b) of such Act is amended by inserting after "Area Redevelopment Act" the following: "(or under any Act supplementary thereto)".

[p. 55]

STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 7984) to assist in the provision of housing for low- and moderate-income families, to promote orderly urban development, to improve living environment in urban areas, and to extend and amend laws relating to housing, urban renewal, and community facilities, submit the following statement in explanation of the effect of the action agreed upon by the conferees and recommended in the accompanying conference report:

The Senate struck out all of the House bill after the enacting clause and inserted a substitute amendment. The committee of conference has agreed to a substitute for both the House bill and the Senate amendment. Except for technical, clarifying, and conforming changes, the following statement explains the differences between the House bill and the substitute agreed to in conference.

[p. 63]

TITLE XI—MISCELLANEOUS

Urban planning grants

The House bill contained a provision authorizing appropriations as needed for the urban planning grant program and terminating the program on October 1, 1969. The Senate amendment simply raised the existing authorization from $105,000,000 to $230,000,000. In addition, the Senate amendment contained a provision permitting up to 5 percent of the funds appropriated to be used in developing and improving planning techniques, and also authorized grants to organizations of elected officials in metropolitan areas to assist in studies, collection of data, and development of plans and programs. The conference substitute contains the Senate provision with a modification.

[p. 75]

The term "elected official" as contained in the original Senate text was changed to read "public official". While the amendment is directed

at making eligible organizations of local elected officials, the term "public official" was required to make it clear that the Metropolitan Councils of Governments for Washington and certain other areas are eligible for these grants even though their members may not be elected. For example, the Washington Council has representatives from the Board of Commissioners of the Government of the District of Columbia. These Commissioners are not elected but are appointed by the President.

[p. 76]

1.3i (4) CONGRESSIONAL RECORD, VOL. 111 (1965)

1.3i (4)(a) June 28, 30: Debated, amended and passed House, pp. 14862, 14877, 15242

Mr. PEPPER.

* * * * *

The last title of the bill, title X, includes a number of miscellaneous provisions, the most important of which are 4-year extensions of the existing urban planning grant program and the public works planning advance program.

* * * * *

[p. 14862]

Mr. BARRETT.

* * * * *

TITLE X—MISCELLANEOUS

Title X, the last title of the bill, would eliminate existing dollar ceilings for the appropriation of funds for the urban planning assistance program, the public works planning advance program and the Federal–State training program. A cutoff date of October 1, 1969, would be provided for each program. Funds would be made available only through appropriations.

* * * * *

[p. 14877]

TITLE X—MISCELLANEOUS

Authorization for urban planning grants

SEC. 1001. (a) Section 701(b) of the Housing Act of 1954 is amended by striking out "not exceeding $105,000,000" in the fifth sentence and inserting in lieu thereof "such amounts as may be necessary".

(b) Section 701 of such Act is further amended by adding at the end thereof the following new subsection:

"(g) No grant shall be made under this section after October 1, 1969, except pursuant to a contract or commitment entered into on or before such date."

[p. 15242]

1.3i (4)(b) July 15: Debated, amended and passed Senate, p. 16959

[No Relevant Discussion on Pertinent Section]

1.3i (4)(c) July 26: Senate agrees to conference report, p. 18247

[No Relevant Discussion on Pertinent Section]

1.3i (4)(d) July 27: House agrees to conference report, p. 18394

[No Relevant Discussion on Pertinent Section]

1.3j DEMONSTRATION CITIES AND METROPOLITAN DEVELOPMENT ACT OF 1966

November 3, 1966, P.L. 89–754, Title IV, §406, Title VI, §604, Title X, §1008, 80 Stat. 1273, 1279, 1286

URBAN PLANNING GRANTS

SEC. 406. Section 701(a) (4) of the Housing Act of 1954 [13] is amended by inserting before the semicolon at the end thereof the following: ", or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community approved under section 1004 of the National Housing Act".

[p. 1273]

URBAN PLANNING GRANTS FOR SURVEYS OF HISTORIC STRUCTURES

SEC. 604. Section 701 of the Housing Act of 1954 [24] is amended by adding at the end thereof the following new subsection:

"(h) In addition to the other grants authorized by this section, the Secretary is authorized to make grants to assist any city, other municipality, or county in making a survey of the structures and sites in such locality which are determined by its appropriate authorities to be of historic or architectural value. Any such survey shall be designed to identify the historic structures and sites in the locality, determine the cost of their rehabilitation or restoration, and provide such other information as may be necessary or appropriate to serve as a foundation for a balanced and effective program of historic preservation in such locality. The aspects of any such survey which relate to the identification of historic and architectural values shall be conducted in accordance with criteria found by the Secretary to be comparable to those used in establishing the National Register maintained by the Secretary of the Interior under other provisions of law; and the results of each such survey shall be made available to the Secretary of the Interior. A grant under this subsection shall not exceed two-thirds of the cost of the survey for which it is made, and shall be made to the appropriate agency or entity specified in paragraphs (1) through (9) of subsection (a) or, if there is no such agency or entity which is qualified and willing to receive the grant and provide for its utilization in accordance with this subsection, directly to the city, other municipality, or county involved."

[p. 1279]

PLANNING GRANTS FOR RESEARCH ON STATE STATUTES AFFECTING LOCAL GOVERNMENTS

SEC. 1008. Section 701(b) of the Housing Act of 1954 [52] is amended by inserting before the period at the end thereof the following: ", and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations".

[p. 1286]

1.3j (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 1439, 89th Cong., 2d Sess. (1966)

DEMONSTRATION CITIES AND METROPOLITAN DEVELOPMENT ACT OF 1966

AUGUST 9, 1966.—Ordered to be printed

Mr. MUSKIE, from the Committee on Banking and Currency, submitted the following

REPORT

together with

MINORITY VIEWS

[To accompany S. 3708]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 3708) to assist comprehensive city demonstration programs for rebuilding slum and blighted areas and for providing the public facilities and services necessary to improve the general welfare of the people who live in those areas, to assist and encourage planned metropolitan development, and for other purposes, and recommend that the bill do pass.

[p. 1]

1.3j (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 1931, 89th Cong., 2d Sess. (1966)

DEMONSTRATION CITIES AND METROPOLITAN DEVELOPMENT ACT OF 1966

SEPTEMBER 1, 1966.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 3708]

The Committee on Banking and Currency, to whom was referred the bill (S. 3708) to assist comprehensive city demonstration programs for rebuilding slum and blighted areas and for providing the public facilities and services necessary to improve the general welfare of the people who live in those areas, to assist and encourage planned metropolitan development, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill, as amended, do pass.

The amendment is as follows: Strike out all after the enacting clause and insert the matter which appears in italic type in the bill herewith reported to the House.

[p. 1]

Urban planning grants.—The bill would make available urban planning grants, under the present program of urban planning assistance to official governmental planning agencies for areas where new communities are to be developed with mortgage insurance assistance. Such Federal grants to local planning agencies are presently available for metropolitan areas, depressed areas, and federally impacted areas.

[p. 28]

URBAN PLANNING GRANTS FOR SURVEYS OF HISTORIC STRUCTURES

Section 604 of the bill amends the comprehensive urban planning program (sec. 701 of the Housing Act of 1954) to authorize the Secretary to make two-thirds grants to assist a city, other municipality, or county

in making a survey of properties of historic or architectural value. Such surveys would identify properties and private information necessary to the development of a balanced and effective local historic preservation program. Grants would, preferably, be made to local agencies undertaking such surveys as part of a local comprehensive planning program. However, where no agency is qualified and willing to undertake adequate surveys, the grant could be made directly to the local public body itself, without population limitation.

Cities with less than 50,000 population are eligible for similar assistance under existing law, but only as part of a comprehensive planning program. The committee believes that the pressing need for historic and architectural preservation justifies these proposed exceptions to the general section 701 limitations on assistance.

Section 701 prohibits assistance for detailed restoration plans and cost estimates of specific projects. Such activities would instead be included as part of projects assisted under the urban renewal and historic preservation grant sections of this title of the bill.

[p. 33]

Section 406. Urban planning grants

This section amends section 701(a) of the Housing Act of 1954 to make urban planning grants thereunder available to official governmental planning agencies for areas where new communities are to be developed with mortgage insurance assistance under the new program established by title IV of the bill. (Federal grants to local planning agencies for such planning are now available for metropolitan areas, depressed areas, and federally impacted areas.)

[p. 57]

Section 604. Urban planning grants for surveys of historic structures

This section amends section 701 of the Housing Act of 1954 by adding a new subsection (h), authorizing the Secretary of Housing and Urban Development to make grants to assist cities, other municipalities, and counties in making surveys (in accordance with criteria comparable to those used by the Secretary of the Interior for the National Register) of structures and sites determined to be of historic or architectural value in order to identify such structures and sites, determine the cost of their rehabilitation and restoration, and provide related information. Such a grant, which could be in an amount up to two-thirds of the cost of the survey involved, would be made to the appropriate planning agency as presently provided for or (if no such agency is qualified and willing to receive and use the grant for such survey) directly to the city or municipality.

[p. 60]

Section 907. Planning grants for research on State statutes affecting local governments

This section amends section 701(b) of the Housing Act of 1954 to permit section 701 planning grant funds to be used, under the demonstration program (for which 5 percent of such funds are set aside), for grants to assist in studies and research on needed revisions to those State statutes which create, govern, or control local governmental operations.

[p. 63]

1.3j (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 2301, 89th Cong., 2d Sess. (1966)

DEMONSTRATION CITIES AND METROPOLITAN DEVELOPMENT ACT OF 1966

OCTOBER 18, 1966.—Ordered to be printed

Mr. PATMAN, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 3708]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 3708) to assist comprehensive city demonstration programs for rebuilding slum and blighted areas and for providing the public facilities and services necessary to improve the general welfare of the people who live in those areas, to assist and encourage planned metropolitan development, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following: *That this Act may be cited as the "Demonstration Cities and Metropolitan Development Act of 1966".*

[p. 1]

STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 3708) to assist comprehensive city demonstration programs for rebuilding slum and blighted areas and for providing the public facilities and services necessary to improve the general welfare of the people who live in those areas, to assist and encourage planned metropolitan development, and for other purposes, submit the following statement in explanation of the effect of the action agreed upon by the conferees and recommended in the accompanying conference report:

The House struck out all of the Senate bill after the enacting clause and inserted a substitute amendment. The committee of conference has agreed to a substitute for both the House amendment and the Senate bill. Except for technical, clarifying, and conforming changes, the following statement explains the differences between the House amendment and the substitute agreed to in conference.

[p. 44]

TITLE IV—LAND DEVELOPMENT AND NEW COMMUNITIES

The House amendment contained a provision not included in the Senate bill increasing the maximum mortgage from $10 million to $25 million which FHA can insure for land development and authorizing this assistance for entire new communities. The conference report contains the House provision with three amendments which would terminate this authority on October 1, 1972; would require approval of any new community by the local governing body and by the Governor of the State (except in "home rule" cases); and would limit the total amount of insurance which can be outstanding under this provision at any one time to $250 million.

[p. 45]

TITLE VI—PRESERVATION OF HISTORIC STRUCTURES

Loans for acquisition and rehabilitation of historic structures

The House amendment contained a provision authorizing the use of below-market interest rate loans under section 312 of the Housing Act of 1964 for historic preservation purposes. There was no such provision in the Senate bill and none is contained in the conference report.

[p. 46]

Studies of State laws affecting cities

The House amendment contained a provision authorizing the limited use of urban planning grant funds for studies of State laws affecting municipalities. This is retained in the conference report but the conferees wish to make clear that it is not intended that these funds be used in any way for lobbying State legislatures.

[p. 48]

1.3j (4) CONGRESSIONAL RECORD, VOL. 112 (1966)

1.3j (4)(a) Aug. 18, 19: Debated, amended and passed Senate, pp. 19858, 19866, 20026, 20030, 20061

[No Relevant Discussion on Pertinent Section]

1.3j (4)(b) Oct. 13, 14: Debated, amended and passed House, pp. 26598, 26604, 26937, 26938, 26959–26962, 26969, 26987

Mr. PEPPER.

* * * * *

Title IV contains a new program to extend FHA mortgage insurance for land development so as to include the financing of entire new large-scale communities. This title would increase from $10 to $25 million the limit now provided on land development mortgages and would provide that mortgages for financing these new communities would be eligible for FNMA special assistance.

[p. 26598]

Mr. PATMAN.

* * * * *

Title IV would extend the FHA financing for subdivisions which we authorized in last year's act to make entire new communities eligible. Many housing and planning experts are convinced of the inevitability of more and more new communities which will relieve some of the land and population pressures which are besetting our larger urban centers. In my judgment we should encourage, through Federal assistance, the growth of new rationally planned communities and towns.

* * * * *

[p. 26604]

Mr. RYAN.

* * * * *

Title IV opens up an exciting possibility for a new kind of Federal program, that of FHA mortgage insurance for planned, new communities. The need for such a program is adequately demonstrated by the fact that, between 1960 and 1965, the suburbs have grown in population by 17.7 percent, while the central cities have grown by 3.2 percent during this period, and this trend is likely to continue. The mushrooming suburbs should not be allowed to become metropolitan oases which hide from the central cities behind a lily-white curtain. Rather, this title should encourage the construction of new communities which would be a contributing part of a planned metropolitan network. We must be wary, however, that these new communities do not become the middle-class ghettos, the closed suburban

communities which many privately financed new towns have become. These new communities must provide housing for all income groups,

* * * * *

Title VI of this bill provides grants to localities for the recognition, relocation, and restoration of historic and architecturally valuable structures in urban renewal areas and loans to tenants or owners of these types of structures for their acquisition and rehabilitation. These are commendable provisions. Only recently was the grand Metropolitan Opera House in New York City saved from the wrecker's ball. Regretfully, many other valuable buildings are not so fortunate and are destroyed. It is my hope that this measure can help prevent such losses.

* * * * *

[p. 26937]

Finally, title IX, besides including many clarifying amendments, also provides additional FHA assistance for cooperative housing, including FHA-insured advances during the construction of such housing, and for low-income housing under the section 221(d)(3) program. Also included are provisions: First, for Federal grants for the development of open-space areas whether or not these areas were acquired under a Federal grant program; second, for the Secretary of Defense to acquire the homes of servicemen and other employees of military bases slated to close or to reimburse them for losses, resulting from such closings, suffered in the sale of their homes, and third, for extending to 6 months after the passage of this bill the time allowed for submission of the report on the Secretary of the Department of Housing and Urban Development's study of relief for homeowners in the vicinity of airports.

* * * * *

[p. 26938]

Urban planning grants

SEC. 406. Section 701(a) (4) of the Housing Act of 1954 is amended by inserting before the semicolon at the end thereof the following: ", or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community approved under section 1004 of the National Housing Act".

[p. 26959]

Urban planning grants for surveys of historic structures

SEC. 604. Section 701 of the Housing Act of 1954 is amended by adding at the end thereof the following new subsection:

"(h) In addition to the other grants authorized by this section, the Secretary is authorized to make grants to assist any city, other municipality, or county in making a survey of the structures and sites in such locality which are determined by its appropriate authorities to be of historic or architectural value. Any such survey shall

[p. 26960]

be designed to locate the historic structures and sites in the locality, determine the cost of their rehabilitation or restoration, and provide such other information as may be necessary or appropriate to serve as a foundation for a balanced and effective program of historic preservation in such locality. The aspects of any such survey which relate to the identification of historic and architectural values shall be conducted in accordance with criteria found by the Secretary to be comparable to those used in establishing the National Register maintained by the Secretary of the Interior under other provisions of law; and the results of each such survey shall be made available to the Secretary of the Interior. A grant under this subsection shall not exceed two-thirds of the cost of the survey for which it is made, and shall be made to the appropriate agency or entity specified in paragraphs (1) through (9) of subsection (a) or, if there is no such agency or entity which is qualified and willing to receive the grant and provide for its utilization in accordance with this subsection, directly to the city, other municipality, or county involved."

[p. 26961]

Planning grants for research on State statutes affecting local governments

SEC. 907. Section 701(b) of the Housing Act of 1954 is amended by inserting before the period at the end thereof the following: ", and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations".

[p. 26962]

Mr. MULTER.

* * * * *

Section 604 of the bill, which I also propose to strike would add special provisions to the section 701 comprehensive urban planning program. This program

already assists in areawide historic surveys. The effect of the new provisions would be to authorize more detailed studies of individual historic structures. Also, it would allow a locality to undertake such historic surveys and planning regardless of whether it was undertaking a general program of comprehensive planning.

[p. 26969]

Mr. PATMAN. Mr. Chairman, I am glad the motion to strike title IV of the bill was rejected by this body.

This land development and new communities title would amend the new title X added to the National Housing Act last year. Title X has as its principal aim to stimulate the production of an increased supply of well-planned and improved residential building sites. It stems from the need, overwhelmingly supported by testimony before the committee, to provide new ways of avoiding the disordered sprawl which has marked recent metropolitan development.

[p. 26987]

1.3j (4)(c) Oct. 18: Senate concurs in conference report, p. 29357

[No Relevant Discussion on Pertinent Section]

1.3j (4)(d) Oct. 20: House concurs in conference report, p. 28127

Mr. PATMAN.

* * * * *

I am pleased to report to the House that our conferees were successful in defending title IV of the House bill which authorized FHA mortgage insurance for development of new communities. However, in view of the strong feelings of the Senate conferees, we did accept a limitation of $250 million on the outstanding amount of such insured loans, together with a termination date for this program of 1972. We also accepted an amendment requiring that any such new community must be approved by the local governing body and, in most cases, by the Governor of the State, as well.

Title VI of the conference report is designed to encourage the preservation of historic structures. The House version included the authorization of funds of several types, including the use of urban renewal grants, urban planning grants, open-space grants, and certain special appropriations. The House version would also have authorized the use of low-interest rehabilitation loans, but in view of the strong objection by the Senate conferees, and by the Department, the loan provision was eliminated.

Mr. Speaker, one of the most serious controversies in this legislation has involved the subject of local grant-in-aid credit under the urban renewal program. As the bill passed the House, there were no provisions for specific projects, but section 701 liberalized existing law so that communities under certain conditions could get credit for one-fourth of the cost of certain local projects. These eligible projects were defined as those for cultural, exhibition, civic, or municipal purposes. The other body had earlier approved a very similar provision, but without the word "municipal." The inclusion of "municipal" greatly disturbed the Department because it was so broad and vague. Accordingly, in conference, we struck out the word "municipal" and in its place substituted "city hall or public safety building."

* * * * *

[p. 28127]

1.3k HOUSING AND URBAN DEVELOPMENT ACTS

Obsolete References, May 25, 1967, P.L. 90-19, §10(a), 81 Stat. 22

SEC. 10. (a) Sections 312, 314, 701, and 702 of the Housing Act of 1954 [52] are amended by striking out "Administrator" each place it appears and inserting in lieu thereof "Secretary".

[p. 22]

1.3k (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 56, 90th Cong., 1st Sess. (1967)

NECESSARY TECHNICAL CORRECTIONS TO REFLECT THE CREATION AND ORGANIZATION OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

FEBRUARY 16, 1967.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, *submitted the following*

REPORT

[To accompany S.J. Res. 42]

The Committee on Banking and Currency, having considered the same, reports favorably a committee resolution (S.J. Res. 42) to amend the National Housing Act, and other laws relating to housing and urban development, to correct certain obsolete references.

PURPOSE

This joint resolution is for the purpose of amending several existing housing and other laws in order to conform them to the establishment of the new Department of Housing and Urban Development.

[p. 1]

1.3k (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 214, 90th Cong., 1st Sess. (1967)

NOMENCLATURE CHANGES REFLECTING THE CREATION OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

APRIL 26, 1967.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S.J. Res. 42]

The Committee on Banking and Currency, to whom was referred the joint resolution (S.J. Res. 42) to amend the National Housing Act, and other laws relating to housing and urban development, to correct certain obsolete references, having considered the same, report favorably thereon without amendment and recommend that the joint resolution do pass.

WHAT THE JOINT RESOLUTION WOULD DO

The joint resolution amends Federal laws relating to housing and urban development to reflect the creation of the new Department of Housing and Urban Development and the transfer, to the Secretary of the Department, of the functions and powers previously vested in the Housing and Home Finance Agency and its constituent units and officials. It does not, in conforming the nomenclature used in those laws to the new administrative structure, make any substantive changes in the programs administered by the Department or authorize any new functions or programs. The names of organizations and officials in the various statutes relating to housing and urban development are simply changed so that they will conform to the names established by the Department of Housing and Urban Development Act. A provision is also included (sec. 28) to make it clear that nothing in the joint resolution affects or impairs (or subjects to any new restriction or limitation) any function or authority of the Federal Home Loan Bank Board or its chairman or the Federal Savings and Loan Insurance Corporation.

TITLE VII—URBAN PLANNING AND RESERVE OF PLANNED PUBLIC WORKS

URBAN PLANNING

SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs, the [Administrator] *Secretary* is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the [Administrator] *Secretary* as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the [Administrator] *Secretary* finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section, (B) any group of adjacent com-

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munities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties, referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

(2) official State, metropolitan, and regional planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning) and acceptable to the [Administrator] *Secretary*, empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

(3) Cities, other municipalities, and counties which (A) are situated in areas designated by the Secretary of Commerce under section 5 of the Area Redevelopment Act as redevelopment areas or (B) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" has determined to be a major disaster;

(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation, or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community approved under section 1004 of the National Housing Act;

(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto;

(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

(8) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other agency or instrumentality is empowered to provide planning assistance under clause (D) of paragraph (1) above; and

(9) the Appalachian Regional Commission, established by the Appalachian Regional Development Act of 1965, for comprehensive planning for the Appalachian region as defined by section 403 of such Act.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban de-

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velopment problems. The [Administrator] *Secretary* shall encourage cooperation in preparing and carrying out plans among all interested

municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other urban areas and reducing transportation needs. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other Federally-aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Commerce under section 307 of title 23, United States Code.

(b) A planning grant made under this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided,* That such a grant may be in an amount not exceeding three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a) (7), or for planning being carried out for a city, other municipality, county, group of adjacent communities, or Indian reservation in an area designated by the Secretary of Commerce as a redevelopment area under section 5 of the Area Redevelopment Act, (or under any Act supplementary thereto) to States participating in planning for Appalachian regional programs, for expenses incurred in the course of such planning, or to the Appalachian Regional Commission. All grants made under this section shall be subject to terms and conditions prescribed by the [Administrator] *Secretary.* No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The [Administrator] *Secretary* is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any grant made under this section. There is hereby authorized to be appropriated not exceeding $230,000,000, to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended: *Provided,* That not to exceed 5 per centum of any funds so appropriated may be used by the [Administrator] *Secretary* for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

(c) The [Administrator] *Secretary* is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning

on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities,

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counties, metropolitan areas, urban regions, and Indian reservations and the establishment and development of the organizational units needed therefor. The [Administrator] *Secretary* is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities, and to Indian tribal bodies, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems. In extending financial assistance under this section, the [Administrator] *Secretary* may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, including transportation facilities, together with long-range fiscal plans for such development; (2) programming of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) intergovernmental coordination of all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

(e) In the exercise of his function of encouraging comprehensive planning by the States, the [Administrator] *Secretary* shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities.

(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the physical growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.

(g) In addition to the planning grants authorized by subsection (a), the [Administrator] *Secretary* is further authorized to make grants to

organizations composed of public officials whom he finds to be representative of the political jurisdictions within a metropolitan area or urban region for the purpose of assisting such organizations to undertake studies, collect data, develop regional plans and programs, and engage in such other activities as the [Administrator] *Secretary* finds necessary or desirable for the solution of the metropolitan or regional problems in such areas or regions. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area or urban region, including, but not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made.

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1.3k (3) CONGRESSIONAL RECORD, VOL. 113 (1967)

1.3k (3)(a) Feb. 20: Passed Senate, p. 4010

[No Relevant Discussion on Pertinent Section]

1.3k (3)(b) May 15: Passed House, p. 12621

[No Relevant Discussion on Pertinent Section]

1.3*l* APPALACHIAN REGIONAL DEVELOPMENT ACT

Amendments of 1967, October 11, 1967, P.L. 90–103, Title I, §115, 81 Stat. 262

SEC. 115. (a) Section 701(a) of the Housing Act of 1954 (40 U.S.C. 461(a)) [16] is amended by striking out "and" at the end of clause (8) and all of clause (9) and inserting in lieu thereof the following:

"(9) the Appalachian Regional Commission, for comprehensive planning for the Appalachian region as defined by section 403 of the Appalachian Regional Development Act of 1965; and

"(10) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs."

(b) The proviso of the first sentence of section 701(b) of the Housing Act of 1954 [17] is amended by inserting after "States" the words "and local development districts".

[p. 262]

1.3*l* (1) SENATE COMMITTEE ON PUBLIC WORKS

S. REP. No. 159, 90th Cong., 1st Sess. (1967)

REVISING AND EXTENDING THE APPALACHIAN REGIONAL DEVELOPMENT ACT OF 1965

AND

AMENDING TITLE V OF THE PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965

APRIL 6, 1967.—Ordered to be printed

From the Committee on Public Works,
submitted the following

REPORT

together with

SUPPLEMENTAL VIEWS

[To accompany S. 602]

Amendments to Housing Act of 1964

Section 213 of the Appalachian Regional Development Act of 1965 amended section 701 of the Housing Act of 1964 to authorize grants, at 75 percent of the costs, to the Commission for comprehensive planning for the region, and to the States for planning Appalachian programs.

[p. 16]

Under the authority of this section, planning grants have been approved for the Commission and several of the Appalachian States. North

Carolina, Tennessee, New York, Ohio, and Alabama are receiving funds to assist in the preparation of State investment plans, including special studies of Appalachian problems.

In addition, the Commission has received a section 701 grant to support a long-range study and planning effort directed at the central Appalachian area of Kentucky, Tennessee, Virginia, and West Virginia. This program will be administered by the Commission staff in conjunction with the representatives of the States involved.

[p. 17]

1.3*l* (2) HOUSE COMMITTEE ON PUBLIC WORKS

H.R. REP. No. 548, 90th Cong., 1st Sess. (1967)

APPALACHIAN REGIONAL DEVELOPMENT ACT AMENDMENTS OF 1967, AND AMENDMENTS TO THE PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965

AUGUST 8, 1967.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. FALLON, from the Committee on Public Works, submitted the following

REPORT

[To accompany S. 602]

The Committee on Public Works, to whom was referred the bill (S. 602) to revise and extend the Appalachian Regional Development Act of 1965, and to amend title V of the Public Works and Economic Development Act of 1965, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

The amendments are as follows:

Strike out all after the enacting clause and insert a complete new text which is printed in the reported bill in italic type.

Amend the title so as to read:

An Act to revise and extend the Appalachian Regional Develop-

ment Act of 1965, and to amend the Public Works and Economic Development Act of 1965.

[p. 1]

AMENDMENTS TO HOUSING ACT OF 1964

Section 213 of the Appalachian Regional Development Act of 1965 amended section 701 of the Housing Act of 1964 to authorize grants, at 75 percent of the costs, to the Commission for comprehensive planning for the region, and to the States for planning Appalachian programs. S. 602 would further amend the Housing Act of 1964 to make local development districts, certified to the Commission by the Governors of the States in which they are located, eligible for 75 percent grants for comprehensive planning in their areas and for planning Appalachian region programs.

The proposed amendment is designed to make it possible to concentrate many of the planning functions, now discharged by a number of units and levels of government, in multicounty local development districts as they are organized.

[p. 20]

Section 115—Amendments to National Housing Act of 1954

This section amends section 701 of the Housing Act of 1954 to make local development districts, certified to the Commission by the Governors of the States in which they are located, eligible for 75-percent grants for comprehensive planning in their areas, and for planning Appalachian region programs.

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SECTION 701 (a) AND (b) OF THE HOUSING ACT OF 1954

URBAN PLANNING

SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs, the Administrator is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning

agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by the section, for the provision of planning assistance to (A) cities and and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Administrator finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties, referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

(2) official State, metropolitan, and regional planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning) and acceptable to the Administrator, empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

[p. 67]

(3) cities, other municipalities, and counties which (A) are situated in areas designated by the Secretary of Commerce under section 5 of the Area Redevelopment Act as redevelopment areas or (B) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" has determined to be a major disaster;

(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation, or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community approved under section 1004 of the National Housing Act;

(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto;

(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

(8) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other agency or instrumentality is empowered to provide planning assistance under clause (D) of paragraph (1) above; [and]

[(9) the Appalachian Regional Commission, established by the Appalachian Regional Development Act of 1965, for comprehensive planning for the Appalachian region as defined by section 403 of such Act.]

(9) the Appalachian Regional Commission, for comprehensive planning for the Appalachian region as defined by section 403 of the Appalachian Regional Development Act of 1965; and

(10) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems. The Administrator shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for

areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other urban areas and reducing transportation needs. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other federally aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Commerce under section 307 of title 23, United States Code.

(b) A planning grant made under this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be in an amount not exceeding three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a)(7), or for planning being carried out for a city, other municipality, county, group of adjacent communities, or Indian reservation in an area designated by the Secretary of Commerce as a redevelopment area under section 5 of the Area Redevelopment Act (or under any Act supplementary thereto), to States *and local development districts* participating in planning for Appalachian regional programs, for expenses incurred in the course of such planning, or to the Appalachian Regional Commission. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any grant made under this section. There is hereby authorized to be appropriated not exceeding $230,000,000, to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended: *Provided*, That not to exceed 5 per centum of any funds so appropriated may be used by the Administrator for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

1.3*l* (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 706, 90th Cong., 1st Sess. (1967)

APPALACHIAN REGIONAL DEVELOPMENT ACT AMENDMENTS OF 1967

SEPTEMBER 26, 1967.—Ordered to be printed

Mr. FALLON, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 602]

The committee of conference on the disagreeing votes of the two Houses on the amendments of the House to the bill (S. 602) to revise and extend the Appalachian Regional Development Act of 1965, and to amend title V of the Public Works and Economic Development Act of 1965, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House to the text of the bill and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following:

* * * * * * *

[p. 1]

SEC. 115. (a) Section 701(a) of the Housing Act of 1954 (40 U.S.C. 461(a)) is amended by striking out "and" at the end of clause (8) and all of clause (9) and inserting in lieu thereof the following:

"(9) the Appalachian Regional Commission, for comprehensive planning for the Appalachian region as defined by section 403 of the Appalachian Regional Development Act of 1965; and

"(10) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs."

(b) *The proviso of the first sentence of section 701(b) of the Housing Act of 1954 is amended by inserting after "States" the words "and local development districts".*

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1.3*l* (4) CONGRESSIONAL RECORD, VOL. 113 (1967)

1.3*l* (4)(a) April 26: Debated, amended and passed Senate, p. 10961

[No Relevant Discussion on Pertinent Section]

1.3*l* (4)(b) Sept. 13, 14: Debated, amended and passed House, pp. 25286, 25577, 25620

[No Relevant Discussion on Pertinent Section]

1.3*l* (4)(c) Sept. 28: House agrees to conference report, p. 27177

[No Relevant Discussion on Pertinent Section]

1.3*l* (4)(d) Sept. 29: Senate agrees to conference report, p. 27326

[No Relevant Discussion on Pertinent Section]

1.3m HOUSING AND URBAN DEVELOPMENT ACT OF 1968
August 1, 1968, P.L. 90-448, §601, 82 Stat. 526

TITLE VI—URBAN PLANNING AND FACILITIES

COMPREHENSIVE PLANNING

SEC. 601. Section 701 of the Housing Act of 1954 is amended to read as follows:

"COMPREHENSIVE PLANNING

"SEC. 701. (a) In order to assist State and local governments in solving planning problems, including those resulting from the increasing concentration of population in metropolitan and other urban areas

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and the out-migration from and lack of coordinated development of resources and services in rural areas; to facilitate comprehensive planning for urban and rural development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage

such governments to establish and improve planning staffs and techniques on an areawide basis, and to engage private consultants where their professional services are deemed appropriate by the assisted governments, the Secretary is authorized to make planning grants to—

"(1) State planning agencies for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided,* That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Secretary finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after September 2, 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection, and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

"(2) State, metropolitan, and regional planning agencies for metropolitan or regional planning, and to cities, within metropolitan areas, for planning which is part of comprehensive metropolitan planning and which shall supplement and be coordinated with State, metropolitan, and regional planning;

"(3) (A) economic development districts designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, and

"(B) cities, other municipalities, and counties which (i) are situated in redevelopment areas or economic development districts designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, or (ii) have suffered substantial damage as a result of catastrophe which the President, pursuant to section 2(a) of the Act entitled 'An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes', approved September 30, 1950, as amended (42 U.S.C. 1855a), has determined to be a major disaster;

"(4) official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation,

or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community approved under section 1004 of the National Housing Act or title IV of the Housing and Urban Development Act of 1968;

"(5) States for State and interstate comprehensive planning and for research and coordination activity related thereto, including technical and other assistance for the establishment and operation of intrastate and interstate planning agencies;

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"(6) State planning agencies for assistance to district planning, or planning for areas within districts, carried on by or for district planning agencies;

"(7) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

"(8) official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

"(9) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation;

"(10) the various regional commissions established by the Appalachian Regional Development Act of 1965 or under the Public Works and Economic Development Act of 1965 for comprehensive planning for the regions established under such Acts (or State agencies or instrumentalities participating in such planning); and

"(11) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs.

Planning assisted under this section shall, to the maximum extent feasible, cover entire areas having common or related development problems. The Secretary shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated develop-

ment of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other areas and reducing transportation needs. Planning carried out with assistance under this section shall also include a housing element as part of the preparation of comprehensive land use plans, and this consideration of the housing needs and land use requirements for housing in each comprehensive plan shall take into account all available evidence of the assumptions and statistical bases upon which the projection of zoning, community facilities, and population growth is based, so that the housing needs of both the region and the local communities studied in the planning will be adequately covered in terms of existing and prospective in-migrant population growth. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other federally aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Transportation under section 307 of title 23, United States Code.

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"(b) A planning grant made under subsection (a) shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be made for up to 75 per centum of such estimated cost when made for planning primarily for (1) redevelopment areas, local development districts, or economic development districts, or portions thereof, described in paragraph (3) (A) and (B)(i) and paragraph (11) of subsection (a), (2) areas described in subsection (a)(8), and (3) the various regions, as described in subsection (a)(10). All grants made under this section shall be subject to terms and conditions prescribed by the Secretary. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Secretary is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any grant made under this section. There are authorized to be appropriated for the purposes of this section not to exceed $265,000,000 prior to July 1, 1969, and not to exceed $390,000,000 prior to July 1, 1970. Of the amount available prior to July 1, 1969, $20,000,000 may be used only for district planning grants under subsection (a)(6), which amount shall be increased by $10,000,000 on July 1, 1969. Any amounts appropriated under this section shall remain available until expended: *Provided*. That, of any funds appropriated under this section,

not to exceed an aggregate of $10,000,000 plus 4 per centum of the funds so appropriated may be used by the Secretary for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

"(c) The Secretary is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified regional, district, or metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

"(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties, metropolitan areas, districts, regions, and Indian reservations and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Secretary may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. The Secretary is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities, and to Indian tribal bodies, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems.

"(e) In the exercise of his responsibilities under this section, the Secretary shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities and other comprehensively planned activities. He shall, particularly, consult with the Secretary of Agriculture prior to his approval of any district planning grants under subsections (a)(6) and (g), and with the Secretary of Commerce prior to his approval of any planning grants which include any part of an economic development district as defined and designated under the Public Works and Eco-

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nomic Development Act of 1965. The Secretary of Agriculture and the Secretary of Commerce, as appropriate, may provide technical assistance, with or without reimbursement, in connection with the establishment of districts by the Secretary of Housing and Urban Development and the carrying out of planning by such districts.

"(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative effort and mutual assistance in the

comprehensive planning for the growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.

"(g) In addition to the planning grants authorized by subsection (a), the Secretary is further authorized to make grants to organizations composed of public officials representative of the political jurisdictions within the metropolitan area, region, or district for the purpose of assisting such organizations to undertake studies, collect data, develop metropolitan, regional, and district plans and programs, and engage in such other activities, including implementation of such plans, as the Secretary finds necessary or desirable for the solution of the metropolitan, regional, or district problems in such areas, regions, or districts. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area, region, or district including, but not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made.

"(h) In addition to the other grants authorized by this section, the Secretary is authorized to make grants to assist any city, other municipality, or county in making a survey of the structures and sites in such locality which are determined by its appropriate authorities to be of historic or architectural value. Any such survey shall be designed to identify the historic structures and sites in the locality, determine the cost of their rehabilitation or restoration, and provide such other information as may be necessary or appropriate to serve as a foundation for a balanced and effective program of historic preservation in such locality. The aspects of any such survey which relate to the identification of historic and architectural values shall be conducted in accordance with criteria found by the Secretary to be comparable to those used in establishing the national register maintained by the Secretary of the Interior under other provisions of law; and the results of each such survey shall be made available to the Secretary of the Interior. A grant under this subsection shall not exceed two-thirds of the cost of the survey for which it is made, and shall be made to the appropriate agency or entity specified in paragraphs (1) through (11) of subsection (a) or, if there is no such agency or entity which is qualified and willing to receive the grant and provide for its utilization in accordance with this subsection, directly to the city, other municipality, or county involved.

"(i) As used in this section—

"(1) The term 'metropolitan area' means a standard metropolitan

statistical area, as established by the Bureau of the Budget, subject, however, to such modifications or extensions as the Secretary deems to be appropriate for the purposes of this section.

"(2) The term 'region' includes (A) all or part of the area of jurisdiction of one or more units of general local government, and (B) one or more metropolitan areas.

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"(3) The term 'district' includes all or part of the area of jurisdiction of (A) one or more counties, and (B) one or more other units of general local government, but does not include any portion of a metropolitan area.

"(4) The term 'comprehensive planning' includes the following:

"(A) preparation, as a guide for governmental policies and action, of general plans with respect to (i) the pattern and intensity of land use, (ii) the provision of public facilities (including transportation facilities) and other government services, and (iii) the effective development and utilization of human and natural resources;

"(B) long-range physical and fiscal plans for such action;

"(C) programing of capital improvements and other major expenditures, based on a determination of relative urgency, together with definite financing plans for such expenditures in the earlier years of the program;

"(D) coordination of all related plans and activities of the State and local governments and agencies concerned; and

"(E) preparation of regulatory and administrative measures in support of the foregoing.

Comprehensive planning for the purpose of districts shall not include planning for or assistance to establishments in relocating from one area to another or assist subcontractors whose purpose is to divest, or whose economic success is dependent upon divesting, other contractors or subcontractors of contracts theretofore customarily performed by them: *Provided*, That this limitation shall not be construed to prohibit assistance for the expansion of an existing business entity through the establishment of a new branch, affiliate, or subsidiary of such entity, if the Secretary finds that the establishment of such branch, affiliate, or subsidiary will not result in an increase in unemployment in the area of original location or in any other area where such entity conducts business operations, unless the Secretary has reason to believe that such branch, affiliate, or subsidiary is being established with the intention of closing down the operations of the existing business entity in the area of its original location or in any other area where it conducts such operations.

"(5) The term 'State planning agencies' includes official State planning

agencies and (in States where no such planning agency exists) agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Secretary.

"(6) The terms 'metropolitan planning agencies', 'regional planning agencies', and 'district planning agencies' mean official metropolitan, regional, and district planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning), and acceptable to the Secretary, empowered under State or local law or interstate compact to perform metropolitan, regional, or district planning, respectively: *Provided*, That such agencies and instrumentalities shall, to the greatest practicable extent, be composed of or responsible to the elected officials of the unit or units of general local government for whose jurisdictions they are empowered to engage in planning."

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1.3m (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 1123, 90th Cong., 2d Sess. (1968)

HOUSING AND URBAN DEVELOPMENT ACT OF 1968

MAY 15 (legislative day, MAY 14), 1968.—Ordered to be printed

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Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

together with

INDIVIDUAL AND ADDITIONAL VIEWS

[To accompany S. 3497]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 3497) to assist in the provision of housing for low and moderate income families, and to extend and amend laws relating to housing and urban development, and recommend that the bill do pass.

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Title VII—Urban Mass Transportation

GRANT AUTHORIZATIONS

Section 701 of the bill would increase the authority for appropriations by $190 million for fiscal year 1970 for the urban mass transportation program. The amount of funds which may be used for research, development and demonstrations under section 6 of the Urban Mass Transportation Act of 1964 would be increased by $6 million on July 1, 1968.

The present fund authorization expires June 30, 1969. It is anticipated that practically the entire authorization will have been appropriated by that time. The need for continued support for mass transportation systems is clear. A recent survey of urban mass transportation capital program plans in 11 major metropolitan areas with about 43 percent of the population of all SMSA's revealed an aggregate 10-year projection of approximately $10.9 billion in capital financing needs. In nearly every metropolitan area surveyed, transit planning officials pointed to the need for increased Federal aid.

The first capital grants under the program were made in February 1965. Since that time, the rate of new applications has risen from approximately $100 million in 1966 and $200 million in 1967 to nearly $300 million. New large-scale transit development and improvement programs are being announced more frequently than in the past, and requests for Federal assistance may reach $600 million in fiscal year 1970. Funding through fiscal year 1970 is therefore essential.

Section 6 of the Act provides for a program of research, development, and demonstration projects in all phases of urban mass transportation which will assist in the reduction of urban transportation needs, the improvement of mass transportation service, or the contribution of such service toward meeting total urban transportation needs at minimum cost. A $25 million program for research, development, test and evaluation of new systems of urban transportation is

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proposed, based on the preliminary findings of the new system study program authorized by the Congress in 1966, and will lay the groundwork for implementation of the program to be recommended in the report on that study.

To allow for the $25 million research, development, and demonstration program level in 1969, the present sublimitation of $50 million for the section 6 programs would be increased to $56 million on July 1, 1968. This increase would provide $23.5 million in unused authorization under section 6. The balance of this program will be funded under the $3 million authorized annually by section 11 of the act for grants to public and private nonprofit institutions of higher learning for theoretical and prac-

tical research, and for training persons for research and employment, in urban transportation.

On or after July 1, 1969, the Secretary would be authorized to use for research, development, and demonstration activities such sums as he deems appropriate out of the grant funds available under the general grant authorization contained in section 4(b) of the 1964 act.

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TITLE VII—URBAN MASS TRANSPORTATION

GRANT AUTHORIZATIONS

Section 701.—Amends section 4(b) of the Urban Mass Transportation Act of 1964 to authorize an appropriation of $190 million for fiscal year 1970. In addition, it would increase the amount of funds which may be used from the current authorization for research development and demonstration programs by $6 million for fiscal year 1969 and would authorize the Secretary after fiscal year 1969 to use for research and demonstration activities such funds as he deems appropriate from those authorized in section 4(b) of the 1964 act.

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1.3m (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 1585, 90th Cong., 2d Sess. (1968)

HOUSING AND URBAN DEVELOPMENT ACT OF 1968

JUNE 25, 1968.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany H.R. 17989]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 17989) to assist in the provision of housing for low and moderate income families, and to extend and amend laws relating to

housing and urban development, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

[p. 1]

Title V—Urban Planning and Facilities

COMPREHENSIVE PLANNING

Section 501 of the bill would rewrite section 701 of the Housing Act of 1954, which authorizes assistance to States, localities, and other areas for comprehensive development planning. In addition to technical and perfecting amendments, the changes include:

Special Planning Assistance for District Planning Outside Metropolitan Areas

A new category of assistance would be authorized for "district" planning in rural and other areas outside of metropolitan areas. The 701 program up to the present time has been oriented toward the planning and development problems of urban areas. Although much of the assisted planning has covered small town and semirural areas, and, for example, problems related to agricultural land uses have been considered where appropriate, grant assistance has not been available to assist planning for the coordinated development of resources and services in areas consisting of small towns and agricultural and other nonurban uses.

The new district planning would help preserve and better utilize the great human and economic investment in these areas. All too often, these areas have stagnated when a little foresight and planning would permit establishment of viable and expanding communities. To reflect this change, the section 701 statement of purpose would be broadened to include reference to the planning problems resulting from outmigration from, and lack of coordinated development of, resources and services in rural areas. In addition, the present regional planning authority in section 701 would be revised to authorize separate planning programs for "regions," defined as including at least one metropolitan area, plus all or part of at least one other general-purpose unit of government; and for "districts," defined as including all or part of at least one county and of at least one other general-purpose unit of government, but not including any part of a metropolitan area.

Up to two-thirds grants (or three-fourths grants in specified areas having special economic handicaps) would continue to be authorized both directly to regional planning bodies and to State planning bodies for assistance to regional planning.

With respect to planning for the newly defined districts, up to two-thirds (or three-fourths for areas with economic handicaps) grants would be authorized to be made, through State planning agencies, for assistance to district planning agencies. The district agency would have to be authorized, by or under State or local statutes or interstate compact, to carry on comprehensive planning for the district.

The assisted planning could be for the entire district or for towns or other appropriate areas within the district. Such planning could be carried out by the district planning agency itself or by the State planning agency acting for the district agency. Grants to States would be specifically authorized for the purpose of providing technical and other assistance for both interstate and intrastate planning agencies (including district and regional agencies).

The Secretary of Agriculture would have special statutory responsibilities with reference to the new district planning program. He

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would be authorized to provide technical assistance, with or without reimbursement, in connection with the establishment of the districts and the carrying out of such planning. The Secretary of Housing and Urban Development would, in turn, be required to consult with the Secretary of Agriculture before approval of any district planning grants made either through the State planning agency or directly to a district council of governments (authorized by an amendment to subsec. (g)).

Conforming amendments would remove references to comprehensive planning as being for urban areas and needs.

Demonstration Projects for Planning Metropolitan or Regional Systems of Public Facilities and Services

Section 701(b) would be amended to make available, from section 701 appropriations, an additional $10 million for studies, research, and demonstration projects. This subsection now authorizes the Secretary to expend up to 5 percent of the section 701 appropriations for projects for the development and improvement of comprehensive planning techniques and methods and the advancement of the purposes of the section.

It is intended that this $10 million be used for demonstration projects in planning entire systems of public facilities and services. While the portion of the metropolitan area or the region which must be served by the entire system planned may vary with the type of public facility or service involved (i.e., water, sewer, solid waste disposal, library, etc.), the particular system being planned should serve all or so substantial

a portion of the metropolitan area or the region as is necessary to obtain the intended cost and quality benefits of broad systematic planning.

The use of such large-scale facilities and services (and the resulting increased availability of special equipment and techniques) makes possible very important savings both in their installation and operation. It has, therefore, been one of the objectives of comprehensive planning, as assisted under section 701, to encourage metropolitan and other areas to provide needed facilities and services in this fashion, either through an agency having areawide responsibilities or through effective areawide cooperative arrangements. Generally, however, the 701 program has not assisted in the detailed studies and investigations (including, for example, systems analysis, cost-benefit evaluations, and other preliminary planning and engineering studies) needed fully to define the feasibility, scope, character, cost, and advantages of such systems. The proposed demonstration projects would provide valuable experience and further development in these new planning techniques and methods.

The assistance would be provided to agencies now eligible to receive planning grants under section 701 and would be limited to the same two-thirds (or three-quarters) grant ratio usually available under the section 701 program.

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Cities in Metropolitan Areas

Grants would be authorized to cities in metropolitan areas, without population limit, to assist them in carrying out planning which is part of comprehensive metropolitan planning being undertaken for the metropolitan area. This authority will enable cities with populations in excess of 50,000, which are not now generally eligible for planning grants under section 701, to receive this assistance to carry out the essential job of planning the most effective use of their available, but often limited, resources. Although planning assisted with this authority must be related to and coordinated with planning being carried out for the metropolitan area, it need not be limited solely to planning of a metropolitan orientation. It may cover the full range of comprehensive planning that the city needs to carry out to properly plan its future and coordinate its development. The assisted planning by the city shall supplement and be coordinated with any State or regional planning being undertaken for the area.

New Authorizations

Subsection (b) of section 701 would be amended to provide for increased authorizations for carrying out the program. The present authorization of $230 million is to be increased to $265 million through

fiscal year 1969, including $20 million which may be used only for district planning grants. For fiscal year 1970 this authorization would be increased by an additional $125 million. Ten million dollars of the amount available in fiscal year 1970 may be used only for district planning.

With this program, Congress has recognized the value of comprehensive planning as a basic prerequisite for the provision of a suitable living environment for every American family, that this planning is a responsibility of State and local governments, and that these governments require financial assistance to establish and support adequate planning organizations. Many of the resulting benefits—in terms of the savings and efficiencies from planned development—accrue to the Federal Government which annually invests millions of dollars, through its assistance programs, in urban facilities and activities.

The growth and interest in the urban planning assistance program reflects the expansion and intensity of usage of comprehensive planning at the State, metropolitan, and small-city level. From its inception in 1954, the 701 program has had a major role in establishing comprehensive planning as an accepted process for guiding and coordinating urban development. The number of different small communities receiving grants under the program has risen from 242 at the end of 1956 to 6,200 as of June 30, 1967. Metropolitan areas and urban regions receiving grants over the same period of time have increased from 23 to 247. Assistance for statewide planning was authorized by an amendment in 1959; by June 30, 1967, some 44 States had received grants for this purpose. Since authority was provided in 1965, grants to 27 councils of government have been made.

Because of this rapid growth in the 701 program, the committee believes it would be desirable for the Secretary of HUD to submit

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annually, to the Banking and Currency Committees of the House of Representatives and the Senate, a report on the use of the grant funds under the program during the preceding year.

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TITLE V—URBAN PLANNING AND FACILITIES

Section 501. Comprehensive planning

This section extensively revises section 701 of the Housing Act of 1954—the urban planning assistance program. In addition to the numerous changes in form and arrangement which do not have substantive effect, the amended section 701 includes new provisions permitting grants for assistance to districts in rural and other nonmetropolitan areas, grants directly to Indian tribal planning councils, and grants to

regional and district councils of government; includes in the stated purposes of the planning to be assisted the encouragement of the use of private consultants, and requires that such planning include a housing element as part of the preparation of comprehensive land use plans; authorizes grants to cities within metropolitan areas as part of comprehensive metropolitan planning; increases the 1969 authorization for planning assistance by $35 million ($20 million for district planning) and authorizes an additional $125 million ($10 million for district planning) commencing with the fiscal year 1970; permits up to $10 million, in addition to the present 5 percent, to be used for research activities; and provides that district planning may not be aimed at assisting businesses to relocate from one area to another.

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[URBAN PLANNING

[SEC. 701. (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs, the Secretary is authorized to make planning grants to—

[(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Secretary as capable of carrying out the planning functions contemplated by the section, for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Secretary finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial

census and having common or related urban planning problems, (C) cities, other municipalities, and counties, referred to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

[(2) official State, metropolitan, and regional planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning) and acceptable to the Secretary, empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

[(3) cities, other municipalities, and counties which (A) are situated in areas designated by the Secretary of Commerce under section 5 of the Area Redevelopment Act as redevelopment areas or (B) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes" has determined to be a major disaster;

[(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal

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installation, or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community approved under section 1004 of the National Housing Act;

[(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto;

[(6) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

[(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

[(8) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other agency or instru-

mentality is empowered to provide planning assistance under clause (D) of paragraph (1) above;

[(9) the Appalachian Regional Commission, for comprehensive planning for the Appalachian region as defined by section 403 of the Appalachian Regional Development Act of 1965; and

[(10) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965 for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas, in the Appalachian region, and for planning for Appalachian regional programs.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems. The Secretary shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other urban areas, and reducing transportation needs. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other Federally-aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Commerce under section 307 of title 23, United States Code.

[(b) A planning grant made under this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be in an amount not exceeding

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three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a)(7), or for planning being carried out for a city, other municipality, county, group of adjacent communities, or Indian reservation in an area designated by the Secretary of Commerce as a redevelopment area under section 5 of the Area Redevelopment Act (or under any Act supplementary thereto), to States and local development districts participating in planning for Appalachian regional programs, for expenses incurred in the course of such planning, or to the Appalachian Regional Commission. All grants made under this section shall be subject to terms and conditions pre-

scribed by the Secretary. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Secretary is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payment on account of any grant made under this section. There is hereby authorized to be appropriated not exceeding $230,000,000, to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended: *Provided*, That not to exceed 5 per centum of any funds so appropriated may be used by the Secretary for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

[(c) The Secretary is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

[(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties, metropolitan areas, urban regions, and Indian reservations and the establishment and development of the organizational units needed therefor. The Secretary is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities, and to Indian tribal bodies, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems. In extending financial assistance under this section, the Secretary may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, including transportation facilities, together with long-range fiscal plans for such development; (2) programming of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) intergovernmental coordination of

all related planned activities among the State and local governmental agencies concerned; and (5) preparation of regulatory and administrative measures in support of the foregoing.

[(e) In the exercise of his function of encouraging comprehensive planning by the States, the Secretary shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities.

[(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the physical growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.

[(g) In addition to the planning grants authorized by subsection (a), the Secretary is further authorized to make grants to organizations composed of public officials whom he finds to be representative of the political jurisdictions within a metropolitan area or urban region for the purpose of assisting such organizations to undertake studies, collect data, develop regional plans and programs, and engage in such other activities as the Secretary finds necessary or desirable for the solution of the metropolitan or regional problems in such areas or regions. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area or urban region, including, but not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made.

[(h) In addition to the other grants authorized by this section, the Secretary is authorized to make grants to assist any city, other municipality, or county in making a survey of the structures and sites in such locality which are determined by its appropriate authorities to be of historic or architectural value. Any such survey shall be designed to identify the historic structures and sites in the locality, determine the cost of their rehabilitation or restoration, and provide such other information as may be necessary or appropriate to serve as a foundation for a balanced and effective program of historic preservation in such locality. The aspects of any such survey which relate to the identification of historic and architectural values shall be conducted in accordance with criteria found by the Secretary to be comparable to those used in establishing the National Register maintained by the Secretary of the Interior under other provisions of law; and the re-

sults of each such survey shall be made available to the Secretary of the Interior. A grant under this subsection shall not exceed two-thirds of the cost of the survey for which it is made, and shall be made to the appropriate agency or entity specified in paragraphs (1) through (9) of subsection (a) or, if there is no such agency or entity which is qualified and willing to receive the grant and provide for its utilization in accordance with this subsection, directly to the city, other municipality, or county involved.]

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COMPREHENSIVE PLANNING

SEC. 701. (a) In order to assist State and local governments in solving planning problems, including those resulting from the increasing concentration of population in metropolitan and other urban areas and the outmigration from and lack of coordinated development of resources and services in rural areas; to facilitate comprehensive planning for urban and rural development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs and techniques on an areawide basis, and to engage private consultants where their professional services are deemed appropriate by the assisted governments, the Secretary is authorized to make planning grants to—

(1) State planning agencies for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: Provided, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Secretary finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after September 2, 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection, and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

(2) State, metropolitan, and regional planning agencies for metropolitan or regional planning, and to cities within metropolitan areas for planning which is part of comprehensive metropolitan planning

and which shall supplement and be coordinated with State, metropolitan, and regional planning;

(3) cities, other municipalities, and counties which (A) are situated in redevelopment areas or economic development districts designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, or (B) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of the Act entitled "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes", approved September 30, 1950, as amended (42 U.S.C. 1855a), has determined to be a major disaster;

(4) official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation, or for areas where rapid urbanization is expected to result or had developed or to be developed as a new community approved under section 1004 of the National Housing Act;

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(5) States for State and interstate comprehensive planning and for research and coordination activity related thereto, including technical and other assistance for the establishment and operation of intrastate and interstate planning agencies;

(6) State planning agencies for assistance to district planning, or planning for areas within districts, carried on by or for district planning agencies;

(7) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

(8) official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

(9) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation;

(10) the Appalachian Regional Commission, established by the Appalachian Regional Development Act of 1965, for comprehensive planning for the Appalachian region as defined by section 403 of

such Act (or State agencies or instrumentalities participating in such planning); and

(11) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs.

Planning assisted under this section shall, to the maximum extent feasible, cover entire areas having common or related development problems. The Secretary shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other areas and reducing transportation needs. Planning carried out with assistance under this section shall also include a housing element as part of the preparation of comprehensive land use plans, and this consideration of the housing needs and land use requirements for housing in each comprehensive plan shall take into account all available evidence of the assumptions and statistical basis upon which the projection of zoning, community facilities, and population growth is based, so that the housing needs of both the region and the local communities studied in the planning will be adequately covered in terms of existing and prospective in-migrant population growth. Funds available under this section shall be in addition

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to and may be used jointly with funds available for planning surveys and investigations under other federally aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Transportation under section 307 of title 23, United States Code.

(b) A planning grant made under subsection (a) shall not exceed two-thirds of the estimated cost of the work for which the grant is made: Provided, That such a grant may be made for up to 74 per centum of such estimated cost when made for planning primarily for (1) redevelopment areas, local development districts, or economic development districts, or portions thereof, described in paragraphs (3)(A) and (11) of subsection (a), (2) areas described in subsection (a)(8), and (3) the Appalachian region, as described in subsection (a)(10). All grants made under this section shall be subject

to terms and conditions prescribed by the Secretary. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Secretary is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any grant made under this section. There are authorized to be appropriated for the purposes of this section not to exceed $265,000,000 prior to July 1, 1969, and not to exceed $390,000,000 prior to July 1, 1970. Of the amount available prior to July 1, 1969, $20,000,000 may be used only for district planning grants under subsection (a)(6), which amount shall be increased by $10,000,000 on July 1, 1969. Any amounts appropriated under this section shall remain available until expended: Provided, That of any funds appropriated under this section, not to exceed an aggregate of $10,000,000 plus 5 per centum of the funds so appropriated may be used by the Secretary for studies, research, and demonstration projects undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

(c) The Secretary is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified regional, district, or metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties, metropolitan areas, districts, regions, and Indian reservations and the establishment and development of the organizational units needed therefor. In extending financial assistance under this section, the Secretary may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. The Secretary is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities, and to Indian tribal bodies, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems.

(e) In the exercise of his responsibilities under this section, the Secretary shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States

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and municipalities for various categories of public facilities and other comprehensively planned activities. He shall, particularly, consult with the Secretary of Agriculture prior to his approval of any district planning

grants under subsections (a)(6) and (g). The Secretary of Agriculture may provide technical assistance, with or without reimbursement, in connection with the establishment of such districts and the carrying out of such planning.

(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.

(g) In addition to the planning grants authorized by subsection (a), the Secretary is further authorized to make grants to organizations composed of public officials representative of the political jurisdictions within a metropolitan area, region, or district for the purpose of assisting such organizations to undertake studies, collect data, develop metropolitan, regional, and district plans and programs, and engage in such other activities as the Secretary finds necessary or desirable for the solution of the metropolitan, regional, or district problems in such areas, regions, or districts. To the maximum extent feasible, all grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area, region, or district including, but not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made.

(h) In addition to the other grants authorized by this section, the Secretary is authorized to make grants to assist any city, other municipality, or county in making a survey of the structures and sites in such locality which are determined by its appropriate authorities to be of historic or architectural value. Any such survey shall be designed to identify the historic structures and sites in the locality, determine the cost of their rehabilitation or restoration, and provide such other information as may be necessary to appropriate to serve as a foundation for a balance and effective program of historic preservation in such locality. The aspects of any such survey which relate to the identification of historic and architectural values shall be conducted in accordance with criteria found by the Secretary to be comparable or those used in establishing the national register maintained by the Secretary of the Interior under other provisions of law; and the results of each such survey shall be made available to the Secretary of the Interior. A grant under this subsection shall not exceed two-thirds of the cost of the survey for which it is made, and shall be made to the appropriate agency or entity specified in paragraphs (1) through (11) of subsection (a) or, if there is no such agency or entity which is qualified and willing to receive the grant and provide for

its utilization in accordance with this subsection, directly to the city, other municipality, or county involved.

(i) As used in this section—

(1) The term "metropolitan area" means a standard metropolitan statistical area, as established by the Bureau of the Budget, subject,

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however, to such modifications or extensions as the Secretary deems to be appropriate for the purposes of this section.

(2) The term "region" includes (A) all or part of the area of jurisdiction of one or more units of general local government, and (B) one or more metropolitan areas.

(3) The term "district" includes all or part of the area of jurisdiction of (A) one or more counties, and (B) one or more other units of general local government, but does not include any portion of a metropolitan area.

(4) The term "comprehensive planning" includes the following:

(A) preparation, as a guide for governmental policies and action, of general plans with respect to (i) the pattern and intensity of land use, (ii) the provision of public facilities (including transportation facilities) and other government services, and (iii) the effective development and utilization of human and natural resources;

(B) long-range physical and fiscal plans for such action;

(C) programing of capital improvements and other major expenditures, based on a determination of relative urgency, together with definitive financing plans for such expenditures in the earlier years of the program;

(D) coordination of all related plans and activities of the State and local governments and agencies concerned; and

(E) preparation of regulatory and administrative measures in support of the foregoing.

Comprehensive planning for the purpose of districts shall not include planning for or assistance to establishments in relocating from one area to another or assist subcontractors whose purpose is to divest, or whose economic success is dependent upon divesting, other contractors or subcontractors of contracts theretofore customarily performed by them: Provided, That this limitation shall not be construed to prohibit assistance for the expansion of an existing business entity through the establishment of a new branch, affiliate, or subsidiary of such entity, if the Secretary finds that the establishment of such branch, affiliate, or subsidiary will not result in an increase in unemployment in the area of original location or in any other area where such entity conducts business operations, unless the Secretary has reason to believe that such branch, affiliate, or subsidiary is being established with the intention of closing down the operations of the existing business entity

in the area of its original location or in any other area where it conducts such operations.

(5) The term "State planning agencies" includes official State planning agencies and (in States where no such planning agency exists) agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Secretary.

(6) The terms "metropolitan planning agencies", "regional planning agencies", and "district planning agencies" mean official metropolitan, regional, and district planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning), and acceptable to the Secretary, empowered under State or local law or interstate compact to perform metropolitan, regional, or district planning, respectively: Provided, That such agencies and instrumentalities shall, to the greatest practicable extent, be composed of or responsible to the elected officials of the unit or units of general local government for whose jurisdictions they are empowered to engage in planning.

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1.3m (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 1785, 90th Cong., 2d Sess. (1968)

HOUSING AND URBAN DEVELOPMENT ACT OF 1968

JULY 23, 1968.—Ordered to be printed

Mr. PATMAN, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 3497]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 3497) to assist in the provision of housing for low and moderate income families, and to extend and amend laws relating to housing and urban development,

having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following:

That this Act may be cited as the "Housing and Urban Development Act of 1968".

[p. 1]

AUTHORIZATION TO MAKE FEASIBILITY STUDIES IN THE PUBLIC WORKS PLANNING ADVANCES PROGRAM

SEC. 607. Section 702(a) of the Housing Act of 1954 is amended by inserting after "to aid in financing the cost of" the following: "feasibility studies,".

TITLE VII—URBAN MASS TRANSPORTATION

GRANT AUTHORIZATIONS

SEC. 701. (a) Section 4(b) of the Urban Mass Transportation Act of 1964 is amended (1) by striking out the word "and" where it first appears in the first sentence, and (2) by inserting before the period at the end of the first sentence "; and $190,000,000 for fiscal year 1970".

(b) Section 6(c) of such Act is amended (1) by striking out $50,000,000" and inserting in lieu thereof "$56,000,000", and (2) by inserting at the end thereof the following: "On or after July 1, 1969, the Secretary may make available to finance projects under this section such additional sums out of the grant authorization provided in section 4(b) as he deems appropriate."

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1.3m (4) CONGRESSIONAL RECORD, VOL. 114 (1968)

1.3m (4)(a) May 24, 28: Debated, amended and passed Senate, pp. 14952

TITLE VII—URBAN MASS TRANSPORTATION

Grant authorizations

Section 701.—Amends section 4(b) of the Urban Mass Transportation Act of 1964 to authorize an appropriation of $190 million for fiscal year 1970. In addition, it would increase the amount of funds which may be used from the current authorization for research development and demonstration programs by $6 million for fiscal year 1969 and would authorize the Secretary after fiscal year 1969 to use for research and demonstration activities such funds as he deems appropriate from those authorized in section 4(b) of the 1964 act.

[p. 14952]

1.3m (4)(b) July 10: Amended and passed House, p. 20578

TITLE VII—SECONDARY MORTGAGE MARKET

PURPOSES

SEC. 701. The purposes of this title include the partition of the Federal National Mortgage Association as heretofore existing into two separate and distinct corporations, each of which shall have continuity and corporate succession as a separated portion of the previously existing corporation. One of such corporations, to be known as Federal National Mortgage Association, will be a Government-sponsored private corporation, will retain the assets and liabilities of the previously existing corporation accounted for under section 304 of the Federal National Mortgage Association Charter Act, and will continue to operate the secondary market operations authorized by such section 304. The other, to be known as Government National Mortgage Association, will remain in the Government, will retain the assets and liabilities of the previously existing corporation accounted for under sections 303 and 306 of such Act, and will continue to operate the special assistance functions and management and liquidating functions authorized by such sections 305 and 306.

[p. 20578]

1.3m (4)(c) July 25: Senate agrees to conference report, p. 23285

Mr. TEAGUE.

* * * * *

Under the 701 urban planning program, both the Senate and House bills contained a provision which permitted the use of this program for the development of rural districts. The primary purpose of this is to encourage the development of small towns and rural areas to provide better living and working conditions, the effect of which will be to take a great deal of pressure off the cities by reducing the constant migration from rural areas to the cities. The differences between the two bills involved the eligibility of certain areas already being given Government support. The conferees in general agreed with the House provision.

On the rural housing program, the principal difference between the two bills involved a self-help provision in the House bill not contained in the Senate bill. Such a provision would authorize financial assistance to enable families to build their own communities and homes with technical assistance provided by the Department of Agriculture. The Senate receded to the House on this provision.

One important provision contained in the House bill but not in the Senate bill authorized a new program of FHA insurance for the construction of nonprofit hospitals. The conference committee agreed to accept the House provision.

Under the urban insurance program, the principal difference between the House and Senate versions involved the establishment of a national insurance development corporation to administer the program which was contained in the Senate bill. The House bill did not include such a provision, but provided that the program would be administered within the Department of Housing and Urban Development. The conferees agreed that the program would be administered within HUD and provided that a Federal Insurance Administrator would be appointed to administer the urban insurance and the flood insurance programs.

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[p. 23285]

1.3m (4)(d) July 26: House agrees to conference report, p. 23683

[No Relevant Discussion on Pertinent Section]

1.3n HOUSING AND URBAN DEVELOPMENT ACT OF 1969

December 24, 1969, P.L. 91-152, Title III, §302, 83 Stat. 391

AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

SEC. 302. The fifth sentence of section 701(b) of the Housing Act of 1954[84] is amended by striking out "and not to exceed $390,000,000 prior to July 1, 1970" and inserting in lieu thereof "and not to exceed $390,000,000 prior to July 1, 1971".

[p. 391]

1.3n (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 91-392, 91st Cong., 1st Sess. (1969)

HOUSING AND URBAN DEVELOPMENT ACT OF 1969

S. 2864.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

together with

INDIVIDUAL VIEWS

[To accompany S. 2864]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 2864) to amend and extend laws relating to housing and urban development, and for other purposes, and recommend that the bill do pass.

[p. 1]

AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

Section 302 of the bill would amend section 701(b) of the Housing Act of 1954 to increase the total amount authorized to be appropriated for comprehensive planning assistance by $40 million on July 1, 1971.

The purpose of this increase is to provide, after taking into account rising costs, sufficient authorization for the Department of Housing and Urban Development to continue, through fiscal years 1971 and 1972, with a level of program activity approximately equivalent to

[p. 22]

that currently being maintained. The unused authority expected at the start of fiscal year 1971 is estimated at $95 million which, if used at a program level of $60 million for fiscal year 1971 and $75 million in 1972, would require additional authorization of $40 million for fiscal year 1972.

[p. 23]

Section 302—Authorization for Comprehensive Planning Grants

This section would amend section 701(b) of the Housing Act of 1954 to increase the total amount authorized to be appropriated for comprehensive planning assistance by $40 million on July 1, 1971.

[p. 47]

1.3n (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 91-539, 91st Cong., 1st Sess. (1969)

HOUSING AND URBAN DEVELOPMENT ACT OF 1969

SEPTEMBER 30, 1969.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

together with

DISSENTING VIEWS

[To accompany H.R. 13827]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 13827) to amend and extend laws relating to housing and

urban development, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

[p. 1]

Section 302. Authorization for comprehensive planning grants

This section amends section 701(b) of the Housing Act of 1954 to extend the availability of approximately $100 million in unused authorization for comprehensive planning grants through the fiscal year 1971. Under existing law this authorization will expire at the end of the fiscal year 1970.

[p. 31]

HOUSING ACT OF 1954

* * * * * * *

COMPREHENSIVE PLANNING

SEC. 701. (a) * * *

* * * * * * *

(10) the various regional commissions established by the Appalachian Regional Development Act of 1965 or under the Public Works and Economic Development Act of 1965 for comprehensive planning for the regions established under such Acts (or State agencies or instrumentalities participating in such planning; [and]

(11) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs[.]*; and*

(12) States, including statewide agencies or instrumentalities of a State or its political subdivisions which are designated by the Governor of the State and acceptable to the Secretary, for programs focused upon the needs of communities having populations less than one hundred thousand which provide information and data on urban needs and urban assistance programs and activities and technical assistance to such communities with respect to the solution of local problems.

Planning assisted under this section shall, to the maximum extent feasible, cover entire areas having common or related development problems. The Secretary shall encourage cooperation in preparing

[p. 150]

and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other areas and reducing transportation needs. Planning carried out with assistance under this section shall also include a housing element as part of the preparation of comprehensive land use plans, and this consideration of the housing needs and land use requirements for housing in each comprehensive plan shall take into account all available evidence of the assumptions and statistical bases upon which the projection of zoning, community facilities, and population growth is based, so that the housing needs of both the region and the local communities studied in the planning will be adequately covered in terms of existing and prospective in-migrant population growth. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other federally aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Transportation under section 307 of title 23, United States Code.

(b) A planning grant made under subsection (a) shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be made for up to 75 per centum of such estimated cost when made for planning primarily for (1) redevelopment areas, local development districts, or economic development districts, or portions thereof, described in paragraph (3) (A) and (B)(i) and paragraph (11) of subsection (a), (2) areas described in subsection (a)(8) and (3) of the various regions, as described in subsection (a)(10). All grants made under this section shall be subject to terms and conditions prescribed by the Secretary. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Secretary is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any grant made under this section. There are authorized to be appropriated for the purposes of this section not to exceed $265,000,000 prior to July 1, 1969, and not to exceed $390,000,000 prior to July 1, [1970] *1971*. Of the amount available prior to July 1, 1969, $20,000,000 may be used only for district planning grants under subsection (a)(6), which amount shall be increased by $10,000,000 on July 1, 1969. Any amounts appropriated under this section shall remain

available until expended: *Provided*, That, of any funds appropriated under this section, not to exceed an aggregate of $10,000,000 plus 5 per centum of the funds so appropriated may be used by the Secretary for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions

* * * * * * *

[p. 151]

1.3n (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 91-740, 91st Cong., 1st Sess. (1969)

HOUSING AND URBAN DEVELOPMENT ACT OF 1969

DECEMBER 10, 1969.—Ordered to be printed

Mr. PATMAN, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 2864]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 2864) to amend and extend laws relating to housing and urban development, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following:

That this Act may be cited as the "Housing and Urban Development Act of 1969".

SEC. 2. Section 305(g) of the National Housing Act is amended—

(1) by striking out $1,000,000,000" and inserting in lieu thereof $2,500,000,000";

(2) by inserting "at par" immediately after "and to purchase"; and

(3) by striking out "$15,000", "$17,500", and "$22,500" and inserting in lieu thereof "$17,500", "$20,000", and "$25,000", respectively.

[p. 1]

Use of Private Planners in Section 701 Comprehensive Planning Program

The Senate bill contained a provision not in the House amendment requiring that any funds granted for comprehensive planning be used in a manner consistent with the Federal Government's policy of relying on the private enterprise system to provide those services which are reasonably and expeditiously available through ordinary business channels. The conference committee deleted this provision. Present law contains language encouraging assisted governments to engage private consultants where their professional services are deemed appropriate. Although the Senate provision was deleted, the conferees wish to make clear that local assisted governments should have freedom to determine for themselves whether to use the services of private planning consultants or whether to use local, State, or regional planning facilities. The conferees expect the Department of Housing

[p. 33]

and Urban Development to assure that this option is fully available to all assisted governments.

Small Communities Urban Information and Technical Assistance Program

The Senate bill extended the availability of existing authorization for the urban information and technical assistance program for small cities through fiscal year 1972. The House amendment consolidated this program with the section 701 comprehensive planning grant program, using section 701 funds. The conference substitute contains the Senate provision.

[p. 34]

1.3n (4) CONGRESSIONAL RECORD, VOL. 115 (1969)

1.3n (4)(a) Sept. 23: Debated, amended and passed Senate, pp. 26702, 26705, 26709–26711, 26726

Mr. SPARKMAN. Mr. President, the committee bill, S. 2864, is essentially a bill to extend and continue existing Federal housing programs authorized by previous acts of Congress.

In general, the Banking and Currency Committee agreed to a 2-year extension of programs which would otherwise terminate this year. The most important of these are the Federal Housing Adminis-

tration programs, urban renewal, model cities, rent supplement, and public housing.

* * * * *

[p. 26702]

SECTION 302—AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

This section would amend section 701(b) of the Housing Act of 1954 to increase the total amount authorized to be appropriated for comprehensive planning assistance by $40 million on July 1, 1971.

[p. 26705]

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk read as follows:

Strike all of the present section 303 beginning on line 12 of page 29 and substitute the following:

"SEC. 303. Section 701 of the Housing Act of 1954 is amended by redesignating subsection (i) as subsection (j), and by inserting after subsection (h) the following new subsection:

" '(i) Any grants made under this section to a State, metropolitan, or regional planning agency, an economic development district, or any other areawide planning agency for use by such agency or district to provide planning assistance to any local government or any agency or instrumentality of a local government should be used in a manner consistent with the Federal Government's policy of relying on the private enterprise system to provide those services which are reasonably and expeditiously available through ordinary business channels.' "

Mr. TOWER. Mr. President, would the Senator from Alabama explain the substance of the amendment?

Mr. SPARKMAN. Yes. It is, really, an amendment to the language that the committee wrote in under the 701 planning grant program.

The Senator will remember that we tried last year to make certain that private planning consultants might be used in some of the planning areas where the local people wanted them.

We wrote that into the law last year, but it appeared that it was not clear that we intended it be optional. The purpose of the amendment is merely to make it clear that our intention is that the use of planning consultants or the use of State regional or locally hired planners is clearly at the option of the local body.

Mr. TOWER. This is, then, a clarifying amendment?

Mr. SPARKMAN. That is right.

Mr. TOWER. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. Is there objection to the amendment?

Mr. TOWER. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. TOWER. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HOLLINGS. Mr. President, I call up my amendment No. 179——

The PRESIDING OFFICER. An amendment is pending.

Mr. TOWER. Mr. President, I ask unanimous consent that the amendment of the distinguished Senator from Alabama [Mr. SPARKMAN] be withdrawn.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and the amendment is withdrawn.

Mr. TOWER. Reserving the right to re-offer it.

The PRESIDING OFFICER. Without objection, it is so ordered.

[p. 26709]

Mr. SPARKMAN. Mr. President, I send to the desk an amendment virtually the same as the one I offered awhile ago on section 701 planning.

The PRESIDING OFFICER. The amendment will be stated.

The ASSISTANT LEGISLATIVE CLERK. The Senator from Alabama (Mr. SPARKMAN) proposes an amendment:

Strike all of the present Section 303 beginning on line 12 of page 29 and substitute the following:

"SEC. 303. Section 701 of the Housing Act of 1954 is amended by redesignating subsection (i) as subsection (j), and by inserting after subsection (h) the following new subsection:

" '(i) Any grants made under this section to a State, metropolitan, or regional planning agency, an economic development district, or any other areawide planning agency for use by such agency or district to provide planning assistance to any local government or any agency or instrumentality of a local government shall be used in a manner con-

sistent with the Federal Government's policy of relying on the private enterprise system to provide those services which are reasonably and expeditiously available through ordinary business channels' ".

Mr. TOWER. Mr. President, I ask unanimous consent to have printed in the RECORD a letter from Secretary Romney addressed to Senator BENNETT. The letter is pertinent to the amendment offered by the Senator from Alabama.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

SEPTEMBER 22, 1969.

Hon. WALLACE F. BENNETT
U.S. Senate, Washington, D.C.

DEAR SENATOR BENNETT: I am pleased to write you, following a meeting held between Assistant Secretary Jackson and John Evans, Minority Staff Director, Senate Banking and Currency Committee, concerning certain proposed amendments to the Housing Act on the use of private consultants in providing planning assistance to local governments.

The effect of this proposed amendment, as drafted, would be to significantly weaken State efforts to assist their communities. This is contrary to our firm commitment to meaningful State urban involvement and participation.

On the other hand, I am determined to encourage participation of the private sector to achieve the goals of this Department. This is especially true with respect to administration of our Planning Assistance Program under Section 701 and 702 of the Housing Act.

To assure that we are taking every possible responsible action for full utilization of private enterprise in HUD's comprehensive planning and public works planning programs, I am taking the following three steps:

1. Expedite completion of a recent survey of all planning agencies receiving 701 Comprehensive Planning Assistance grants to determine the extent to which private consultants are utilized. Preliminary findings indicate that upwards to 45 percent of all appropriations made available to the States under Section 701 are expended for use of private consultant services. The results of this survey will be forwarded to you.

2. Review thoroughly the existing regulations and guidelines for the Comprehensive Planning Assistance Program. A preliminary review of this document, which contains a

[p. 26710]

large number of references to use of consultants, indicates that it could be strengthened.

3. Invite the major organizations concerned with this subject, including the American Society of Consulting Planners and the National Society of Professional Engineers, to thoroughly explore these matters of common interest. I have asked Assistant Secretary Jackson to promptly call such a meeting.

I hope these views are helpful to you and to the Banking and Currency Committee in its deliberations.

Sincerely,

GEORGE ROMNEY.

Mr. SPARKMAN. Mr. President, the amendment was offered by the Senator from Maine (Mr. MUSKIE) who had fully intended to be present and introduce the amendment.

The PRESIDING OFFICER. The question is on agreeing to the amendment.

Mr. TOWER. Mr. President, apparently the administration has no objection to the amendment. It is a constructive amendment and on behalf of the minority I am prepared to accept it.

The PRESIDING OFFICER. The question is on agreeing to the amendment.

The amendment was agreed to.

Mr. TOWER. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. SPARKMAN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. SPARKMAN. Mr. President, the Senator from Rhode Island (Mr. PELL) wishes to address questions to me relating to a provision already agreed to. The discussion will be fully relevant to that matter. I yield to the Senator for that purpose.

The PRESIDING OFFICER. The Senator from Rhode Island is recognized.

Mr. PELL. Mr. President, I thank the Senator from Alabama.

Would the bill prohibit the State government in my State of Rhode Island, from using Federal funds for planning activities under contract with local governments in the State if the local governments enter into the contracts voluntarily and if they are not prohibited

by the State from using private planning consultants?

Mr. SPARKMAN. Mr. President, awhile ago I commented on the language that was in the bill as reported. In reading the report and the language of the bill, I came to the conclusion that the bill did not do just what the report said it did. I refer to the voluntary use of private consultants. Therefore, we worked out amendatory language that makes it voluntary.

It is entirely optional with a municipality, county, region, metropolitan area, or any other branch of the government. They can use planning consultants if they wish or contract with the State to supply consultants or make whatever arrangement they want. It is purely voluntary.

Mr. PELL. Mr. President, I thank the Senator from Alabama very much indeed for that assurance.

[p. 26711]

AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

SEC. 302. The fifth sentence of section 701(b) of the Housing Act of 1954 is amended by striking out "and not to exceed $390,000,000 prior to July 1, 1970" and inserting in lieu thereof "not to exceed $390,000,000 prior to July 1, 1971, and not to exceed $430,000,000 prior to July 1, 1972".

UTILIZATION OF PRIVATE ENTERPRISE IN COMPREHENSIVE PLANNING AND PUBLIC WORKS PLANNING

SEC. 303. Section 701 of the Housing Act of 1954 is amended by redesignating subsection (i) as subsection (j), and by inserting after subsection (h) the following new subsection:

"(i) Any grants made under this section to a State, metropolitan, or regional planning agency, an economic development district, or any other areawide planning agency for use by such agency or district to provide planning assistance to any local government or any agency or instrumentality of a local government shall be used in a manner consistent with the Federal Government's policy of relying on the private enterprise system to provide those services which are reasonably and expeditiously available through ordinary business channels".

[p. 26726]

1.3n (4)(b) Oct. 23: Amended and passed House, p. 31238

AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

SEC. 302. The fifth sentence of section 701(b) of the Housing Act of 1954 is amended by striking out "and not to exceed $390,000,000 prior to July 1, 1970" and inserting in lieu thereof "and not to exceed $390,000,000 prior to July 1, 1971".

URBAN INFORMATION AND TECHNICAL ASSISTANCE SERVICES

SEC. 303. (a) Section 701(a) of the Housing Act of 1954 is amended—

(1) by striking out "and" at the end of paragraph (10);

(2) by striking out the period at the end of paragraph (11) and inserting in lieu thereof "; and"; and

(3) by adding after paragraph (11) the following new paragraph:

"(12) States, including statewide agencies or instrumentalities of a State or its political subdivisions which are designated by the Governor of the State and acceptable to the Secretary, for programs focused upon the needs of communities having populations less than one hundred thousand which provide information and data on urban needs and urban assistance programs and activities and technical assistance to such communities with respect to the solution of local problems."

(b) Title IX of the Demonstration Cities and Metropolitan Development Act of 1966 is repealed.

[p. 31238]

1.3n (4)(c) Dec. 12: Senate agrees to conference report, p. 38624

[No Relevant Discussion on Pertinent Section]

1.3n (4)(d) Dec. 12: House agrees to conference report, p. 38773

[No Relevant Discussion on Pertinent Section]

1.3o TECHNICAL AMENDMENTS OF THE HOUSING ACT OF 1954

December 31, 1970, P.L. 91-606, Title III, §301(a), 84 Stat. 1758

TITLE III—MISCELLANEOUS

TECHNICAL AMENDMENTS

SEC. 301. (a) Section 701(a) (3) (B) (ii) of the Housing Act of 1954 (40 U.S.C. 461(a) (3) (B) (ii))[75] is amended to read as follows: "(ii) have suffered substantial damage as a result of a major disaster as determined by the President pursuant to the Disaster Relief Act of 1970."

[p. 1758]

1.3o (1) SENATE COMMITTEE ON PUBLIC WORKS

S. REP. No. 91-1157, 91st Cong., 2d Sess. (1970)

DISASTER ASSISTANCE

AUGUST 31, 1970.—Ordered to be printed

Mr. BAYH, from the Committee on Public Works, submitted the following

REPORT

together with

INDIVIDUAL VIEWS

[To accompany S. 3619]

The Committee on Public Works, to which was referred the bill (S. 3619) having considered the same, reports favorably thereon with an amendment and unanimously recommends that the bill, as amended, do pass.

[p. 1]

1.3o (2) HOUSE COMMITTEE ON PUBLIC WORKS

H.R. REP. No. 91-1524, 91st Cong., 2d Sess. (1970)

DISASTER RELIEF ACT OF 1970

SEPTEMBER 29, 1970.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. FALLON, from the Committee on Public Works, submitted the following

REPORT

[To accompany S. 3619]

The Committee on Public Works, to whom was referred the bill (S. 3619) to revise and expand Federal programs for relief from the effects of major disasters, and for other purposes, having considered same, reports favorably thereon with amendment and recommends that the bill as amended do pass. The amendment is as follows:

Strike out all after the enacting clause and insert a substitute text which is printed in the reported bill in italic type.

[p. 1]

1.3o (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 91-1752, 91st Cong., 2d Sess. (1970)

DISASTER RELIEF ACT OF 1970

DECEMBER 15, 1970.—Ordered to be printed

Mr. JONES of Alabama, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany S. 3619]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 3619) to revise

and expand Federal programs for the relief from the effects of major disasters, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following: * * *

[p. 1]

1.3o (4) CONGRESSIONAL RECORD, VOL. 116 (1970)

1.3o (4)(a) Sept. 9: Amended and passed Senate, p. 31058

[No Relevant Discussion on Pertinent Section]

1.3o (4)(b) Oct. 5: Amended and Passed House, p. 34798

[No Relevant Discussion on Pertinent Section]

1.3o (4)(c) Dec. 15, 17: House agrees to conference report, pp. 41523, 42212

[No Relevant Discussion on Pertinent Section]

1.3o (4)(d) Dec. 18: Senate agrees to conference report, p. 42365

[No Relevant Discussion on Pertinent Section]

1.3p MODEL CITIES AND METROPOLITAN DEVELOPMENT PROGRAMS

December 31, 1970, P.L. 91-609, Title III, §302, Title VII, §§727(e), 735, 84 Stat. 1780, 1803, 1804

AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

SEC. 302. The fifth sentence of section 701(b) of the Housing Act of 1954 is amended by striking out "and not to exceed $390,000,000 prior to July 1, 1971" and inserting in lieu thereof "and not to exceed $420,000,000 prior to July 1, 1972".

[p. 1780]

SEC. 727. * * *

(e) Section 701 of the Housing Act of 1954[84] is amended by—

(1) striking out the word "approved" in subsection (a) (4) and adding before the semicolon at the end of such subsection "or under part B of the Urban Growth and New Community Development Act of 1970";

(2) inserting in subsection (b) after "(2) areas described in" the following: "subsection (a)(4) or"; and

(3) striking out the "No" at the beginning of the third sentence of subsection (b) and inserting in lieu thereof "Except for planning for areas described in subsection (a)(4), no".

[p. 1803]

PART C—DEVELOPMENT OF RATIONAL URBAN GROWTH PATTERNS

STATE AND REGIONAL PLANNING

SEC. 735. Section 701 of the Housing Act of 1954[85] is amended by adding at the end thereof the following new subsection:

"(j) In carrying out the provisions of this section relating to planning for States, regions, or other multijurisdictional areas whose development has significance for purposes of national growth and urban development objectives, the Secretary shall encourage the formulation of plans and programs which will include the studies, criteria, standards, and implementing procedures necessary for effectively guiding and controlling major decisions as to where growth should take place within such States, regions, or areas. Such plans and programs shall take account of the availability of and need for conserving land and other irreplaceable natural resources; of projected changes in size, movement, and composition of population; of the necessity for expanding housing and employment opportunities; of the opportunities, requirements, and possible locations for, new communities and largescale projects for expanding or revitalizing existing communities; and of the need for methods of achieving modernization, simplification, and improvements in governmental structures, systems, and procedures related to growth objectives. If the Secretary determines that activities otherwise eligible for assistance under this section are necessary to the development or implementation of such plans and programs, he may make grants in support of such activities to any governmental agency or organization of public officials which he determines is capable of carrying out the planning work involved in an effective and efficient manner and may make such grants in

an amount equal to not more than 75 per centum of the cost of such activities."

[p. 1804]

1.3p (1) SENATE COMMITTEE ON BANKING AND CURRENCY

S. REP. No. 91-1216, 91st Cong., 2d Sess. (1970)

HOUSING AND URBAN DEVELOPMENT ACT OF 1970

SEPTEMBER 21, 1970.—Ordered to be printed

Mr. SPARKMAN, from the Committee on Banking and Currency, submitted the following

REPORT

[To accompany S. 4368]

The Committee on Banking and Currency, having considered the same, report favorably a committee bill (S. 4368) to extend and amend laws relating to housing and urban development, and for other purposes, and recommend that the bill do pass.

[p. 1]

AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

Section 302 of the bill would amend section 701(b) of the Housing Act of 1954 to increase the total amount authorized to be appropriated for comprehensive planning grants from $390 million to $415 million and extend by one year (through fiscal year 1972) authority to appropriate funds. The additional $25 million in grant authority, plus an estimated carryover in unused authority of $55 million, will provide funds for the needed expansion of this important program. The projection of an $80 million program level for fiscal year 1972 represents a $30 million increase over the current program level of $50 million.

[p. 20]

Types of financial assistance

The first type of financial assistance provided under this part to new community developers would be, in effect, an expansion of the program

of guarantees for land acquisition and improvement under Title IV of the Housing and Urban Development Act of 1968.

The Secretary would be authorized to pledge the full faith and credit of the United States to the payment on bonds and other obligations issued to finance land acquisition and land development (but not the construction of residential, commercial or industrial buildings), by private new community developers and by State land development agencies. The obligation of State and local agencies the income from which is exempt from Federal taxation would not be eligible for the guarantees. However, the Secretary would also be authorized to make grants to the State land development agency in an amount which did not exceed the difference between the interest paid on those obligations and the interest on similar obligations the income from which is tax exempt.

The outstanding principal obligations guaranteed for a single project could not exceed the sum of 80 percent of the Secretary's estimate of the value of the land before development and 90 percent of his estimate of the actual cost of the land development. The outstanding principal obligations guaranteed under the Act would at no time exceed $50,000,000 for a single program or $500,000,000 for all projects assisted by guarantees.

The guarantee is designed to make it possible for the developer to tap the corporate bond market through public sale of bonds or notes. Private developers will also sometimes wish to attract individual large lenders, such as life insurance companies, and its guarantee would facilitate this. The guarantee should be helpful to borrowers in obtaining lower interest rates, longer maturities, and freedom from the requirements that lenders sometimes impose in the case of unguaranteed land development investments that they share in the profits.

A second form of assistance, also directly related to the developer's problem of obtaining adequate "patient money," would be provided through direct Federal loans to State land development agencies and private new community developers to cover interest charges during the early years of approved new community development projects. Such loans would be in an amount not to exceed the interest payments on indebtedness attributable to land acquisition and land development, including public facilities, and only with respect to interest payments on indebtedness outstanding during an initial development period (not more than 15 years) prior to the time when the project's marketing program had reached the point where continued development was possible without the benefit of further loans. Repayment of loans could be deferred for up to 15 years and would be repaid with interest at an annual rate equal to the average yield to maturity on

eligible. The Secretary could include provisions for repayment where appropriate. More extensive planning grants, up to 75 percent of cost, would be available to public developers under the planning grant provisions of section 701 of the Housing Act of 1954.

The Secretary would also be authorized to provide technical assistance to developers in connection with planning and carrying out new community development programs. Such assistance could be provided, either directly or by other arrangements, to qualified private and public developers, and local public bodies and agencies.

The broad research and development authority of the Secretary under existing law could also be utilized in a manner useful to the new communities program.

In order to facilitate the administration of the new communities program, a Community Development Corporation would be created with the Department of Housing and Urban Development. The Corporation would have a five member board of directors consisting of the Secretary of Housing and Urban Development; the General Manager of the Corporation who would be appointed by the President with the advice and consent of the Senate and who would be the Corporation's chief executive officer; and three persons appointed by the Secretary, at least two of whom were not officers or employees of HUD. The Secretary's loan and guarantee functions would be administered through the Community Development Corporation, along with such other functions as the Secretary prescribed. The Corporation would carry out its functions subject to the direction and supervision of the Secretary of HUD.

PART C—DEVELOPMENT OF RATIONAL URBAN GROWTH PATTERNS

The Committee believes that if the policies set forth in Parts A and B are to be effectively implemented, the Federal Government must provide assistance to State, regional, and area governments and organizations undertaking activities related to those policies. The provisions of Part C are addressed to this need.

Section 701 of the Housing Act of 1954 would be amended to authorize the Secretary to make comprehensive planning grants, at three-fourths of the cost of the planning, to government agencies or organizations of public officials capable of formulating plans and procedures for determining where growth should take place within the State, region, or area. Second (under a provision found in title IV, rather than in this title), the Secretary would be authorized to make grants to State and local public bodies to cover not more than 75 per centum of the cost of acquiring interests in undeveloped or predominantly undevel-

oped land which, if withheld from commercial, industrial, and residential development, would significantly guide desirable patterns of urban growth. The Secretary would also have authority to establish conditions for the disposition and the future use of land acquired under this provision.

[p. 34]

SECTION 302—AUTHORIZATION FOR COMPREHENSIVE PLANNING GRANTS

This section authorizes new appropriations of $25 million for comprehensive planning grants under section 701(b) during fiscal year 1972.

[p. 49]

(*e*) Section 701 of the Housing Act of 1954 would be amended to enable official governmental planning agencies to receive planning grants in connection with new communities before the new community has been finally approved, thereby making timely planning possible. New communities would also be made eligible under the provisions in section 701 which now authorize three-fourths planning grants for several categories of comprehensive planning by State and local public bodies.

[p. 64]

PART C—DEVELOPMENT OF RATIONAL URBAN GROWTH PATTERNS

SECTION 735—STATE AND REGIONAL PLANNING

This section adds a new subsection to section 701 of the Housing Act of 1954 which provides that, in making grants pertaining to comprehensive planning for States, regions, or other multijurisdictional areas whose development affects national growth and urban development objectives, the Secretary shall encourage the formulation of specific plans and programs for guiding and controlling urban growth within these States, regions, or areas. The Secretary would also be empowered to make grants to any governmental agency or organization of public officials to cover not more than 75 per centum of the cost of activities otherwise eligible under section 701 which are necessary to the development or implementation of plans or programs under the new subsection.

[p. 65]

1.3p (2) HOUSE COMMITTEE ON BANKING AND CURRENCY

H.R. REP. No. 91-1556, 91st Cong., 2d Sess. (1970)

THE HOUSING AND URBAN DEVELOPMENT ACT OF 1970

OCTOBER 5, 1970.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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MR. PATMAN, from the Committee on Banking and Currency, submitted the following

REPORT

together with

SUPPLEMENTAL AND MINORITY VIEWS

[To accompany H.R. 19436]

The Committee on Banking and Currency, to whom was referred the bill (H.R. 19436) to provide for the establishment of a national urban growth policy, to encourage and support the proper growth and development of our States, metropolitan areas, cities, counties, and towns with emphasis upon new community and inner city development, to extend and amend laws relating to housing and urban development, and for other purposes, having considered the same, report favorably thereon without amendments and recommend that the bill do pass.

WHAT THE BILL WOULD DO

The committee bill would provide for the development of a national urban growth policy, authorize a new and greatly expanded program of Federal assistance for new community development, make needed improvements and provide necessary extensions and additional funds for existing housing and urban development programs, and provide an important new program of direct Federal writing of essential property insurance if insurance rates in the private market exceed reasonable rates within the means of homeowners and small businessmen. The principal provisions of the bill are briefly summarized, as follows:

PUBLIC HOUSING ANNUAL CONTRIBUTIONS

Section 302 would increase the authorization for annual contribution contracts under the public housing program by $150 million upon enactment, by $275 million beginning with fiscal year 1972, $300 million beginning with fiscal year 1973, and $350 million beginning with fiscal year 1974.

The committee is providing additional funds for fiscal year 1971 for two reasons: First, because of rapidly rising construction and land costs, more funds are needed to produce the budgeted number of public housing units. Second, there has been an increased demand for program funds throughout the Nation. For the fiscal years through 1974, the amount authorized in the bill is to provide for the new units that will be necessary for meeting the housing goals, as set forth in the President's Second Annual Report on Housing Goals and the modernization program, as well as increased costs and additional subsidies.

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Section 402. Authorization for comprehensive planning grants

This section would amend section 701(b) of the Housing Act of 1954 to extend for 1 year (through fiscal year 1972), authority to appropriate unused authorizations for comprehensive planning grants. The section would also authorize an additional $30 million for comprehensive planning grants to be appropriated prior to July 1, 1972.

TITLE V—CONSOLIDATION OF OPEN-SPACE LAND PROGRAMS

Section 501. Consolidation of open-space land programs

This section would amend title VII of the Housing Act of 1961 (grants for open-space land, urban beautification and historic preservation) to authorize a single program of grants for (1) acquisition of title to, or other interests in, open-space land in urban areas, and (2) the development of open-space or other land in urban areas for open-space uses (including historic preservation).

Section 701 of the amended title would restate basic congressional findings and purposes. Section 701(b) would be amended to include a finding that the need for parks and other open space in built-up portions of urban areas is especially great in low-income neighborhoods and communities.

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COMPREHENSIVE PLANNING

SEC. 701. (a) In order to assist State and local governments in solving planning problems, including those resulting from the increasing concentration of population in metropolitan and other urban areas and the out-migration from and lack of coordinated development of resources and services in rural areas; to facilitate comprehensive planning for urban and rural development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs and techniques on an areawide basis, and to engage private consultants where their professional services are deemed appropriate by the assisted governments, the Secretary is authorized to make planning grants to—

(1) State planning agencies for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Secretary finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after September 2, 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties referred to in paragraph (3) of this subsection, and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

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(2) State, metropolitan, and regional planning agencies for metropolitan or regional planning, and to cities within metropolitan areas, for planning which is part of comprehensive metropolitan planning and which shall supplement and be coordinated with State, metropolitan, and regional planning;

(3) (A) economic development districts designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, and

(B) cities, other municipalities, and counties which (i) are situated in redevelopment areas or economic development districts

designated by the Secretary of Commerce under title IV of the Public Works and Economic Development Act of 1965, or (ii) have suffered substantial damage as a result of catastrophe which the President, pursuant to section 2(a) of the Act entitled "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes," approved September 30, 1950, as amended (42 U.S.C. 1855a), has determined to be a major disaster;

(4) official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation, or for areas where rapid urbanization is expected to result on land developed or to be developed as a new community [approved] under section 1004 of the National Housing Act or title IV of the Housing and Urban Development Act of 1968 *or under part B of the Urban Growth and New Community Development Act of 1970;*

(5) States for State and interstate comprehensive planning and for research and coordination activity related thereto, including technical and other assistance for the establishment and operation of intrastate and interstate planning agencies;

(6) State planning agencies for assistance to district planning, or planning for areas within districts, carried on by or for district planning agencies;

(7) metropolitan and regional planning agencies, with the approval of the State planning agency or (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

(8) official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

(9) tribal planning councils or other tribal bodies designated by the Secretary of the Interior for planning for an Indian reservation;

(10) the various regional commissions established by the Appalachian Regional Development Act of 1965 or under the Public Works and Economic Development Act of 1965 for comprehensive planning for the regions established under such Acts

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(or State agencies or instrumentalities participating in such planning); and

(11) local development districts, certified under section 301 of the Appalachian Regional Development Act of 1965, for comprehensive planning for their entire areas, or for metropolitan planning, urban planning, county planning, or small municipality planning within such areas in the Appalachian region, and for planning for Appalachian regional programs.

Planning assisted under this section shall, to the maximum extent feasible, cover entire areas having common or related development problems. The Secretary shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other areas and reducing transportation needs. Planning carried out with assistance under this section shall also include a housing element as part of the preparation of comprehensive land use plans, and their consideration of the housing needs and land use requirements for housing in each comprehensive plan shall take into account all available evidence of the assumptions and statistical bases upon which the projection of zoning, community facilities, and population growth is based, so that the housing needs of both the region and the local communities studied in the planning will be adequately covered in terms of existing and prospective in-migrant population growth. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other federally aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Transportation under section 307 of title 23, United States Code.

(b) A planning grant made under subsection (a) shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be made for up to 75 per centum of such estimated cost when made for planning primarily for (1) redevelopment areas, local development districts, or economic development districts, or portions thereof, described in paragraph (3) (A) and (B) (i) and paragraph (11) of subsection (a), (2) areas described in subsection (a) (8), and (3) the various regions, as described in subsection (a) (10). All grants made under this section shall be subject to terms and conditions

prescribed by the Secretary. [No] *Except for planning for areas described in subsection (a) (4),* portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Secretary is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advance or progress payments on account of any grant made under this section. There are authorized to be appropriated for the purposes of this section not to exceed $265,000,000 prior to July 1, 1969, and not to exceed [$390,000,000] *$420,000,000* prior to July 1, [1971] *1972*. Of the amount available prior to

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July 1, 1969, $20,000,000 may be used only for district planning grants under subsection (a) (6), which amount shall be increased by $10,000,000 on July 1, 1969. Any amounts appropriated under this section shall remain available until expended: *Provided,* That, of any funds appropriated under this section, not to exceed an aggregate of $10,000,000 plus 5 per centum of the funds so appropriated may be used by the Secretary for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section, and for grants to assist in the conduct of studies and research relating to needed revisions in State statutes which create, govern, or control local governments and local governmental operations.

* * * * * * *

(j) In carrying out the provisions of this section relating to planning for States, regions, or other multijurisdictional areas whose development has significance for purposes of national growth and urban development objectives, the Secretary shall encourage the formulation of plans and programs which will include the studies, criteria, standards, and implementing procedures necessary for effectively guiding and controlling major decisions as to where growth should take place within such States, regions, or areas. Such plans and programs shall take account of the availability of and need for conserving land and other irreplaceable natural resources; of projected changes in size, movement, and composition of population; of the necessity for expanding housing and employment opportunities; of the opportunities, requirements, and possible locations for new communities and large-scale projects for expanding or revitalizing existing communities; and of the need for methods of achieving modernization, simplification, and improvements in governmental structures, systems, and procedures related to growth objectives. If the Secretary determines that activities otherwise eligible for assistance under this section are necessary to the development or implementation of such

plans and programs, he may make grants in support of such activities to any governmental agency or organization of public officials which he determines is capable of carrying out the planning work involved in an effective and efficient manner and make such grants in an amount equal to not more than 75 per centum of the cost of such activities.

* * * * * * *

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1.3p (3) COMMITTEE OF CONFERENCE

H.R. REP. No. 91-1784, 91st Cong., 2d Sess. (1970)

HOUSING AND URBAN DEVELOPMENT ACT OF 1970

DECEMBER 17, 1970.—Ordered to be printed

MR. PATMAN, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H.R. 19436]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 19436) to provide for the establishment of a national urban growth policy, to encourage and support the proper growth and development of our States, metropolitan areas, cities, counties, and towns with emphasis upon new community and inner city development, to extend and amend laws relating to housing and urban development, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following: *That this Act may be cited as the "Housing and Urban Development Act of 1970".*

[p. 1]

1.3p (4) CONGRESSIONAL RECORD, VOL. 116 (1970)

1.3p (4)(a) Dec. 2, 3: Amended and passed House, pp. 39823–39824

PARLIAMENTARY INQUIRY

Mr. DAVIS of Wisconsin. Mr. Chairman, a parliamentary inquiry.

The CHAIRMAN. The gentleman will state his parliamentary inquiry.

Mr. DAVIS of Wisconsin. Mr. Chairman, I have not been able to get hold of a page copy of the so-called Stephens substitute amendment, and therefore I am not able to provide a correct page number on which an amendment should occur. However, it would occur at the close of section 302 of title III of the Stephens amendment in the nature of a substitute. Would an amendment relating to that be in order at this time?

The CHAIRMAN. The Chair will state to the gentleman that such an amendment would be in order at this time.

AMENDMENT OFFERED BY MR. DAVIS OF WISCONSIN TO THE AMENDMENT IN THE NATURE OF A SUBSTITUTE OFFERED BY MR. STEPHENS

Mr. DAVIS of Wisconsin. Mr. Chairman, I offer an amendment to the amendment in the nature of a substitute.

The Clerk read as follows:

Amendment offered by Mr. DAVIS of Wisconsin to the amendment in the nature of a substitute offered by Mr. STEPHENS: At the end of title III, section 302, change the period to a colon and add the following proviso: "*Provided*, that after July 1, 1971, the aggregate amount of contracts to make annual contributions executed subsequent to the enactment of this act shall not exceed amounts approved in appropriation acts."

Mr. DAVIS of Wisconsin. Mr. Chairman, this is an amendment I offered with respect to similar legislation 2 years ago. I had prepared the amendment for introduction in connection with the bill this year.

I have talked with the gentleman from Pennsylvania, who is the floor manager for the bill. He pointed out to me that because of commitments which may have been made he felt that this might not be timely in connection with it.

I was unable to reach the gentleman this morning in order to discuss with him the amended amendment which is now before this Committee, which would delay the effective date of it until the beginning of the new fiscal year.

As I understand it from conversations I have had with the gentleman from Pennsylvania, he has not been opposed to the idea of placing public housing contributions under the annual review along with contract authority under the surveillance of the Subcommittee on HUD and Independent Offices of the Committee on Appropriations, but he had been worried about the fact of commitments that might already have been made. It was on this basis that I did defer the effective date until the beginning of the new fiscal year.

I see that the gentleman is on his feet, and I would like to ask for his comments relating to this amendment as it has been changed in order to deal with the problems which he felt might occur if this had been offered as a straight amendment to become effective immediately.

Mr. BARRETT. Will the gentleman yield?

Mr. DAVIS of Wisconsin. I am happy to yield to the chairman of the subcommittee.

Mr. BARRETT. I will say to the gentleman in the first place that I did not get a copy of the amendment which you have submitted here. Second, I would have to oppose it—and I think the gentleman would agree—on the basis that

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your amendment, as I observed it as read by the Clerk, is to take effect in 1971.

Mr. DAVIS of Wisconsin. At the beginning of the new fiscal year.

Mr. BARRETT. Yes. Of course, you and I talked about it, and I was certainly grateful for the way you informed me and your splendid cooperation. I am not able to say whether this would distort the contractual agreements made up until 1972. I do think, if we were able to sit down together, a few of us, in the next Congress and rationalize it and have a hearing on this, we could do the job more effectively. because money would be allocated for 1972 and by that time all of the public housing authorities throughout the country would be properly advised. By 1973 you will have to come through the normal appropriation procedures.

I would be grateful to the gentleman if he will withdraw that amendment and let us do it next year in harmony with our committee and the House.

Mr. DAVIS of Wisconsin. I hesitate to accede to this suggestion, because, as the gentleman will recall, we did have a colloquy relating to it 2 years ago. At that time the gentleman did indicate his concern but said that in principle he was not opposed to it. My only concern is not to interfere with outgoing commitments that may have been or would be made during the current fiscal year. However, I do feel the principle of putting the annual surveillance of these contributions under the proper subcommittee of the Committee on Appropriations is very important in order that we may have a balanced housing program. I say this since all of the other major housing programs do come under this annual review and it is not possible to attempt to compare the effectiveness of the various programs when one program, and a large and expanded one, sits outside of that annual surveillance by the appropriate subcommittee of the Committee on Appropriations. I would not object if the gentleman would feel it proper to defer the effective date of this until July 1, 1972, if he felt that this would avoid any embarrassment on the basis of commitments that have been made, but I do think it is important that the principle be established.

The CHAIRMAN. The time of the gentleman has expired.

(By unanimous consent, Mr. Davis of Wisconsin was allowed to proceed for 2 additional minutes.)

Mr. BARRETT. Mr. Chairman, if the gentleman will yield further, I think that, due to the nature of the statement by the gentleman from Wisconsin in 1968, the gentleman from Pennsylvania was quite opposed to the amendment for the simple reason that we were in a crisis then throughout the country in that housing was badly needed. As the gentleman will recall, we have a need across the country for a minimum in the next decade for 26 million homes or houses which were badly needed.

However, at this time I am concerned that the gentleman's amendment may distort the negotiations and the contractual procedures by the housing authorities. If the gentleman suggests now that we do this on the premise that we bring it into the housing bill for 1972, I think that would be more adequate in order to give us time to get their homes in order so that they would know that they could not enter into contracts without knowing what money was appropriated.

Mr. DAVIS of Wisconsin. Would not the gentleman from Pennsylvania feel that after the effective date of July 1, 1972, this would avoid any embarrassment with reference to outstanding commitments and would provide the time and notice that would be required in connection with it?

Mr. BARRETT. Mr. Chairman, if the gentleman will yield further, I would say that we would not have the opportunity to contact all of the housing authorities——

The CHAIRMAN. The time of the gentleman from Wisconsin has again expired.

(By unanimous consent (at the request of Mr. BARRETT) Mr. DAVIS of Wisconsin was allowed to proceed for 2 additional minutes.)

Mr. BARRETT. Mr. Chairman, will the gentleman yield further?

Mr. DAVIS of Wisconsin. Yes, I yield further to the gentleman from Pennsylvania.

Mr. BARRETT. I do think that on the basis on which the gentleman is putting it now we should agree to let it go over until the next Congress so that we can sit down and rationalize with the members of the housing authorities throughout the country and the Department of Housing and Urban Development here and tell them that by 1973 they will have to go through the normal procedure on appropriations. I think we can work it out that way and everyone would be happy.

Therefore, I am hopeful that the gentleman from Wisconsin will withdraw his amendment.

The CHAIRMAN. The time of the gentleman from Wisconsin has again expired.

Mr. BARRETT. Mr. Chairman, I move to strike the requisite number of words.

Mr. Chairman, I was wondering if the gentleman from Wisconsin (Mr. DAVIS) desires to withdraw his amendment at this time and let us deal with this matter at a later date and properly discuss this matter sensibly across the table before we complicate any contractual agreements.

Mr. DAVIS of Wisconsin. Mr. Chairman, will the gentleman yield?

Mr. BARRETT. I shall be happy to yield to the gentleman from Wisconsin.

Mr. DAVIS of Wisconsin. Mr. Chairman, with the gentleman's assurance that prior to July 1, 1971, there will be an opportunity to reevaluate this matter so that we can attempt to arrive at a pattern that is consistent for the funding of all the HUD housing programs, I would be willing to defer this matter until such time early next year, if we have the agreement of the gentleman that this will be done within the next 7 months.

Mr. BARRETT. I thank the gentleman very much.

Mr. DAVIS of Wisconsin. Mr. Chairman, I ask unanimous consent to withdraw my amendment.

The CHAIRMAN. Is there objection to the request of the gentleman from Wisconsin?

There was no objection.

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1.3p (4)(b) Dec. 8: Amended and passed Senate, p. 40459

[No Relevant Discussion on Pertinent Section]

1.3p (4)(c) Dec. 18: Senate agrees to conference report, p. 42438

[No Relevant Discussion on Pertinent Section]

1.3p (4)(d) Dec. 19: House agrees to conference report, p. 42638

[No Relevant Discussion on Pertinent Section]

1.4 DEFINITION OF EXECUTIVE AGENCY

5 U.S.C. §105

5 § 105. Executive agency

For the purpose of this title, "Executive agency" means an Executive department, a Government corporation, and an independent establishment. Pub.L. 89–554, Sept. 6, 1966, 80 Stat. 379.

1.4a DEFINITION OF EXECUTIVE AGENCY

September 6, 1966, P.L. 89-554, 80 Stat. 379

§105. Executive agency

For the purpose of this title, "Executive agency" means an Executive department, a Government corporation, and an independent establishment.

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1.4a (1) HOUSE COMMITTEE ON THE JUDICIARY

H.R. REP. No. 901, 89th Cong., 1st Sess. (1965)

TITLE 5, UNITED STATES CODE, "GOVERNMENT ORGANIZATION AND EMPLOYEES"

JULY 21, 1966.—Ordered to be printed

Mr. ERVIN, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany H.R. 10104]

The Committee on the Judiciary, to which was referred the bill (H.R. 10104), to enact title 5, United States Code, "Government Organization and Employees," codifying the general and permanent laws relating to the organization of the Government of the United States and to its civilian officers and employees, having considered the same, reports favorably thereon, with amendments, and recommends that the bill, H.R. 10104, as amended, do pass.

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CHAPTER 3—POWERS

Sec.
301. Departmental regulations.
302. Delegation of authority.
303. Oaths to witnesses.
304. Subpenas.
305. Systematic agency review of operations.

SECTION 301

Derivation:	United States Code	Revised Statutes and Statutes at Large
	5 U.S.C. 22	R.S. § 161. Aug. 12, 1958, Pub. L. 85-619, 72 Stat. 547.

The words "Executive department" are substituted for "department" as the definition of "department" applicable to this section is coextensive with the definition of "Executive department" in section 101. The words "not inconsistent with law" are omitted as surplusage as a regulation which is inconsistent with law is invalid.

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1.4a (2) SENATE COMMITTEE ON THE JUDICIARY

S. REP. No. 1380, 89th Cong., 2d Sess. (1966)

TITLE 5, UNITED STATES CODE, "GOVERNMENT ORGANIZATION AND EMPLOYEES"

AUGUST 31, 1965.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. WILLIS, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany H.R. 10104]

The Committee on the Judiciary, to whom was referred the bill (H.R. 10104) to enact Title 5, United States Code, "Government Organization

and Employees," codifying the general and permanent laws relating to the organization of the Government of the United States and to its civilian officers and employees, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

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SECTION 105

The section is supplied to avoid the necessity for defining "Executive agency" each time it is used in this title.

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1.4a (3) CONGRESSIONAL RECORD, VOL. 112 (1966)

1.4a (3)(a) July 25: Passed Senate, pp. 17010–17011

[No Relevant Discussion on Pertinent Section]

1.4a (3)(b) Aug. 11: Passed House, p. 19077

[No Relevant Discussion on Pertinent Section]

1.5 THE DAVIS-BACON ACT, AS AMENDED

40 U.S.C. §§276a—276a-5

(See "General 1.13a–1.13h" for legislative history)

§ 276a. Rate of wages for laborers and mechanics

(a) The advertised specifications for every contract in excess of $2,000, to which the United States or the District of Columbia is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the United States or the District of Columbia within the geographical limits of the States of the Union, or the District of Columbia, and which requires or involves the employment of mechanics and/or laborers shall contain a provision stating the minimum wages to be paid various classes of laborers and mechanics which shall be based upon the wages that will be determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the city, town, village, or other civil subdivision of the State, in which the work is to be performed, or in the District of Columbia if the work is to be performed there; and every contract based upon these specifications shall contain a stipulation that the contractor or his subcontractor shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the advertised specifications, regardless of any contractual relationship which may be alleged to exist between the contractor or subcontractor and such laborers and mechanics, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of accrued payments as may be considered necessary by the contracting officer to pay to laborers and mechanics employed by the contractor or any subcontractor on the work the difference between the rates of wages required by the contract to be paid laborers and mechanics on the work and the rates of wages received by such laborers and mechanics and not refunded to the contractor, subcontractors, or their agents.

(b) As used in sections 276a to 276a—5 of this title the term "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" shall include—

(1) the basic hourly rate of pay; and

(2) the amount of—

(A) the rate of contribution irrevocably made by a

contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) the rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to laborers and mechanics pursuant to an enforcible commitment to carry out a financially responsible plan or program which was communicated in writing to the laborers and mechanics affected,

for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other Federal, State, or local law to provide any of such benefits:

Provided, That the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the Secretary of Labor, insofar as sections 276a to 276a—5 of this title and other Acts incorporating sections 276a to 276a—5 of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in paragraph (2) (A), or by the assumption of an enforcible commitment to bear the costs of a plan or program of a type referred to in paragraph (2) (B), or any combination thereof, where the aggregate of any such payments, contributions, and costs is not less than the rate of pay described in paragraph (1) plus the amount referred to in paragraph (2).

In determining the overtime pay to which the laborer or mechanic is entitled under any Federal law, his regular or basic hourly rate of pay (or other alternative rate upon which premium rate of overtime compensation is computed) shall be deemed to be the rate computed under paragraph (1), except that where the amount of payments, contributions, or costs incurred with respect to him exceeds the prevailing wage applicable to him under sections 276a to 276a—5 of this title, such regular or basic hourly rate of pay (or such other alternative rate) shall be arrived at by deducting from the amount of payments, contributions, or costs actually incurred with respect to him, the amount of contributions or costs of the types described in paragraph (2) actually incurred with respect to him, or the amount determined under paragraph (2) but not actually paid, whichever amount is the greater.

Mar. 3, 1931, c. 411, § 1, 46 Stat. 1494; Aug. 30, 1935, c. 825, 49 Stat. 1011; June 15, 1940, c. 373, § 1, 54 Stat. 399; July 12, 1960, Pub.L. 86–624, § 26, 74 Stat. 418; July 2, 1964, Pub.L. 88–349, § 1, 78 Stat. 238.

§ 276a—1. Termination of work on failure to pay agreed wages; completion of work by Government

Every contract within the scope of section 276a to 276a—5 of this title shall contain the further provision that in the event it is found by the contracting officer that any laborer or mechanic employed by the contractor or any subcontractor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the Government may, by written notice to the contractor, terminate his right to proceed with the work or such part of the work as to which there has been a failure to pay said required wages and to prosecute the work to completion by contract or otherwise, and the contractor and his sureties shall be liable to the Government for any excess costs occasioned the Government thereby.

Mar. 3, 1931, c. 411, § 2, as added Aug. 30, 1935, c. 825, 49 Stat. 1011.

§ 276a—2. Payment of wages by Comptroller General from withheld payments; listing contractors violating contracts

(a) The Comptroller General of the United States is authorized and directed to pay directly to laborers and mechanics from any accrued payments withheld under the terms of the contract any wages found to be due laborers and mechanics pursuant to sections 276a to 276a—5 of this title; and the Comptroller General of the United States is further authorized and is directed to distribute a list to all departments of the Government giving the names of persons or firms whom he has found to have disregarded their obligations to employees and subcontractors. No contract shall be awarded to the persons or firms appearing on this list or to any firm, corporation, partnership, or association in which such persons or firms have an interest until three years have elapsed from the date of publication of the list containing the names of such persons or firms.

(b) If the accrued payments withheld under the terms of the contract, as aforesaid, are insufficient to reimburse all the laborers and mechanics, with respect to whom there has been a failure to pay the wages required pursuant to section 276a to 276a—5 of this title, such laborers and mechanics shall have the right of action and/or of intervention against the contractor and his sureties con-

ferred by law upon persons furnishing labor or materials, and in such proceedings it shall be no defense that such laborers and mechanics accepted or agreed to accept less than the required rate of wages or voluntarily made refunds.
Mar. 3, 1931, c. 411, § 3, as added Aug. 30, 1935, c. 825, 49 Stat. 1011.

§ 276a—3. Effect on other Federal laws

Sections 276a to 276a—5 of this title shall not be construed to supersede or impair any authority otherwise granted by Federal law to provide for the establishment of specific wage rates.
Mar. 3, 1931, c. 411, § 4, as added Aug. 30, 1935, c. 825, 49 Stat. 1011.

§ 276a—4. Effective date of sections 276a to 276a—5

Sections 276a to 276a—5 of this title shall take effect thirty days after August 30, 1935, but shall not affect any contract then existing or any contract that may thereafter be entered into pursuant to invitations for bids that are outstanding on August 30, 1935.
Mar. 3, 1931, c. 411, § 5, as added Aug. 30, 1935, c. 825, 49 Stat. 1011.

§ 276a—5. Suspension of sections 276a to 276a—5 during emergency

In the event of a national emergency the President is authorized to suspend the provisions of sections 276a to 276a—5 of this title.
Mar. 3, 1931, c. 411, § 6, as added Aug. 30, 1935, c. 825, 49 Stat. 1011.

1.6 REORGANIZATION PLAN NO. 14 OF 1950

64 Stat. 1267 (1950)

Prepared by the President and transmitted to the Senate and the House of Representatives in Congress assembled, March 13, 1950, pursuant to the provisions of the Reorganization Act of 1949, approved June 20, 1949.

LABOR STANDARDS ENFORCEMENT

In order to assure coordination of administration and consistency of enforcement of the labor standards provisions of each of the following Acts by the Federal agencies responsible for the administration thereof, the Secretary of Labor shall prescribe appropriate standards, regulations, and procedures, which shall be observed by these agencies, and cause to be made by the Department of Labor such investigations, with respect to compliance with and enforcement of such labor standards, as he deems desirable, namely: (a) The Act of March 3, 1931 (46 Stat. 1494, ch. 411), as amended; (b) the Act of June 13, 1934 (48 Stat. 948, ch. 482); (c) the Act of August 1, 1892 (27 Stat. 340, ch. 352), as amended; (d) the Act of June 19, 1912 (37 Stat. 137, ch. 174), as amended; (e) the Act of June 3, 1939 (53 Stat. 804, ch. 175), as amended; (f) the Act of August 13, 1946 (60 Stat. 1040, ch. 958); (g) the Act of May 13, 1946 (60 Stat. 170, ch. 251), as amended; and (h) the Act of July 15, 1949, ch. 338, Public Law 171, 81st Congress, First Session.

1.7 REGULATIONS GOVERNING CONTRACTORS AND SUBCONTRACTORS, AS AMENDED

40 U.S.C. §276c

40 § 276c. Regulations governing contractors and subcontractors

The Secretary of Labor shall make reasonable regulations for contractors and subcontractors engaged in the construction, prosecution, completion or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States, including a provision that each contractor and subcontractor shall furnish weekly a statement with respect to the wages paid each employee during the preceding week. Section 1001 of Title 18 shall apply to such statements.

June 13, 1934, c. 482, § 2, 48 Stat. 948; May 24, 1949, c. 139, § 134, 63 Stat. 108; Aug. 28, 1958, Pub.L. 85–800, § 12, 72 Stat. 967.

1.7a RATES OF PAY FOR LABOR

June 13, 1934, P.L. 73-325, §2, 48 Stat. 948

SEC. 2. To aid in the enforcement of the above section, the Secretary of the Treasury and the Secretary of the Interior jointly shall make reasonable regulations for contractors or subcontractors on any such building or work, including a provision that each contractor and subcontractor shall furnish weekly a sworn affidavit with respect to the wages paid each employee during the preceding week.

[p. 948]

1.7a (1) SENATE COMMITTEE ON THE JUDICIARY

S. REP. No. 803, 73d Cong., 2d Sess. (1934)

TO PREVENT EVASION OF CERTAIN STATUTES CONCERNING RATES OF PAY FOR LABOR

APRIL 17 (calendar day, APRIL 23), 1934.—Ordered to be printed

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Mr. STEPHENS, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany S. 3041]

The Committee on the Judiciary, having had under consideration the bill (S. 3041) to effecuate the purpose of certain statutes concerning rates of pay for labor, by making it unlawful to prevent anyone from receiving the compensation contracted for thereunder, and for other purposes, reports the same favorably to the committee and recommends that the bill do pass, with the following amendments:

On page 2, line 2, immediately after the sign "$", insert the figures "5,000".

On page 2, line 2, immediately after the words "or imprisoned not more than", insert the word "five".

On page 2, line 5, immediately after the word "Treasury", insert the words "and the Secretary of the Interior jointly".

Hearings of the Senate Committee on Racketeering revealed that large sums of money have been extracted from the pockets of American

labor, to enrich contractors, subcontractors, and their officials. In the language of one of the great leaders of labor:

> It has been a common practice for contractors constructing Federal buildings to pay the employees the prevailing rate as determined by the Secretary of Labor and then have them return a certain amount to the contractor. That is a most vicious practice.

The purpose of the last amendment above set out is to make the legislation apply to P.W.A. grants.

[p. 1]

1.7a (2) HOUSE COMMITTEE ON THE JUDICIARY

H.R. REP. No. 1750, 73d Cong., 2d Sess. (1934)

TO EFFECTUATE THE PURPOSE OF CERTAIN STATUTES CONCERNING RATES OF PAY FOR LABOR, BY MAKING IT UNLAWFUL TO PREVENT ANYONE FROM RECEIVING THE COMPENSATION CONTRACTED FOR THEREUNDER, AND FOR OTHER PURPOSES

MAY 23, 1934.—Referred to the House Calendar and ordered to be printed

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Mr. SUMNERS of Texas, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany S. 3041]

The Committee on the Judiciary, to whom was referred the bill (S. 3041) to effectuate the purpose of certain statutes concerning rates of pay for labor, by making it unlawful to prevent anyone from receiving the compensation contracted for thereunder, and for other purposes, after consideration, report the same favorably to the House with the recommendation that the bill do pass.

This bill is aimed at the suppression of the so-called "kick-back racket" by which a contractor on a Government project pays his laborers wages at the rate the Government requires him to pay them, but thereafter forces them to give back to him a part of the wages they have received. The maximum penalty prescribed for violation of the bill which prohibits this practice is a fine of $5,000 or imprisonment for 5 years, or both.

The Administrator of Public Works has urged the passage of this proposed legislation in the following letter to the Chairman of the Committee on the Judiciary:

FEDERAL EMERGENCY ADMINISTRATOR OF PUBLIC WORKS,
Washington, May 8, 1934.

Hon. H. W. SUMNERS,
Chairman of the Judiciary Committee,
House of Representatives, Washington, D.C.

MY DEAR JUDGE SUMNERS: It has come to my attention that bill S. 3041 has passed the Senate and is now under consideration by your committee. This bill makes a misdemeanor the inducing, by any manner whatsoever, of a "kick-back" from wages received pursuant to a contract of employment on any project financed in whole or in part with Federal funds.

I wish to impress you with the urgent need of this legislation to prevent a very prevalent evil in the construction industry which, to the extent that it exists on Public Works projects, defeats the purpose of title II of the National Industrial Recovery Act and the success of our Public Works program.

Sincerely yours,

HAROLD L. ICKES, *Administrator.*

[p. 1]

1.7a (3) CONGRESSIONAL RECORD, VOL. 78 (1934)

1.7a (3)(a) April 20: Passed Senate, p. 7401

[No Relevant Discussion on Pertinent Section]

1.7a (3)(b) June 7: Passed House, p. 10759

[No Relevant Discussion on Pertinent Section]

1.7b ACT TO AMEND TITLE XVIII, TITLE XXVIII, AND OTHER PURPOSES

May 24, 1949, P.L. 81–72, §134, 63 Stat. 108

SEC. 134. Section 2 of the Act of June 13, 1934 (chapter 482, 48 Stat. 948; 40 U.S.C., § 276c) is amended to read as follows:

"The Secretary of Labor shall make reasonable regulations for contractors and subcontractors engaged in the construction, prosecution, completion or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States, including a provision that each contractor and subcontractor shall furnish weekly a sworn affidavit with respect to the wages paid each employee during the preceding week.".

[p. 108]

1.7b (1) HOUSE COMMITTEE ON THE JUDICIARY

H.R. REP. No. 352, 81st Cong., 1st Sess. (1949)

AMENDMENT OF TITLE 18 AND TITLE 28, UNITED STATES CODE

MARCH 30, 1949.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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Mr. BRYSON, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany H. R. 3762]

The Committee on the Judiciary, to whom was referred the bill (H.R. 3762) to amend title 18, entitled "Crimes and Criminal Procedure," and title 28, entitled "Judiciary and Judicial Procedure," of the United States Code, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

The bill incorporates in titles 18 and 28 of the United States Code, legislation which was enacted in the latter part of the second session of the Eightieth Congress, either just before or subsequent to the enactment of the revision of those titles on June 25, 1948. It corrects typographical and other minor errors, and clarifies the language of some sections to conform more closely to the original law, or the remove ambiguities which have been discovered. The bill also substitutes corrected phraseology in sections relating to the armed forces to conform to the reorganization of such forces; makes changes of nomenclature in other titles of the code to conform to new title 28; amends the section prescribing procedure for the removal of cases from State courts so as to make it fit the diverse procedural laws of the various States; and repeals inconsistent and superseded laws.

[p. 1]

SECTION 134 OF BILL

This section restates section 2 of the 1934 kick-back statute to eliminate reference to section 1 of that act which is now section 874 of title 18,

U. S. C., and to conform to Reorganization Plan No. IV, § 9, eff., June 30, 1940 (5 F.R. 2421, 54 Stat. 1236).

[p. 21]

Act June 13, 1934, ch. 482, § 2, 48 Stat. 948 (40 U.S.C. § 276c) (see sec. 134 of bill)

Comparative text.—

The Secretary of Labor shall make reasonable regulations for contractors and subcontractors engaged in the construction, prosecution, completion or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. [To aid in the enforcement of the above section, the Secretary of the Treasury and the Secretary of the Interior jointly shall make reasonable regulations for contractors or subcontractors on any such building or work,] including a provision that each contractor and subcontractor shall furnish weekly a sworn affidavit with respect to the wages paid each employee during the preceding week.

[p. 53]

1.7b (2) SENATE COMMITTEE ON THE JUDICIARY

S. REP. No. 303, 81st Cong., 1st Sess. (1949)

AMENDMENT OF TITLE 18 AND TITLE 28, UNITED STATES CODE

APRIL 26 (legislative day, APRIL 11), 1949.—Ordered to be printed

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Mr. O'CONOR, from the Committee on the Judiciary, submitted the following

REPORT

[To accompany H. R. 3762]

The Committee on the Judiciary, to whom was referred the bill (H.R. 3762) to amend title 18, entitled, "Crimes and Criminal Procedure," and title 28, entitled, "Judiciary and Judicial Procedure," of the United States Code, and for other purposes, having considered the same, report favorably thereon, with amendments, and recommend that the bill, as amended, do pass.

[p. 1]

1.7b (3) CONGRESSIONAL RECORD, VOL. 95 (1949)

1.7b (3)(a) April 14: Passed House, p. 3819

[No Relevant Discussion on Pertinent Section]

1.7b (3)(b) May 6: Amended and passed Senate, p. 5826

[No Relevant Discussion on Pertinent Section]

1.7b (3)(c) May 18: House concurs in Senate amendments, p. 6283

[No Relevant Discussion on Pertinent Section]

1.7c SMALL BUSINESS PROCUREMENT PROCEDURES ACT

August 28, 1958, P.L. 85-800, §12, 72 Stat. 967

SEC. 12. Section 2 of the Act of June 13, 1934 (48 Stat. 948), as amended (40 U.S.C. 276c), is amended further—

(a) by striking out "sworn affidavit" and substituting therefor "statement"; and

(b) by adding at the end thereof the following sentence: "Section 1001 of title 18 of the United States Code (Criminal Code and Criminal Procedure) shall apply to such statements."

[p. 967]

1.7c (1) SENATE COMMITTEE ON GOVERNMENT OPERATIONS

S. REP. No. 2201, 85th Cong., 2d Sess. (1958)

IMPROVING OPPORTUNITIES FOR SMALL BUSINESS CONCERNS TO OBTAIN A FAIR PROPORTION OF GOVERNMENT PURCHASES AND CONTRACTS, TO FACILITATE PROCUREMENT OF PROPERTY AND SERVICES BY THE GOVERNMENT, AND FOR OTHER PURPOSES

AUGUST 5, 1958.—Ordered to be printed

Mr. MCCLELLAN, from the Committee on Government Operations, submitted the following

REPORT

[To accompany S. 3224]

The Committee on Government Operations, to whom was referred the bill (S. 3224) to improve opportunities for small business concerns to obtain a fair proportion of Government purchases and contracts, to facilitate procurement of property and services by the Government, and for other purposes, having considered the same, report favorably thereon with amendments, and recommend that the bill, as amended, do pass.

[p. 1]

Section 12: Section 12 would amend the Copeland (Anti-Kickback) Act to simplify the filing of payroll information by contractors and subcontractors in connection with construction contracts made or financed by the Government.

Section 12 (*a*) would authorize their furnishing a "statement" of wages paid employees during the preceding week instead of a "sworn affidavit" with respect thereto. Removal of the statutory requirement for the affidavit will permit simplification of enforcement procedures.

Section 12 (*b*) would apply the provisions and penalties of section 1001 of title 18, United States Code, to the filing of these statements. Hence, the criminal law will apply to false statements as it does to false affidavits.

The anti-kickback provision of the Copeland Act will continue to be protected by the criminal law (18 U.S.C. 874).

[p. 9]

TITLE 40, UNITED STATES CODE, SECTION 276c

SEC. 276c. Same; regulations governing contractors and subcontractors.

The Secretary of Labor shall make reasonable regulations for contractors and subcontractors engaged in the construction, prosecution, completion or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States, including a provision that each contractor and subcontractor shall furnish weekly a [sworn affidavit] *statement* with respect to the wages paid each employee during the preceding week. *Section 1001 of title 18 of the United States Code (Criminal Code and Criminal Procedure) shall apply to such statements.* (June 13, 1934, ch. 482, § 2, 48 Stat. 948; 1940 Reorg. Plan No. IV, § 9, 5 F. R. 2421, 54 Stat. 1236; May 24, 1949, ch. 139, § 134, 63 Stat. 108.)

[p. 25]

1.7c (2) CONGRESSIONAL RECORD, VOL. 104 (1958)

1.7c (2)(a) Aug. 14: Passed Senate, p. 17539

[No Relevant Discussion on Pertinent Section]

1.7c (2)(b) Aug. 15: Passed House, p. 17908

[No Relevant Discussion on Pertinent Section]

1.8 AMORTIZATION OF POLLUTION CONTROL FACILITIES

As amended, 26 U.S.C. §169 (1969)

(See "General 1.4–1.4a (5) (c)" for text and legislative history)

AMORTIZATION OF POLLUTION CONTROL FACILITIES

§169. Amortization of pollution control facilities

(a) Allowance of deduction.—Every person, at his election, shall be entitled to a deduction with respect to the amortization of the amortizable basis of any certified pollution control facility (as defined in subsection (d)), based on a period of 60 months. Such amortization deduction shall be an amount, with respect to each month of such period within the

taxable year, equal to the amortizable basis of the pollution control facility at the end of such month divided by the number of months (including the month for which the deduction is computed) remaining in the period. Such amortizable basis at the end of the month shall be computed without regard to the amortization deduction for such month. The amortization deduction provided by this section with respect to any month shall be in lieu of the depreciation deduction with respect to such pollution control facility for such month provided by section 167. The 60-month period shall begin, as to any pollution control facility, at the election of the taxpayer, with the month following the month in which such facility was completed or acquired, or with the succeeding taxable year.

(b) Election of amortization.—The election of the taxpayer to take the amortization deduction and to begin the 60-month period with the month following the month in which the facility is completed or acquired, or with the taxable year succeeding the taxable year in which such facility is completed or acquired, shall be made by filing with the Secretary or his delegate, in such manner, in such form, and within such time, as the Secretary or his delegate may by regulations prescribe, a statement of such election.

(c) Termination of amortization deduction.—A taxpayer which has elected under subsection (b) to take the amortization deduction provided in subsection (a) may, at any time after making such election, discontinue the amortization deduction with respect to the remainder of the amortization period, such discontinuance to begin as of the beginning of any month specified by the taxpayer in a notice in writing filed with the Secretary or his delegate before the beginning of such month. The depreciation deduction provided under section 167 shall be allowed, beginning with the first month as to which the amortization deduction does not apply, and the taxpayer shall not be entitled to any further amortization deduction under this section with respect to such pollution control facility.

(d) Definitions.—For purposes of this section—

(1) Certified pollution control facility.—The term "certified pollution control facility" means a new identifiable treatment facility which is used, in connection with a plant or other property in operation before January 1, 1969, to abate or control water or atmospheric pollution or contamination by removing, altering, disposing, or storing of pollutants, contaminants, wastes, or heat and which—

(A) the State certifying authority having jurisdiction with respect to such facility has certified to the Federal certifying authority as having been constructed, reconstructed, erected,

or acquired in conformity with the State program or requirements for abatement or control of water or atmospheric pollution or contamination; and

(B) the Federal certifying authority has certified to the Secretary or his delegate (i) as being in compliance with the applicable regulations of Federal agencies and (ii) as being in furtherance of the general policy of the United States for cooperation with the States in the prevention and abatement of water pollution under the Federal Water Pollution Control Act, as amended (33 U.S.C. 466 et seq.), or in the prevention and abatement of atmospheric pollution and contamination under the Clean Air Act, as amended (42 U.S.C. 1857 et seq.).

(2) State certifying authority.—The term "State certifying authority" means, in the case of water pollution, the State water pollution control agency as defined in section 13(a) of the Federal Water Pollution Control Act and, in the case of air pollution, the air pollution control agency as defined in section 302(b) of the Clean Air Act. The term "State certifying authority" includes any interstate agency authorized to act in place of a certifying authority of the State.

(3) Federal certifying authority.—The term "Federal certifying authority" means, in the case of water pollution, the Secretary of the Interior and, in the case of air pollution, the Secretary of Health, Education, and Welfare.

(4) New identifiable treatment facility.—For purposes of paragraph (1), the term "new identifiable treatment facility" includes only tangible property (not including a building and its structural components, other than a building which is exclusively a treatment facility) which is of a character subject to the allowance for depreciation provided in section 167, which is identifiable as a treatment facility, and which—

(A) is property—

(i) the construction, reconstruction, or erection of which is completed by the taxpayer after December 31, 1968, or

(ii) acquired after December 31, 1968, if the original use of the property commences with the taxpayer and commences after such date, and

(B) is placed in service by the taxpayer before January 1, 1975.

In applying this section in the case of property described in clause (i) of subparagraph (A), there shall be taken into account only that portion of the basis which is properly attributable to construction, reconstruction, or erection after December 31, 1968.

(e) Profitmaking abatement works, etc.—The Federal certifying authority shall not certify any property under subsection (d) (1) (B) to the extent it appears that by reason of profits derived through the recovery of wastes or otherwise in the operation of such property, its costs will be recovered over its actual useful life.

(f) Amortizable basis.—

(1) Defined.—For purposes of this section, the term "amortizable basis" means that portion of the adjusted basis (for determining gain) of a certified pollution control facility which may be amortized under this section.

(2) Special rules.—

(A) If a certified pollution control facility has a useful life (determined as of the first day of the first month for which a deduction is allowable under this section) in excess of 15 years, the amortizable basis of such facility shall be equal to an amount which bears the same ratio to the portion of the adjusted basis of such facility, which would be eligible for amortization but for the application of this subparagraph, as 15 bears to the number of years of useful life of such facility.

(B) The amortizable basis of a certified pollution control facility with respect to which an election under this section is in effect shall not be increased, for purposes of this section, for additions or improvements after the amortization period has begun.

(g) Depreciation deduction.—The depreciation deduction provided by section 167 shall, despite the provisions of subsection (a), be allowed with respect to the portion of the adjusted basis which is not the amortizable basis.

(h) Repealed. Pub.L. 92-178, Title I, §104(f)(2), Dec. 10, 1971, 85 Stat. 502.

(i) Life tenant and remainderman.—In the case of property held by one person for life with remainder to another person, the deduction under this section shall be computed as if the life tenant were the absolute owner of the property and shall be allowable to the life tenant.

(j) Cross reference.—

For special rule with respect to certain gain derived from the disposition of property the adjusted basis of which is determined with regard to this section, see section 1245.

Aug. 16, 1954, c. 736, 68A Stat. 55, added Pub.L. 91–172, Title VII, §704(a), Dec. 30, 1969, 83 Stat. 667; amended Pub.L. 92–178, Title I, §104(f)(2), Dec. 10, 1971, 85 Stat. 502.

1.9 INTEREST ON CERTAIN GOVERNMENT OBLIGATIONS

As amended, 26 U.S.C. §103 (1969)

(See "General 1.9–1.9d (4) (d)" for text and legislative history)

INTEREST ON CERTAIN GOVERNMENT OBLIGATIONS

§103. Interest on certain governmental obligations

(a) General rule.—Gross-income does not include interest on—

(1) the obligations of a State, a Territory, or a possession of the United States, or any political subdivision of any of the foregoing, or of the District of Columbia;

(2) the obligations of the United States; or

(3) the obligations of a corporation organized under Act of Congress, if such corporation is an instrumentality of the United States and if under the respective Acts authorizing the issue of the obligations the interest is wholly exempt from the taxes imposed by this subtitle.

(b) Exception.—Subsection (a) (2) shall not apply to interest on obligations of the United States issued after September 1, 1917 (other than postal savings certificates of deposit, to the extent they represent deposits made before March 1, 1941), unless under the respective Acts authorizing the issuance thereof such interest is wholly exempt from the taxes imposed by this subtitle.

(c) Industrial development bonds.—

(1) Subsection (a) (1) not to apply.—Except as otherwise provided in this subsection, any industrial development bond shall be treated as an obligation not described in subsection (a) (1).

(2) Industrial development bond.—For purposes of this subsection, the term "industrial development bond" means any obligation—

(A) which is issued as part of an issue all or a major portion of the proceeds of which are to be used directly or indirectly in any trade or business carried on by any person who is not an exempt person (within the meaning of paragraph (3)), and

(B) the payment of the principal or interest on which (under the terms of such obligation or any underlying arrangement) is, in whole or in major part—

(i) secured by any interest in property used or to be used in a trade or business or in payments in respect of such property, or

(ii) to be derived from payments in respect of property, or borrowed money, used or to be used in a trade or business.

(3) Exempt person.—For purposes of paragraph (2) (A), the term "exempt person" means—

(A) a governmental unit, or

(B) an organization described in section 501(c) (3) and exempt from tax under section 501(a) (but only with respect to a trade or business carried on by such organization which is not an unrelated trade or business, determined by applying section 513(a) to such organization).

(4) Certain exempt activities.—Paragraph (1) shall not apply to any obligation which is issued as part of an issue substantially all of the proceeds of which are to be used to provide—

(A) residential real property for family units,

(B) sports facilities,

(C) convention or trade show facilities,

(D) airports, docks, wharves, mass commuting facilities, parking facilities, or storage for training facilities directly related to any of the foregoing,

(E) sewage or solid waste disposal facilities or facilities for the local furnishing of electric energy or gas,

(F) air or water pollution control facilities, or

(G) facilities for the furnishing of water, if available on reasonable demand to members of the general public.

(5) Industrial parks.—Paragraph (1) shall not apply to any obligation issued as part of an issue substantially all of the proceeds of which are to be used for the acquisition or development of land as the site for an industrial park. For purposes of the preceding sentence, the term "development of land" includes the provision of water, sewage, drainage, or similar facilities, or of transportation, power, or communication facilities, which are incidential to use of the site as an industrial park, but, except with respect to such facilities, does not include the provision of structures or buildings.

(6) Exemption for certain small issues.—

(A) In general.—Paragraph (1) shall not apply to any obligation issued as part of an issue the aggregate authorized face amount of which is $1,000,000 or less and substantially all of the proceeds of which are to be used (i) for the acquisition,

construction, reconstruction, or improvement of land or property of a character subject to the allowance for depreciation, or (ii) to redeem part or all of a prior issue which was issued for purposes described in clause (i) or this clause.

(B) Certain prior issues taken into account.—If—

(i) the proceeds of two or more issues of obligations (whether or not the issuer of each such issue is the same) are or will be used primarily with respect to facilities located in the same incorporated municipality or located in the same county (but not in any incorporated municipality),

(ii) the principal user of such facilities is or will be the same person or two or more related persons, and

(iii) but for this subparagraph, subparagraph (A) would then apply to each such issue,

then, for purposes of subparagraph (A), in determining the aggregate face amount of any later issue there shall be taken into account the face amount of obligations issued under all prior such issues and outstanding at the time of such later issue (not including as outstanding any obligation which is to be redeemed from the proceeds of the later issue).

(C) Related persons.—For purposes of this paragraph and paragraph (7), a person is a related person to another person if—

(i) the relationship between such persons would result in a disallowance of losses under section 267 or 707(b), or

(ii) such persons are members of the same controlled group of corporations (as defined in section 1563(a), except that "more than 50 percent" shall be substituted for "at least 80 percent" each place it appears therein).

(D) $5,000,000 limit in certain cases.—At the election of the issuer, made at such time and in such manner as the Secretary or his delegate shall by regulations prescribe, with respect to any issue this paragraph shall be applied—

(i) by substituting "$5,000,000" for "$1,000,000" in subparagraph (A), and

(ii) in determining the aggregate face amount of such issue, by taking into account not only the amount described in subparagraph (B), but also the aggregate amount of capital expenditures with respect to facilities described in subparagraph (E) paid or incurred during the 6-year period beginning 3 years before the date of such issue and ending 3 years after such date (and financed otherwise than out of the proceeds of outstanding issues to which subparagraph (A) applied), as if the aggregate amount of such capital

expenditures constituted the face amount of a prior outstanding issue described in subparagraph (B).

(E) Facilities taken into account.—For purposes of subparagraph (D) (ii), the facilities described in this subparagraph are facilities—

(i) located in the same incorporated municipality or located in the same county (but not in any incorporated municipality), and

(ii) the principal user of which is or will be the same person or two or more related persons.

For purposes of clause (i), the determination of whether or not facilities are located in the same governmental unit shall be made as of the date of issue of the issue in question.

(F) Certain capital expenditures not taken into account.—For purposes of subparagraph (D) (ii), any capital expenditure—

(i) to replace property destroyed or damaged by fire, storm, or other casualty, to the extent of the fair market value of the property replaced.

(ii) required by a change made after the date of issue of the issue in question in a Federal or State law or local ordinance of general application or required by a change made after such date in rules and regulations of general application issued under such a law or ordinance, or

(iii) required by circumstances which could not be reasonably foreseen on such date of issue or arising out of a mistake of law or fact (but the aggregate amount of expenditures not taken into account under this clause with respect to any issue shall not exceed $250,000),

shall not be taken into account.

(G) Limitation on loss of tax exemption.—In subparagraph (D) (ii) with respect to capital expenditures made after the date of any issue, no obligation issued as a part of such issue shall be treated as an obligation not described in subsection (a) (1) by reason of any such expenditure for any period before the date on which such expenditure is paid or incurred.

(H) Certain refinancing issues.—In the case of any issue described in subparagraph (A) (ii), an election may be made under subparagraph (D) only if all of the prior issues being redeemed are issued to which subparagraph (A) applies. In applying subparagraph (D) (ii) with respect to such a refinancing issue, capital expenditures shall be taken into account only for purposes of determining whether the prior issues being re-

deemed qualified (and would have continued to qualify) under subparagraph (A).

(7) Exception.—Paragraphs (4), (5), and (6) shall not apply with respect to any obligation for any period during which it is held by a person who is a substantial user of the facilities or a related person.

(d) Arbitrage bonds.—

(1) Subsection (a) (1) not to apply.—Except as provided in this subsection, any arbitrage bond shall be treated as an obligation not described in subsection (a) (1).

(2) Arbitrage bond.—For purposes of this subsection, the term "arbitrage bond" means any obligation which is issued as part of an issue all or a major portion of the proceeds of which are reasonably expected to be used directly or indirectly—

(A) to acquire securities (within the meaning of section 165(g) (2) (A) or (B)) or obligations other than obligations described in subsection (a) (1)) which may be reasonably expected at the time of issuance of such issue, to produce a yield over the term of the issue which is materially higher (taking into account any discount or premium) than the yield on obligations of such issue, or

(B) to replace funds which were used directly or indirectly to acquire securities or obligations described in subparagraph (A).

(3) Exception.—Paragraph (1) shall not apply to any obligation—

(A) which is issued as part of an issue substantially all of the proceeds of which are reasonably expected to be used to provide permanent financing for real property used or to be used for residential purposes for the personnel of an educational institution (within the meaning of section 151(e) (4) which grants baccalaureate or higher degrees, or to replace funds which were so used, and

(B) the yield on which over the term of the issue is not reasonably expected, at the time of issuance of such issue, to be substantially lower than the yield on obligations acquired or to be acquired in providing such financing.

This paragraph shall not apply with respect to any obligation for any period during which it is held by a person who is a substantial user of property financed by the proceeds of the issue of which such obligation is a part, or by a member of the family (within the meaning of section 318(a) (1)) of any such person.

(4) Special rules.—For purposes of paragraph (1), an obligation shall not be treated as an arbitrage bond solely by reason of the fact that—

(A) the proceeds of the issue of which such obligation is a part may be invested for a temporary period in securities or other obligations until such proceeds are needed for the purpose for which such issue was issued, or

(B) an amount of the proceeds of the issue of which such obligation is a part may be invested in securities or other obligations which are part of a reasonably required reserve or replacement fund.

The amount referred to in subparagraph (B) shall not exceed 15 percent of the proceeds of the issue of which such obligation is a part unless the issuer establishes that a higher amount is necessary.

(5) Regulations.—The Secretary or his delegate shall prescribe such regulations as may be necessary to carry out the purposes of this subsection.

(e) Cross references.—

For provisions relating to the taxable status of—

(1) Bonds and certificates of indebtedness authorized by the First Liberty Bond Act, see sections 1 and 6 of that Act (40 Stat. 35, 36; 31 U.S.C. 746, 755);

(2) Bonds issued to restore or maintain the gold reserve, see section 2 of the Act of March 14, 1900 (31 Stat. 46; 31 U.S.C. 408);

(1) Bonds, notes, certificates of indebtedness, and Treasury bills authorized by the Second Liberty Bond Act, see sections 4, 5(b) and (d), 7, 18(b), and 22(d) of that Act, as amended (40 Stat. 290; 46 Stat. 20, 775; 40 Stat. 291, 1310; 55 Stat. 8; 31 U.S.C. 752a, 754, 747, 753, 757c);

(4) Bonds, notes, and certificates of indebtedness of the United States and bonds of the War Finance Corporation owned by certain nonresidents, see section 3 of the Fourth Liberty Bond Act, as amended (40 Stat. 1311, §4; 31 U.S.C. 750);

(5) Certificates of indebtedness issued after February 4, 1910, see section 2 of the Act of that date (36 Stat. 192; 31 U.S.C. 769);

(6) Consols of 1930, see section 11 of the Act of March 14, 1900 (31 Stat. 48; 31 U.S.C. 751);

(7) Obligations and evidences of ownership issued by the United States or any of its agencies or instrumentalities on or after March 28, 1942, see section 4 of the Public

Debt Act of 1941, as amended (c. 147, 61 Stat. 180; 31 U.S.C. 742a);

(8) Commodity Credit Corporation obligation, see section 5 of the Act of March 8, 1938 (52 Stat. 108; 15 U.S.C. 713a–5);

(9) Debentures issued by Federal Housing Administrator, see sections 204(d) and 207(i) of the National Housing Act, as amended (52 Stat. 14, 20; 12 U.S.C. 1710, 1713);

(10) Debentures issued to mortgagees by United States Maritime Commission, see section 1105(c) of the Merchant Marine Act, 1936, as amended (52 Stat. 972; 46 U.S.C. 1275);

(11) Federal Deposit Insurance Corporation obligations, see section 15 of the Federal Deposit Insurance Act (64 Stat. 890; 12 U.S.C. 1825);

(12) Federal Home Loan Bank obligations, see section 13 of the Federal Home Loan Bank Act, as amended (49 Stat. 295, §3; 12 U.S.C. 1433);

(13) Federal savings and loan association loans, see section 5(h) of the Home Owners' Loan Act of 1933, as amended (48 Stat. 133; 12 U.S.C. 1464);

(14) Federal Savings and Loan Insurance Corporation obligations, see section 402(e) of the National Housing Act (48 Stat. 1257; 12 U.S.C. 1725);

(15) Home Owners' Loan Corporation bonds, see section 4(c) of the Home Owners' Loan Act of 1933, as amended (43 Stat. 644, c. 168; 12 U.S.C. 1463);

(16) Obligations of Central Bank for Cooperatives, production credit corporations, production credit associations, and banks for cooperatives, see section 63 of the Farm Credit Act of 1933 (48 Stat. 267; 12 U.S.C. 1138c);

(17) Panama Canal bonds, see section 1 of the Act of December 21, 1904 (34 Stat. 5; 3 U.S.C. 743), section 8 of the Act of June 28, 1902 (32 Stat. 484; 31 U.S.C. 744), and section 39 of the Tariff Act of 1909 (36 Stat. 117; 31 U.S.C. 745);

(18) Philippine bonds, etc., issued before the independence of the Philippines, see section 9 of the Philippine Independence Act (48 Stat. 463; 48 U.S.C. 1239);

(19) Postal savings bonds, see section 10 of the Act of June 25, 1910 (36 Stat. 817; 39 U.S.C. 760);

(20) Puerto Rican bonds, see section 3 of the Act of March 2, 1917, as amended (50 Stat. 344; 48 U.S.C. 745);

(21) Treasury notes issued to retire national bank notes, see section 18 of the Federal Reserve Act (38 Stat. 268; 12 U.S.C. 447);

(22) United States Housing Authority obligations, see sections 5(e) and 20(b) of the United States Housing Act of 1937 (50 Stat. 890, 898; 42 U.S.C. 1405, 1420);

(23) Virgin Islands insular and municipal bonds, see section 1 of the Act of October 27, 1949 (63 Stat. 940; 48 U.S.C. 1403)

Aug. 16, 1954, c. 736, 68A Stat. 29; June 29, 1968, Pub.L. 90–364, Title I, §107(a), 82 Stat. 266; Oct. 24, 1968, Pub.L. 90–634, Title IV, §401(a), 82 Stat. 1349; Dec. 30, 1969, Pub.L. 91–172, Title VI, §601(a), 83 Stat. 656; Dec. 10, 1971, Pub.L. 92-178, Title III, §315(a), (b), 85 Stat. 529.

Executive Orders

[Reserved]

Regulations

[EPA's regulations are found in the Code of Federal Regulations (CFR), which is periodically updated by the Federal Register. For a complete listing of the pertinent regulations, see "Contents 3.1 through 3.7" on page xix.]

Guidelines and Reports

4.1 STATE/INTERSTATE SOLID WASTE PLANNING GRANT LISTING, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, JANUARY 1968,

STATE/INTERSTATE SOLID WASTE PLANNING GRANT LISTING, JANUARY 1968

The Solid Waste Disposal Act, Public Law 89-272, provides for grants to State and interstate agencies not to exceed fifty percent of the cost of making surveys of solid waste practices and developing solid waste disposal plans. Initial planning grant applications are considered for a maximum project period of three years.

To date, thirty-five States and Puerto Rico have received solid waste planning grants. Thd District of Columbia's planning grant and the Kansas-Missouri interstate planning grant have been approved but have not been funded. Consequently, the "Project Period" begin and end dates for these two grants are not shown on the listing.

Total Public Health Service funds awarded for solid waste planning grants during Fiscal Year 1966 amounted to $399,983. Total funds awarded during Fiscal Year 1967 were $997,305. Planning Grant funds are limited to $2,000,000 for Fiscal Year 1968.

The figure given in the "Total Recommended PHS Support" column represents the total amount of PHS funds initially approved for the grantee's entire project period. The grantee is required to provide at least an equivalent amount of matching support.

The Public Health Service official assigned to the planning project is the Solid Wastes Program regional program chief for the PHS region in which the grantee is located. A listing of regional program chiefs is shown on the following page. The PHS region in which each project is located is specified on the listing.

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STATES AND INTERSTATE AREAS WITH APPROVED SOLID WASTE PLANNING GRANTS

State	PHS region	Grant number	Project, director, and agency	Project period		Period of support (years)	Total recommended PHS support
				Begin	End		
Arkansas	VII	S02-UI-00032	S. L. Davies, Arkansas Pollution Control Commission, Little Rock, Ark.	Oct. 1, 1967	Sept. 30, 1970	3	$60,600
California	IX	S02-UI-00008	P. A. Rogers, State Department of Public Health, Berkeley, Calif.	June 1, 1966	May 31, 1969	3	190,000
Colorado	VIII	S02-UI-00001	O. F. Stoddard, Colorado State Department of Public Health, Denver, Colo.	June 1, 1966	May 31, 1969	3	67,765
Connecticut	I	S02-UI-00023	D. C. Wiggin, Connecticut State Department of Health, Hartford, Conn.	June 1, 1966	May 31, 1969	3	108,741
Delaware	II	S02-UI-00037	Donald K. Harmeson, Delaware State Board of Health, Dover, Del.	June 1, 1967	May 31, 1970	3	40,000
District of Columbia	III	S02-UI-00030	Paul W. Reed, Department of Sanitary Engineering, Washington, D.C.	----------	----------	1	50,000
Florida	IV	S02-UI-00025	V. D. Patton, Florida State Board of Health, Jacksonville, Fla.	June 1, 1967	May 31, 1970	3	77,161
Georgia	IV	S02-UI-00022	J. P. Gibbs, Georgia Department of Public Health, Atlanta, Ga.	Sept. 1, 1966	Aug. 31, 1968	2	62,284
Hawaii	IX	S02-UI-00013	B. J. McMorrow, Hawaii Department of Health, Honolulu, Hawaii.	June 1, 1966	Dec. 31, 1968	2	76,400
Idaho	VIII	S02-UI-00015	R. P. Olson, Idaho Department of Health, Boise, Idaho.	June 1, 1966	May 31, 1969	3	68,024
Kansas	VI	S02-UI-00035	Ivan F. Shull, Kansas State Health Department, Topeka, Kans.	Nov. 1, 1967	Oct. 31, 1970	3	60,267
Kan.-Mo. Interstate	VI	S02-UI-00038	K. E. Crippin (acting), Metropolitan Planning Commission, Kansas City, Mo.	----------	----------	2	125,000

Kentucky	III	S02-UI-00005	R. C. Pickard, Kentucky State Department of Health, Frankfort, Ky.	June 1, 1966	May 31, 1969	3	45,000
Louisiana	VII	S02-UI-00010	J. T. Trygg, Louisiana State Board of Health, New Orleans, La.	Sept. 1, 1966	Aug. 31, 1968	2	68,277
Maine	I	S02-UI-00024	E. W. Tibbetts, Maine Department of Health and Welfare, Augusta, Maine.	June 1, 1966	Dec. 31, 1968	2	29,000
Maryland	III	S02-UI-00009	W. H. Shields, Jr., Maryland State Department of Health, Baltimore, Md.	Jan. 1, 1967	Dec. 31, 1969	3	143,874
Massachusetts	I	S02-UI-00016	J. J. Collins, Department of Public Health, Boston, Mass.	Jan. 1, 1967	Dec. 31, 1970	3	89,035
Michigan	V	S02-UI-00036	Fred B. Kellow, Michigan Department of Public Health, Lansing, Mich.	June 1, 1967	May 31, 1969	2	96,761
Minnesota	VI	S02-UI-00034	John P. Badalich, Minnesota Pollution Control Agency, Minneapolis, Minn.	Jan. 1, 1968	Dec. 31, 1970	3	60,211
Montana	VIII	S02-UI-00028	Claiborne W. Brinck, Montana State Board of Health, Helena, Mont.	June 1, 1967	May 31, 1970	3	60,319
New Jersey	II	S02-UI-00007	John Zemlansky, New Jersey State Department of Health, Trenton, N. J.	June 1, 1966	May 31, 1968	2	120,000
New Mexico	VII	S02-UI-00019	Bryan E. Miller, New Mexico Department of Public Health, Santa Fe, N. M.	Oct. 1, 1967	Sept. 30, 1970	3	87,606
New York	II	S02-UI-00021	J. A. Salvato, New York State Department of Health, Albany, N. Y.	June 1, 1966	May 31, 1969	3	425,000
North Carolina	III	S02-UI-00006	C. M. White, North Carolina State Board of Health, Raleigh, N.C.	Sept. 1, 1966	Aug. 31, 1969	3	45,576
North Dakota	VI	S02-UI-00029	Everett Lobb, North Dakota State Department of Health, Bismark, N. Dak.	July 1, 1967	June 30, 1970	3	40,623
Ohio	V	S02-UI-00011	C. M. Robinson, Ohio Department of Health, Columbus, Ohio.	Sept. 1, 1966	Aug. 31, 1968	2	84,340
Oklahoma	VII	S02-UI-00018	L. F. Pummill, Oklahoma State Department of Health, Oklahoma City, Okla.	June 1, 1966	May 31, 1969	3	88,500

STATES AND INTERSTATE AREAS WITH APPROVED SOLID WASTE PLANNING GRANTS—Continued

State	PHS region	Grant number	Project, director, and agency	Project period		Period of support (years)	Total recommended PHS support
				Begin	End		
Oregon	IX	S02-UI-00014	W. B. Culham, Oregon State Board of Health, Portland, Ore.	Sept. 1, 1966	Aug. 31, 1969	3	48,654
Pennsylvania	II	S02-UI-00020	W. Bucciarelli, Pennsylvania Department of Health, Harrisburg, Pa.	June 1, 1966	May 31, 1969	3	315,374
Rhode Island	I	S02-UI-00012	W. J. Shea, Rhode Island Department of Health, Providence, R. I.	June 1, 1966	May 31, 1968	2	23,458
South Carolina	IV	S02-UI-00017	C. E. Corley, South Carolina State Board of Health, Columbia, S.C.	June 1, 1966	May 31, 1969	3	150,588
Tennessee	IV	S02-UI-00026	J. L. Church, Tennessee Department of Public Health, Nashville, Tenn.	Jan. 1, 1967	Dec. 31, 1969	3	76,505
Texas	VII	S02-UI-00031	D. M. Cochran, Texas State Department of Health, Austin, Tex.	Jan. 1, 1967	Dec. 31, 1969	3	86,063
Utah	VIII	S02-UI-00033	Lynn N. Thatcher, Utah State Department of Health, Salt Lake City, Utah.	Sept. 1, 1967	Aug. 31, 1970	3	29,121
Virginia	III	S02-UI-00003	R. E. Dorer, Virginia State Health Department, Richmond, Va.	Sept. 1, 1966	Aug. 31, 1969	3	108,564
Washington	IX	S02-UI-00004	R. J. Myklebust, Washington Department of Health, Olympia, Wash.	Sept. 1, 1966	Aug. 31, 1968	2	45,000
West Virginia	III	S02-UI-00002	O. R. Lyons, West Virginia State Department of Health, Charleston, W. Va.	June 1, 1966	May 31, 1969	3	71,243
Puerto Rico	III	S02-UI-00027	Santos Rohena, Puerto Rico Department of Health, Santurce, P.R.	Sept. 1, 1967	Aug. 31, 1970	3	30,972

NOTE.—For any additions or corrections, please contact: Lee Hultgren, U.S. Public Health Service, NCUIH, Solid Wastes Program, 222 East Central Parkway, Cincinnati, Ohio 45202. Area Code: 513-871-1820.

4.2 SOLID WASTE DISPOSAL DEMONSTRATION OR STUDY AND INVESTIGATION PROJECT GRANTS, TERMS, AND CONDITIONS, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, NATIONAL CENTER FOR URBAN AND INDUSTRIAL HEALTH, SOLID WASTE PROGRAM, AUGUST 1967

TERMS AND CONDITIONS GOVERNING
SOLID-WASTE DISPOSAL
DEMONSTRATION OR STUDY AND INVESTIGATION PROJECT GRANTS

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DISCRIMINATION PROHIBITED—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, the grant and award programs of the Public Health Service, like every program or activity receiving financial assistance from the Department of Health, Education, and Welfare, must be operated in compliance with this law.

TERMS AND CONDITIONS GOVERNING SOLID-WASTE DISPOSAL DEMONSTRATION OR STUDY AND INVESTIGATION PROJECT GRANTS*

I. PURPOSE OF DEMONSTRATION OR STUDY AND INVESTIGATION PROJECT GRANTS

This document sets forth the terms, conditions, and procedures governing the Solid-Waste Disposal Demonstration or Study and Investigation Project Grants administered by the Solid Wastes Program, Public Health Service. The program is authorized by Section 204, Title II, Public Law 89-272, Solid Waste Disposal Act, and the regulations pursuant thereto (42 CFR, Part 59). It provides for Federal grants for the support of demonstration projects of new and improved solid-waste disposal methods, devices, and techniques, studies and investigations of municipal and regional solid-waste disposal problems, practices and programs, and studies and investigations of particular solid-wastes, solid-waste disposal problems, practices, and techniques. This program also provides support for demonstration, study, and investigation projects on the reduction of the amount of solid wastes and unsalvageable waste materials, and the recovery and utilization of potential resources in solid-wastes.

"Solid-waste" means 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 solid or dissolved material in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants. "Solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid-waste.

The Act also authorizes Federal financial assistance for the construction of facilities necessary to demonstration projects, but not for study and investigation projects as stated above. The term "construction" as defined in Section 203 of the Solid Waste Disposal Act means (a) the erection or building of new structures and acquisition of lands or interests therein, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and (b) the acquisition and installation of initial equipment of, or required in connection with, new or newly acquired structures or the expanded, remodeled, altered, modernized or extended part of existing structures (including trucks and other motor vehicles, tractors, cranes, and other machinery)

* *These terms and conditions are subject to change as deemed necessary by the Public Health Service.*

necessary for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and the public health, safety, engineering, architectural, legal, fiscal, and economic aspects

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of the project, and any surveys, designs, plans, working drawings, specifications, and other action necessary for carrying out the construction of the facility, and (c) the inspection and supervision of the process of carrying out the project to completion.

II. ELIGIBLE APPLICANTS

Any public agency or private non-profit organization in the United States (including the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and American Samoa) is eligible to apply for a grant. A private non-profit organization must provide evidence of its non-profit status.

III. EXTENT OF FEDERAL FINANCIAL ASSISTANCE

The Federal grant for a solid-waste disposal demonstration or study and investigation project may not exceed two-thirds of the estimated total cost of the project, including the estimated cost of construction of facilities, if any. The remainder is to be provided from non-Federal funds.

IV. APPLICANT FINANCIAL PARTICIPATION REQUIREMENTS

Applicants are required to provide at least one-third of the estimated total cost of the demonstration project, including the cost of construction of facilities, if any, from funds other than any other Federal grants, or any non-Federal funds used to match other Federal grants.

V. PERIOD OF SUPPORT

The length of time for which demonstration or study and investigation project grant support may be requested is dependent upon the concept, the objectives, and the methodology proposed. The Public Health Service limits its approval to grant support to project periods up to three years. Budget periods within the maximum 3-year project periods and 12-month units beginning on the first day of the month requested in an approved application, or the first day of the month mutually agreed upon by the applicant and the Solid Wastes Program. Grantees may request renewal beyond the originally approved project period for projects which require a longer period for completion. Renewal applications

compete with new and other renewal applications in the same manner as original applications. (See Section No. XVIII, Continuation and Renewal Applications.)

VI. PROGRAM DIRECTION

The demonstration or study and investigation project must be under the direction of a full-time director or coordinator responsible for the direction and supervision of all the activities involved in the project. This is the individual whom the Public Health Service will contact in matters concerning the project.

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VII. CONDITIONS OF GRANT

In order to be awarded a grant for an approved solid-waste disposal "Studies and investigation-Municipal and regional project", applicants must provide assurance satisfactory to the Surgeon General of the Public Health Service:

a. That there shall be an effective arrangement to insure full participation and coordination with related State, interstate, regional, and local planning activities; and

b. That non-Federal funds are available for at least one-third of the cost of the solid-waste disposal demonstration or study and investigation project in addition to those which are available for the applicant's solid-waste disposal program activities not included in the project.

Further, applicants for *demonstration project grants* must provide assurance satisfactory to the Surgeon General:

c. That open dumping or open burning of solid wastes is not authorized or is prohibited by law within the jurisdiction in which the applicant proposes to conduct the demonstration; except that if such assurance cannot be given:

(1) An applicant which is a unit of government responsible for enforcement of laws and regulations relating to solid-waste disposal practices must set forth a schedule acceptable to the Surgeon General for the elimination of open dumping or open burning within its jurisdiction, or

(2) An applicant which is not a unit of government responsible for enforcing laws and regulations relating to solid-waste disposal practices must submit a schedule officially adopted by the responsible unit of government.

Applicants for *demonstration project grants which involve construction* must also provide assurance satisfactory to the Surgeon General:

d. That there will be proper and efficient operation and maintenance of the facility after completion of its construction;

e. That the Surgeon General or authorized agents and other persons have access to any facility constructed as part of a demonstration project, and access to the records pertaining to the operation of the facility at any reasonable time;

f. That all laborers and mechanics employed by contractors or subcontractors on a project of the type covered by the Davis-Bacon Act, as amended (40 USC 276a-276a-5) will be paid wages at rates not less than those prevailing on similar work in the locality as determined by the Secretary of Labor in accordance with the Act; and

g. That he will comply with the requirement of Executive Order 11246, September 24, 1965, (30 FR 12319) pertaining to Equal Employment Opportunity, and with the applicable rules and regulations, and prescribed procedures.

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Applicants for *study and investigation project grants of national value* must, in addition, provide assurance satisfactory to the Surgeon General:

h. That the findings of the proposed studies and investigations would be of significant national value in solid-waste disposal practices or programs.

Applicants for *study and investigation project grants on municipal and regional* solid-waste disposal activities must, in addition:

i. Be, in the judgment of the Surgeon General, legally responsible or is under existing law authorized or empowered upon compliance with legal requirements to assume responsibility for the provision of solid-waste disposal services throughout the geographic area covered by the proposed project; and

j. Give assurance satisfactory to the Surgeon General that the proposed project will be coordinated with any State-wide plans and programs relating to solid-waste disposal.

VIII. USE OF FUNDS

When approved in the application, grant funds may be used for the direct costs of carrying out the demonstration, study, or investigation project. These are:

a. *Personnel.*—Salaries and wages, including fringe benefits, of professional, technical, clerical, and other staff, and consultants who will render direct services to the approved project. The salary levels of such personnel may be set by the grantee organization according to its own standards, provided no monetary differential is allowed for such personnel because they are to be paid from grant funds. Consultant fees must be the same as those usually paid by the applicant, but may not be paid to a staff member of the applicant organization or any person employed by the grantee or by States participating in an interstate

project activity. Grant funds may not be used to pay the salary of a Federal employee.

b. *Equipment.*—Specialized items which are needed for the project.

c. *Supplies.*—Items which are consumable or expendable, and needed for the project.

d. *Travel.*—Transportation, subsistence, and related costs for travel to be performed during the project period and essential to the conduct of the project.

e. *Other Costs.*—Items not included in one of the above categories. Examples include: communication costs, contractual services, rental of space (but applicant may not charge rent for space which is State-owned or owned by the applicant) utilized by project personnel. Each item for which funds are requested must be separately identified.

f. *Construction of Facilities.*—When necessary to a demonstration project, (See definition of "construction," Section I, Purpose of Grants, and Sections III and IV on financial participation). Estimated costs of the construction of facilities must be included in the application. The estimates must include the estimated costs of major components or items, such as: land, engineering design, equipment, machinery, labor, and building materials. Final awards will be based on the completed

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detailed design of the construction project, and a negotiated agreement as to other requisite terms and conditions.

IX. LIMITATIONS ON USE OF FUNDS

a. Grant funds may not be used for activities for which other Federal grant funds are available, or for activities not described in the approved application.

b. Grant funds may not be used for any purpose contrary to the regulations and policies of the Public Health Service or the grantee.

c. All obligations of grant funds must be incurred within the approved project period, and liquidated within one year after the end of the budget period in which the obligation was established.

X. HOW TO APPLY

Interested organizations are required to submit Form NCUI—42, Application for Solid-Waste Disposal Demonstration or Study and Investigation Project Grant, completed in accordance with these terms and conditions and the instructions for completing the application. The signed original and one copy must be mailed directly to the Solid Wastes Program, Public Health Service, Cincinnati, Ohio 45202. Two additional copies must be sent to the appropriate regional office. (For list of regional offices, see page 10.)

Applications may be submitted at any time, but should be submitted at least six months in advance of the anticipated beginning date of the project.

Applicants are urged to request consultation from the State solid-waste disposal agency early in the development and design of projects, as well as to consult with, and secure the support of professional and other groups, or appropriate local agencies that will be utilizing or assisting in the provision of the services contemplated by the project. Applicants also may secure consultation and assistance from the appropriate Public Health Service regional representative.

Applications are available through the regional offices of the Public Health Service or the Solid Wastes Program, Public Health Service, Cincinnati, Ohio 45202.

XI. REVIEW PROCEDURE AND NOTIFICATION

Applications will be considered for funding three times a year: February, May, and October. They will be reviewed and evaluated by the regional and headquarters staff of the Solid Wastes Program. At the discretion of the Chief of the Program, expert advice will be secured from outside the Public Health Service on the technical merit of the project proposals.

Applicants will be notified in writing of the action taken on their applications about two to four weeks after the final review.

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The regional representative will contact approved applicants to negotiate the beginning data of the project period if it is different from that requested in the application.

Review Criteria—The criteria for evaluating the merits of project proposals are:

1. Degree to which project objectives are clearly established, attainable, and for which progress toward attainment can and will be measured.
2. The substantive merit and potential contribution of the project toward developing knowledge and techniques for meeting the objectives of the Solid Waste Disposal Act.
3. Degree to which the project can be expected to yield or demonstrate results that will be useful and desirable on a national or regional basis.
4. Availability, adequacy, and competence of the personnel, facilities and other resources needed to carry out the project.
5. For those projects involving construction of a facility proposed, the feasibility of the facility to meet the objectives of the project.
6. Extent of participation and coordination of community groups with related interests in the area of solid-waste disposal.
7. Proportion of project costs to be borne by the applicant and, where

appropriate, the applicant's plan to continue the activity as an on-going service, after termination of Federal assistance.

8. Degree to which the proposed project is in accordance with the State or regional overall plan, or proposed plan, and priorities with respect to solid-waste disposal services.

XII. PAYMENT PROCEDURE

If the grantee organization has received awards from other Public Health Service programs which are being paid under a letter-of-credit system or other cash control system, the payment for solid-waste disposal project grants will be incorporated into the same system.

For grantee organizations which have no other awards from the Public Health Service, an initial payment generally will be made shortly before the beginning of the project period, and in the amount necessary for the first quarter (or first three-month period). Subsequent payments will be made upon request and in the amounts needed for the next quarterly period.

XIII. REBUDGETING OF FUNDS

It is expected that expenditures for the project will follow the budget categories (i.e., personnel, equipment, travel, supplies, construction, and other) of the approved application. It is recognized, however, that transfers among the categories

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may be necessary on occasion. Transfers among budget categories may be made except in the following instances where prior approval of the transfer must be secured from the Public Health Service:

a. Any expenditures in a budget category for which no funds were initially budgeted in the approved application.

b. When a transfer regardless of amount would result in and/or reflect a change in the scope of the project or when the grantee is uncertain as to whether a change affects the character or scope of a project as described in the approved application.

c. Any transfers into the equipment, travel, or construction categories.

Requests for approval of rebudgeting of funds should be submitted by letter to the Solid Wastes Program.

XIV. PROJECT REVISIONS

Public Health Service approval of a revision of an approved project is required when: (a) a substantial change in the scope, character, or activities of the project occurs or is proposed; (b) a change in the project director is necessitated; or (c) an extension or other change in the project is desired. These revisions may be submitted in letter form, although

the extent of the changes under (a) above may require submission of a revised application. Normally, a request for extension in project period will be made only near the scheduled terminating date of the project.

XV. ACCOUNTABILITY AND AUDIT

The grantee must establish and maintain a separate account for the grant-supported activity, reflecting all receipts, obligations, and disbursements of grant and matching funds. In addition, it must maintain and make available for audit purposes supporting fiscal records and documentation as evidence of grant and matching fund expenditures. Such documentation shall be retained until the fiscal audit has been conducted and any questions arising from it have been resolved, and shall include:

a. The name of each employee whose salary in whole, or in part, is charged to the grant-supported activity, together with the total salary paid to such person during the grant period. Time or effort reports, filed within one month following each quarter in which service is provided, are required to support the salaries charged to the grant, and may be presented as best estimates shown in percentages for professional staff and daily time records for non-professional staff.

b. A copy of all travel vouchers, purchase invoices, and contracts charged to the grant-supported activity.

c. An identification of all other costs charged to the grant-supported activity.

A fiscal audit will be made by the audit staff of the Department of Health, Education, and Welfare.

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XVI. EXPENDITURE AND PROGRAM REPORTS

Reports of expenditures shall be made on the expenditures report form prescribed by the Public Health Service. Reports shall be submitted within 120 days after the close of each 12-month portion of the project period, and also at the end of the project period. These reports shall be submitted in triplicate to the appropriate Regional Health Director.

The grantee must submit, no later than six months after the end of the project period, a final report of its activities under the grant. Six copies of the report should be submitted to the appropriate Regional Health Director.

Interim progress reports must accompany applications for continuation grants. (See Section XVIII, Continuation and Renewal Applications.) In addition, the Surgeon General may from time to time request special reports.

XVII. TERMINATION OF GRANT AND REPAYMENT OF GRANT FUNDS

A solid-waste disposal demonstration or study and investigation project may be terminated at any time before the end of the approved project period by the grantee upon formal notification to the Public Health Service. The Surgeon General may revoke a grant in whole or in part, or withhold future payments, at any time in the event that he finds that the grantee has failed in a material respect to comply with Federal law or established grant policies, or has failed to carry out the activity as approved.

Any unobligated balance in or due the Federal grant account at the end of the project period, at the time of earlier termination of the grant, or after audit, shall be refunded to the Public Health Service. Refund should be made by check payable to the Public Health Service, Department of Health, Education, and Welfare.

XVIII. CONTINUATION AND RENEWAL APPLICATIONS

In the case of solid-waste disposal projects which have been approved for a period of more than one year, and for which an initial grant award has been made in an amount for a lesser period (usually a 12-month period), a continuation application is required. Contingent on the satisfactory development of the project, continuation applications have first claim on available funds. Such applications must be submitted three months prior to the end of each 12-month portion of the project period. Grantees will be provided with the necessary application forms and instructions at the appropriate time.

Applications for renewal of a grant beyond the approved project period should be submitted at least nine months prior to the end of the currently approved period. Renewal grant applications are submitted according to the procedures for a new grant and are reviewed in competition with new and other renewal grant applications.

XIX. PUBLICATION AND COPYRIGHT

As part of solid-waste disposal activities, grantees are urged to publish results and findings in the interest of developing public awareness of solid-waste disposal problems and enlisting public support for remedial efforts.

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Public Health Service review or approval of such publications is not required. It is requested, however, that Federal grant assistance be acknowledged by including in any such publication the following note:

"This solid-waste disposal (demonstration or study and investigation)

project was supported in part by a grant from the Public Health Service, Department of Health, Education, and Welfare."

Thirty copies of such publication should be sent to the Regional Health Director for appropriate distribution.

Similarly, an author is free to arrange for copyright without Public Health Service approval provided that the Public Health Service is assured of the right to reproduce and distribute copyrighted material resulting from Federally supported project operations.

XX. PATENT POLICY

All inventions arising out of activities supported in whole or in part by the Public Health Service grant funds must be promptly and fully reported to the Surgeon General.

Prior to the award of a grant, the Public Health Service must be advised of any outstanding commitments or obligations of the applicant organization, or the professional personnel to be associated with the proposed project, which conflict with the patent regulations of the U.S. Department of Health, Education, and Welfare. A statement concerning patent commitments of the applicant organization, signed by an official of the organization authorized to act in patent matters, must be submitted as part of the initial grant application. In addition, grantees must submit an annual invention statement in connection with continuation applications.

XXI. COMPLIANCE WITH CIVIL RIGHTS ACT OF 1964

Title VI of the Civil Rights Act of 1964 states: "No person in the United States, shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The solid-waste disposal project grant must be operated in compliance with this law, and the implementing regulations of the Department of Health, Education, and Welfare (45 CFR, Part 80). (See instructions for filing application).

XXII. FURTHER INFORMATION OR ASSISTANCE

Further information regarding the Solid Waste Disposal Demonstration, Study and Investigation Project Grant Program, technical assistance, consultation, and application forms may be obtained through the appropriate Regional Health Director.

Information on other solid-waste disposal grant programs may also be obtained from the regional office.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE

REGIONAL OFFICES

	States Included
Region I, J. F. Kennedy Federal Office Building, Boston, Mass. 02203	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
Region II, Room 1200, 42 Broadway, New York, N.Y. 10004	Delaware, New Jersey, New York, Pennsylvania.
Region III, 220 7th Street, NE., Charlottesville, Va. 22901	District of Columbia, Kentucky, Maryland, North Carolina, Virginia, West Virginia, Puerto Rico, Virgin Islands.
Region IV, Room 404, 50 Seventh Street, NE., Atlanta, Ga. 30323	Alabama, Florida, Georgia, Mississippi, South Carolina, Tennessee.
Region V, Room 712, New Post Office Building, 433 West Van Buren Street, Chicago, Ill. 60607	Illinois, Indiana, Michigan, Ohio, Wisconsin.
Region VI, 601 East Twelfth Street, Kansas City, Mo. 64106	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
Region VII, 1114 Commerce Street, Dallas, Tex. 75212	Arkansas, Louisiana, New Mexico, Oklahoma, Texas.
Region VIII, Room 551, 9017 Federal Office Building, 19th and Stout Streets, Denver, Colo. 80202	Colorado, Idaho, Montana, Utah, Wyoming.
Region IX, 447 Federal Office Building, Civic Center, San Francisco, Calif. 94102	Alaska, Arizona, California, Hawaii, Nevada, Oregon, Washington, Guam, American Samoa.

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4.3 SOLID WASTE DISPOSAL PLANNING GRANT, TERMS, AND CONDITIONS, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, NATIONAL CENTER FOR URBAN AND INDUSTRIAL HEALTH, SOLID WASTE PROGRAM, JANUARY 1967

SOLID-WASTE DISPOSAL PLANNING GRANTS TERMS AND CONDITIONS

Page 1: Delete in Paragraph III from "Funds granted to applicants in any one State . . ." to the end of Paragraph III.

Page 4: Change "Chevy Chase, Maryland 20015" to "Cincinnati, Ohio 45202"

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TERMS AND CONDITIONS GOVERNING SOLID-WASTE DISPOSAL PLANNING GRANTS

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DISCRIMINATION PROHIBITED—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, the grant and award programs of the Public Health Service, like every program or activity receiving financial assistance from the Department of Health, Education, and Welfare, must be operated in compliance with this law.

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TERMS AND CONDITIONS GOVERNING SOLID-WASTE DISPOSAL PLANNING GRANTS*

I. PURPOSE OF PLANNING GRANTS

This document sets forth the terms, conditions, and procedures governing the Solid-Waste Disposal Planning Grant Program administered by

* These terms and conditions are subject to change as deemed necessary by the Public Health Service.

the Solid Wastes Program, Public Health Service. The program is authorized by Section 206, Title II, Public Law 89-272, Solid-Waste Disposal Act, and the regulations pursuant thereto (42 CFR, Part 59). It provides for Federal grants to assist State and interstate agencies in making surveys of solid-waste disposal practices and problems, and in developing plans for new and improved methods of proper and economic solid-waste disposal within the jurisdictional areas of such State or interstate agencies (hereinafter referred to as "solid-waste disposal planning grants").

"Solid-waste" means garbage, refuse, and other discarded solid materials, including solid-waste material resulting from industrial, commercial, and agricultural operations, and from community activities. Excluded are solids or dissolved material in domestic sewage or other significant pollutants in water resources such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants. "Solid-waste disposal" means the collection, storage, treatment, utilization, processing, or final disposal of solid waste.

It is not the purpose of these grants to provide financial assistance for State or interstate solid-waste disposal operations or services, other than survey and planning activities.

II. ELIGIBLE APPLICANTS

Eligible applicants are (a) State agencies designated by the Governor, or other appropriate State authority, to represent a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa, and (b) interstate agencies designated as the sole agency responsible for solid-waste disposal planning within their jurisdictional areas.

The designated agency may be an existing agency of the State government or a new one established for the purpose of the solid-waste disposal survey and planning activity. It may be an interdepartmental agency, such as a commission, committee, or board.

A certification of the designation must be included as a part of the application for a planning grant.

III. EXTENT OF FEDERAL FINANCIAL ASSISTANCE

Federal funds may be granted to pay not more than 50 percent of the cost of solid-waste disposal survey and planning activities. The remainder is to be provided from non-Federal funds. Funds granted to applicants in any one State are limited to

not more than 12.5 percent of the Federal funds available for this program for each fiscal year's appropriation. For this requirement, planning grants to an interstate agency will be conisdered to be granted to the States involved in proportion to the amounts of non-Federal funds budgeted for the project by the participating States, or by the participating municipalities located in the respective States.

IV. APPLICANT FINANCIAL PARTICIPATION REQUIREMENTS

Applicants are required to provide at least 50 percent of the cost of the solid-waste disposal planning activity from funds other than any other Federal grants, or any non-Federal funds used to match other Federal grants.

V. PERIOD OF SUPPORT

Although the development of a comprehensive statewide solid-waste disposal plan may require a period longer than three years, applications for grant support will be considered for project periods up to three years. Budget periods within the maximum 3-year project periods are 12-month units beginning on the first day of the month requested in the application, or the first day of the month mutually agreed upon by the applicant and the Solid Wastes Program. Support from Federal funds beyond an approved project period should be requested at least nine months prior to the termination date of the currently approved project period. (See Section XVIII, Continuation and Renewal Applications.)

VI. PROGRAM DIRECTION

The agency designated to be the sole agency responsible for solid-waste disposal activities must have, or plan to employ, a full-time employee responsible for these activities, including solid-waste disposal planning. (See Section VIII, Use of Funds. Only that portion of the employee's time that is devoted to the survey and planning activities may be charged to the grant-supported project.)

VII. CONDITIONS OF PLANNING GRANT

In order to be awarded a grant for an approved solid-waste disposal planning project, applicants must provide assurance satisfactory to the Surgeon General of the Public Health Service:

a. That any survey and planning project is directed toward the production of a comprehensive solid-waste disposal plan, including agricultural, commercial, industrial, and domestic solid-waste disposal for the entire geographic area of the State, or of the interstate jurisdiction;

b. That in the conduct of the project there shall be consultation and coordination with other State agencies which have responsibility for any aspect of planning essential to statewide planning for proper and effective solid-waste disposal consistent with the protection of the public health, including such factors as population, urban and metropolitan development, land-use planning, water pollution control, air pollution control, and the feasibility of regional solid-waste disposal programs;

c. That there shall be an effective arrangement to insure full participation and coordination with related State, interstate, regional, and local planning activities including those financed in whole or in part with funds granted under section 701 of the Housing Act of 1954 (40 USC 61); and

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d. That non-Federal funds are available for at least 50 percent of the cost of the solid-waste disposal planning project in addition to those which are available for the applicant's solid-waste disposal program activities not included in the planning project.

VIII. USE OF FUNDS

When approved in the application, grant funds may be used for the following costs of carrying out the survey and planning program:

a. *Personnel.*—Salaries and wages, including fringe benefits, of professional, technical, clerical, and other staff, and consultants who will render direct services to the approved project. The salary levels of such personnel may be set by the grantee organization according to its own standards, provided no monetary differential is allowed for such personnel because they are to be paid from grant funds. Consultant fees must be the same as those usually paid by the applicant, but may not be paid to a staff member of the applicant organization or any person employed by the State, or the States participating in an interstate planning activity. Grant funds may not be used to pay the salary of a Federal employee.

b. *Equipment.*—Specialized items which are needed for the project.

c. *Supplies.*—Items which are consumable or expendable, and needed for the project.

d. *Travel.*—Transportation, subsistence, and related costs for travel to be performed during the project period and essential to the conduct of the project.

e. *Other Costs.*—Items not included in one of the above categories, such as communication costs, contractual services, rental of space (but

applicant may not charge rent for space which is state-owned or owned by the applicant) utilized by project personnel. Each item for which funds are requested must be separately identified.

IX. LIMITATIONS ON USE OF FUNDS

a. Grant funds may not be used for activities for which other Federal grant funds are available, or for activities not described in the approved application.

b. Grant funds may not be used for any purpose contrary to the regulations and policies of the Public Health Service or the grantee.

c. All obligations of grant funds must be incurred within the approved project period, and liquidated within one year after the end of the budget period in which the obligation was established.

X. HOW TO APPLY

Interested State and interstate agencies are required to submit Form PHS-4872-1, Application for Solid-Waste Disposal Planning Grant, completed in accordance with these terms and conditions and the instructions for completing the application. The original and two copies must be mailed to the appropriate Public Health Service Regional Health Director. (For list of regional offices, see page 8.)

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Planning grant applications will be considered twice a year. Applications may be submitted at any time; however, those received by September 1 and February 1 of each year will be in competition for the Federal funds available for its program in that fiscal year.

Applicants are urged to secure consultation and assistance through the Public Health Service Regional Health Director prior to the development of their proposals and the preparation of the application.

Applications are available through the regional offices of the Public Health Service or the Solid Wastes Program, Public Health Service, Chevy Chase, Md. 20015.

XI. REVIEW PROCEDURES AND NOTIFICATION

Applications will be reviewed and evaluated by the regional and headquarters staff of the Solid Wastes Program. The advice of consultants will be sought as deemed necessary by the Chief of the Program.

Applicants will be notified in writing of the action taken on their applications approximately two months after the cut-off date for receipt of applications.

The regional representative will contact approved applicants to

negotiate the beginning data of the project period if it is different from that requested in the application.

XII. PAYMENT PROCEDURE

If the grantee organization has received awards from other Public Health Service programs which are being paid under a letter-of-credit system or other cash control system, the payment for solid-waste disposal planning grants will be incorporated into the same system.

For grantee organizations which have no other awards from the Public Health Service, generally an initial payment will be made shortly before the beginning of the project period, and in the amount necessary for the first quarter (or first three-month period). Subsequent payments will be made upon request and in the amounts needed for the next quarterly period.

XIII. REBUDGETING OF FUNDS

It is expected that expenditures for the project will follow the budget categories (i.e., personnel, equipment, travel, supplies, and other) of the approved application. It is recognized, however, that transfers among the categories may be necessary on occasion. Transfers among budget categories may be made, except in the following instances where prior approval of the transfer must be secured from the Public Health Service:

a. Any expenditures in a budget category for which no funds were initially budgeted in the approved application.

b. When a transfer regardless of amount would result in and/or reflect a change in the scope of the planning activity described in the approved application; and

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c. Any transfers into the equipment and travel categories.

Requests for approval of rebudgeting of funds should be submitted by letter to the Solid Wastes Program.

XIV. PLANNING PROJECT REVISIONS

Public Health Service approval of a revision of an approved planning project is required when: (a) a substantial change in the scope, character, or activities of the project occurs or is proposed; (b) a change in the project director is necessitated; or (c) an extension or other change in the project is desired. These revisions may be submitted in letter form, although the extent of the changes under (a) above may require submission of a revised application. Normally, a request for extension in project period will be made only near the scheduled terminating date of the project.

XV. ACCOUNTABILITY AND AUDIT

The grantee must establish and maintain a separate account for the grant-supported activity, reflecting all receipts, obligations, and disbursements of grant and matching funds. In addition, the grantee must maintain and make available for audit purposes supporting fiscal records and documentation as evidence of grant and matching fund expenditures. Such documentation shall be retained until the fiscal audit has been conducted and any questions arising from it have been resolved, and shall include:

a. The name of each employee whose salary in whole, or in part, is charged to the grant-supported activity. The agency in which such person is employed shall be identified, together with the total salary paid to such person during the grant period. Time or effort reports, filed within one month following each quarter in which service is provided, are required to support the salaries charged to the grant, and may be presented as best estimates shown in percentages for professional staff and daily time records for non-professional staff.

b. A copy of all travel vouchers, purchase invoices, and contracts charged to the grant-supported activity.

c. An identification of all other costs charged to the planning activity.

A fiscal audit will be made by the audit staff of the Department of Health, Education, and Welfare.

XVI. EXPENDITURE AND PROGRAM REPORTS

Reports of expenditures shall be made on the expenditure report form prescribed by the Public Health Service. Reports shall be submitted within 120 days after the close of each 12-month portion of the project period, and also at the end of the project period. These reports shall be submitted in triplicate to the appropriate Regional Health Director.

The State or interstate agency must submit, no later than six months after the end of the project period, a final report of its activities under the grant. When a State plan has resulted, the plan itself together with such additional material as is deemed appropriate may be the final progress report. This report shall be submitted to the appropriate Regional Health Director.

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Interim progress reports must accompany applications for continuation grants. (See Section XVIII, Continuation and Renewal Applications.) In addition, the Surgeon General may from time to time request special reports.

XVII. TERMINATION OF GRANT AND REPAYMENT OF GRANT FUNDS

A solid-waste disposal planning grant may be terminated at any time before the end of the approved project period by the grantee upon formal notification to the Public Health Service. The Surgeon General may revoke planning grants in whole or in part, or withhold future payments, at any time in the event that he finds that the grantee has failed in a material respect to comply with Federal law or established grant policies, or has failed to carry out the planning activity as approved.

Any unobligated balance in or due the Federal grant account at the end of the project period, at the time of earlier termination of the grant, or after audit, shall be refunded to the Public Health Service. Refund should be made by check payable to the Public Health Service, Department of Health, Education, and Welfare.

XVIII. CONTINUATION AND RENEWAL APPLICATIONS

In the case of solid-waste disposal planning projects which have been approved for a period of more than one year, and for which an initial grant award has been made in an amount for a lesser period (usually a 12-month period), a continuation application is required. Contingent on the satisfactory development of the planning activity, continuation applications have first claim on available funds. Such applications must be submitted three months prior to the end of each 12-month portion of the project period. Grantees will be provided with the necessary application forms and intructions at the appropriate time.

Applications for renewal of a grant beyond the approved project period should be submitted at least nine months prior to the end of the currently approved period. Renewal grant applications are submitted according to the procedures for a new grant and are reviewed in competition with new and other renewal grant applications.

XIX. PUBLICATION AND COPYRIGHT

As part of solid-waste disposal planning activities, grantees are urged to publish results and findings in the interest of developing public awareness of solid-waste disposal problems and enlisting public support for remedial efforts. Public Health Service review or approval of such publications is not required. It is requested, however, that Federal grant assistance be acknowledged by including in any such publication the following note:

"This solid-waste disposal planning project was supported in part by a grant from the Public Health Service, Department of Health, Education, and Welfare."

Thirty copies of such publication should be sent to the Regional Health Director for appropriate distribution.

Similarly, an author is free to arrange for copyright without Public Health Service approval provided that the Public Health Service is assured of the right to reproduce and distribute copyrighted material resulting from Federally supported project operations.

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XX. PATENT POLICY

All inventions arising out of activities supported in whole or in part by the Public Health Service grant funds must be promptly and fully reported to the Surgeon General.

Prior to the award of a grant, the Public Health Service must be advised of any outstanding commitments or obligations of the applicant organization, or the professional personnel to be associated with the proposed project, which conflict with the patent regulations of the U.S. Department of Health, Education, and Welfare, A statement concerning patent commitments of the applicant organization, signed by an official of the organization authorized to act in patent matters, must be submitted as part of the initial grant application. In addition, grantees must submit an annual invention statement in connection with continuation applications.

XXI. COMPLIANCE WITH CIVIL RIGHTS ACT OF 1964

Title VI of the Civil Rights Act of 1964 states: "No person in the United States, shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The solid-waste disposal planning grant must be operated in compliance with this law, and the implementing regulations of the Department of Health, Education, and Welfare (45 CFR, Part 80). (See instructions for filing application).

XXII. FURTHER INFORMATION OR ASSISTANCE

Further information regarding the Solid-Waste Disposal Planning Grant Program, technical assistance, consultation, and application forms may be obtained through the appropriate Regional Health Director.

Information on other solid-waste disposal grant programs may also be obtained from the regional office.

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE

REGIONAL OFFICES

	States Included
Region I, J. F. Kennedy Federal Office Building, Boston, Mass. 02203	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Region II, Room 1200, 42 Broadway, New York, N.Y. 10004	Delaware, New Jersey, New York, Pennsylvania
Region III, 700 East Jefferson Street, Charlottesville, Va. 22901	District of Columbia, Kentucky, Maryland, North Carolina, Virginia, West Virginia, Puerto Rico, Virgin Islands
Region IV, Room 404, 50 Seventh Street, NE., Atlanta, Ga. 30323	Alabama, Florida, Georgia, Mississippi, South Carolina, Tennessee
Region V, Room 712, New Post Office Building, West Van Buren Street, Chicago, Ill. 60607	Illinois, Indiana, Michigan, Ohio, Wisconsin
Region VI, 12th 601 East Street, Kansas City, Mo. 64106	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
Region VII, 1114 Commerce Street, Dallas, Texas 75212	Arkansas, Louisiana, New Mexico, Oklahoma, Texas
Region VIII, Room 551, 9017 Federal Office Building, 19th and Stout Streets, Denver, Colo. 80202	Colorado, Idaho, Montana, Utah, Wyoming
Region IX, 447 Federal Office Building, Civic Center, San Francisco, Calif. 94102	Alaska, Arizona, California, Hawaii, Nevada, Oregon, Washington, Guam, American Samoa

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4.4 A SOLID WASTE PROGRAM, U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, NATIONAL CENTER FOR URBAN AND INDUSTRIAL HEALTH, SOLID WASTE PROGRAM, FEBRUARY 1968

THE PROBLEM

By the year 2000, the population of the United States is expected to double. Our cities and their surrounding urbanized areas are already bearing the brunt of this explosive growth, with its accompanying increase in industrial activities. This growth, coupled with the increasing per capita rate of refuse production, is resulting in an every-increasing volume of solid wastes that must be regularly collected, transported, and ultimately disposed of on suitable land.

Insanitary, inadequate solid waste collection and disposal activities create one of the most serious and most neglected aspects of environmental contamination affecting public health and welfare.

Land required for waste disposal facilities is also in demand for many more attractive uses in every metropolitan complex. Therefore, unless workable plans are made and implemented, metropolitan areas will be forced to haul refuse long distances, thus placing an additional economic burden on this essential public service. To meet even short-term needs realistically, suitable areas must be reserved for refuse disposal as a part of overall metropolitan area environmental health plans.

Solid wastes include a great variety of things that individuals, manufacturers, commercial establishments and communities discard as no longer usable, such as garbage, rubbish, ashes, street refuse, demolition debris, construction refuse, abandoned automobile hulks, old refrigerators and furniture, and the wastes from slaughterhouses, canneries, manufacturing plants, and hospitals. The dimensions of the problem are staggering. Available data[1] indicate that current national production of solid wastes in urban communities amounts to

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over 800 million pounds daily, and it is estimated that the total will rise to approximately three times that amount by 1980.

The efforts now being made to deal with this problem are clearly inadequate. Less than half of the cities and towns in the United States with populations of more than 2,500 dispose of community refuse by approved sanitary and nuisance-free methods. All too often solid wastes are disposed of by methods that create unhealthful, insanitary, and unsightly environmental conditions. Such practices contribute to air, water, and soil pollution and create breeding places for disease-carrying insects and rodents. Accumulations of litter, refuse, and junk, cause fire hazards, contribute to accidents and destory beauty of cities and countrysides.

Storage, collection, and disposal of solid wastes is one of the major economic problems of urban areas. As the American Public Works Association recently pointed out: "The annual outlay for refuse collection and disposal services—over $1.5 billion—is exceeded only by expenditures for schools and roads."[3]

In addition to the expenditures by local governmental agencies, the editors of *Refuse Removal Journal* have estimated that the annual expenditures of the private sanitation industry are over $1.3 billion.[4] From the standpoint of the average person, these costs can no longer be considered minor. For example, the average charge to homeowners in the Washington, D.C., Suburban Sanitary District is $40.20 per year for water and sewer charges and $36 per year for refuse service. Thus, the refuse service charge amounts to almost as much as water supply and sewerage combined.

Field studies have shown that an average of at least 85 percent of the

total cost of providing refuse service is spent on collection.[5] Since labor charges account for the major cost in the collection operation, the development of new and more efficient methods of designing and operating refuse collection systems offer a most productive area for research improvement. Systems analysis methods are already being applied to this problem on the operating level.

COLLECTION AND DISPOSAL SERVICES

A question that frequently confronts communities when considering metropolitan-wide refuse services is: What level of the local

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government should provide refuse collection and disposal services? One of the major obstacles to organizing efficient, high-quality refuse collection and disposal systems in metropolitan areas is the multitude of local government units. In Allegheny County, Pennsylvania, for example, there are 129 local political subdivisions. These local political subdivisions may be separated by natural boundaries, such as rivers or mountains, or by the political boundaries of satellite communities that surround a central city. The provision of economical refuse service under such conditions is complicated and in some cases may be further hampered by State or international boundaries.

Traditionally, small and large cities have provided their own "total" service. During the last few years, however, there has been a trend in metropolitan areas toward each community continuing to provide collection, but with disposal service provided on an area-wide basis. Increasing population and higher population density has resulted in a shortage of land for disposal sites, an increase in the quantities of refuse that must be collected, and longer hauling distances to disposal sites which may be located even beyond the limits of the urbanized area.

Area-wide refuse disposal service is being provided in a few metropolitan areas by special purpose districts, by counties, or by cooperative agreements between cities and other local political subdivisions. The scarcity of disposal sites has led some metropolitan areas to develop fewer and larger scale disposal facilities. Transfer stations are being used more often to reduce collection vehicle mileage along with larger vehicles for hauling to disposal sites. The economic advantage of such systems has brought many metropolitan areas to consider area-wide disposal service. The economy-of-scale factor not only can reduce unit costs but also can make it possible to discontinue many insanitary operations, and avoid needless duplication of investments. Although studies—such as those made in the metropolitan areas of Northeastern Illinois[6] and Hartford, Connecticut[7]—have emphasized the need for area-wide refuse disposal agencies, most States lack enabling legislation to form special-purpose

districts or to allow counties to provide these services. This function was considered in the 1962 study of governmental organizations by the U.S. Bureau of Census.[8] It was found that only nine States—California, Connecticut, Kentucky, Michigan, New Jersey, Ohio, South Carolina, Tennessee, and Washington—make any provisions for the formation of districts or authorities to organize and operate such area-wide systems.

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Local governments will have to exert major efforts to solve solid wastes problems in some metropolitan areas. For example, the Sanitation Districts of Los Angeles County, California, made a detailed study and report[9] which led to the establishment of a system of transfer stations and sanitary landfills serving more than fifty cities and a large unincorporated area in the county. In neighboring Orange County, the Highway Department[10] prepared a master plan for refuse disposal which anticipated the county's disposal needs up to the year 2000. A county-wide system of transfer stations and sanitary landfills was subsequently established with the support of all the cities and other local governmental units. Comprehensive planning such as this is an essential step in the design of efficient area-wide refuse collection and disposal services. Local conditions must be evaluated, the possible solutions investigated, and the best methods of providing improved service determined.

THE NEW LEGISLATION

The solid wastes problem was given national visibility in President Johnson's 1966 message to the Congress on Natural Beauty. The President emphasized the need for proper solid waste disposal as a vital factor in maintaining and improving the health of our nation and the beauty of the environment in which we live. He recommended legislation to assist the States in developing comprehensive programs for some forms of solid waste disposal and also for the establishment of research and demonstration projects directed toward uncovering more effective methods for disposing of, or salvaging, solid wastes.

The Solid Waste Disposal Act (Public Law 89-272) represents in many respects the evolution of several earlier legislative proposals which had been introduced into the Congress but which has not been enacted. Included were bills by Senator Smathers and Representatives Lisinski, Roosevelt, and Blatnik.

In the first session of the 89th Congress, Senator Edmund Muskie introduced S. 306 and chaired hearings on the bill, now known as the Clean Air Act and Solid Waste Disposal Act, which was passed by the Senate. The bill was then referred to the House Committee on Interstate and Foreign Commerce under Chairman Oren Harris, for further con-

sideration. Congressional hearings evoked support from such groups as the National League of Cities,

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the National Association of Sanitarians, the Conference of State Sanitary Engineers, the American Public Works Association, the American Medical Association, several State departments of health, and numerous city officials. We would recommend for further reading the House and Senate Committee reports on hearings held in connection with the legislation, in order to better understand the support given to this legislation by the numerous distinguished individuals and organizations who supported it. The legislation was signed by President Johnson on October 20, 1965.

What are some of the salient points in the Solid Waste Disposal Act?

Section 202—"Findings and Purposes"—is particularly illuminating in that it presents the basic rationale for Congressional action in the passage of the Act. Some of these reasons are paraphrased below:

1. The amount of solid waste continues to increase and also to change in character.

2. In addition to the conventional forms of solid waste, we are concerned with those resulting from the demolition of buildings, construction of highways, and industrial, commercial, and agricultural operations.

3. The problems within our metropolitan and urban areas are becoming extremely complicated from the standpoint of managing, financing, and solving technical problems related to the disposal of solid wastes.

4. Present unsatisfactory methods of disposal result in scenic blight, with incidental air, water, and land pollution problems, accident hazards, and the whole gamut of public health problems, including problems of insect and rodent vectors of disease.

5. We need to salvage those waste materials having economic potential to conseve the natural resources of this nation.

6. There is a compelling need for Federal technical and financial assistance.

Based on these findings, the Congress has designed the Act to satisfy two basic purposes or objectives, namely:

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To initiate and accelerate a national research and development program for new and improved methods of proper and economic solid waste disposal including studies directed toward the conservation of natural resources by reducing the amount of wastes and unsalvageable materials and by recovery and utilization of potential resources in solid wastes.

To provide technical and financial assistance to State and local governments and interstate agencies in the planning, development, and conduct of solid waste disposal programs.

Under the Secretary of Health, Education, and Welfare the Public

Health Service is now mounting a program designed to accomplish these purposes.

Section 203—"Definitions". The responsibility for the problems of solid wastes resulting from the extraction, processing, or utilization of minerals or fossil fuels—where such wastes may be controlled within the processing facility—is delegated to the Secretary of the Interior. This recognizes the involvement of the Bureau of Mines, particularly in connection with the problems of mineral wastes.

Section 204—"Research, Demonstrations, Training, and other Activities"—is probably the broadest single Section of the Act. This Section constitutes the basis on which the Public Health Service will initiate a research program, conduct demonstrations, initiate training activities, and related actions necessary for the implementation of the Act. In addition to imposing basic responsibilities on the Public Health Service, it provides for the cooperation with, and the providing of financial assistance to, appropriate public authorities, agencies, institutions, private agencies and institutions, and individuals in carrying out work on the multifaceted aspects of solid waste disposal.

One of the mechanisms authorized to obtain the help and assistance of these outside groups is grants-in-aid to public or private agencies and institutions, and to individuals, for research, training projects, surveys and demonstrations, including the construction of facilities. Support can also be provided through the mechanism of contracts, which has proven to be a useful tool in initiating research projects in support of program needs. One of the overriding requirements of Section 204 provides that no grant shall be made to cover more than two-thirds of the cost of construction of any facility covered by the Act.

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Much of the Act is contained in these provisions, since it provides for research which will provide new and improved methods for disposing of solid wastes. It provides for training which will give our nation the necessary cadre of specially trained personnel to handle the solid waste disposal problems of today and tomorrow. It provides for investigations, experiments and demonstrations, so that the research findings may be readily translated into operating practices and demonstrated in the field under actual operating conditions. And it provides for surveys and studies which will give us better definition of the existing and the newly developing problems which we will be facing.

Section 205—"Interstate and Interlocal Cooperation"—places the Federal Government on record as supporting the initiating of interstate and interlocal activities in connection with solid waste disposal. Recognizing that the problem is no respecter of political boundaries, this section encourages the enactment of improved State and local laws governing solid waste

disposal. It is hoped that the enactment of this Federal legislation will stimulate law-making bodies to consider the legislation so desperately needed.

Section 206—"Grants for State and Interstate Planning"—provides for grants to State and interstate agencies (not to exceed 50 percent of the cost) for making surveys of solid waste disposal practices and problems and of developing solid waste disposal plans for such areas. Here is the mechanism by which we can begin to develop the long-range plans for solid waste disposal which are so urgently needed in many areas. A number of conditions are imposed on the making of such grants. For example, they must be made to a single State agency which has the sole responsibility for carrying out such a program; the plan must involve consideration of the public health problems and such related factors as population growth, urban and metropolitan development, land-use planning, air and water pollution control; and the plan must be consistent with other related State, interstate, and local plans. Here the Congress recognizes the fact that planning must be done on a comprehensive basis and that the solid waste plans must, in fact, be consistent with the broad needs of the community and the region.

Section 210—"Appropriations"—is significant in that it identifies the magnitude of the program conceived by the Congress. This Section authorizes $7 million for the first year (actually, only

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$4 million of this amount was ultimately appropriated); $14 million for Fiscal Year 1967; $19.2 million for F. Y. 1968, and $20 million for 1969 to be appropriated to the Secretary of Health, Education, and Welfare. This Section also authorizes $3 million for the first year; $6 million for Fiscal Year 1967; $10.8 million for F. Y. 1968, and $12.5 million for 1969 to be appropriated to the Secretary of Interior.

In summary, the Congress has forged a chain binding the Federal Government to responsibility for leadership of a national solid waste program. The Solid Waste Disposal Act authorizes four major links in the chain: research, demonstrations, training, and planning.

The President has challenged us to stop polluting the environment. He has called for high-quality solid wastes management.

This legislation of Congress is designed to raise our solid waste programs to high levels of accomplishment.

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4.5 "WORKING AGREEMENT BETWEEN HEALTH, EDUCATION, AND WELFARE," PUBLIC HEALTH SERVICE, AND HOUSING AND URBAN DEVELOPMENT, MARCH 1967

RELATIONSHIPS WITH DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Two conferences have been held with representatives of D/HUD:

It was agreed that coordination of solid waste planning with "701" planning required in the Solid Waste Disposal Act, could be accomplished at the State level, by liaison between the designated solid waste agency and the State "comprehensive planning" agency and/or the "legal planning assistance" agency. In line with this approach, D/HUD has furnished lists of the State planning agencies and these lists have been sent to the PHS regional offices.

Further conferences will be held regarding appropriate exchange of information on projects supported by grants from the respective agencies.

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Secretary, PUBLIC HEALTH SERVICE

(Attn: Assistant Secretary for Individual and Family Services)

Surgeon General—Working Agreement Between HEW–PHS and HUD

In view of the respective primary missions of the two agencies, one related to health and the other to urban affairs, there is need of a working agreement for a division of labor regarding urban environmental factors which need to be controlled or eliminated for the well-being of urban life.

PL 89-754 authorizes and directs the Secretary of HUD to document and define urban environmental factors which need to be controlled or eliminated for the well being of urban life....and is authorized....or by working agreements with departments and agencies of the Federal Government....PL 410 charges the Public Health Service with the responsibility for attending to, among other things, the health aspect of urban life.

There is a need that an agreement be negotiated between the Secretary of HEW and the Secretary of HUD defining the role of the PHS in research, development, technical assistance and training regarding; (a) health-related criteria for standards in housing and neighborhood development, maintenance and use, (b) standards for other physical environmental factors, and related community organization, relevant to the promotion of physical, mental and social well-being of the individual in his urban setting, and (c) comprehensive planning for environmental health facilities and services.

If a meeting for such negotiation is arranged, the Office of Urban Environmental Health Planning in the National Center for Urban and Industrial Health will be available to serve as staff in preparation of materials for developing a working agreement. This unit was recommended to be the focal point for such urban activities by the Surgeon General's Task Force on Health in Housing and Urban Development.

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Reference was made to the memo of August 1 from the RPD of EEFP, New York, wherein it was stated that one of the results of the Philadelphia meeting was an agreement by Mr. Phelan, Regional Director of HUD, that his office would *require* that consideration be given to solid waste management in the comprehensive community plan requirement of the "Workable Program". Mr. Ives took strong exception to the word "require". He said the regional office was in a position to encourage but not require such action. A discussion of just what a "Workable Program" was ensued. Mr. Ives said he would send material to this office on the "Workable Program".

The meeting was concluded with the agreement that this office would proceed to prepare a draft of a technical advisory paper and that the individual responsible for this would work with Mr. Jerry Newman as his counterpart in the Urban Renewal Administration.

cc: Wesley E. Gilbertson
Thomas J. Lawler
Richard D. Vaughan
Warren Smith
Everett MacLeman, N.Y. Regional Office
Ralph Van Derwerker, N.Y. Regional Office

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SURGEON GENERAL, PUBLIC HEALTH SERVICE, BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL(SIC)

DIRECTOR, BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL—BRIEFING MEMORANDUM ON WORKING AGREEMENT BETWEEN HEW-PHS AND HUD

The following remarks and quotations from key documents pertain to the basis for development of such a working agreement between HEW and HUD.

According to the U.S. Government Manual, "The Public Health Service, (in the DHEW), under the direction of the Surgeon General, is the Federal agency specifically charged with responsibilities for protecting and improving the health of the people of the Nation.... (A major function of the Service is) to assist the States and other governments in the application of new knowledge for the prevention and control of

disease. The maintenance of a healthful environment, and the development of community health services." This in effect states that the primary mission or predominant sphere of the Service is responsibility for the health or well-being of the people of the entire Nation, urban or rural.

The HUD statement "Evaluation of Department's Programs and Goals," submitted by Secretary Weaver as Appendix to Part I of the *Federal Role in Urban Affairs*, (Hearings Before the Subcommittee on Executive Reorganization of the Senate Committee on Government Operations, December 30, 1966), discusses the reorganization of the Federal Government through groups of governmental units coordinated in respect to broad major missions, and HUD's primary mission as follows:

"The Federal Government is only now in the final stages of reorganizing itself so that it can deal with our urban problems through units of government that have been entrusted with broad major missions...

"In organizing groups of governmental organizations on the basis of broad missions, it is important to achieve the sharpest possible focus with respect to the mission of each governmental unit and to achieve the clearest possible boundary lines with respect to ultimate authority to take final action under each specific piece of legislation...

"The primary mission of the new Department, as described by the Bureau of the Budget, is to carry out major functions relating to the improvement of the physical environment of the urban community and to provide a focus for the coordination of related executive branch efforts...

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"It should be noted that the order which gives the Secretary of Housing and Urban Development such flexible authority in no way elevates this recently created Secretary above his fellow Cabinet members, although it does vest an important initiative in him. The order is based on a provision in the act which created the Department of Housing and Urban Development that—

"The Secretary shall, among his responsibilities, exercise leadership at the direction of the President in coordinating Federal activities affecting housing and urban development...

"The heads of other Federal departments and agencies will continue, as before, to exercise leadership within the executive branch on behalf of the President in their predominant spheres of responsibility."

An example of an area requiring a working agreement at an early date is found in PL 89-754. The Congress found, in Section 1011 (A) and (B), "that much more knowledge is urgently needed concerning the effect on human beings of highly urbanized surroundings." It therefore authorized and directed the Secretary of HUD to:

"(1) conduct studies, surveys, research, and analyses with respect to the ecological factors involved in urban living; (2) document and define *urban environmental factors* which *need to be controlled or eliminated* for the *well-being* of urban life; ... (3) establish through interagency consultation the coordinated utilization of urban ecological information on projects undertaken or assisted by the Federal Government which affected the growth or development of urban areas."

And further in subparagraph (d) "The Secretary is authorized to carry out the studies, surveys, research, and analyses authorized by this section either directly or by contract with public or private bodies or agencies, or by *working agreement with departments and agencies of the Federal Government*, as he may determine to be desirable."

In the same Act, known as the "Model Cities Program" or "Demonstration Cities and Metropolitan Development Act of 1956", the Congress authorized as follows: "in order to insure that all Federal programs related to metropolitan development are carried out in a coordinated manner—... (2) *all Federal agencies* which are organized in administering programs related to metropolitan development, or which otherwise

perform functions relating thereto, shall, to the maximum extent practicable, *consult with* and seek advice from *all other significantly affected Federal departments* and agencies in an effort to assure fully coordinated programs."

PL 610 charges the Public Health Service with the responsibility for attending to, among other things, the health aspect of urban life. In

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PL 89-749, "Comprehensive Health Planning and Public Health Services Amendments of 1966", "the Congress declares that fulfillment of our national purpose depends on promoting and assuring the highest level of health attainable for every person, in an environment which contributes positively to healthful individual and family living;..."

It is respectfully suggested that, under their respective primary missions, it is equally incumbent on either the Secretary of the HEW or the Secretary of HUD to undertake the initiative to obtain such working agreements between the two Departments and their agencies which will assure health inputs in HUD's functions and in the coordinated efforts of any group of governmental organizations entrusted with broad, major missions in respect to urban or metropolitan environment.

RICHARD A. PRINDLE, M.D.,
Assistant Surgeon General

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SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED THROUGH AUGUST 10, 1965

PUBLIC LAW 560, 83D CONGRESS 40 U.S.C. 461

Urban planning

SEC. 701 (a) In order to assist State and local governments in solving planning problems resulting from the increasing concentration of population in metropolitan and other urban areas, including smaller communities; to facilitate comprehensive planning for urban development, including coordinated transportation systems, on a continuing basis by such governments; and to encourage such governments to establish and improve planning staffs, the [Housing and Home Finance] Administrator is authorized to make planning grants to—

(1) State planning agencies, or (in States where no such planning agency exists) to agencies or instrumentalities of State government designated by the Governor of the State and acceptable to the Administrator as capable of carrying out the planning functions contemplated by this section, for the provision of planning assistance to (A) cities and other municipalities having a population of less than 50,000 according to the latest decennial census, and counties without regard to population: *Provided*, That grants shall be made under this paragraph for planning assistance to counties having a population of 50,000 or more, according to the latest decennial census, which are within metropolitan areas, only if (i) the Administrator finds that planning and plans for such county will be coordinated with the program of comprehensive planning, if any, which is being carried out for the metropolitan area of which the county is a part, and (ii) the aggregate amount of the grants made subject to this proviso does not exceed 15 per centum of the aggregate amount appropriated, after the date of enactment of the Housing Act of 1964, for the purposes of this section, (B) any group of adjacent communities, either incorporated or unincorporated, having a total population of less than 50,000 according to the latest decennial census and having common or related urban planning problems, (C) cities, other municipalities, and counties referred

to in paragraph (3) of this subsection and areas referred to in paragraph (4) of this subsection, and (D) Indian reservations;

(2) official State, metropolitan, and regional planning agencies, or other agencies and instrumentalities designated by the Governor (or Governors in the case of interstate planning) and acceptable to the Administrator, empowered under State or local laws or interstate compact to perform metropolitan or regional planning;

(3) cities, other municipalities, and counties which (A) are situated in areas designated by the Secretary of Commerce under section 5 of the Area Redevelopment Act as redevelopment areas or (B) have suffered substantial damage as a result of a catastrophe which the President, pursuant to section 2(a) of "An Act to authorize Federal assistance to States and local governments in major disasters, and for other purposes", has determined to be a major disaster;

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(4) to official governmental planning agencies for areas where rapid urbanization has resulted or is expected to result from the establishment or rapid and substantial expansion of a Federal installation;

(5) State planning agencies for State and interstate comprehensive planning (as defined in subsection (d)) and for research and coordination activity related thereto;

(6) metropolitan and regional planning agencies, with the approval of the State planning agency of (in States where no such planning agency exists) of the Governor of the State, for the provision of planning assistance within the metropolitan area or region to cities, other municipalities, counties, groups of adjacent communities, or Indian reservations described in clauses (A), (B), (C), and (D) of paragraph (1) of this subsection;

(7) to official governmental planning agencies for any area where there has occurred a substantial reduction in employment opportunities as the result of (A) the closing (in whole or in part) of a Federal installation, or (B) a decline in the volume of Government orders for the procurement of articles or materials produced or manufactured in such area;

(8) tribal planning councils or other tribal bodies designed by the Secretary of the Interior for planning for an Indian reservation to which no State planning agency or other instrumentality is empowered to provide planning assistance under clause (D) of paragraph (1) above; and

(9) the Appalachian Regional Commission, established by the Appalachian Regional Development Act of 1965, for comprehensive planning for the Appalachian region as defined by section 403 of such Act.

Planning assisted under this section shall, to the maximum extent feasible, cover entire urban areas having common or related urban development problems. The Administrator shall encourage cooperation in preparing and carrying out plans among all interested municipalities, political subdivisions, public agencies, and other parties in order to achieve coordinated development of entire areas. To the maximum extent feasible, pertinent plans and studies already made for areas shall be utilized so as to avoid unnecessary repetition of effort and expense. Planning which may be assisted under this section includes the preparation of comprehensive urban transportation surveys, studies, and plans to aid in solving problems of traffic congestion, facilitating the circulation of people and goods in metropolitan and other urban areas and reducing transportation needs. Funds available under this section shall be in addition to and may be used jointly with funds available for planning surveys and investigations under other Federally-aided programs, and nothing contained in this section shall be construed as affecting the authority of the Secretary of Commerce under section 307 of title 23, United States Code.

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(b) A planning grant made under this section shall not exceed two-thirds of the estimated cost of the work for which the grant is made: *Provided*, That such a grant may be in an amount not exceeding three-fourths of such estimated cost to an official governmental planning agency for an area described in subsection (a)(7), or for planning being carried out for a city, other municipality, county, group of adjacent communities, or Indian reservation in an area designated by the Secretary of Commerce as a redevelopment area under section 5 of the Area Redevelopment Act (or under any Act supplementary thereto), to States participating in planning for Appalachian regional programs, for expenses incurred in the course of such planning, or to the Appalachian Regional Commission. All grants made under this section shall be subject to terms and conditions prescribed by the Administrator. No portion of any grant made under this section shall be used for the preparation of plans for specific public works. The Administrator is authorized, notwithstanding the provisions of section 3648 of the Revised Statutes, as amended, to make advances or progress payments on account of any grant made under this section. There is hereby authorized to be appropriated not exceeding $230,000,000 to carry out the purposes of this section, and any amounts so appropriated shall remain available until expended: *Provided*, That not to exceed 5 per centum of any funds so appropriated may be used by the Administrator for studies, research, and demonstration projects, undertaken independently or by contract, for the development and improvement of techniques and methods for comprehensive planning and for the advancement of the purposes of this section.

(c) The Administrator is authorized, in areas embracing several municipalities or other political subdivisions, to encourage planning on a unified metropolitan basis and to provide technical assistance for such planning and the solution of problems relating thereto.

(d) It is the further intent of this section to encourage comprehensive planning, including transportation planning, for States, cities, counties, metropolitan areas, urban regions, and Indian reservations and the establishment and development of the organizational units needed therefor. The Administrator is authorized to provide technical assistance to State and local governments and their agencies and instrumentalities, and to Indian tribal bodies, undertaking such planning and, by contract or otherwise, to make studies and publish information on related problems. In extending financial assistance under this section, the Administrator may require such assurances as he deems adequate that the appropriate State and local agencies are making reasonable progress in the development of the elements of comprehensive planning. Comprehensive planning, as used in this section, includes the following, to the extent directly related to urban needs: (1) preparation, as a guide for long-range development, of general physical plans with respect to the pattern and intensity of land use and the provision of public facilities, including transportation facilities, together with long-range fiscal plans for such development; (2) programing of capital improvements based on a determination of relative urgency, together with definitive financing plans for the improvements to be constructed in the earlier years of the program; (3) coordination of all related plans of the departments or subdivisions of the government concerned; (4) intergovernmental coordination of all related planned

activities among the State and local governmental agencies concerned; and the preparation of regulatory and administrative measures in support of the foregoing.

(e) In the exercise of his function of encouraging comprehensive planning by the States, the Administrator shall consult with those officials of the Federal Government responsible for the administration of programs of Federal assistance to the States and municipalities for various categories of public facilities.

(f) The consent of the Congress is hereby given to any two or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in the comprehensive planning for the physical growth and development of interstate, metropolitan, or other urban areas, and to establish such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts.

(g) In addition to the planning grants authorized by subsection (a), the Administrator is further authorized to make grants to organizations composed of public officials whom he finds to be representative of the political jurisdictions within a metropolitan area or urban region for the purpose of assisting such organizations to undertake studies, collect data, develop regional plans and programs, and engage in such other activities as the Administrator finds necessary or desirable for the solution of the metropolitan or regional problems in such areas or regions. To the maximum extent feasible, the grants under this subsection shall be for activities relating to all the developmental aspects of the total metropolitan area or urban region, including, but not limited to, land use, transportation, housing, economic development, natural resources development, community facilities, and the general improvement of living environments. A grant under this subsection shall not exceed two-thirds of the estimated cost of the work for which the grant is made.

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The Record SEPTEMBER 23, 1966.

From: Leo Weaver, Chief, Technical Services, OSW.

Subject: Meeting with Messrs. R. Ives, J. Newman, DHUD, re technical advisory for solid wastes, September 23, 1966.

Mr. Gilbertson and the writer met with Messrs. Ives and Newman as an outgrowth of a request for assistance from the RPD, EEFP, New York (re memorandum of August 1, 1966).

Mr. Gilbertson reviewed previous contacts which resulted in preparation of a draft of a proposed agreement on coordinating grant activities of OSW and related "701" planning activities of the Urban Renewal Administration. Reference was made to a note received from Roger Honberger regarding the URA review of the draft wherein Mr. Honberger stated he desired to meet with Mr. Gilbertson, or his representative, to clarify the types of work which should be undertaken with funds from the respective agencies. At that time, the use of "Planning Agency Letters" as a mechanism for promoting coordination between the "701" programs and other Federal programs was indicated. Mr. Ives emphasized his recognition of the importance of close coordination between OSW and his area of activity.

There was a general discussion of the missions of the 701 grant and the PHS grants under the Solid Wastes Act. There was general agreement that the 701 program would concentrate on grants to State planning agencies which included funds for incorporating a solid waste plan into the comprehensive State plan. The PHS, on the other hand, would make grants to the designated solid waste planning agency for developing the solid waste plan as such.

Regarding S&I planning grants it was stated that HUD should concentrate on the small communities and that the OSW should pick up the relatively large S&I planning grant requirements for metropolitan-regional approach feasibility studies which could lead to demonstrations.

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COOPERATIVE PROJECT AGREEMENT

I. Title of Project: "Joint U.S. Public Health Service—Tennessee Valley Authority Composting Project, Johnson City, Tennessee," hereinafter referred to as "the Project."

II. Parties to the Agreement:

A. U.S. Public Health Service, Washington, D.C., hereinafter referred to as "PHS".

B. Tennessee Valley Authority, Chattanooga, Tennessee, hereinafter referred to as "TVA."

C. City of Johnson City, Tennessee, hereinafter referred to as "the City."

III. Term of Agreement: This agreement shall be of full force and effect for a period of 7 years from the date of execution hereof, unless sooner terminated in accordance with the provisions of this agreement. This agreement may be renewed upon mutual agreement of the parties hereto.

IV. The parties hereby agree that the purpose of the project, which includes the design, construction and operation of a composting plant in Johnson City, Tennessee, is to demonstrate the engineering and economic feasibility of producing compost from mixed refuse and raw and digested sewage sludge; to conduct research into the health aspects of the use and processing of such compost and into the commercial and agricultural use and acceptability of the finished product and is not intended as a substitute for the maintenance of adequate sewage treatment facilities and refuse disposal service by the City.

V. The parties further agree as follows:

A. The City agrees:

1. To furnish, without cost to the other parties hereto, a site of approximately ten acres adjacent to the City sewage treatment plant, for the construction of the composting plant, which site is more particularly described in appendix "A" which is attached hereto and made a part hereof.

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2. To furnish without cost to PHS and TVA, such road easements and utility right of-way as PHS and TVA may determine to be necessary for the use of the aforementioned site for the project.

3. To permit PHS and TVA access to such City property as necessary in connection with the conduct of the project.

4. To deliver to the compost plant such normal mixed refuse and special wastes as available from its refuse collection system in such amounts and at such times as PHS and TVA may request.

5. To deliver to the compost plant such raw sludge and such digested or partially digested sludge, in such amounts as may be available from its sewage treatment plant, and at such times as PHS and TVA may request.

6. To permit PHS and TVA to use City laboratory facilities at the City sewage treatment plant to the extent the City determines that such use will not interfere with its own use of the laboratory.

7. To remove from the compost plant upon request any solid, semi-solid or raw materials and processed or partially processed compost within 24 hours and to dispose of all such materials.

8. To accept at no charge to PHS and TVA all waste water (including sanitary sewage, effluent from sludge thickening and other compost plant processes, and wash water) from the compost plant, piping and pumping to be by PHS and TVA.

9. To maintain and operate at no cost to PHS and TVA such City property, buildings, equipment and facilities as may be required for the continued operation of the compost plant.

10. To furnish such other facilities and services as it can readily provide that may be requested by PHS and TVA.

B. TVA agrees, subject to the provisions of paragraph V, section C and without cost to the City:

1. To design a compost plant, including all buildings, structures and appurtenances thereto, to meet the following requirements. The plant shall be of the windrow type and which will have a rated capacity of 10 tons per hour of mixed refuse and up to 2500 gallons per hour of sewage sludge. The plant shall be designed to be capable of providing maximum dependability of service and of providing information on comparative operation

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of individual units of processing equipment. The composting plant shall be designed so as to be capable of performing the following functions: (a) shredding to increase active surface area of processed material, (b) moisture control by adding water or dry material, and (c) mixing to uniformly compost all the material being treated. The composting plant shall be equipped with necessary materials handling equipment, including receiving hopper, plate conveyor, belt conveyors, magnetic separators, sewage sludge thickener, rasping machine, hammermill, and windrow placing and turning machinery. The composting plant shall be capable of producing processed refuse, formed into windrows, approximately five feet high and seven feet wide at the base, to undergo decomposition. The processing equipment will be housed in a modular sheet metal industrial type building with concrete footings and concrete slab floor.

The composting plant shall provide for active composting to take place in unprotected windrows, but with a covered curing and storage building in which to complete the decomposition, dry, and store the finished compost. This temporary building will be near the processing building, will be roofed to protect compost from rain, and will be high enough to permit the entrance and maneuvering of dump trucks and front-end loaders.

Office, laboratory and visitor reception space on the site will be provided in a building of temporary construction.

2. To submit to PHS plans and specifications for a compost plant which meets the requirements of subsection 1 above, together with the estimated cost of construction of such plant.

3. To construct, operate, and maintain a compost plant in accordance with plans approved therefor by PHS.

4. To conduct studies, research, experiments and investigations of the feasibility of commercial and agricultural use of the compost produced.

5. To remove at the termination of this agreement all buildings, structures and appurtenances erected for the project, unless said buildings, structures and appurtenances are otherwise disposed of with the approval of the City and of PHS and in accordance with applicable Federal requirements for the disposal of Government property in effect at the time of termination.

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C. PHS agrees:

1. To pay TVA for costs incurred in the design, construction, maintenance and operation of the compost plant and such costs as may be incurred in the removal of the compost plant.

2. To pay to the City the increased costs incurred by the City for its sewage and refuse disposal services resulting from the City's obligations under this agreement and such costs as may be incurred by the City pursuant to paragraph V, section A, sub-

section 10, if such increased costs are substantiated by actual cost data submitted by the City.

3. To conduct health-oriented studies, research, investigations and experiments relating to: (a) the composting process and the compost produced, and (b) the efficient and economic operation of the compost plant.

VI. The parties hereto further mutually agree:

a. That the compost plant will be located on a ten acre site adjacent to the City sewage treatment works near Johnson City, Tennessee, which site is more particularly described in appendix "A" hereof.

b. That this agreement may be terminated by mutual agreement of all parties hereto, or upon 180 days notice by PHS and TVA to the City of the intention of PHS and TVA to terminate this agreement.

c. That the project shall be referred to in all publications, press releases, signs, etc. as a "Joint U.S. Public Health Service—Tennessee Valley Authority Composting Project, Johnson City, Tennessee."

d. That all funds expended by the City in connection with this project will be accounted for in such a manner as deemed necessary by Federal auditors.

e. That obligations assumed hereunder shall be subject to the availability of funds for such purposes.

f. That the terms and conditions herein set forth, may, at any time hereunder be changed or modified by supplemental agreement with mutual consent of the parties concerned.

g. That the data collected will be the property of and will be used as deemed appropriate by PHS and TVA. All proposed publications by parties hereto of the data, or evaluations thereof developed in this project will be transmitted to the other parties hereto for review and comment a reasonable period of time in advance of proposed publication data.

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h. That the City relinquishes title and interest in any refuse and sludge and products thereof, when such refuse and sludge are accepted by PHS and TVA at the compost plant, and all such materials when accepted shall be and become the property of the United States.

VII. PHS representative and project supervisor:
Mr. Wesley E. Gilbertson, Chief
Office of Solid Wastes
EH, BSS, PHS, DHEW
TVA representative:
Dr. O. M. Derryberry, Director of Health
Tennessee Valley Authority
City representative:
Mr. D. A. Burkhalter, City Manager
City of Johnson City, Tennessee

EDWARD N. BACKUS,
Mayor, City of Johnson City, Tennessee.
DR. O. M. DERRYBERRY,
Director of Health, Tennessee Valley Authority.
DR. WILLIAM H. STEWART,
Surgeon General, Public Health Service.

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MEMORANDUM OF UNDERSTANDING—DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE AND THE DEPARTMENT OF THE INTERIOR BUREAU OF MINES

RELATIVE TO

Implementation of Title II, the Solid Waste Disposal Act of 1965, Public Law 89-272

The Department of Health, Education, and Welfare, Public Health Service, and the Department of the Interior, Bureau of Mines, each has an area of responsibility for implementing the provisions of Public Law 89-272, the Solid Waste Disposal Act, and are mutually desirous of developing a coordinated program toward the attainment of common objectives under the Act. The report of the House Committee on Interstate and Foreign Commerce (Report No. 899, Page 27, lines 19 through 36), states that, under the provisions of the bill, subsequently enacted as Public Law 89-272, the Department of Health, Education, and Welfare "would be responsible for administration of the Act, except that the Secretary of the Interior will be responsible for 'solid waste resulting from the extraction, processing or utilization of minerals and fossil fuels where the generation, production, or reuse of such wastes is or may be controlled within the extraction, processing or utilization facility or facilities and where such control is a feature of the technology or economy of the operation of such facility or facilities'. This arrangement would make the Secretary of Health, Education, and Welfare responsible for administration of the Act with respect to solid waste problems of communities, including those problems which may affect the general environments of communities, and including those solid wastes or solid waste residues that result from business and industrial activities and become part of the community's solid waste disposal system. The Department of the Interior, as above indicated, would be responsible for solving industrial solid waste problems within facilities engaged in extraction, processing, or utilization of minerals and fossil fuels in the circumstances above defined." To accomplish these objectives, the Public Health Service and the Bureau of Mines have entered into this Memorandum of Understanding in order to define and describe the principal areas of program interest of each agency and to clearly establish a mutually acceptable working relationship which insures proper coordination of all programs under Public Law 89-272.

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It is mutually agreed that:

A. The Public Health Service and the Bureau of Mines will designate officials to act as the principal contacts and liaison officers at the program level in interagency matters pertaining to Public Law 89-272.

B. In regard to demonstration grant applications under Section 204 of Public Law 89-272, the Public Health Service will refer to the Bureau of Mines for necessary action, those demonstration grant applications pertaining primarily to mineral or fossil fuel solid waste problems as defined under Section 203(1) of the Act; and the Bureau of Mines will refer to the Public Health Service for necessary action those demonstration grant applications pertaining to other solid waste problems.

C. The Public Health Service will refer to the Bureau of Mines for review and comment those demonstration grant applications which give major emphasis to components involving mineral, metal, and fossil fuel solid waste problems as part of a broader solid waste disposal program; and the Bureau of Mines will refer to the Public Health Service for review and comment those demonstration grant applications in which the mineral and fossil fuel solid waste problems have significant community implications. In the above cases, it is understood that any comments the reviewing

agency wishes to make will be forwarded within a period of fifteen (15) working days from the time of receipt.

D. The Bureau of Mines and the Public Health Service may support, on a joint basis, demonstration, research, or training projects which have implications for disposal of solid wastes from minerals or fossil fuels and from community sources.

E. The Public Health Service and the Bureau of Mines will perform reimbursable services for each other, when such action is appropriate and feasible and mutually beneficial to the agencies.

F. The Public Health Service and the Bureau of Mines will exchange information regarding program activities under Public Law 89-272. This will include information on grant awards and similar actions.

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G. The Public Health Service in carrying out its responsibilities for developing comprehensive State and local solid waste programs, and in providing technical assistance to State and local agencies and industry, will need technical information from the Bureau of Mines. From time to time such information will be made available by the Bureau of Mines to the Public Health Service.

H. Since the processing and disposal of automobile and other metallic scrap involve problems of community environmental pollution, blight, and parallel resource problems in the technology of salvage and utilization, the Public Health Service and the Bureau of Mines may jointly conduct projects on broad phases of the junk and scrap auto problem, and individually on specific appropriate complementary segments.

This Memorandum of Understanding shall become effective upon acceptance of both parties, and shall continue indefinitely, but may be modified at the request of either of the cooperative agencies. This agreement may be terminated by either agency upon thirty (30) days notice in writing.

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From: Director, NCUIH OCTOBER 30, 1967.

To: Director, NCAPC

Subject: Creation of a Liaison Committee.

This is to acknowledge your memorandum of October 4, 1967 concerning the establishment of a liaison committee between certain portions of the NCAPC and the Solid Wastes Program, NCUIH. I heartily concur in such a proposal and have advised Mr. Richard D. Vaughan, Chief, Solid Wastes Program to initiate efforts with NCAPC that will officially establish such a liaison force.

As you know, a discussion between the Solid Wastes Program and certain members of your staff was held on October 18, 1967 to discuss this very subject, and it is my understanding that the primary liaison representatives for each organization have been selected and they are now working on a protocol describing the liaison activities. Mr. H. Lanier Hickman, Jr., Chief, Technical Services, Solid Wastes Program is the primary liaison representative for the Solid Wastes Program, and other Solid Wastes Program members are now being selected to serve on subgroups. We anticipate that the protocol will be available shortly after November 1, 1967.

JEROME H. SVORE.

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DECEMBER 1, 1967.

From: M. Dean High, Technical Assistant to the Associate Director for Abatement and Control, NCAPC; H. Lanier Hickman, Jr., Chief, Technical Services, Solid Wastes Program, NCUIH.

To: See below.

Subject: Liaison Between NCAPC and Solid Wastes Program, NCUIH.

The directors of the NCAPC and NCUIH, in memorandums dated October 4, and October 30, 1967, respectively, (copies attached) stated their joint support for establishment of close and continuing liaison between the NCAPC and the Solid Wastes Program, NCUIH. At an October 18, 1967, meeting in Washington, D.C. general guidelines were discussed for liaison between the two groups; M. Dean High and H. Lanier Hickman were designated as the central focus points for this dialogue.

It was agreed that several persons in each Center would need to communicate directly with their counterpart in the other Center at periodic intervals on matters of mutual interest. Suggested areas of mutual interest and liaison representatives from each Center are listed below:

Area of Interest	NCAPC	SWP–NCUIH
Principal Liaison Member	M. Dean High	H. L. Hickman
Process and R & D	R. P. Hangebrauck	B. T. Riley
Demonstration Grants	S. T. Cuffe	R. P. Lonergan
Abatement Investigations	R. L. Harris	M. G. Tucker
Emission Studies and Testing Procedures	J. McGinnity	E. L. Higgins
Program Planning and Development	R. Jimeson	R. W. Eldredge
Standards and Criteria	J. J. Schueneman	J. DeMarco
Federal Facilities	R. A. Venezia	J. DeMarco

The representatives should take immediate steps to establish contact and maintain communication with their counterpart. A formal meeting of the NCAPC–SWP liaison committee members will be held in January or February, 1968 and thereafter at intervals to be decided by the committee. Responsibility for keeping the principal liaison members (High and Hickman) informed of activities in each area of interest shall rest with the individual representatives listed above.

H. LANIER HICKMAN, JR.
M. DEAN HIGH

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Dr. Middleton, Mr. Svore, Mr. Vaughan, NCAPC–SWP Liaison Committee Members Mr. High, Mr. Hangebrauck, Mr. Cuffe, Mr. Harris, Mr. McGinnity, Mr. Jimeson, Mr. Schueneman, Mr. Venezia, Mr. Hickman, Mr. Riley, Mr. Lonergan, Mr. Tucker, Mr. Higgins, Mr. Eldredge, and Mr. DeMarco.

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MR. JEROME H. SVORE, DIRECTOR, NATIONAL CENTER FOR URBAN AND INDUSTRIAL HEALTH, DIRECTOR, NATIONAL CENTER FOR AIR POLLUTION CONTROL

CREATION OF A LIAISON COMMITTEE

In view of some common interests between your Solid Wastes Program and our air pollution control activities, I would like to propose that we create a formal liaison

committee to facilitate cooperation on matters of refuse disposal, particularly incineration. Recent informal meetings between members from the two Centers have proven beneficial, but have indicated the need for formally scheduled meetings. Areas in which I believe such an exchange of ideas would prove beneficial include the following.

(1) Determining the design parameters that affect emissions from municipal incinerators.

(2) Determining the effectiveness of pollution control devices used on municipal incinerators.

(3) Deciding upon uniform source testing procedures between the two Centers for both the collection and analysis of air contaminants.

(4) Exploring abatement conference recommendations relating to refuse disposal, including alternative methods to incineration.

(5) Sharing information obtained from source tests, literature surveys, and conferences.

(6) Coordination of research and development activities of the National Center for Air Pollution Control and the National Center for Urban and Industrial Health for projects encompassing the interests of both groups.

[p. 1]

If you agree on the desirability of creating a formal liaison committee between our two Centers, I would suggest that meetings be held at one- or two-month intervals alternately in Cincinnati, Washington, D.C., or North Carolina. Representatives from our Center to this committee would include at least the Chief of our Engineering Section of the Abatement Program, the Chief of the Incineration Unit in this Section, a representative of the Process Control Engineering Program, and a member from the Federal Facilities Section.

JOHN T. MIDDLETON.

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4.6 DEMONSTRATION PROJECTS, SOLID WASTE PROGRAMS, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, MARCH 1967, AND A SUPPLEMENT OF DEMONSTRATION PROJECT ABSTRACTS, SOLID WASTE PROGRAM, MARCH 1967.

DISCRIMINATION PROHIBITED—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, the programs discussed in this publication like every program or activity receiving financial assistance from the Department of Health, Education, and Welfare, must be operated in compliance with this law.

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FOREWORD

Projects described in these abstracts have received awards covering up to two-thirds of project costs as authorized by the Solid Waste Disposal

Act of 1965. The awards were made by the Solid Wastes Program of the Public Health Service's National Center for Urban and Industrial Health.

The projects are of two kinds. Some are designed to demonstrate the feasibility of new and improved technology for solid waste disposal. Others are to investigate the development of area-wide solid waste management systems to replace insanitary and uneconomic operations by individual communities.

The Solid Wastes Program, as outlined in the Act, is aimed at initiating across the Nation the adoption of practices and systems for disposing of solid wastes which protect human health and scenic beauty.

In addition to demonstration projects, the Program supports research and training in solid wastes management, provides up to 50 percent support for statewide solid waste program planning, and assists local and State governments with technical problems.

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Project type: Study/Invest/Demo. Grant Agency No. 1-D01-SW-00003-01

Title: Bagged Solid Waste Landfill Project

Project Director: Calvin A. Canney, Town Manager, Town Hall, Barrington, R.I.

Amount and year.—$30,830—01.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.
Objective.—To demonstrate the feasibility of rubbish and garbage disposal by the "bag system" in a sanitary landfill and to determine the effect of this collection method on the capacity of sanitary landfills.
Procedures.—One-third of the population of Barrington will be converted to the "bag system." Detailed records of cost and failures will be kept. The bag will be used either strictly for garbage or for garbage and rubbish. The effect of these variables on sanitary landfill operations will be determined. Changes in the volume of collection and also the volume requirement in sanitary landfills due to the use of different "bag systems" will be determined by actual investigation. The degree of economy and advisability of using this method will be determined by evaluation of the data, and by assessment of public attitude.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00004-01

Title: Solid Waste Reduction/Salvage Plant

Project Director: John R. Reinhardt, Civil Engineer II, City of Madison, Engineering Department, Madison, Wis.

Amount and year.—$375,000—01, $90,000—02, and $90,000—03.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.
Objective.—To make an economic study of the Gondard process of milling refuse as a means of reducing volume for the purpose of extending the life of a landfill. To evaluate the sanitary aspects of the milled refuse, economic feasibility of salvaging items such as

paper and metal, use of milled refuse as a landfill cover, and investigate physical changes, in the condition of "milled" versus "as collected" refuse in the fill site.

Procedure.—In the first year of the program a building will be erected and milling equipment will be installed. Landfill cells will be laid out, collection routes will be determined. Primary determinations will be made (1) to acceptability of using milled refuse in a landfill (2) to comparison of "in-fill" volumes and settlement characteristics (3) to cost of sanitary landfilling using "as-collected" and "milled" refuse (4) to evaluation of claims relative to rodents, insects, odor, dust and blowing litter (5) to comparison of traffic load-bearing characteristics of both types of sites (6) to study the effects of varying the mill grate mesh-size (7) to determine if milled refuse can be used as a cover material for demolition debris and non-grindable materials (8) to compare the gas production and bacterial content in both types of landfills (9) to observe the extent of anaerobic and aerobic decomposition in the second and third year of the project period operation, a landfill using milled refuse will be evaluated. Mesh-size of the optimum size will be determined. Economic determination will be made concerning salvable materials. Examination will be made of the landfill to determine if when covered with a minimal amount of topsoil, it will support vegetation and be suitable as a surface.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00005-01

Title: Solid Waste Disposal Study for Kalamazoo County—Michigan

Project Director: E. L. Bockstanz, Engineer Manager, Kalamazoo, County Road Commission, P.O. Box 2127, Kalamazoo, Mich.

Amount and year.—$12,000—01.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.

Objective.—To investigate and report on the feasibility of various disposal methods for Kalamazoo County. The firm of Jones, Henry and Williams will perform the entire study. They plan to determine the present and future quantities of household and industrial wastes, the possible location of disposal areas and the operating costs of the disposal systems.

Procedures.—The consultant will endeavor to determine the combination of disposal method and disposal site that best relieves the solid waste disposal problems of Kalamazoo County. To determine the optimum solution, the consultant will use data accumulated by local agencies, aerial photographs, ground studies and subsurface investigations.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00006-01.

Title: Hydrogeology of Solid Waste Disposal Sites.

Project Director: Robert N. Farvolden, Associate Professor Geology, Department of Geology, University of Illinois, Urbana, Ill.

Amount and year.—$71,297—01, $27,335—02.
Started.—June 1966.
Expected finish.—May 1967.

Objective.—To define and study the geological factors that influence the movement of groundwater into, or leachate away from, landfill solid waste disposal areas.

Procedures.—Several landfill sites will be selected for study in order to consider several

different geological formations. Soil borings at and around the selected disposal sites will be used to define the geology of the disposal area. Piezometer tubes will be placed to define the groundwater movement through the area. After completely defining the geology and groundwater movement through the area, an attempt will be made to define the factors that have the greatest influence on the movement of the groundwater thru the disposal area. Water samples will then be collected and analyzed to confirm the ideas. The ultimate objective of the study is to develop the criteria with which to judge the groundwater pollution potential of a landfill when selecting a site.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00007-01

Title: Solid Waste Study and Planning Grant-Jefferson County

Project Director: Dr. John E. Heer, Professor, Civil Engineering, University of Louisville, Louisville, Ky.

Amount and year.—$65,940—01.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.

Objective.—To investigate the composition and volume of solid wastes generated as well as the zones of generation. The methods of disposal most suited to the area and type of waste will be investigated, as well as possible sites for future disposal units.

Procedures.—Jefferson County will be divided into three socio-economic areas; low, medium and high. The average family income for each area is less than $5,000; $5,000–$7,000; and more than $7,000 respectively. The amount and type of waste generated in each area will be determined by surveys. This data will be used to determine the type of disposal most suited for each area and to select possible future sites for solid waste disposal.

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Project Type: Study/Invest/Demo. Grant Agency No. D01-SW-00009-01

Title: High Density Landfill Recovery Program

Project Director: John Nicholson, Assistant Director, King County Sanitary Operations, Seattle, Wash.

Amount and year.—$375,000—01, $71,008—02.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.

Objective.—King County proposes to demonstrate the feasibility of using a refuse burying compactor to create an economical sanitary landfill program that recovers and salvages land presently unusable. They will provide for long haul transportation in sanitary containers. These containers will be designed such that the refuse can be transferred directly into the compactor whereby it will be extruded below ground level at pressures up to 200 PSI. They hope to show the resultant landfill will be free of decay, gas producing products, and settlement.

Procedures.—Under the direction of Hayes Evans, King County Sanitary Operations has designed and constructed the Transfer Stations, prepared designs for the transfer containers and the unloading yoke. By June 1967 they hope to have completed the engineering designs for the disposal machine. The 1967–68 program will involve the construction and demonstration of the disposal machine.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00010-01

Title: Waste Incineration in Mechanically Agitated Fluidized Beds

Project Director: Richard C. Bailie, Associate Professor, Department of Chemical Engineering, West Virginia University, Morgantown, W. Va.

Amount and year.—$95,627—01, $80,800—02.
Started.—June 1, 1966.
Expected finish.—May 31, 1968.
Objective.—To obtain a cleaner more economical method for the disposal of solid wastes using fluidized bed techniques. Special emphasis will be placed on garbage, rubbish, and sewage sludge.
Procedures.—A pilot plant study of a fluidized bed will be made to obtain the data necessary for an evaluation of the process, to obtain operating experience, and to solve expected problems. This data will be used to develop an optimum design for several solid waste disposal problems. The following parameters will be studied:
a. Effect of varying the method of feeding including the feed composition.
b. Effect of changing certain bed characteristics.
c. Air Pollution control.
d. Chemical composition of influent and effluent.
e. Temperature of influent and effluent.
f. Heat Transfer.
g. Incineration of Sewage Sludge.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00011-01

Title: Gully Reclamation Method—Landfill Demonstration—Nebraska

Project Directer: John N. Nueberger, General Manager, Papio Watershed Board, Washington, Douglas and Sarpy Counties, Room 220, Hilcrest Center, Ralston, Nebr.

Amount and year.—$72,300—01, $35,600—02, $35,600—03.
Started.—June 1966.
Expected finish.—May 1969.
Objective.—To demonstrate and promote the acceptance of landfills for county-wide solid wastes disposal by utilizing the gully reclamation method.
Procedures.—A gully in the Papio Watershed area of Sarpy County will be selected for a sanitary landfill site. Engineering studies will be conducted to determine the location for erecting a dam type structure, with a suitable spillway across the lower end of the gully. The dam and spillway will be erected with due regard to preventing landfill seepage from polluting the downstream waterways. Operation of the landfill will take place starting from the upstream end of the gully and progress toward the dam. The usual sanitary landfill appurtenances will be included such as access roads, scale and scale house, fencing gates, etc. Data on the amount, types of wastes materials, cover depth, compaction and settlement will be collected. Seepage water samples will be taken to determine the chemical and biological characteristics of internal drainage water.
Project evaluation would include.—(1) Findings on management and operation requirements to obtain community acceptance to the landfill methods employed; (2) determining landfill site costs, financing, and user rates for solid waste disposal; and (3) determining the value of gully reclamation by sanitary landfill operation in accom-

plishing conservation, controlling run-off channel grade, countryside beautification, and satisfactory solid waste disposal.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00013-01

Title: Multi-Purpose Incinerator—Connecticut.

Project Director: Norman W. Wagner, Supervisor of Sanitation, Bureau of Sanitation, Magee Avenue, Stamford, Conn.

Amount and year.—$800,000—01, $30,000—02.
Started.—June 1966.
Expected finish.—May 1968.
Objective.—To demonstrate the practicability of burning bulk waste in a multi-purpose incinerator.

Procedures.—Design and construct a 175 ton per day multi-purpose incinerator adjacent to the City of Stamford's Sewage Treatment Plant. The design criteria will utilize the research data which was developed through a recent Public Health Service grant to Mr. Elmer Kaiser, Senior Research Scientist, New York University and from information made available for the Detroit Special Waste Incinerator and DuPont Special Waste Incinerator. The design features will provide: (1) for operation under strict air pollution control requirements; (2) for burning of over-sized solid waste items such as logs, stumps, brush, demolition lumber, furniture, tires, plastics, automobile bodies and non-gradeable highly volatile liquid residues. Evaluation procedures of the incinerator's ability to handle these special wastes will develop or produce: (1) accurate measurements of weights and volumes of all special wastes; (2) rules and regulations governing the delivery of waste such as maximum size permissible; (3) descriptions of complex industrial wastes; (4) information on which wastes are compatible and non-compatible when burned together; (5) methods of charging the chamber; (6) operating temperatures; (7) draft measurements; (8) effectiveness of centrifugal and electrostatic dust interceptors; and (9) information on excess air requirements and stack emissions.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00018-01

Title: Land Reclamation by Accelerated Stabilization.

Project Director: Ralph Stone, President, Ralph Stone & Co., Inc., Engineers, 10954 Santa Monica Boulevard, Los Angeles, Calif.

Amount and year.—$122,100—01, $98,825—02, $99,625—03.
Started.—June 1, 1966.
Expected finish.—May 31, 1969.
Objectives.—The City of Santa Clara is proposing to demonstrate the feasibility of land reclamation by accelerated stabilization using aerobic high-rate and composting test cells. They intend to show that the resultant sanitary landfill will be free of methane and hydrogen gases, will have a reduction in the pollution of ground water reduction in solid waste disposal costs and an increase in solid wastes disposal capacity when compared to a conventional sanitary landfill.

Procedures.—In the first phase of this project, the city of Santa Clara will construct, operate and compare conventional anaerobic sanitary landfills with two types of aerobic landfills (composting and controlled high-rate oxidation) in order to obtain their respective efficiencies in reclaiming land. Phase two will begin only if phase one

has been successful. It will demonstrate a full scale aerobic landfill in actual operation and provide the city of Santa Clara with appropriate cost and land reclamation maintenance experience.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00019-01

Title: Jefferson Parish (Louisiana) West Bank Refuse Collection.

Project Director: Ray E. Patron, Director of Garbage, 912 David Drive, Metairie, La.

Amount and year.—$28,007—01.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.
Objective.—To analyze the existing collection and disposal systems in the 4 garbage districts on the West Bank of Jefferson Parish and to evolve a plan for consolidating these districts into one central organization.
Procedures.—The existing systems will be analyzed with regard to efficiency, economics and potential growth. Collection methods and routes, transfer stations, incineration, and landfill operations will be considered. Experienced consulting engineers will be used.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00020-01

Title: Recreational Use of Waste Incineration Heat

Project Director: Richard L. Nelson, Assistant Executive Administrator, Bergen County Admin. Building, Hackensack, N.J.

Amount and year.—$300,000—01, $292,968—02, $23,067—03.
Started.—June 1966.
Expected finish.—May 1969.
Objective.—To construct an incinerator so designed that it will be economical for solid waste disposal, acceptable from the standpoint of air pollution control when located in a recreation park area, and that it will service, through heat recovery, as a source of economical power for the operation of adjacent recreational facilities.
Procedures.—A 600 ton/day incinerator would be constructed in a recreational park area. The design includes the incorporation of air pollution control and waste heat recovery devices. The unit would be evaluated to show the economics of operation, that it is acceptable in a park area, and that it furnishes a power source for the economical and efficient operation of adjacent recreational facilities such as a swimming pool and ice skating rink.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00021-01

Title: California Integrated Solid Waste Management System.

Project Director: Frank M. Stead, Division of Environmental Sanitation, State Department of Public Health, 2151 Berkeley Way, Berkeley, Calif.

Amount and year.—$223,940—01, $178,687—02.
Started.—June 1, 1966.
Expected finish.—May 31, 1968.
Objective.—To investigate, plan, and design a regional Solid Waste management system which can efficiently and economically handle all of the solid wastes of the area, and to implement, construct, test, and evaluate the designed system.

Procedures.—The State Department of Health will conduct a systemized approach to the Urban-Rural Solid Waste Management problems of the Fresno Region. The actual investigation will be made by the Von Karman Center, Aerojet-General Corporation and Engineering-Science, Inc. The first objective of this study will be to develop a methodology that can be generalized and used in any region. They plan to develop a procedure for measuring the effectiveness of any proposed system in solving all problems created by solid wastes. They will then make an identification of the operating conditions (waste loads; geological, meteorological, hydrologic and technology and existing waste management practices) and conceptual designs of alternative systems. By incorporating this data into their evaluation and comparative programs they hope to recommend a solid waste management system that will alleviate current and future solid wastes problems in the Fresno Region.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00026-01

Title: Paterson, Clifton, Passaic, Wayne Regional Solid Waste Program

Project Director: Frank P. Francia, President, Board of Public Works, City Hall, Paterson, N.J.

Amount and year.—$75,000—01.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.
Objectives.—The primary objective of this project is to construct and operate a pilot operation which will demonstrate the most economical solution to their solid waste problems. To find this solution, they plan to evaluate the means, the procedures and the mechanics of handling and disposing of solid waste through regionalized facilities. Their findings and solution will be incorporated into the overall state plans.
Procedures.—The existing systems will be analyzed and all known methods for disposing of solid wastes will be evaluated with respect to their particular area. In addition an inventory and quantitation of industrial and household refuse will be made.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00029-01A1

Title: Solid Waste Disposal Incinerator Prototype for Specialized Operations.

Project Director: E. F. Bannon, 274 Middle Street, Bridgeport, Conn.

Amount and year.—$272,506—01, $17,506—02.
Started.—December 1966.
Expected finish.—November 1968.
Objective.—The project objective is to construct a modification and improvement of an experimental solid waste incinerator; to experimentally elicit information as to practicability and safety of said device; to determine the relative cost per ton of disposal; to determine the types and amounts of waste materials which can safely be disposed of; and to secure information as to the relative hazards of disposing of volatile and/or explosive substances which now must be buried.
Procedures.—The City of Bridgeport, Connecticut, will demonstrate the feasibility of using two improved incinerators to combust materials which cannot be burned in conventional incinerators. A "Detroit" type brush burner will be modified to provide a heat exchanger mechanism to raise combustion temperatures. A special refractory lining will be installed to withstand those high temperatures. The second incinerator will be a modified "Dupont" open pit type. It will be improved by the addition of jets

of hot air generated in the "Detroit" incinerator. It will have special refractory lining capable of withstanding a temperature of 3000°F. In the final system normal wastes will be burned in conventional and bulky demolition wastes, volatiles, and explosives in the "Dupont" incinerator. The economic practicability (by cost comparison) and the safety of this equipment will be investigated. Experiments will also be conducted to determine the most advantageous size and contour of the proposed pit, the angle of air propellent types, the quantity of air needed according to the type of waste, the most effective gas mixtures, the time needed to load, fire, and remove unconsumable waste, and the type of solid waste that cannot be handled.

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Project Type: Study/Invent/Demon. Grant Agency No. 1-D01-SW-00030-01

Title: Gainesville Compost Plant.

Project Director: Houston H., Director, Gainesville Metropolitan Waste, Conversion Corp., P.O. Box 1026, Wheaton, Ill.

Amount and year.—$375,000—01, $832,320—02, $178,400—03.
Started.—June 1, 1966.
Expected finish.—May 31, 1968.
Objectives.—To demonstrate a recently developed high-rate, mechanical composting system for the disposal of municipal garbage and trash from medium sized communities. It will also serve as a demonstration.
Procedures.—A "Metropolitan" mechanical composting facility will be constructed to serve the City of Gainesville, the University of Florida, and Alachua County for a seven-year demonstration period. Municipal sludge will be incorporated into the municipal garbage and refuse. Fifteen per cent of the compost from the plant will be donated to the City and the University for agricultural and horticultural demonstration purposes. The remainder will be sold to amortize the bonds issued by the Authority for its share of the project.
Evaluation of the project will include complete cost analysis, product sales, demonstration procedures and arthropod and rodent control.

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Project Type: Study/Invest/Demon. Grant Agency No. 2-D01-SW-00033-02

Title: San Jose/Santa Clara County Solid Waste Disposal Demonstration Project

Project Director: Raymond C. Miller, Director of Public Health, San Jose, California.

Amount and year.—$58,500—01, $127,500—02.
Started.—January 1967.
Expected finish.—December 1967.
Objective.—To undertake a study to show that a solid waste disposal system, which basically employs incineration, is feasible for accomplishing total solid waste disposal for counties or districts containing metropolitan areas.
Procedures.—This study is a continuation of one which was funded for $39,000 for the period 6/1/66 through 12/31/66. The study consists of a systems analysis approach to develop a plan for handling all solid wastes produced in the San Jose Metropolitan area and the Santa Clara County. This analysis would include: (1) determination of solid waste situations in San Jose and all of Santa Clara County; (2) examination of salvage and by-product markets, and the various processes by which these products

can be obtained; and (3) determination of functional specifications for disposal demonstration facilities for San Jose Metropolitan area and disposal requirements for all of Santa Clara County. Concurrently with the above, there will be undertaken a systems analysis of the legal, political, and social aspects for full-plan development.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00035-01

Title: Erie County Refuse Disposal Project

Project Director: Thomas C. West, Director, Division Environmental Health, Erie County Department of Health, 2101 Peach Street, Erie, Pa.

Amount and year.—$34,000—01, $10,000—02.
Started.—June 1966.
Expected finish.—May 1968.
Objective.—First Year: Evaluate existing solid waste collection and disposal operations in Erie County; and from findings propose refuse collection and disposal site system that would properly serve the County.
Second year.—Study the sociological problems connected with the adverse reactions of the population to the solid waste problem, and develop a public education program to overcome the attitude.
Procedures.—The procedures used may be listed as follows: (1) A county-wide survey of each existing dump and landfill sites will be undertaken. (2) A county-wide survey to recommend location of new and suitable landfill sites will be undertaken. (3) Existing methods of collection relative to haul distances will be evaluated. (4) The two existing City of Erie incinerators will be evaluated. (5) The cost, method of payment, and rate schedule of future programs will be estimated. (6) A questionnaire designed to determine a residents knowledge of and attitudes toward solid waste disposal methods will be distributed. (7) An educational program based on the results of the previous survey will be established. (8) Literature and mass media information on solid waste disposal methods will be disseminated.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00036-01

Title: Oklahoma County (Oklahoma) Solid Waste Disposal Study

Project Director: D. C. Clevland, Director, Division of Environmental Health, City-County Health Department, 331 West Main St., Oklahoma City, Okla.

Amount and year.—$20,650—01, $20,650—02, $20,650—03.
Started.—June 1, 1966.
Expected finish.—May 31, 1969.
Objective.—To prepare a long-range plan for the collection and disposal of solid wastes to serve Oklahoma County and the adjacent high density areas.
Procedures.—(1) Study existing legislation and promote permissive legislation if area or district solid waste collection and disposal systems are not permitted; (2) Prepare a long-range plan for collection and disposal of solid wastes; and (3) Conduct the study and investigation with a sanitarian on the County's staff plus a consultant, such plan to include collection routes, disposal sites, and transfer stations.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00038-01

Title: Incinerator No. 5 Phase I—Special Studies—Washington, D.C.

Project Director: William F. Young, Chief, Project Development and Engineering Branch, Department of Sanitary Engineering, District of Columbia.

Amount and year.—$94,203—01.
Started.—June 1, 1966.
Expected finish.—May 31, 1967.
Objective.—To determine the feasibility and cost of incorporating certain features into the design and construction of a proposed 800 TPD incinerator (Incinerator #5). This project includes the study and investigation of: (a) Air Pollution Control; (b) Heat Recovery; (c) Metal recovery; (d) Control Laboratory; (e) Chipper Installation, and (f) Compression Press.
Procedures.—A demonstration incinerator will be built within the District of Columbia and will be operated by the Department of Sanitary Engineering. Six separate but related studies will be made of this facility. These studies will include:
Air Pollution Control.—The effect of certain incinerator variables on the type and quantity of atmospheric contamination and the contaminate effect on air pollution control equipment will be studied.
Heat Recovery.—Refuse fuel variables and characteristics of certain equipment will be studied.
Metal Recovery.—Recovery of metals before incineration and ferrous metals after incineration.
Control Laboratory.—Available appropriate laboratory and monitoring equipment will be studied.
Chipper Installation.—Investigate various types of chipper equipment for reduction of large combustible materials.
Compression Press.—Various types of presses for reducing the volume of noncombustibles will be determined.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00039-1

Title: Maricopa County-wide Solid Waste Disposal

Project Director: Joseph Weinstein, Director, Division Environmental Health Services, 1825 E. Roosevelt, Phoenix, Ariz.

Amount and year.—$45,000—01, $21,000—02, $21,000—03.
Started.—December 1966.
Expected finish.—November 1969.
Objective.—The project objective is to review current solid wastes disposal practices in Maricopa County; to appraise the influence and interrelationship of the currently employed disposal systems on one another; to appraise the serviceability of these systems to the county as a whole, and to develop a county-wide solid waste disposal plan by which the county might develop methods and techniques to be used and establish a timetable for putting the plan into effect.
Procedures.—A qualified consulting engineer will be responsible for attaining a majority of the objectives listed. Personnel of the County Health Department will make supplementary surveys of the availability and suitability of certain land for landfill services. The type and quantity of solid wastes now being produced in the county will be determined. The type of disposal practiced in the separate communities

including sanitary landfill, dumps, animal feeding, incineration, and composting will be noted. The population and the waste production for the year 2000 will be projected. An analysis of possible solutions to solid waste disposal problems will be made, including area needed, location, and cost of landfills; the same analysis for incinerators; and an estimate of the probable place of composting in solid waste disposal.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00045-1

Title: Building an Amphitheater and Coastline Ramp with Municipal Refuse

Project Director: Charles S. Kiley, Director, Public Works, City of Va. Beach, 18th and Arctic Avenue, Virginia Beach, Va.

Amount and year.—$180,300—01, $53,288—02, $55,424—03.
Started.—January 1967.
Expected finish.—December 1969.
Objective.—The city of Virginia Beach, Virginia proposes to demonstrate the feasibility of constructing a hill or vertical sanitary landfill out of municipal refuse. The project is designed to take three years, and upon completion the resulting hill—60 feet high consisting of densely compacted refuse—will take the form of an amphitheater and coasting ramp. Cover material will be obtained from a pit which will be allowed to fill with water to form a lake. The final hill will be covered with vegetation to prevent erosion.

Procedures.—The project site area will be thoroughly surveyed and prepared. The land where the fill is to be placed will be evacuated to a depth somewhat above ground water and a standard sanitary landfill will be started. A four-foot layer of refuse will be placed, compacted, and covered each day with a 6-inch layer of earth. When earth from the original cut is used up, earth from a borrow pit will be utilized. When the project is completed, this pit will be allowed to fill with water to form a lake. Top soil will be piled separately for use as a final cover material. This material will be placed on the side slopes and covered with vegetation as the fill rises. Commencing with this project, a nursery will be started to grow plants which will be used to fix the banks. The fill will be shaped so that at completion an amphitheater and coasting ramp will be created. This project has been designed to dispose of the refuse from a city of about 150,000 population for a period of about three years.

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Project Type: Study/Invest/Demon. Grant Agency No. A-D01-SW-00046-1

Title: Development of Construction and Use Criteria for Sanitary Landfills

Project Director: John A. Lambie, County Engineer, County Engineering Building, 108 West Second Street, Los Angeles, Calif.

Amount and year.—$99,500—01, $110,000—02, $94,000—03.
Started.—January 1967.
Expected finish.—December 1969.
Objective.—This project is designed to satisfy the following three objectives with respect to design and operation of sanitary landfills; (1) The development of methods to control gas movements from existing and new landfills; (2) The development of methods to control leachate discharging from existing and new landfills; and (3) The development of a "Code" for use in controlling construction of buildings on completed sanitary landfills.

Procedures.—The procedures to be used during the course of this project are the following: First Year—Provide solutions to the problem of decomposition gas movement from sanitary landfills into surrounding soil and groundwaters. These solutions will be the result of studies of (1) gas flow measurements (2) geologic configurations (3) soil properties (4) subsidence rates and (5) gas control devices. Second Year—Continue to investigate subsidence in sanitary landfills. The investigations will include (1) a review of subsidence data obtained from other on-going solid waste disposal projects (2) surveys of existing structures located on landfills in Los Angeles and San Francisco areas (3) Evaluation of settlement data (4) studies of the effects of settlement on structures, utilities, and roadbeds, and (5) Recommendation for construction of above facilities on sanitary landfill sides. Third Year—The findings from the first and second years will be combined and evaluated to provide specific design and construction guidelines for sanitary landfills in urbanized areas. Solutions to subsidence problems will be developed, pilot experiments to demonstrate the advantages of volume reduction prior to landfilling will be conducted, salvage of materials will be studied, and a control and inspection system for landfill operations will be formulated. Throughout the study, specific proposals for demonstration projects will be formulated.

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Project Type: Study/Invest/Demon. Grant Agency No. D01-SW-00048-01

Title: Use of Abandoned Strip Mines for Solid Waste Disposal in Maryland

Project Director: Wilfred H. Shields, Jr., Acting Chief, Division of Solid Wastes, Maryland State Department of Health, 301 W. Preston St., Baltimore, Md.

Amount and year.—$43,178—01, $75,581—02, $72,561—03.
Started.—November 1966.
Expected finish.—October 1969.
Objective.—To determine the feasibility of using abandoned strip mines for landfills.
Procedures.—(a) To determine correct procedures, equipment requirements, and other desirable operational techniques for efficient year-round utilization of abandoned strip mines for solid waste disposal; (b) determine any special precautions needed to prevent ground or surface wastes pollution caused by water leaching through the fill; (c) determine the effect of sanitary landfill operations on acid formation; (d) determine the unit costs for disposal of solid waste; (e) determine the unit capacity of strip mine landfills when used for disposal of solid wastes; (f) locate and estimate capacity of strip mines in Maryland suitable for waste disposal and (g) determine the effects of combining sewage sludge and solid waste disposal in the pit landfill.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00050-01

Title: Evaluation of Alternatives in Refuse Disposal—City of Raleigh, N.C.

Project Director: Warren J. Mann, Director, Department of Public Works, Room 307, Municipal Building, Raleigh, N.C.

Amount and year.—$41,718—01, $41,718—02, $41,718—03.
Started.—January 1967.
Expected finish.—December 1969.
Objective.—The study has the following objectives: (1) Application of existing mathematical simulation model to city refuse collection to improve its efficiency;

(2) application of mathematical model to landfill site selection; (3) extend applied mathematical model to evaluate regional solid waste management; (4) develop methods to maximize salvage benefits by choice of disposal method.

Procedures.—The Quon, Charmes and Wersan simulation model of a refuse collection system will be tested and applied to the refuse collection system of the City of Raleigh to identify cost saving procedures in the collection of the City's waste. A second model developed by Wersan, will be tested for application to disposal site selection for the city's wastes. The origin and composition of wastes will be studied. A survey of available markets for recoverable materials will be made. Reasons for failure of abandoned incinerators will be sought. The elements of a multiple-method disposal system will be examined.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00053-01

Title: County-wide Sanitary Landfill Refuse Disposal Project—Broome County, N.Y.

Project Director: Rolan M. Austin, 62 Water Street, Binghamton, N.Y.

Amount and year.—$42,000—01.

Started.—November 1966.

Expected finish.—October 1967.

Objective.—Techniques, procedures and feasibility of financing, establishing and operating a County-wide refuse program requiring the integration of numerous problems presently operated by large and small units of government will be demonstrated.

Procedures.—The County has previously determined that a sanitary landfill with transfer stations is the most economical disposal method. They intend to (1) authorize a County tax to establish, operate and maintain a County-wide refuse disposal program; (2) plan, equip and operate a sanitary landfill; (3) evaluate conditions to handle refuse from a combination of large urban areas and small communities; and (4) develop and use educational material and information to help stimulate support for County-wide refuse disposal programs.

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FOREWORD

The abstracts in this supplement describe projects awarded since publication of our March, 1967, issue. These projects have received awards covering up to two-thirds of project costs as authorized by the Solid Waste Disposal Act of 1965. The awards were made by the Solid Wastes Program of the Public Health Service's National Center for Urban and Industrial Health.

The projects are of two kinds. Some are designed to demonstrate the feasibility of new and improved technology for solid waste disposal. Others investigate the development of area-wide solid waste management systems to replace insanitary and uneconomic operations by individual communities.

The Solid Wastes Program, as outlined in the Act, is aimed at initiating across the Nation the adoption of practices and systems for disposing of solid wastes which protect human health and scenic beauty.

In addition to demonstration projects, the Program supports research and training in solid wastes management, provides up to 50 percent support for statewide solid waste program planning, and assists local and State governments with technical problems.

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Project Type: Study/Invest/Demon. Grant Agency No. 3-D01-SW-00018-02S1

Title: Land Reclamation by Accelerated Stabilization and Related Studies of Compactor Equipment

Project Director: Ralph Stone, President, Ralph Stone & Company, Inc. Engineers, 10964 Santa Monica Boulevard, Los Angeles, Calif. 90025

Amount and year.—$63,350—01, $45,120—02.
Started.—June 1, 1967.
Expected finish.—May 31, 1969.
Objective.—To compare the densities achieved in sanitary landfills using conventional and self-propelled compaction equipment.
Procedures.—The first phase of this project will be to analyze compaction achieved using conventional equipment. The D-9 caterpillar and F. W. Wagner WC-17 rubber-tire compactor will be used. The second phase will be to determine the compaction obtained using the SF-17 Wagner steel-tire compactor and compare this data to that obtained in the first phase. Tests will be conducted regularly to determine refuse composition, percent moisture, percent inerts, settlement of test cells, and bearing capacity of test cells. A final report will conclude the project which will evaluate the technical, economic and environmental aspects of landfill compaction using various types of mechanical equipment.

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Project Type: Study/Invest/Demon. Grant Agency No. 2-D01-SW-00038-0.

Title: Incinerator No. 5 Phase II-Design.

Project Director: William F. Young, Chief, Project Development and Engineering Branch, Department of Sanitary Engineering, Government of the District of Columbia, 14th and E streets, NW., Washington, D.C. 20004.

Amount and year.—$390,081—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—To study, investigate, and develop a design for a solid waste incinerator installation, together with satellite equipment, capable of reducing the volume of all categories of solid wastes (exclusive of excavated and demolition non-combustible materials) for disposal in sanitary landfills.
Procedures.—The District of Columbia Department of Sanitary Engineering Proposes to make a comprehensive investigation of the design features, and design of a continuous feed incinerator and appurtenances. Investigations will be conducted to determine the performance of special equipment (e.g. mechanical collectors and electrostatic precipitators) and to develop design modifications which will make them suitable for use in municipal solid waste incineration. Size reduction of large combustible objects by a large hammer mill will be investigated and if proven feasible will be incorporated into the design. Special control and research laboratory facilities will also

be included in the design of the incinerator so that a thorough evaluation can be made on the refuse incinerator while operating under all conditions. Included in the study will be an investigation of procedures and actions which a municipality must take for interim disposal of solid wastes during design and construction of a permanent facility. The design of this incinerator also will demonstrate how to incorporate a single jurisdiction's solid waste facility into a long range regional plan.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00040-01

Title: Solid Waste Disposal by Incineration, Using an Incineration with Characteristics Requiring Minimum Control Equipment.

Principal Investigator(s): Geertz, C.; Galli, G.; Feldstein, M.; and Johnson, H.

Project Director: Clifford J. Geertz, City Engineer, Room 359, City Hall, San Francisco, Calif.

Amount and year.—$175,790—01, $233,290—02, $235,790—03.
Started.—April 1, 1967.
Expected finish.—March 31, 1970.
Objectives.—Develop, design and construct a municipal type refuse incinerator with operating characteristics that would meet the requirements of the several air pollution control districts in the Pacific Coastal area with a minimum of control equipment.
Procedures.—Incineration process features which will be studied, developed, fabricated and tested include; (1) A mechanical grate capable of functioning with a minimum of excess air; (2) multiple chamber furnace without "conventional" bridge and/or curtain wall; (3) a secondary chamber located to obtain turbulence and complete burnout of gases; (4) air jets for inducing turbulence and mixing at the entrance to the secondary chamber; and (5) a fly ash scrubber, which, when used in conjunction with the other components, would produce an effluent capable of meeting air pollution regulations. Design factors would be evaluated by testing under varying conditions of operation. Construction, maintenance and operating costs information will be developed for a unit capable of handling 100 to 150 tons per day.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-0057-1

Title: Refuse Crusher—Tacoma, Wash.

Project Director: Gibert M. Schuster, P.E., Director of Public Works, City of Tacoma, 930 Tacoma Avenue South, Tacoma, Wash. 98402.

Amount and year.—$158,036—01, $198,932—02, $78,854—03.
Started.—June 1, 1967.
Expected finish.—May 31, 1970.
Objective.—To demonstrate the feasibility of disposing demolition wastes by shredding and compacting into a sanitary landfill. This operation will help to eliminate the City of Tacoma's current air pollution problem caused by open burning of demolition waste. By reducing the bulk of the material to a more practical size, the disposal of this material in a sanitary landfill becomes more practical.
Procedures.—In the first year of the project, scales and a scale house will be purchased and installed. A metal wheel compactor will also be purchased. A three phase, 18-month evaluation of the project will then be conducted in the city's sanitary landfill. During Phase I the sanitary landfill will be operated under controlled conditions using solid wastes without demolition material. Accurate records of the volume and weight of the

regular solid wastes will be kept. During Phase II the landfill will be operated under controlled conditions incorporating unshredded demolition waste. The weight and volume of material used in the landfill will be recorded. Prior to Phase III a hammer shredder will be purchased and will be used in Phase III to combine shredded demolition waste with the regular solid waste at the sanitary landfill. The weight and volume of waste will be recorded both before and after the shredding process. The evaluation of this project will include the investigation of the sources of solid wastes for inclusion in the sanitary landfill as well as the practical and economical aspects of this disposal process.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00060-01

Title: Des Moines Metropolitan Area Solid Waste Study and Investigation

Project Director: Leo L. Johnson, P.E., Director of Public Services, City of Des Moines, City Hall, Des Moines, Iowa 50309.

Amount and year.—$109,483—01.
Started.—April 1, 1967.
Expected finish.—March 31, 1968.
Objective.—To make a comprehensive and detailed analysis of present solid waste collection and disposal operations on a metropolitan basis (the study area consists of the city of Des Moines, twelve surrounding communities, and portions of two counties), and from this analysis make a recommendation which will suggest the best method for collection and disposal both now and in the future.
Procedures.—The consulting firm, Henningson, Durham, and Richardson, is employed to conduct this study. This firm in cooperation with the project staff plans to include the following actions in its study: (1) Analyze the quantities and nature of wastes, (2) review present solid waste collection practices and cost analysis methods, (3) analyze existing disposal methods and investigate possible disposal methods, (4) investigate existing laws regulating solid waste collection and disposal operations, (5) analyze existing administrative procedures, and (6) determine the best method for financing both the capital and operating costs of the recommended program.
The analysis of collection and disposal data will be handled by computer programing for determining now and maintaining in the future the most economical and feasible system for these operations.
The final report will include recommendations dealing with legislation, financing, system of administration, type and location of disposal sites, system of collection, and the method for coordinating all of these interrelated factors.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-001-SW-00061-01

Title: Investigate and Evaluate Feasibility of Refuse Baling as a Means of Conserving Sanitary Fill Space—San Diego, Calif.

Project Director: Eric Quartly, Public Works Director, City of San Diego, City Administration Building, San Diego, Calif. 92101

Amount and year.—$90,900—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—The City of San Diego, California proposes to investigate and analyze refuse baling in comparison with its present Sanitary Landfill Conservation Methods to determine the relative efficiency and economics of refuse baling as a means of extending

the life of sanitary landfill sites and reducing the haul distance of its refuse collection vehicles. This study and investigation will be oriented towards determining whether the construction of a pilot baling station as a demonstration project is feasible.

Procedures.—The procedures to be used during the course of this project are the following: (1) Contact national and international baling companies to determine the variety and capabilities of the equipment available or adaptable for baling of refuse. (2) Obtain suitable balers from local businesses and conduct initial tests evaluating the various refuse baler equipment available to determine which is most suitable for use in pilot operations. (3) Compile data on costs and the compaction achieved with the present sanitary landfill operations as the basis for evaluating the potential economics feasibility of refuse baling. (4) Evaluate the economics of a baling/transfer station operation versus a direct haul operation with baling at the final site.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00063-01A1

Title: Development of Master Plan for Solid Waste Collection and Disposal—New Orleans, La.

Project Director: F. Earl Berry, Superintendent of Sanitation, Room 2W13—City Hall, New Orleans, La. 70112

Amount and year.—$117,913.07—01.

Started.—June 1, 1967.

Expected finish.—May 31, 1968.

Objectives.—To analyze present collection and disposal facilities and procedures employed for residential and commercial wastes, and to recommend a master plan for the next twenty years for an integrated collection and disposal facility for the New Orleans Metropolitan Area.

Procedures.—The development of a master plan for the New Orleans Metropolitan Area will proceed in three phases:

Phase 1: A population and economic study will be conducted to determine the present status and expected growth of the area for the next twenty years.

Phase 2: The present collection and disposal system will be evaluated and other such systems will be studied.

Phase 3: An economic and financial study will be made of the collection and disposal systems presented in Phase 2 and final recommendations will be made for a program of solid waste methods and procedures for the next two decades and its development by stages to meet public need and protect public health.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00069-0

Title: Farmington River Valley Solid Waste Disposal Study and Investigation

Project Director: Stephen A. Flis, Town Manager, Town of Farmington, Town Hall, Unionville, Conn. 06085.

Amount and year.—$28,991—01, $30,180—02.

Started.—April 1, 1967.

Expected finish.—March 31, 1969.

Objective.—Determine the practicality and relative economic advantages of providing refuse disposal service for subregional, low-density population areas through a cooperative, five-town group effort.

Procedures.—The primary objective of this project will be achieved by: (1) Analyzing refuse collection and transportation costs under different methods and different collection frequencies while providing uniform and better service to the homeowner;

(2) determining the location, size and availability of refuse disposal facilities that will best serve this group of towns and contiguous municipalities if economic considerations so indicate; (3) determining the types and the cost of refuse disposal facilities that will most efficiently serve these towns; (4) evaluating the possibility of employing several disposal methods in the refuse disposal system; (5) setting up a training program for personnel operating solid waste services including administrative rules and procedures—this advice would be available to other municipalities with similar problems; (6) establishing and recommending for adoption uniform refuse handling and storage procedures at the household level, and (7) establishing procedures for the disposal of tree trimmings, logs, stumps and bulky objects, including junk cars.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00070-01

Title: Solid Waste Disposal Study for Flint and Genesee County Metropolitan Area, Mich.

Project Director: Thomas H. Haga, Director-Coordinator, Genesee County Metropolitan Planning Commission, 511 Courthouse, Flint, Mich. 48502

Amount and year.—$64,063—01, $3,770—02.
Started.—April 1, 1967.
Expected finish.—March 31, 1969.
Objective.—To conduct a thorough solid waste disposal study for Genesee County. This study will include: (1) A quantitative and qualitative analysis of the solid waste produced, (2) an inventory of present solid waste disposal facilities, and (3) recommendations which will enable Genesee County to meet its future solid waste disposal needs.

Procedures.—The project staff in cooperation with all governmental units, private haulers, and commercial and industrial organizations will determine the composition of solid waste produced in the study area and locate all disposal areas and facilities, including size, availability of utilities, and any special characteristics. The consultant, Consoer, Townsend, and Associates, will conduct sufficient additional qualitative and quantitative studies so that the solid waste disposal needs of Genesee County can be projected to the year 1995. With this information the consultant will then prepare a report and recommendations for an efficient solid waste collection and disposal system (including preliminary cost estimates) for the Flint metropolitan area and the entire county.

Since this project is being supported by industry and government, the project staff in conjunction with the consultant will attend any and all meetings necessary to explain the proposed recommendations to all governmental units and interested civic and industrial organizations in the study area in an effort to secure approval of the proposed recommendations.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00072-01

Title: Solid Waste Collection and Disposal Study—Harrison County, Miss.

Project Director: To be named.

Amount and year.—$50,000—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—To make a comprehensive study of solid waste collection and disposal practices within Harrison County, Mississippi, and to develop a twenty-year plan for

collection and disposal practices within the area. Further it is intended to integrate the present separate solid waste collection and disposal facilities of the individual municipalities into an overall county system.

Procedures.—The County of Harrison, Mississippi has retained the services of Albert Switzer & Associates, Inc. of Mississippi to provide the engineering services required to fulfill the objectives of the project. These services will be conducted in a three phase operation. Phase one will include a population and economic study on present and future conditions in the County. Phase two will prepare and present the Master Waste Collection and Disposal Plan for the County. This will involve conducting studies on present and future waste collection and disposal systems needed for the area. During Phase three an economic and financial study will be conducted on the collection and disposal systems proposed in phase two. Recommendations will be made in a final report on the facilities and methods needed by the County to conduct an efficient and economical solid wastes collection and disposal program.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00073-01

Title: Investigate the Potential Benefits of Rail Haul as an Integral Part of Waste Disposal Systems

Project Director: Dr. Karl W. Wolf, Research Associate, American Public Works Association Research Foundation, 1313 East 60th Street, Chicago, Ill. 60637

Amount and year.—$257,800—01, $88,300—02, $68,700—03.

Started.—April 1, 1967.

Expected finish.—March 31, 1970.

Objective.—The project staff intends to make a thorough and comprehensive evaluation of the costs and benefits obtainable for the collection, transportation and disposal of solid wastes from urban areas by the use of rail-haul techniques.

Procedures.—The project consists of three major phases—one phase occurring each year. Phase One is concerned with the identification, development and setting up of the rail haul and related solid waste transport and disposal techniques. Phase Two implements the rail haul waste disposal concept in cooperation with a selected number of communities. Phase Three concludes the project by a comprehensive evaluation of the concept and techniques of Phase Two.

More detailed steps in the various phases of the procedure consist of applying systems analysis techniques to the time and cost aspects of the project. Likewise, the project task force will meet periodically to evaluate and enhance the systems analysis schedules, the ground rules, and the individual assignments through constructive criticism. After the first phase-year of the project, a final report covering the first year's work will be written. This detailed and documented report, in conjunction with a procedural manual shall explain how rail-haul concepts can be applied to various types and kinds of communities. Furthermore, by the end of the first year a number of demonstration projects hopefully will be set up in a selected number of communities so that actual operations will commence at the beginning of the year. These operations will be conducted in close cooperation with the New York Central Railroad.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00076-01

Title: Solid Waste Disposal Study and Investigation Project Grant—Brockton, Mass.

Project Director: Alvin Jack Sims, Mayor, City of Brockton, City Hall, Brockton, Mass. 02401

Amount and year.—$27,450—01.
Started.—June 1, 1967.
Expected finish.—August 31, 1967.
Objective.—To investigate and evaluate the Melt-Zit high temperature pilot incinerator at Whitman, Massachusetts. The purpose of this study will be to determine the feasibility of such a system for the City of Brockton and the several contiguous towns comprising the Brockton Standard Metropolitan Statistical Area (SMSA).
Procedures.—The Melt-Zit high temperature pilot incinerator at Whitman, Massachusetts will be tested and evaluated. The tests will show operating costs and results of the incinerator and particulate matter in the gases as well as gas analyses. The owner of the plant, the American Design & Development Corporation, will make available the incinerator, operate it, and furnish instrumentation. The City of Brockton will furnish refuse needed for the tests in quantity up to 100 tons per day. The tests will be conducted in two periods of five days each. One period will provide for eight hour per day operation and the other will provide for continual operation. Professor Kaiser of New York University will have the responsibility of conducting the operations tests, analyzing samples of refuse and end products, and preparing a report describing the test results. Mr. Fred Rehm will measure and report on the gas analyses. Fay, Spofford, and Thorndike, Consulting Engineers will provide general supervision.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00078-1

Title: Problems and Solutions in Regional Approach to Incineration of Solid Wastes—Central Wayne County, Mich.

Project Director: Virgil E. Eller, Superintendent, Central Wayne County Sanitation Authority, 4901 Inkster Road, Dearborn Heights, Mich. 48125

Amount and year.—$98,700—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—The Central Wayne County Sanitation Authority proposes to demonstrate the advantages of installing Fly Ash Slurry Treatment and the savings that can be accomplished in water costs, sanitary sewer maintenance and general operation.
Procedures.—The consulting engineering firm of Pate, Hirn & Bogue, Inc. will conduct the demonstration project in three stages. The first stage will consist of a complete investigation and evaluation of existing systems as well as equipment and materials available for pumping, conveying and treating the fly ash relative to treatment efficiency and partial recovery of process water. At the same time a detailed study of the plant and the quantity and quality of the waste will be made. The second stage will consist of the preparation of plans and specifications using the selected system. Competitive bids will be received; the treatment facility will be constructed and placed in operation. The third stage will consist of testing and evaluating the system. Data on flow, solids volume, efficiency of solids removal, water saved and the effects on the sanitary sewers will be collected. A report will be written covering this test data and results.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00080-0

Title: Agricultural Benefits and Environmental Changes from Use of Digested Sewage Sludge on Field Crops

Project Director: Charles T. Mickle, Chief Engineer, The Metropolitan Sanitary District of Greater Chicago, 100 East Erie Street, Chicago, Ill. 60611

Amount and year.—$494,000—01, $207,000—02, $213,000—03.
Started.—April 1, 1967.
Expected finish.—March 31, 1970.
Objective.—To determine the practicality of disposing of digested sewage solids on land with primary consideration given to: 1) investigation of factors relevant to the contamination of surface water and groundwater, and 2) investigation of factors relevant to the pollution of soils with heavy metals, highly soluble salt concentrations, grease and organic compounds inherent in the sewage sludge, and 3) investigate factors relevant to the method, frequency, rate, and time for safely applying digested sewage sludge on sandy soil.
Procedures.—The field installation will consist of 36 plots, 30 feet long and 20 feet wide, separated on each side by a 20 foot border and sealed to prevent lateral water movement.

Field infiltration tests with water will be conducted periodically after various rates of digested sludge have been applied to the land in order to evaluate the risk of contaminating surface water by runoff from rain water.

Clay drainage tile will be placed at a depth of five feet through the center of each plot. This tile will convey the drainage water to an instrument house for chemical and biological analyses.

Laboratory, greenhouse, and field analyses on plant growth under the various rates and frequencies of digested sewage sludge application will be conducted to determine which crops and crop practices obtain the greatest extraction of heavy metals and soluble salts.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00081-01

Title: Illinois Auto Salvage Waste Pollution Control

Project Director: Larry Goddard, Executive Director, Illinois Auto Salvage Dealers Association, 612 South Second Street, Springfield, Ill. 62704

Amount and year.—$40,820—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—To develop a program for automotive salvage dealers in Illinois for upgrading the disposal of solid wastes to eliminate problems currently affecting the health and welfare of the public and to prevent the development of future problems of this character.
Procedure.—Illinois auto salvage dealers are pressed by public agencies to improve their solid wastes disposal to eliminate health and welfare problems resulting from current practices and to modify their operations to prevent future public health problems. The applicant representing the dealers of Illinois has retained the consulting firm of Crawford, Murphy, and Tilly, Inc. to conduct a study of the problem and to provide information and recommendations. Guidelines will be prepared for the collection, handling, storage, and processing of abandoned autos. The location and extent of activities of auto salvage dealers within the state will be determined. A complete survey

will be made of the literature related to automotive salvaging, including incineration, shredding and compacting of automobiles. An economic study will be made so as to determine the impact of upgrading the handling, processing, storage, and disposal of automobiles.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00082-01

Title: Control of Dust in Handling of Solid Wastes.

Project Director: Allan J. Kronbach, Assistant General Manager, P.O. Box 1234, Berkley, Mich. 48072

Amount and year.—$40,000—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—To study and investigate the feasibility and economic practicability of controlling the spreading of dust into the atmosphere within the incinerator building and environment during the process of handling solid waste material for disposal. If the results of the study show merit, the design, installation, and demonstration of the dust equipment will follow.
Procedures.—The Southeastern Okland County Incinerator Authority plans to conduct a study to find new methods for controlling dust within incinerator plants or handling areas. The proposed study would include development of such dust control plans, economic evaluations of the plans and economic feasibility reports of the most promising plans. Basic criteria for the dust control plans would be development of a system designed to achieve:

1. "Capture" of air borne dust particles as near the point of generation as possible.
2. No reduction in incinerator efficiency.
3. A decrease in the atmospheric air pollution in and adjacent to the plant.
4. Elimination of discomfort to the plant personnel and truck drivers.
5. Maintain normal atmospheric pressures in the building.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00084-1

Title: Western Jefferson County, Wisconsin Solid Waste Disposal Study.

Project Director: Bruce O. Frudden, P.E., Mead and Hunt, Inc., P.O. Box 5247, Madison, Wis. 53705

Amount and year.—$6,500—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—To determine the feasibility of a joint solid waste disposal system for the communities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Johnson Creek, and the surrounding rural township. Special consideration will be given to the establishment of a utility to operate a solid waste disposal system for the subject communities.
Objective.—The entire study will be performed by a consultant firm. Mead & Hunt, Inc. and will be compiled into a report. The scope of the study will include consideration of the following items:

(1) Population and project increase.
(2) Type and quantity of refuse and projected increase.
(3) Present collection methods, frequency of pick-ups, equipment, personnel and costs.

(4) Review of available methods of disposal including landfill, incineration, garbage grinding and digestion, milling, and others.

(5) Analysis of refuse disposal projects that appear feasible for the area being studied.

(6) Cost estimates for each type of project analyzed, including capital expenditure and annual operating costs.

(7) Conclusions and recommendations.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00087

Title: Tocks Island Regional-Interstate (Pennsylvania, New Jersey and New York) Solid Waste Management Study.

Project Director: Frank W. Dressler, Executive Director, Tocks Island Regional Advisory Council, 612 Monroe Street, Stroudsburg, Pa. 18360

Amount and year.—$84,510—01, $107,490—02.

Started.—June 1, 1967.

Expected finish.—May 31, 1969.

Objective.—Demonstrate regional interagency solid waste planning under the leadership of a new type of regional agency, the Tocks Island Regional Advisory Council (TIRAC) which is an organization of representatives from the six member counties in the tri-state region affected by the Delaware Water Gap National Recreation Area and explore and demonstrate the feasibility of resolving a major environmental health problem (solid waste disposal) on a regional bases inter-local and/or inter—local, interstate cooperation and action.

Procedures.—The study will be carried out through a combination of staff and consultant activities supplemented with information and studies to be provided by the three state health agencies and by information supplied by the Delaware River Basin Commission environmental study currently underway. The three states involved, Pennsylvania, New Jersey and New York will undertake a special "Legislative Study" to determine the legal powers and responsibilities which exist in the solid waste field at the state regional, county and local levels of government. A detailed work program will investigate a "systems planning" approach which may provide cost effectiveness data on various plans to be developed and will also permit the study readily to be updated in the future. Three committees, a steering committee, a technical advisory committee and a solid waste management committee, each composed of one member of each of the participating agencies will be established to insure successful execution and eventual implementation of the recommendations of the study.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00089-01

Title: Incinerator Water Treatment System and Air Pollution Scrubber Test

Project Director: Wayne Seifert, Plant Superintendent, Whitemarsh Township Authority, Township Building, Lafayette Hill, Pa. 19444

Amount and year.—$145,000—01, $18,000—02, $18,000—03.

Started.—June 1, 1967.

Expected finish.—May 31, 1970.

Objective.—To test the effectiveness of the waste water treatment system for clarifying and reusing waste water in incineraters and to test the air pollution control effectiveness of the floeded baffle scrubber.

Procedures.—The 300 ton per day single furnace Whitemarsh Authority incinerator has recently been renovated. Part of the renovation included the installation of a closed water handling and treatment system and an air pollution control scrubber. The water treatment system proved to be inadequate. A new system has been developed utilizing a chemical treatment for precipitation and pH control, a grit chamber type process water clarifying unit consisting of a thickening mechanism and a dewatering mechanism, and lagoons for final clarification. The project will concern the construction and testing of this new system. The designers feel that the new treatment system will demonstrate successfully, that incinerator waste-water can be properly treated and reused, and that the air pollution control scrubber will provide adequate protection.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00090-1

Title: Study and Investigation of Solid Waste in Appalachian Regional Demonstration Health Area—Ten counties in West Virginia

Project Director: O. R. Lyons, Director, Solid Waste Disposal Planning, West Virginia State Department of Health, Charleston, W. Va. 25305

Amount and year.—$14,425—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.
Objective.—To survey and identify quantity and character of existing solid waste conditions in the region for now and in the future, to study the inter-county approach to solution of solid waste problems involving ten counties in a depressed area and develop a regional plan for waste disposal including a forecast of future needs of the region.
Procedures.—The study will be conducted by members of the engineering faculty at the West Virginia Institute of Technology. Mr. L. M. Blockwell, Director of Engineering will be in overall charge of the study. Three field men will conduct investigations in the area to obtain such information as amounts and kinds of waste generated in the area and present means of disposal. From these data the area will be divided into waste disposal zones using volume of waste and existing transportation facilities as guides. The disposal problems of each of these zones will be dealt with on an individual basis. At this time any discrepancies of deficiencies in data will be reviewed and corrected. Various meetings with the Southern West Virginia Regional Health Council are planned so that the final report will reflect both the engineering judgment of the study group and the ideas and concerns of the Council.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00091-01

Title: Bulk Refuse Crusher Facility—Buffalo, N.Y.

Project Director: Leonard S. Wegman, Leonard S. Wegman, Co., 101 Park Avenue, New York, N.Y. 10017

Amount and year.—$380,200—01, $392,300—02, $35,100—03.
Started.—June 1, 1967.
Expected finish.—May 31, 1970.
Objective.—To demonstrate the feasibility of presizing bulky municipal refuse prior to disposal by incineration, thus increasing the ability of new and existing incinerators with limited-size charging openings to handle bulky waste that is presently finding its way to open dumps and open burning.

Procedures.—The City of Buffalo proposes to install a bulk refuse crusher as an addition to a municipal incinerator which today has no air pollution equipment. The present incinerator has batch feed furnaces and expansion and subsidence chambers. It is designed to handle 400 tons of refuse per day. In addition to the bulk refuse crusher, a completely new incinerator train consisting of a continuous stoker type furnace, a special chamber to accept and burn bulky uncrushed items, an enlarged wet bottom settling chamber, a spray chamber, and cyclone fly ash collectors to provide air pollution controls will be installed. The furnaces in the existing plant will be upgraded with similar air pollution control devices. The enlargement will increase the plant capacity to 660 tons per day.

Accurate records will be kept of the operation to establish the quantities, weight and characteristics of the material processed. Records on the bulk refuse crusher will also provide data as to power, consumption, maintenance, labor and other costs to determine the economic feasibility of wide-spread use of such a facility by other communities faced with the problem of oversized discard disposal.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00092-01

Title: Economic Feasibility of Composting Refuse and Sewage Sludge in Southeastern Michigan—Riverview, Michigan

Project Director: Milton D. Redlick, Civil Engineer, Johnson & Anderson, Inc., 2300 Dixie Highway, Pontiac, Mich. 48055

Amount and year.—$9,780—01.
Started.—June 1, 1967.
Expected finish.—October 15, 1967.

Objective.—To evaluate the economic feasibility of constructing a refuse and sewage sludge composting plant in the city of Riverview with particular attention to the market value and quantity of the finished compost and salvaged material.

Procedures.—The existing marketing channels in the Southern States for refuse compost will be reviewed and evaluated. The present marketing channels for chemical fertilizer in the Michigan area will be surveyed, analyzed, and reported. The methods of bulk shipping, primarily rail and truck, will be investigated. The capital and operating costs for refuse composting plants of various capacities will be developed and reported. The project will be culminated in a written report outlining the results of the survey and conclusions as to the economics of composting.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00093-01

Title: Demonstration of Solid Waste Disposal Machine and Consolidation of Several Separate Disposal Operations Into One County Operated Project.

Project Director: William M. Friedman, Jr., Assistant Commissioner for Environmental Health, Niagara County Health Department, 525 Dewley Building, Lockport, N.Y. 14094

Amount and year.—$544,525—01, $98,544—02.
Started.—June 1, 1967.
Expected finish.—May 31, 1969.

Objective.—To demonstrate the feasibility of consolidating and centralizing the solid waste disposal facilities of Niagara County with a population of 250,000 into one regional solid waste management under an established county agency. The project will demonstrate the capabilities of a newly developed landfill compaction machine. It also

proposed to rehabilitate 13 existing disposal sites which are to be abandoned, therefore eliminating numerous existing nuisance conditions.

Procedures.—The Solid Waste Agency has been established to serve Niagara County in its solid wastes affairs. The Agency proposes for its first project to establish two county sanitary landfills. One site will use the newly developed D&J Press refuse machine, while the other will use standard landfill equipment. The D&J Press refuse machine, which is capable of receiving, compacting, and covering refuse at a rate of 35 tons per hour, will be tested and evaluated. All solid waste received will be weighed and recorded. Complete records will be kept on the operational costs of the operation and of the operational difficulties of the machine. An economic study will be conducted on the site with ordinary landfill equipment to determine the feasibility of converting this site to a transfer station. Existing disposal sites will be closed and rehabilitated during the project period.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00095-1

Title: Comprehensive Study of Solid Waste Disposal—Cascade County, Mont.

Project Director: John A. Googins, M.D., Health Officer, City-County Health Department, 1130-17th Avenue South, Great Falls, Mont. 59401

Amount and year.—$57,000—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.

Objective.—Cascade County, Montana proposes: (1) To investigate and define existing conditions as to solid waste storage, collection and disposal in the county. (2) To determine the most economical, efficient and effective methods for storing, collecting and disposing of solid wastes in the county. (3) To implement study findings by preparing a comprehensive solid waste disposal report for Cascade County.

Procedures.—The study will be conducted through the joint efforts of the County of Cascade, City of Great Falls, City of Belt, the Towns of Cascade and Neihart and the consulting engineering firm, Thomas Dean and Hoskins, Inc. Inventories of existing facilities and practices will be prepared. Determination of the most economical, efficient and effective methods of storage, collection and disposal will be made. Implementation will be in the form of a final report which will include a regional collection plan, development of alternative methods of disposal, recommended ordinances or regulations to provide effective utilization, and a public relations program to gain public support.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00097-1

Title: Shredding of Bulky Solid Wastes for New York City

Project Director: Maurice M. Feldman, P.E., Deputy Commissioner, Engineering Department of Sanitation, 125 Worth Street, New York, N.Y. 10013

Amount and year.—$2,151,000—01.
Started.—June 1, 1967.
Expected finish.—May 31, 1968.

Objective.—This project provides for the development, design, and construction of a facility in the City of New York to shear and shred, or otherwise reduce, the widest possible range of bulky solid wastes to manageable size for the effective and useful disposal in waterfront land recovery, sanitary landfill, or for preparation for incineration. This facility must be capable of handling 975 tons/day of oversized solid wastes.

Procedures.—Prior to this project, the City of New York hired a consulting engineer

to conduct a preliminary study which involved studying all existing shearing-grinding apparatus and reporting as to whether the City can use existing machinery or whether new types of equipment must be developed. The first phase of the demonstration project will begin by preparing from this preliminary study a detailed report which will consist of plans and specifications of the installation. Once this report is completed, construction of the 975 ton/day shredder will begin. Upon completion of the shredder, an independent testing agency, J. G. White Engineering Corporation, will be employed to record and evaluate the actual overall economics of operation. Parameters used in the report will include (a) outage rates, (b) feeding rates, (c) shredding rates, (d) power consumption, (3) direct operating costs, (f) indirect and maintenance costs, and (g) amortization costs. Truck scales will be installed for measurement of shredded waste output. Interim and final test reports, documenting the City's experience with the installation will also be issued.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00102-0

Title: Dairy Manure Management Methods—Monroe, Wash.

Project Director: Dr. Donald E. Proctor, Associate Sanitary Engineer, Sanitary Engineering Section, College of Engineering Research Division, Washington State University, Pullman, Wash. 99163

Amount and year.—$336,767—01, $134,083—02, $139,445—03.
Started.—June 1, 1967.
Expected finish.—May 31, 1970.
Objective.—The Washington State University proposes to work with the State Reformatory Honor Farm at Monroe, Washington to demonstrate facilities and techniques that will reduce the possibility of dairy manure's being washed or carried into streams, increase the fertilizer values actually realized, and hopefully, reduce the cost and unpleasant aesthetic considerations now associated with the management of this solid waste.

Procedures.—A system of three independent anerobic lagoons will be used for both storage of the manure and degradation of the most putrescible constituents. Variations in the rates of loading and in the depth and volumes of the lagoons are two of the many variables to be experimented with in this project. The manure will ultimately be applied to fields but only during the drier seasons of the year when run-off is least likely and when the need for the fertilizer constituents is highest. Evaluation of all phases of the project will be carried on by a staff drawn from the Washington State University's Sanitary Engineering Section, Department of Animal Sciences, and Department of Agronomy. Complete documentation and evaluation will be provided through papers, reports and speeches presented throughout the duration and at the conclusion of the project.

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Project Type: Study/Invest/Demon. Grant Agency No. 1-D01-SW-00106-01

Title: Demonstration of Improved Incinerator Technology for a Small Community

Project Director: Walter K. Smith, Borough Manager, Borough of Shippensburg, P.O. Box 129, Shippensburg, Pa. 17257

Amount and year.—$204,813—01, $20,100—02, $20,100—03.
Started.—June 1, 1967.
Expected finish.—May 31, 1970.
Objective.—To demonstrate that a small mechanically stoked rotary grate incinera-

tor can provide a small municipal area with a feasible means for the disposal of solid wastes which will meet Air Pollution standards, eliminate environmental health hazards, and be the most economical method of disposal in an area where sanitary landfill methods cannot be adopted.

Procedures.—The Borough of Shippensburg will construct, demonstrate, and evaluate a stainless steel, perforated rotary grate incinerator. The proposed unit is manufactured by the Kennedy Van Saun Corporation.

Records will be kept of the operation of the incinerator. They will include the weight of refuse fed into the incinerator, the amount of residue produced, the type and water content of refuse received, the amount of time needed to incinerate an average load of refuse, the actual operating costs of the incinerator, and various difficulties and problems of operation, should there be any. The Borough also hopes to demonstrate that the incinerator residue can be used as fine material in the soil cement stabilization process.

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4.7 SUMMARIES OF RESEARCH AND TRAINING GRANTS IN SOLID WASTE DISPOSAL, U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PUBLIC HEALTH SERVICE, JANUARY 1967.

DISCRIMINATION PROHIBITED—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance." Therefore, projects supported by grants or awards from the Solid Wastes Program, like every program or activity of the Department of Health, Education, and Welfare, must be operated in compliance with this law.

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Introduction

THIS PUBLICATION describes briefly research and training activities in solid wastes management supported by Public Health Service grants through January 1, 1967. A small grant program in solid wastes studies was funded by the former Division of Environmental Engineering and Food Protection through December 1965. After that date, funding of these grants was transferred to the Office of Solid Wastes. The Office was established under authority of the Solid Waste Disposal Act and is now the solid Wastes Program in the Public Health Service's National Center for Urban and Industrial Health.

Work in progress under the Program is primarily that of (1) initiating and accelerating research and development for new and improved methods of healthful and economic solid waste disposal and (2) providing technical and financial assistance to local and State governments and interstate agencies in the planning, development, and conduct of solid waste disposal programs. In general, the role of the Federal Government is that of supporting partner with public and nonprofit private agencies in efforts to improve protection against pollution by solid wastes with emphasis on recycling wastes or converting them into marketable products.

Major parts of the Solid Wastes Program, other than grant-supported research and training, include (1) local and State projects for demonstrating new and improved solid waste technology with up to two-thirds Federal support; (2) local and State studies and investigations of regional waste management systems which also receive up to two-thirds support; (3) statewide solid waste surveys and program planning with up to 50 percent support; (4) training, in addition to that supported by the training grant program, for administrative and operative solid wastes personnel; (5) technical services to supplement solid waste management competencies at local and State levels; and (6) research on special problems in solid wastes.

Research and training grants support activities in all phases of solid waste management, including collection, storage, disposal and recycling of wastes, and health problems related to these services. Research grants generally are awarded to universities, nonprofit research organizations, and other public or private nonprofit agencies or institutions. Training grants usually support programs leading to advanced degrees in engineering, science, and economics in institutions of higher education.

The research summaries which follow describe purposes and procedures and list publications resulting from the work. The summaries generally are in an order related to the length of time projects have been supported. The training summaries describe the development of solid wastes curricula in the universities.

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Part I

Research Grants Terminated before Fiscal Year 1966

BACTERIAL CONTAMINATION FROM HOSPITAL SOLID WASTES

Prof. Richard G. Bond, *School of Public Health*, University of Minnesota, Minneapolis, Minn.

EF 00007–04
Final Year Support: $48,870
Terminated: December 1963

PURPOSE: To study the microbial hazards involved in solid waste handling, and associated housekeeping procedures in a representative cross section of hospitals.

PROCEDURE: (1) Investigate waste handling and resulting bacteriological contamination at production areas, storage and utility areas, and at the site of ultimate disposal. In addition to conventional solid wastes such as waste basket trash, this included medical and surgical wastes, reusable instruments, laundry and kitchen wastes. (2) Duplicate the techniques associated with waste handling in a chamber where the microbiological environment is controlled, and study the quantitative and qualitative bacteriology associated with the particular method of solid waste handling. (3) Experimentally investigate methods of minimizing environmental contamination in three special areas, namely: linen chutes, corridor floor cleaning procedures, and experimental animal surgery facilities.

Publications

GREENE, V. W., BOND, R. G. AND MICHAELSEN, G. S. Air handling systems must be planned to reduce the spread of infection. Modern Hospital 95: (2)136, Aug. 1960.

GREENE, V. W., VESLEY, D., BOND, R. G., AND MICHAELSEN, G. S. The engineer and infection control. Hospitals JAHA 34: (17)69, Sept. 1, 1960.

GREENE, V. W. AND HERMAN, L. G. Problems associated with surface sampling techniques and apparatus in the institutional environment. Journal Milk and Food Technology 24: (8)262, Aug. 1961.

VESLEY, D. AND BRASK, M. Environmental implications in the control of hospital-acquired infections. Nursing Outlook 9: (12)742. Dec. 1961.

GREENE, V. W. AND VESLEY, D. Method for evaluating effectiveness of surgical masks. Journal of Bacteriology 83:663, 1962.

GREENE, V. W., VESLEY, D. AND KEENAN, K. M. New method for microbiological sampling of surfaces. Journal of Bacteriology 84:188, 1962.

GREENE, V. W., VESLEY, D., BOND, R. G. AND MICHAELSEN, G. S. Microbiological contamination of hospital air. I. Quantitative studies. Applied Microbiology 10: (6)561, Nov. 1962.

GREENE, V. W., VESLEY, D., BOND, R. G. AND MICHAELSEN, G. S. Microbiological contamination of hospital air. II. Qualitative studies. Applied Microbiology 10: (6)567, Nov. 1962.

MICHAELSEN, G. S. AND VESLEY, D. Industrial clean room versus hospital operating rooms. Air Engineering. 5: (9)24, Sept. 1963.

VESLEY, D. AND MICHAELSEN, G. S. Application of a sampling technique to the evaluation of bacteriological effectiveness of certain hospital housekeeping procedures. Health Laboratory Science 1: (2)107, April 1964.

BULLOCK, W. E., HALL, J. W., SPINK, W. W., DAMSKY, L. J. GREENE, V. W., VESLEY, D. AND BAUER, H. A staphylococcal isolation service: epidemiologic and clinical studies over one year. Annals of Internal Medicine 60: (5)777, May 1964.

MICHAELSEN, G. S. Waste Handling. *IN* Proceedings, National Conference on Institutionally Acquired Infections, Minneapolis, Minnesota. Sept. 4–6, 1963. PHS Publication No. 1188, p. 65.

VESLEY, D. Surface sampling techniques for the institutional environment-present status. *IN* Proceedings, National Conference on Institutionally Acquired Infections, Minneapolis, Minnesota. Sept. 4–6, 1963. PHS Publication No. 1188, p. 101.

GARBAGE AND WASTES FOR MUSHROOM PRODUCTION

Dr. Seymour S. Block, Research Department of Chemical Engineering, University of Florida, Gainesville, Fla.

EF 00008-05
Final Year Support: $17,940
Terminated: December 1964

PURPOSE: To study the production of composts capable of yielding mushrooms.

PROCEDURE: The objectives of this study were to prepare composts from municipal and industrial wastes capable of yielding (1) mushrooms for human consumption, (2) protein and vitamin-rich fungus mycelium for animal feed, and (3) humus fertilizer for plant growth.

The work demonstrated that when properly blended, fortified, and composted these waste materials will support mushroom growth and produce mushrooms in good yield and flavor. Analysis of the spent residue, composed largely of mushroom mycelium, shows it to contain over 15 per cent nitrogen. As an animal feed, the residue was shown to have potential as a feed ingredient for ruminants.

Publications

BLOCK, S. S. Developments in the production of mushroom mycelium in submerged liquid culture. Journal Biochemical and Microbiological Technology and Engineering. 2:(3)243, September 1960.

RAO, S. N. AND BLOCK, S. S. Experiments in small-scale composting. Developments in Industrial Microbiology. 3:326, 1962.

BLOCK, S. S. AND RAO, S. N. Sawdust compost for mushroom growing. Mushroom Science. 5:134, 1962.

BLOCK, S. S. Effect of casing soils on the shape of the mushrooms. Mushroom Science, 5:321, 1962.

AMMERMAN, C. B. AND BLOCK, S. S. Feed from wastes: feeding value of rations containing sewage sludge and oakwood sawdust. Journal Agricultural and Food Chemistry. 12:(6)539, November/December 1964.

BLOCK, S. S. Composting conversion of solid wastes for mushroom growing. Biotechnology and Bioengineering. 6:(4)403, December 1964.

BLOCK, S. S. Garbage composting for mushroom production. Applied Microbiology. 13:(1)5, January 1965.

BLOCK, S. S. AND RAO, S. N. Small scale composting for mushroom growing studies. Developments in Industrial Microbiology. 6:284, 1965.

THE PHYSICAL AND CHEMICAL COMPOSITION OF MUNICIPAL REFUSE

Dr. Don E. Bloodgood, *Department of Sanitary Engineering*, Purdue University, Lafayette, Ind.

EF 00146-05
Final Year Support: $13,800
Terminated: December 1962

PURPOSE: To develop methods of sampling and analyzing municipal refuse.

PROCEDURE: Field studies were conducted in seven major midwestern cities in order to obtain samples of refuse for laboratory analysis as well as to estimate the accuracy of the method used in obtaining these samples. It was found that sample areas constituting only 0.06 per cent of the population of a city the size of Milwaukee could be used to estimate within seven per cent the quantity of refuse production from the entire city.

Laboratory studies were conducted in order to determine the error due to two necessary stages of sampling of the collected refuse prior to chemical analyses. Laboratory studies also included the development of

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reliable methods for determining the following tests on municipal refuse: moisture, K_2O, P_2O_5, sulfur, and calorific value.

Results indicated significant differences in both quantity and quality of refuse produced in medium, high, and low socio-economic areas of a city.

Publications

BELL, J. M. The physical and chemical composition of municipal refuse. The Reporter, APWA 29:(1)11, January 1962.

ETZEL, J. E. AND BELL, J. M. Methods of sampling and analyzing refuse. The Reporter, APWA, 29:(11)2, November 1962.

BELL, J. M. Characteristics of municipal refuse. *IN* Proceedings, National Conference on Solid Waste Research, American Public Works Association, Chicago. December 1963. 1.28.

SANITARY ENGINEERING APPLIED TO LIVESTOCK MANURES

Dr. Samuel A. Hart, Department of Agricultural Engineering, University of California, Davis, Calif.

EF 00265-04
Final Year Support: $14,400
Terminated: August 1965

PURPOSE: To develop sanitary and effective methods of managing the manure produced on concentrated livestock farms, such as dairies, beef feed lots, and poultry farms. Methods and machinery were investigated to develop means of collecting manure from where it is defecated by the animals.

PROCEDURE: Both laboratory and pilot plant operations of various processing and stabilization techniques—such as digestion, algae ponds, activated sludge composting, and drying—were conducted to develop methods feasible at the farm level. In addition, final disposal techniques and outlets were evaluated. These ideas were studied with the thought that the most probable disposal will be on agricultural land, where it must compete with inorganic fertilizers.

Publications

HART, S. A. Digestion tests of livestock wastes. Journal Water Pollution Control Federation. 35: (6)748, June 1963.

HART, S. A. Fowl fecal facts. World's Poultry Science Journal. 19: (4)262, October/December 1963.

OSTRANDER, C. E. AND HART, S. A. Degradation of manure collected in water under chickens. Poultry Science. 43: (5)1144, September 1964.

HART S. W. Thin spreading of slurried manures. Transactions American Society of Agricultural Engineers. 7: (1)22, 1964.

HART, S. A. AND FAIRBANK, W. C. Disposal of perished poultry. *IN* Proceedings, Second National Symposium on Poultry Industry Waste Management, University of Nebraska, Lincoln, Nebraska, May 19–20, 1964. p. 213.

HART, S. A. AND TURNER, M. E. Lagoons for livestock manure. Journal Water Pollution Control Federation. 37: (11)1578, November 1965.

HART, S. A. AND GOLUEKE, C. G. Producing algae in lagoons. Transactions of the American Society of Agricultural Engineers, Vol. 8, November 1, 1965. p. 122.

HART, S. A., MOORE, J. A. AND HALE, W. F. Pumping manure slurries. *IN* Proceedings, National Symposium on Animal Waste Management. Michigan State University, East Lansing, Michigan. May 5–7, 1966. p. 34.

NATIONAL CONFERENCE ON SOLID WASTE RESEARCH

Dr. Ross E. McKinney, *Department of Civil Engineering*, University of Kansas, Lawrence, Kans.

EF 00549-01
One Year Support: $18,478
Terminated: June 1964

THESE FUNDS supported in part a National Conference on Solid Waste to stimulate research in this field. Recognition was given in the long-range aspects of the solid waste disposal problem and the urgency of working toward a solution. The conference, held for two and one-half days in December 1963 in Chicago, reviewed the problem of solid wastes in the United States. Some 36 papers and summaries were presented by authorities in the field.

The conference covered research needs in waste characteristics, waste collection and transportation, and waste treatment and utilization, with efforts directed toward encouraging young researchers to meeting the research needs in this field.

The budget covered mainly travel and per diem for program participants and Study Section members, travel for 30 young researchers, travel for three foreign scientists, preparation and printing of the program, stenotype recording, and transcription and publication of the proceedings.

Publications

PROCEEDINGS, National Conference on Solid Waste Research, The American Public Works Association, Chicago, Illinois, December 1963.

INCINERATION OF INFECTIOUS AND RADIOACTIVE SOLID WASTE

Dr. Leslie Silverman, *Department of Industrial Hygiene*, Harvard School of Public Health, Boston, Mass.

EF 00579-01 and 01S1
Final Year Support: $52,122
Terminated: June 1965

PURPOSE: To investigate and analyze the performance characteristics of a new institutional incinerator-boiler facility, designed to dispose of combustible, infectious, and low-level radioactive biological, as well as solid wastes, from research laboratories and hospitals.

PROCEDURE: Utilized the Harvard incinerator-boiler as a prototype after completion of the customary manufacturers acceptance tests

and investigated the decontamination that may be attained in a specially designed combination incinerator-boiler.

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Part II

Research Grants Supported during Fiscal Year 1966

FACTORS CONTROLLING UTILIZATION OF SANITARY LANDFILLS

Professor Robert C. Merz, Department of Civil Engineering, University of Southern California, Los Angeles, Calif.

Grant No: SW 00028-06
Fiscal Year 1966
Support: $29,718

PURPOSE: To expand a continuing program for obtaining field information on factors controlling volume reduction in a sanitary landfill, with emphasis on physical and biochemical phenomena.

PROCEDURE: The various landfilling techniques are being carried out for this project in a large landfill operated by the Los Angeles County, California Sanitation Districts. Six landfill study cells, about 50 feet square by 20 feet deep, were originally constructed in landfills, with three special purpose cells constructed later.

In these cells, the effects of soil admixtures, compaction, aeration, moisture, and temperature and various sanitation studies are being evaluated. Each load of refuse used is weighed and categorized as to composition.

Efficient utilization of landfill sites is an important aspect of this study.

This research has received Public Health Service support since May 1960.

Publications

MERZ, R. C. AND STONE, R. Landfill settlement rates. Public Works, 93:(9)103, September 1962.

MERZ, R. C. AND STONE, R. Gas production in a sanitary landfill. Public Works, 95:(2)84, February 1964.

MERZ, R. C. AND STONE, R. Sanitary landfill behavior in an aerobic environment. Public Works, 97:(1)67, January 1966.

MERZ, R. C. AND STONE, R. Factors controlling utilization of sanitary landfill site. Final Report to DHEW, NIH, USPHS, January 1, 1964 to December 31, 1965. University of Southern California, Los Angeles, California. (Limited Distribution).

COMPOSTING FRUIT AND VEGETABLE REFUSE

Mr. Walter A. Mercer, National Canners Association, Western Research Laboratory, Berkeley, Calif.

Grant No: SW 00039-04
Fiscal Year 1966
Support: $29,146

PURPOSE: The purpose of this study is to develop a rapid, aesthetically acceptable, reliable, and economic method of disposal for the high-moisture solid refuse produced in harvesting and processing fruits and vegetables, emphasizing accelerated rates of aerobic composting.

PROCEDURE: Pilot studies were conducted using aeration bins in which mixtures of fruit and vegetable canning wastes were composted with dry, moisture-absorbing materials. Redwood bark, straw, sawdust, rice hulls, coffee grounds, and final compost from this process have been used for this purpose. In addition to these studies, the effects of repeated additions of fresh waste on the compost process with intermittent or continuous forced aeration are being investigated. Parallel to and using information obtained by these pilot studies, are large scale windrow composting studies. In most cases, the compost material is turned and mixed on a flexible schedule.

This research has received Public Health Service support since April 1963.

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Publications

MERCER, W. A., ROSE, W. W., CHAPMAN, J. E., KATSUYAMA, A. M., & DWINNELL, F. JR. Aerobic composting fruit and vegetable refuse. Compost Science. 3:(3)9, Autumn 1962.

MERCER, W. A. Industrial solid wastes; The problems of the food industry. *IN* Proceedings, National Conference on Solid Waste Research, American Public Works Association, Chicago, Illinois. December 1963. p. 51.

ROSE, W. W., AND MERCER, W. A. Composting fruit waste solids. *IN* Proceedings, Eleventh Pacific Northwest Industrial Waste Conference, Corvallis, Oregon, May 9-10, 1963. Engineering Experiment Station, Oregon State University Circular No. 29. p. 32.

ROSE, W. W., KATSUYAMA, A. M., CHAPMAN, J. E., PORTER, V., ROSEID, S. AND MERCER, W. A. Composting fruit and vegetable refuse. Compost Science 6:(2)13, Summer 1965.

ROSE, W. W. AND MERCER, W. A. Treatment and Disposal of Potato Wastes. *IN* Proceedings, International Symposium on Utilization and Disposal of Potato Wastes, Fredericton, New Brunswick, Canada. May 24-27, 1965. p. 147.

MATHEMATICAL SIMULATION OF REFUSE COLLECTION AND DISPOSAL SYSTEMS

Dr. Abraham Charnes and Dr. J. E. Quon, Department of Applied Mathematics, Northwestern University, Evanston, Ill. 60201

Grant No: SW 00048-04
Fiscal Year 1966
Support: $18,394

PURPOSE: The development and perfection of a mathematical model to simulate the municipal refuse collection and disposal problem. This model enables the engineer-designer to predict the behavior of a wide variety of proposed designs quickly and accurately, and thus to predict an optimum solution based upon more complex criteria than it has previously been possible to evaluate.

PROCEDURE: Preliminary collection and analysis of refuse disposal unit operations cost data and the expected type and amount of pollution resulting from the various collection and disposal methods were obtained from literature. Data also were obtained by communication and direct interview with responsible municipal authorities, public health workers, and consulting engineers. A mathematical simulation analysis of refuse collection and disposal systems was developed. A computer program capable of considering stochastic variations in the system parameters was written for the daily route method of refuse collection. Initial computations served to delineate the relationships of the several performance parameters (over-all collection efficiency, length of workday, etc.) to the characteristics of the system (average daily quantity of refuse, daily variability in the quantity of refuse, truck capacity, etc.).

This research has received Public Health Service support since September 1962.

Publications

WERSAN, S., EISEN, R., QUON, J. AND CHARNES, A. Computer Simulation of a Refuse collection System. Systems Research Memorandum No. 101, The Technological Institute, College of Arts & Sciences, Northwestern University. April 1964. 31 pp. *Limited Distribution.*

QUON, J. E., CHARNES, A. AND WERSAN, S. J. Simulation and Analyses of a Refuse Collection Systems. Journal Sanitary Engineering Division, ASCE 91:(5)17 Oct. 1965.

INTEGRATED CONTROL OF THE HOUSE FLY

Dr. Richard C. Axtell, *Department of Entomology,* North Carolina State University, Raleigh, N. C.

Grant No: SW 00020-03
Fiscal Year 1966
Support: $6,900

PURPOSE: To explore factors affecting the attractiveness of house flies to various predacious, manure-inhabiting mites and study the susceptibility of these mites to insecticides commonly used for house flies.

PROCEDURE: Two specific studies are being conducted. In one study, mixed populations of manure mites are being examined to determine if the combination of different species results in higher frequency of predation and phoresy. Further work will be carried out to isolate the pheromones present in manure and in house flies responsible for the attraction of mites. Microsurgery techniques with a laser beam are being used to investigate in greater detail the role of certain sensory areas in the mite for attraction. In the other study, laboratory tests of the comparative toxicities of various insecticides for house fly larvae and predaceous mites have been completed for 16 compounds. Additional insecticides will be screened for toxicity and promising compounds will be tested in the field.

This research has received Public Health Service support since September 1963.

Publications

AXTELL, R. C. Phoretic Relationship of Some Common Manure-Inhabiting Maecochelidae (Acarine: Mesostigniata) to the House Fly; Annals of the Entomological Society of America, 57: (5)584, September 1964.

O'DONNELL, A. E. AND AXTELL, R. C. Predation by Fuscuropoda Vegetans (Acarina: Uropodidae) on the House Fly (Musca domestica); Annals of the Entomological Society of America, 58: (3)403, May 1965.

FARISH, D. J. AND AXTELL, R. C. Sensory functions of the palps and first tarsi of macrocheles muscaedomesticae (Acarina: Macrochelidae), a predator of the house fly; Annals of the Entomological Society of America, 59: (1)165, January 1966.

INCINERATION OF BULKY MUNICIPAL REFUSE

Prof. Elmer R. Kaiser, Department of Chemical Engineering, New York University, New York, N. Y.

Grant No: SW 00027-03
Fiscal Year 1966
Support: $26,160

PURPOSE: To investigate the fundamentals of incineration of bulky refuse when burned in a controlled refractory-lined furnace. Bulky refuse normally is too large for charging into conventional municipal incinerators. Emphasis is on the determination of an optimum time for consumption along with minimum emission of smoke and fly ash and a noncombustible residue.

PROCEDURE: The approach being used is to determine the physics and chemistry of the controlled combustion during the burning of different types of bulky refuse. Temperatures of the solids and gases in the pile, of the exit flue gases and of strategic refractory surfaces will be measured. In addition, gases will be sampled, the rate of air supply measured, dust in the flue gases determined and density evaluations made.

This research has received Public Health Service support since Feb. 1964.

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Publications

KAISER, E. R. The incineration of bulky refuse. *IN* Proceedings, 1966 National Incinerator Conference. American Society of Mechanical Engineers, New York, N.Y., May 1–4, 1966. p. 39.

SANITARY LANDFILL INVESTIGATION

Prof. Jerry C. Burchinal, *Department of Civil Engineering*, West Virginia University, Morgantown, W. Va.

Grant No: SW 00038-03
Fiscal Year 1966
Support: $29,374

PURPOSE: To identify the groups of micro-organisms active in refuse decomposition; to study oxidation conditions of buried refuse and the effects of moisture, temperature and nitrogen; to investigate gas production and its composition in a landfill; to determine the effects of nitrogen,

phosphorous, and potassium on refuse decomposition; and to obtain basic chemical and bacteriological data concerning water pollution around landfills.

PROCEDURE: To accomplish these objectives, fresh household refuse and material retrieved from landfills were studied in parallel. In addition, the effects of different strip-mine spoils on refuse, either mixed or in layers, were studied. Generally, these were laboratory investigations under controlled conditions, using various test cylinders for simulated landfills. In some cases, sampling pits were constructed in operational landfills at Morgantown, West Virginia along with observation and sampling wells.

This research has received Public Health Service support since June 1962.

Publications

DOBSON, ANN L. AND WILSON, H. A. Refuse decomposition in strip-mine spoils. Proceedings of the West Virginia Academy of Science, 35:59, 1963.

HANDLING, TREATMENT, AND DISPOSAL OF ANIMAL WASTES

Dr. Thamon E. Hazen, Agricultural Experiment Station, Iowa State University, Ames, Iowa

Grant No: SW 00040-03
Fiscal Year 1966
Support: $21,913

PURPOSE: This project was directed primarily to the investigation of physical, chemical and bacteriological properties of hog wastes and the testing of methods for the management, treatment and disposal of these wastes so as to reduce any health hazards. Wastes from other farm animals were similarly studied but in less detail.

PROCEDURE: Lagoons and their resulting effluent with various loading rates of both liquid and solid wastes was the treatment receiving greatest attention, although anaerobic digesters and an oxidation ditch also were studied. Properties of raw manures and treated effluents evaluated were: total and volatile solids, specific weight, B.O.D., C.O.D., nitrogen, phosphorous, and potash content, odor, pH, bacteriological content, toxic substances, among others.

This research has received Public Health Service support since June 1963.

Publications

TAIGANIDES, E. P., BAUMANN, E. R., JOHNSON, H. P. & HAZEN, T. E. Anaerobic Digestion of Hog Wastes. Journal Agricultural Engineering Research. 8:(4)327, 1963.

TAIGANIDES, E. P., BAUMANN, E. R., & HAZEN, T. E. Sludge Digestion of Farm Animal Wastes. Journal Paper No. J-4661, Iowa Agricultural and Home Economics Experiment Station and Compost Science 4:(2)26, Summer 1963.

TAIGANIDES, E. P., Agricultural Solid Wastes. *IN* Proceedings National Conference on Solid Waste Research. American Public Works Assoc., Chicago, Dec. 1963. p. 39.

TAIGANIDES, E. P., HAZEN, T. E., BAUMANN, E. R. & JOHNSON, H. P. Properties and Pumping Characteristics of Hog Wastes. Transactions of the American Society of Agricultural Engineers. 7:(2)123, 1964.

TAIGANIDES, E. P. & HAZEN, T. E. Animal Waste Disposal Practices and their Influence on Farm Building Design. Journal Paper No. J-4830, Iowa Agricultural and Home Economics Experiment Station, Ames Project 1433. 1964.

TAIGANIDES, E. P. Disposal of Animal Wastes, Journal Paper No. J-4876, Iowa Agricultural and Home Economics Experiment Station, Ames Project 1433. 1964.

TAIGANIDES, E. P. & HAZEN, T. E. Physical and Chemical Properties of Animal Wastes. Journal Paper No. 5161, Iowa Agricultural and Home Economics Experiment Station, Ames, Project 1433. 1964.

TAIGANIDES, E. P., Theoretical Considerations of Anaerobic Lagoons for Poultry Wastes. Journal Paper No. J-4889, Iowa Agricultural and Home Economics Experiment Station, Ames, Project 1433, 1964, and *IN* Second National Symposium on Poultry Waste Management, University of Nebraska, Lincoln, Nebraska. May 19–20, 1964. p. 251.

WILLRICH, T. L., Primary Treatment of Swine Wastes by Lagooning. Journal Paper No. J-5423, Iowa Agric. & Home Econ. Exp. Sta., Ames Project 1433. 1966.

SUCCESSION AND ECOLOGY OF DIPTERA IN CATTLE DROPPINGS

Dr. John R. Anderson, Department of Entomology and Parasitology, University of California, Berkeley, Calif.

Grant No: SW 00041-03
Fiscal Year 1966
Support: $13,818

PURPOSE: To study cattle droppings as an ecological unit.

PROCEDURE: The cow pat habitat is being observed to determine succession and density of various species of Diptera that occur naturally in these situations. Studies are being conducted under both undisturbed pasture and experimental conditions, to determine the effects of this

succession of species on the population dynamics of the species comprising the cattle dropping community.

Using this approach, species of flies are substituted to alter the usual patterns and thus determine effects of induced changes on subsequent establishment of species. Studies also are made on factors, such as size and color, which influence attraction of insects. Concurrent observations will be made of climatic conditions and physical characteristics of the habitat when standardized samples are collected to determine which larvae are present.

This research has received Public Health Service support since October 1963.

Publications

ANDERSON, J. R. Recent Developments in the control of Some Arthropods of Public Health and Veterinary Importance. Muscoid Flies. Bulletin Entomological Society of America. 12:(3) Sept. 1966. IN PRESS.

ANDERSON, J. R. Biological Interrelationships Between Feces and Flies. *IN* Management of Farm Animal Wastes, Proceedings, National Symposium on Animal Waste Management. May 5–7, 1966, East Lansing, Michigan, p. 20.

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A STUDY OF FARM WASTES

Prof. Stanley A. Witzel, Agricultural Engineering, University of Wisconsin, Madison, Wis.

Grant No: SW 00042-03
Fiscal Year 1966
Support: $30,600

PURPOSE: This is a comprehensive study of farm wastes, dealing with their quality, physical character, chemical and biological composition, and the effects of animal housing practices. The objective is to study farm wastes in a changing agriculture to determine their character, their economic value to agriculture, and any adverse effect they may have on public health.

PROCEDURE: To accomplish these objectives, wastes from dairy cows are collected periodically, weighed, and analyzed. Further exploratory analyses of swine and poultry wastes are planned and bacteriological characteristics of fresh wastes from ruminating animals, lagoon waste input, and lagoon microorganisms are being investigated. These studies include liquid manure wastes being held in below-ground storage tanks for removal to fields. In soils, farm wastes receiving different methods of treatment will be compared by direct field application

for their value in stabilizing soil structure and for their contribution to the nutrition of field crops.

Sources and amounts of pollution of surface and subsurface waters resulting from different animal waste management and farming practices are being studied.

This research has received Public Health Service support since June 1964.

Publications

WITZEL, S. A., MCCOY, E. & LEHNER, R. Chemical and biological reactions from lagoons used for cattle. Transactions of the American Society of Agricultural Engineers 8:(3)449, 1965.

WITZEL, S. A., MCCOY, E., POLKOWSKI, L. B., ATTOE, D. J. & NICHOLS, M. S. Physical, chemical and bacteriological properties of farm wastes (bovine species) *IN* Proceedings, National Symposium on Farm Animal Wastes, Michigan State University, East Lansing, May 5–7, 1966. p. 10.

PYROLYSIS OF MUNICIPAL REFUSE

Prof. Elmer R. Kaiser, Department of Chemical Engineering, New York University, New York, N. Y.

Grant No: SW 00043-03
Fiscal Year 1966
Support: $16,432

PURPOSE: To determine the nature and quantity of the volatile matter from the pyrolysis of refuse constituents.

PROCEDURE: Investigate the gasification of solid waste materials normally disposed of by incineration, landfill or open burning and to determine the feasibility of producing a gaseous fuel suitable for firing in a boiler or other uses. This would show the possibilities for yields of gases and heat from refuse and the volume of the ultimate flue gas after the gas is burned. A first step was to determine the volatile content of specific waste materials by heating small quantities individually in a closed retort.

A pilot-scale continuous refuse gasifier has been built to devolatilize refuse and to burn out the fixed carbon remaining after devola-

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tilization stage. The ashes are to be removed continuously from the gasifier.

On a large scale, the refuse inerts (bottles, tin cans, ash, etc.) would be removed from the gasifier, while only the hot, raw fuel gas from the process would enter power boilers for steam generation.

This research has received Public Health Service support since Sept. 1963.

Publications

KAISER, E. R. Refuse composition and flue-gas analyses from municipal incinerators. *IN* Proceedings, 1964 National Incinerator Conference, American Society of Mechanical Engineers, New York, N.Y. May 18–20, 1964. p. 35.

KAISER, E. R. Combustion and heat calculations for incinerators. *IN* Proceedings, 1964 National Incinerator Conference, American Society of Mechanical Engineers, New York, N.Y. May 18–20, 1964. p. 81.

KAISER, E. R. Chemical analysis of refuse components. *IN* Proceedings, 1966 National Incinerator Conference, American Society of Mechanical Engineers, New York, N.Y. May 1–4, 1966. p. 84.

KAISER, E. R. Prospects for reducing particulate emissions from large incinerators. Air Pollution Control Association, 16: (6)324, June 1966.

BIOLOGICAL CONSEQUENCES OF PLANT RESIDUE DECOMPOSITION IN SOIL

Dr. William Snyder, *Department of Plant Pathology,* University of California, Berkeley, Calif.

Grant No: SW 00050–03
Fiscal Year 1966
Support: $29,677

PURPOSE: To continue studies to further separate and characterize the major biologically-active components of plant decomposition products, to determine what changes may occur in these components as organic matter is degraded under varying conditions of soil moisture and temperature, to make sequential studies during the decomposition of plant material in soil under these varying conditions, and to test effects of these compounds on the behavior of plants and plant pathogens. Previous studies have shown that when plant residues decompose in soil, a wide variety of compounds may be produced which have diverse biological activities. Thus, an important objective is to ascertain the effects of these compounds not only on plants grown in nutrient cultures but also on plants in non-sterile soils.

PROCEDURE. Organic matter used in these studies include barley, rye, soybeans, and other common plants from widely-separated families. Prevalence of various compounds are determined by water extraction, ether extraction, chromatography, and in some cases ion exchange columns and electrophoresis. In continuing studies, the effects of these compounds will be determined on the biology, survival, and parasitic activity of *Fusarium solani* f. *phaseoli* pathogenic to beans, *Thielaviopsis basicola* pathogenic to beans and cotton, *Fusarium oxysporum* f. *Basinfectum* pathogenic to cotton and *Rhizoctonia solani* pathogenic to cotton and potato. In addition, studies of the influence of nutrition on virulence

will be conducted using seedling plants and environmental control chambers.

This research has received Public Health Service support since Feb. 1964.

Publications

PATRICK, Z. A., TOUSSOUN, T. A., KOCH, L. W. Effect of crop-residue decomposition products on plant roots. Annual Review of Phytopathology, 2:267, 1964.

PATRICK, Z. A., TOUSSOUN, T. A., THORPE, H. J. Germination of Chlamydospores of thielaviopsis basicola. Phytopathology 55:(4)466, April 1965.

PATRICK, Z. A., SAYRE, R. M., THORPE, H. J. Nematocidal substances selective for plant-parasitic nematodes in extracts of decomposing rye. Phytopathology. 55:(6) 702, June 1965.

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A STUDY OF INCINERATOR RESIDUE

Dr. P. Walton Purdom, Environmental Engineering and Science, Drexel Institute of Technology, Philadelphia, Pa.

Grant No: SW 00005-02
Fiscal Year 1966
Support: $106,958

PURPOSE: This study of incinerator residue is a cooperative program between the City of Philadelphia, Departments of Streets, Public Health and Water, and the Drexel Institute of Technology. Present studies are analyzing residue from Philadelphia incinerators of batch feed and traveling grate design. Other designs, including reciprocating grate and rotary kiln units, will be studied in municipalities outside Philadelphia. One part will emphasize studies of the properties and usefulness as fill material of the residue. Another part is a field study in which incinerator refuse is placed in an area which is subject to tidal surging. Leaching contaminates as well as time-release mechanisms will be studied.

PROCEDURE: Preliminary investigations showed that the final residue from municipal incinerators varies with the input and the incinerator process. The study consisted of analyzing incinerator residue to determine the physical and chemical characteristics and variance. Similarly, in this study, the residue will be classified as to its acceptability as direct, exposed fill, considering such factors as potential for dust, odor, fly breeding, and rat attraction. This study will provide information on the character of incinerator residue, establish a system for the objective classification of residue, indicate future design potentials for municipal

incinerators, and determine possible use of inert residue in construction, earth work, land reclamation, etc.

This research has received Public Health Service support since January 1965.

MICROBIOLOGICAL STABILIZATION OF ANIMAL WASTES

Dr. Edward C. Berry, *Department of Bacteriology*, South Dakota State College, Brookings, S.D.

Grant No: SW 00029–02
Fiscal Year 1966
Support: $22,932

PURPOSE: The purpose is to study the stabilization of livestock wastes by microbial means and to determine the physical, chemical and microbiological characteristics of these wastes and the changes to the point of stabilization. The information obtained will provide the engineers the criteria for the kind and size of processing equipment to convert this material into harmless and less unsanitary state.

PROCEDURE: The procedure used in this study is to place measured quantities of animal excreta in a stainless steel digester tank. Then the stabilization of these materials is observed while varying the oxygen supply, pH, temperature, and amount of water. Studies of the microbial flora will also be made to improve the stabilization rate. In addition, the B.O.D. is being determined at both the start and end of the tank process to give a measure of changes made and the degree of stabilization. The various gases produced, CH_4, CO_2, CO, NH_3, H_2, and H_2S, are collected and measured.

This research has received Public Health Service support since June 1964.

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Publications

BULLERMAN, L. B. & BERRY, E. C. Use of Cheese Whey for Vitamin B_{12} Production: I. Whey Solids and Yeast Extract Levels. Applied Microbiology 14: (93)353, May 1966.

BERRY, E. C. & BULLERMAN, L. B. Use of Cheese Whey for Vitamin B_{12} Production: II. Cobalt, Precursor, and Aeration Levels. Applied Microbiology 14: (3)356, May 1966.

BULLERMAN, L. B. & BERRY, E. C. Use of Cheese Whey for Vitamin B_{12} Production: III. Growth Studies and Dry-Weight Activity. Applied Microbiology 14: (3)358, May 1966.

BERRY, E. C. Requirements for Microbial Reduction of Farm Animal Wastes. *IN* Proceedings, National Symposium on Animal Waste Management. Michigan State University, East Lansing, May 5–7, 1966. p. 56.

PYROLYSIS OF SOLID MUNICIPAL WASTES

Mr. Donald A. Hoffman, Office of Utilities Department, City of San Diego, Calif.

Grant No: SW 00036–02
Fiscal Year 1966
Support: $26,827

PURPOSE: This study, on a larger-than-laboratory scale, is to measure the various products produced by pyrolysis due to varied pressures and temperatures and to determine the most economical conditions of operation.

PROCEDURE: Various types of municipal refuse are heated in a small stainless steel, batch pilot plant. Investigations are being made into possible advantages of separating glass and cans at different times during the study and of pre-drying or adding moisture. The gases produced during pyrolysis are collected, allowed to separate into gaseous and liquid components, then analyzed for major, minor, and trace components.

Pyrolysis for the thermochemical conversion of complex organic solids into combustible gases, tarry liquids, and a stable residue has been applied successfully to wood products and coal. It may prove economically feasible to reduce the volume of solid municipal wastes with the concomitant formation of useful by-products.

This research has received Public Health Service support since June 1965.

SYSTEMS ANALYSIS FOR SHIPBORNE MUNICIPAL INCINERATION

Dr. Melvin W. First, Industrial Hygiene, Harvard School of Public Health, Boston, Mass.

Grant No: SW 00044–02
Fiscal Year 1966
Support: $120,642

PURPOSE: This study is to investigate the problem of economic disposal of refuse in densely populated coastal areas, utilizing the Boston metropolitan region, which is conveniently situated for the research involved.

PROCEDURE: The scientific and technical aspects of ocean burning of municipal solid wastes and the disposal of the residues at sea are being examined. Ocean currents and other ecological factors affecting ash movement are studied to estimate the influence of disposal on marine

life. This includes the investigation of buoyancy characteristics of incinerator ash and methods of discharging this ash to prevent floating residues. Studies are also conducted to determine methods of stabilizing untreated wastes for limited periods. Systems

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analysis and computers are used to optimize collection networks oriented toward waterfront collection routes.

Preliminary cost analysis indicates that ship incineration is likely to be no more expensive than equivalent land-based incinerators located in the core areas of the city, or sanitary landfills 20 to 40 miles from the collection sites. These studies are designed to define the costs, operating characteristics, ecological and environmental health implications, and the proper sphere of operation of incinerator ships.

This research has received Public Health Service support since March 1965.

COMPREHENSIVE STUDIES OF SOLID WASTE MANAGEMENT

Prof. Percy H. McGauhey, Sanitary Engineering Research Laboratory, University of California, Berkeley, Calif.

Grant No: SW 00003-01
Fiscal Year 1966
Support: $158,876

PURPOSE: To develop solutions to problems in all aspects of solid waste management through a program of research which brings the competence of specialists in the wide variety of disciplines involved in planning, financing, and administering a community into an effective combination with that of engineers and environmental health specialists.

PROCEDURE: Five research teams will be responsible for the following topics: (1) evaluation of waste and environmental factors, (2) evaluation of the problem of solid waste with respect to land use planning and economic analysis, (3) evaluation of the use of existing sewers and treatment processes with experimental approaches of the transport of ground materials and turbulent diffusion of ground material, (4) analysis of transport and management systems by the application of research operations, (5) attempts at the improvement of technology by a. incineration, converting to fuel modification of the Davis incinerator, plus a literature survey on effects, b. wet oxidation-application of various processes to combustible rubbish, c. experimental composting manure-rubbish mixtures with an economic study.

This research has received Public Health Service support since June 1966.

NITROGEN CYCLE ECOLOGY OF SOLID WASTE COMPOSTING

Dr. David T. Knuth, *Research Microbiologist*, Battelle Memorial Institute, Columbus, Ohio

Grant No: SW 00007-01
Fiscal Year 1966
Support: $24,200

PURPOSE: To investigate the biochemistry and microbiology of the nitrogen cycle during the composting process for treating solid municipal wastes.

PROCEDURE: The goals are to conserve nitrogen compounds during the composting of wastes, to effect more efficient solid municipal waste utilization by composting, and to encourage greater use of composting in agriculture as a result of controlled compost quality.

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The presence of nitrogen-cycle microorganisms and their nitrogenous products can be ascertained in normal compost prepared in the laboratory. The extent to which nitrogen is lost and converted to forms unavailable to microorganisms which decompose waste will become the basis for the selection of useful environmental modifications. Attainment of these objectives is expected to effect greater waste utilization and nitrogen economy during composting.

This research has received Public Health Service support since June 1966.

HOSPITAL SOLID WASTE DISPOSAL IN COMMUNITY FACILITIES

Prof. Richard G. Bond, School of Public Health, University of Minnesota, Minneapolis, Minn.

Grant No: SW 00009-01
Fiscal Year 1966
Support: $13,178

PURPOSE: To study the treatment of or destruction of wastes within a hospital, the disposal of hospital wastes outside the hospital and the community acceptance and disposal of hospital wastes.

PROCEDURE: To do this, two hospitals will be selected from suburban communities where the waste collection is less well developed and where the hospitals are of a different design and operation. A third

hospital will be in a more rural location. Detailed information will also be obtained about the communities. After survey techniques are developed and data tabulated from these three hospitals, approximately 25 hospitals around the United States will be similarly investigated. Experience obtained from this enlarged study will then be applied to collections from about one hundred hospitals.

Data of the kind described for evaluation does not now exist. Perhaps the single, most important contribution of such data would be the strengthening of the existing hospital program having to do with design criteria and operational standards.

This research has received Public Health Service support since June 1966.

ENGINEERING PROPERTIES OF FARM WASTES

Dr. E. Paul Taiganides, Agricultural Engineering, Ohio State University Research Foundation, Columbus, Ohio

Grant No: SW 00015-01
Fiscal Year 1966
Support: $18,627

PURPOSE: To develop techniques for measuring and evaluating some of the engineering properties of livestock manure and to determine the effects of changes in feed and environmental parameters on the physical, chemical, and biological properties of the farm animal wastes. This study is planned so as to define the properties of animal wastes in terms independent of specific handling systems in order to increase their usefulness in design.

PROCEDURE: Data on manure properties will be correlated with such production parameters as mean live weights, feed intake, and daily protein intake. Attempts will be made to develop a method of theo-

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retically estimating the quantities and composition of manures from animals reared in total confinement. In these studies, computers will be used to investigate the effect of such changes as temperature, ventilation rates and humidity, or engineering properties on these wastes.

Because of the geographic position of Ohio, results of this study should reflect not only production conditions and practice of the central area of the country, but also climatic, urban, and sociological conditions of the region.

This study will show means of waste disposal which have low labor requirements, reduce nuisance conditions, and improve sanitation.

This research has received Public Health Service support since June 1966.

CONFERENCE OF INSTITUTE FOR SOLID WASTES

Mr. Robert D. Bugher, *Executive Director*, American Public Works Association, Chicago, Ill.

Grant No: SW 00023–01
Fiscal Year 1966
Support: $10,000

THESE FUNDS supported, in part, the First Annual Meeting of the Institute for Solid Wastes of the American Public Works Association (APWA), held in Chicago, Illinois on September 10–15, 1966. The institute was formed August 29, 1965, within the structure of the APWA. The meeting was held in conjunction with the Public Works Congress and Equipment Show.

The funds helped to defray expenses incurred by specially invited representatives of the International Association of Public Cleansing (INTAPUC), to establish an international relationship within a national framework. Further, the participation of experts in the field of solid waste from other countries enhanced the conference. The conference focused on research in solid wastes.

This project has received Public Health Service support since June 1966.

FLY AND ECONOMIC EVALUATION OF URBAN GARBAGE SYSTEMS

Mr. Dean H. Ecke, *Vector Control Specialist*, Santa Clara County Health Department, San Jose, Calif.

Grant No: SW 00017–01
Fiscal Year 1966
Support: $44,148

PURPOSE: This study will compare once-a-week and twice-a-week garbage collection for fly production and costs, using both the conventional garbage can and paper bag systems. The program is to compare the entomological and economic value between the two basic systems and to demonstrate the value of more frequent collection service, particularly where there is a severe green blow fly (Phaenicia) problem.

PROCEDURE: To show this, four economically comparable residential areas of approximately 800 homes each will be studied in the City of Santa Clara. Proper notices will be sent to residences of the areas. The principal investigator together with a fly consultant from the State

Health Department will supervise the entomological evaluation for the study. Forty larval collection traps

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will be installed under representative garbage units in each area, where cooperation is assured. About six weeks will be allowed, before entomological evaluation starts, to permit both customer and collectors to become familiar with the system.

Adult fly density will be regularly measured in each study area using about 20 standard cone entrance fly traps at fixed locations. In addition, weekly observations will be made at standardized attractant stations for adult fly density.

Engineering consultants from the City and State health departments will develop the detailed procedures to be followed for the economic evaluation. A solid waste engineer from the State Health Department will supervise this phase of the study.

This research has received Public Health Service support since May 1966.

PARTIAL OXIDATION OF SOLID ORGANIC WASTES

Dr. William W. Shuster, Department of Civil Engineering, Rensselaer Polytechnic Institute, Troy, N.Y.

Grant No: SW 00022–01
Fiscal Year 1966
Support: $26,546

PURPOSE: To investigate the possibility of converting solid refuse into useful products. Particular attention is being given to the possibility of heating finely divided raw material in a fluidized bed suspended by nitrogen-air mixtures.

PROCEDURE: The procedure is to convert the organic material contained in solid wastes to useful recoverable products through a mechanism of partial combustion. To accomplish this, a fairly homogeneous material, such as the dried sludge from a sewage treatment plant, is used to minimize the variability of heterogenity. In addition, the effects of air-solid ratios, temperature and moisture content on the product composition is being studied. Effluent gas is passed through a series of condensers and freeze traps for collection of various product fractions, such as alcohols, aldehaydes, ketones, and other types of partly oxygenated products. The approach is not only to emphasize disposal of solid organic wastes, but to develop a process of product recovery which will be economically attractive.

This research has received Public Health Service support since May 1966.

FATE OF INSECTICIDES IN COMPOSTED AGRICULTURAL WASTES

Mr. Walter W. Rose, *Head, Water and Waste Engineering Section,* National Canners Association, Berkeley, Calif.

Grant No: SW 00025–01
Fiscal Year 1966
Support: $16,448

PURPOSE: To determine the fate of insecticides in composting agricultural wastes by isolation, separation, and identification of residues of the original insecticide and its major transformation products.

PROCEDURE: In this study, insecticides from three main classes will be incorporated singly or as realistic mixtures in representative wastes before composting. The microorganisms responsible for the degradation

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of each insecticide would be determined by pure culture isolation and metabolic studies in media containing graduated levels of insecticides. Performance of degrading organisms during composting would be evaluated to insure their suitability for technical application. The effectiveness of microbial degradation of insecticides during composting would be evaluated for both continuous and batch operation. Insecticides to be used in this study are DDT, dieldrin, parathion, diazinon, Zineb, and carbaryl.

This research has received Public Health Service support since May 1966

NATIONAL SYMPOSIUM ON ANIMAL WASTE MANAGEMENT

Dr. Paul Taiganides, Agricultural Engineering, Ohio State University Research Foundation, Columbus, Ohio

Grant No: SW 00026–01
Fiscal Year 1966
Support: $6,500

PURPOSE: These funds supported, in part, a national research conference on the management of farm solid wastes at the Michigan State University, May 5–7, 1966. The conference was designed to appraise present animal waste management practices, evaluate the present technology, project future needs, and give direction to and stimulate research on problems in the field.

Another objective was to provide a forum for teams of scientists, engineers, public health officials, and others to exchange knowledge on agricultural waste problems. About three hundred attended the conference, including several young scientists from foreign countries.

This project has received Public Health Service support since April 1966.

Publications

PROCEEDINGS, National Symposium on Animal Waste Management, American Society of Agricultural Engineering, East Lansing, Michigan, May 5–7, 1966.

CONTINUOUS INCINERATION OF MUNICIPAL REFUSE

Prof. Elmer R. Kaiser, Department of Chemical Engineering, New York University, New York, N. Y.

Grant No: SW 00035-01
Fiscal Year 1966
Support: $50,433

PURPOSE: To conduct a comprehensive research program on a newly developed, modern municipal incinerator of the continuous-feed type, which incorporates rocking-grate stokers and cyclone dust collectors.

PROCEDURE: This study is being conducted at the Oceanside Refuse Disposal Plant which was completed in October 1964 by the town of Hempstead, Nassau County, Long Island, New York. Using this incinerator, the following investigations will be made: (1) determine composition of refuse, grate residue, slag, fly ash, and waste water; (2) determine amount of grate residue, fly ash, refractory slag deposits, waste water pollutants, and air pollutant emissions necessary for a material balance; (3) determine value of heat release, heat transfer, and refractory furnace temperature necessary for a heat balance,

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and study combustion process factors; and (4) determine control equipment efficiencies. The residue is to be free of putrescible matter and otherwise free of water contaminants that is to be used in landfill.

This research has received Public Health Service support since Sept. 1965.

Publications

KAISER, E. R. A new incinerator control meter is needed. *IN* Proceedings, 1966 National Incinerator Conference, American Society of Mechanical Engineers, New York, N.Y., May 1–4, 1966, p. 176.

NATIONAL CONFERENCE ON SOLID WASTE MANAGEMENT

Dr. Samuel A. Hart, Agricultural Engineering, University of California, Davis, Calif.

Grant No: SW 00037-01
Fiscal Year 1966
Support: $24,069

PURPOSE: These funds supported in part a national conference on the management of solid wastes. The conference, held on April 4–5, 1966 at Davis, California, explored operations research and systems analysis as possible tools in improving the approach to the involved metropolitan problems of waste management.

Approximately 350 persons attended the meeting. Representatives from the Public Health Service, universities, industry, local governments, and private institutions presented papers.

This project has received Health Service support since July 1965.

Publications

PROCEEDINGS, National Conference on Solid Waste Management. Davis, California. April 4–5, 1966.

BIOLOGICAL METHANE FORMATION

Dr. Marvin P. Bryant, Department of Dairy Science, University of Illinois, Urbana, Ill.

Grant No: SW 00045-01
Fiscal Year 1966
Support: $48,840

PURPOSE: To obtain fundamental ecological, nutritional, and biochemical information from enumerating studies and from pure culture studies which can be applied to a general understanding of the process of methane formation from organic matter in important natural systems.

PROCEDURE: The quantitatively significant bacteria, in important natural sites of methane formation, will be enumerated, isolated, and characterized. Studies will be made of habitats in which the anaerobic decomposition of plant food and of organic wastes lead to methane formation. Characterization of isolated methane bacteria will include nutritional studies to establish the relationship of the nutrient requirements of the organisms to the chemical composition of the natural habitat. Bacteria

which produce methane from various organic substrates, hydrogen, and carbon dioxide, will be enumerated and isolated.

In addition, the biochemistry of methane formation in Methanobacillus omellanskii will be investigated. Other methane bacteria, especially those of quantitative significance in

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natural environments, also will be studied biochemically to compare the mechanism of methane production in various bacteria which produce methane from organic substrates, hydrogen, and carbon dioxide. Other aspects of the biochemistry of methane bacteria will be studied.

This research has received Public Health Service support since June 1966.

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Part III

Research Grants Initiated Between July 1 and January 1, 1967 in Fiscal Year 1967

CELLULOSE DEGRADATION IN COMPOSTING

Dr. John S. Jeris, Department of Civil Engineering, Manhattan College, Bronx, N. Y.

Grant No: SW 00004-01
Fiscal Year 1967
Support: $27,991

PURPOSE: To investigate the environmental conditions required for a more rapid cellulose degradation by microorganisms associated with composting. Also to apply engineering procedures toward a more economical use of the composting process as a method of handling urban refuse.

PROCEDURE: The laboratory studies consist of a series of compost units charged with defined mixtures ranging from paper to material closely resembling municipal refuse. In this, pure and mixed cultures of microorganisms will be implanted in both natural and synthetic compost. The objectives of these bench studies are to attempt to maximize the

breakdown of cellulose under composting conditions, to determine the biological and biochemical mechanisms of such breakdown, and to attempt to accelerate cellulose degradation. Consideration also will be given to standardization of routine analysis of compost.

In these attempts to optimize the environmental conditions in composting, the laboratory findings will be applied in a large-scale compost plant to be located in New York City. This venture will be designed to determine the condition for the most efficient as well as the most economical commercial operation.

This research has received Public Health Service support since August 1966.

CHEMICAL TRANSFORMATION OF SOLID WASTES

Dr. Virgil H. Freed, Department of Agricultural Chemistry, Oregon State University, Corvallis, Oreg.

Grant No: SW 00006-01
Fiscal Year 1967
Support: $38,460

PURPOSE: To study (1) the conversion of solid wastes to products of economic value and (2) the reduction in volume of solid wastes for easier handling.

PROCEDURE: The two phases of this study are: (1) to classify and identify the chemical nature of the constituents of solid wastes and investigate methods of chemical transformation of these wastes and (2) to follow the development of suitable laboratory procedures and conduct studies on pilot plant operations, engineering problems, and economic aspects. The first phase will consist of a survey of literature, experimental determination of wastes not covered in the literature, and a limited investigation of composed materials.

Early efforts in the chemical transformation studies are being directed toward simplified wastes, such as grass, straw, and wood wastes, which are problems in the Pacific northwest. Reactions to be studied for chemical transformation of these wastes will include hydrogenation, chlorination, selective oxidation, nitration, and ammoniation.

This research has received Public Health Service support since October 1966.

DISPOSAL OF DAIRY CATTLE WASTES BY AEROBIC DIGESTION

Dr. Alvin C. Dale, Department of Agricultural Engineering, Purdue University Research Foundation, Lafayette, Ind.

Grant No: SW 00011-01
Fiscal Year 1967
Support: $56,572

PURPOSE: To develop a complete aerobic digestion system for the disposal of dairy cattle wastes. Some of the specific objectives will be to determine the physical, chemical, and biological (biodegradable) properties to show whether preliminary separation of the undigested materials is necessary for aerobic digestion, and to relate the composition of the animal rations, loading rates, temperatures, and oxidation characteristics of the digester to the treatability of the wastes.

PROCEDURE: The field phase will be based on the findings of the laboratory phase. The laboratory studies will consist of a series of factorial experiments designed as waste characteristic and treatability tests, estimated to last one to two years. This will include tank and chamber studies on the effect of particle size on decomposition rate, the relationship of ration and antibiotic to different temperatures, effects of temperature on aerobic decomposition, and to determine the need of an inoculum for the sludge.

For field studies, it is proposed to design and install a prototype dairy cattle waste treatment system of digestion chambers. Another possibility is the installation of a Pasveer Ditch beneath a free-stall barn with a slotted floor. Consideration will also be given to the disposal of the sludge and effluent from the aerobic digestion chambers.

This research has received Public Health Service support since January 1967.

DYNAMIC EVALUATION PROCEDURE REFUSE HANDLING SYSTEMS

Dr. Bobby C. Spradlin, School of Industrial Engineering, Georgia Institute of Technology, Atlanta, Ga.

Grant No: SW 00012-01
Fiscal Year 1967
Support: $30,402

PURPOSE: To detail a descriptive simulation model of a solid waste management system in a cooperative study with the City of Atlanta,

Georgia. In addition, the effects of changes made in the system as a result of the study will be evaluated.

PROCEDURE: The perspective used in this study is called Industrial Dynamics (J. W. Forrester), which grows out of four lines of earlier development: information-feed-back theory, automatizing military tactical decision making, experimental design of complex systems by use of models, and digital computers for low-cost computation. This concept may be used to treat the interactions between the flows of information, money, orders, materials, personnel, and capital equipment in an industrial system.

This study will utilize the solid wastes system of the City of Atlanta for the purpose of data collection. Using this data, the research is to design a model to portray systems behavior, provide a procedure for the evaluation of various proposals as potential system improvements from a standpoint of economy and efficiency, provide insight into the basic nature of the variables inherent in a solid waste handling system, and possibly disclose new important variables not previously understood.

This research has received Public Health Service support since September 1966.

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LIVESTOCK WASTE MANAGEMENT AND SANITATION

Dr. Donald L. Day, Department of Agricultural Engineering, University of Illinois, Urbana, Ill.

Grant No: SW 00018-01
Fiscal Year 1967
Support: $32,910

PURPOSE: To attempt to refine knowledge of the physical, chemical, and biological properties of livestock waste and to develop methods of waste management. The project is principally concerned with swine waste management but other livestock and poultry will be investigated to a limited extent.

PROCEDURE: This is mostly a field study being conducted on the university swine farm equipped with liquid waste facilities, a Pasveer ditch, a series of lagoons, and sand-bed filters. The buildings housing the hogs have slotted floors and mechanical means for circulating and removing the manure from beneath the animals.

Principally, the studies consist of (1) treating liquid manure to suppress objectionable gases and odors and (2) an aerobic treatment plant in a production building. In the first study, the type and amount of treating materials needed, the yield and fertilizer value of the solids collected, and the management procedures for removing and utilizing these solids will

be determined. In the second study, the oxygenation and power requirements of circulating brush will be investigated. Related investigations will include: inoculum requirements for starting the aerobic process and developing the required bacterial flora, speed of rotor and depth to the wastes, depth of wastes, quantity and fertilizer characteristics of surplus sludge, quality of effluent, and gas production from the plant.

This research has received Public Health Service support since September 1966.

POLLUTION OF SUBSURFACE WATER BY SANITARY LANDFILL

Dr. Irwin Remson, Department of Civil Engineering and Mechanics, Drexel Institute of Technology, Philadelphia, Pa.

Grant No: SW 00024-01
Fiscal Year 1967
Support: $68,904

PURPOSE: To provide means for predicting the quantitative movement of contaminants in underground water from present and proposed sanitary landfills, to appraise design methods and remedial procedures for reducing to within specified limits any undesirable contaminant movement that the study may disclose, and to develop hydrologic criteria for evaluating site suitability for sanitary landfill.

PROCEDURE: Prototype landfills in part of populous southeastern Pennsylvania, located in widespread schist formations, are being studied to clarify the hydraulics of pollution movement in sanitary landfills. In these studies, the geometry and associated geological materials, along with their hydraulic properties, will be determined from borings and cores. These field observations are to be supplemented with laboratory lysimeter work, using soil tanks about 6 by 6 by 12 feet deep.

The second portion of the study will consist of the development of suitable criteria for the design of sanitary landfill operations and prediction of their performance. This phase will use data collected in the first

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phase, and will involve a mathematical model and solution by digital computer. An important objective is to develop a contaminant transport prediction model to determine the production of pollutants in landfills, their movement out of the fills, and their movement through, or absorption in, both the saturated and unsaturated zones.

This research has received Public Health Service support since September 1966.

MICROBIOLOGY AND ACID PRODUCTION IN SANITARY LANDFILLS

Mr. Jerry C. Burchinal, Department of Civil Engineering, West Virginia University, Morgantown, W. Va.

Grant No: SW 00031-01
Fiscal Year 1967
Support: $30,505

PURPOSE: To determine (1) the effect of nitrogen, phosphorous, and potassium on the decomposition of municipal refuse, and (2) the succession of microorganisms during decomposition. Also, the occurrence and order of appearance of organic acids will be determined, and attempts will be made to identify species of microorganisms responsible for formation of organic acids.

PROCEDURE: In these studies, fresh household refuse is placed in simulated landfills under controlled laboratory conditions. For this, cylinders up to three feet in diameter and sixteen feet deep are being used, with the smaller cylinders insulated to decrease the dissipation of heat. Chemical analysis and microbial isolations will be made of the refuse before it is put into the simulated landfills, and later, similar examinations will be made at intervals of the decomposing refuse.

In another study to be made during the decomposition of the refuse, an attempt will be made to correlate different organic acids indicative of decomposition to the bacteria which produce the acids, and to establish initial sources of the acids. In addition, correlation of these studies will be made with gas production, quality, quantity, and volume produced per unit of refuse.

This research has received Public Health Service support since January 1967.

EFFECTS OF GARBAGE COMPOST ON SOIL PROCESSES

Dr. Charles C. Hortenstine, Department of Soils, University of Florida, Gainesville, Fla.

Grant No: SW 00033-01
Fiscal Year 1967
Support: $19,986

PURPOSE: To (1) determine toxic or beneficial effects of large amounts of compost on soil, (2) evaluate compost as a nutrient, a soil amendment, and a source of pollutants in ground water, and (3) study the long-term effects of large amounts of compost on soil.

PROCEDURE: Laboratory, greenhouse, and field phases of this study will be conducted concurrently. In the laboratory studies, samples of garbage compost will be examined to determine the microbiological activities, plant nutrient content, organic matter, leaching characteristics, plant material, and various other physical and chemical properties. Optimum moisture and temperature conditions from most rapid decomposition will be utilized. Greenhouse studies will emphasize

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nutrient availability of the compost as compared to sources such as sewage sludge and mineral fertilizers, compost as a planting or potting medium, and the effects of compost on soil structure. In a similar manner, field studies will be conducted throughout Florida on the major soil types with garbage compost as a source of plant nutrient for agronomic and horticultural crops. An attempt will also be made to determine the maximum amount of garbage compost that can safely be applied to a particular soil type.

The economic aspects will be important considerations in all these studies.

This research has received Public Health Service support since December 1966.

POULTRY MANURE DISPOSAL BY PLOW FURROW COVER

Dr. Billy Ray Wilson, Bureau of Conservation and Environmental Science, Rutgers University, New Brunswick, N.J.

Grant No: SW 00047-01
Fiscal Year 1967
Support: $79,812

PURPOSE: To determine the frequency of application, amounts, and length of time that poultry manure can be applied to soils without undesirable effects, to develop equipment and techniques for this disposal, and to evaluate the use of soil as a disposal medium for poultry manure.

PROCEDURE: This study is a continuation of preliminary work which indicated the feasibility of the plow-furrow-cover method. A laboratory phase, primarily soil respiration studies, and several field experimental phases, will be conducted, using several New Jersey soil types.

In the laboratory phase, the ability of the soil to decompose repeated increments of waste will be investigated, as will be the factors which prevent a soil from operating indefinitely as a disposal medium. Carbon dioxide evolution will be used as the measure of decomposition.

The field studies will be conducted at the University Research Center (Adelphia, New Jersey) and at commercial poultry farms. Plots for manure applications of the plow-furrow-cover studies will contain a 4×4 foot test strip for percolation studies. In these test strips, lysimeters will be used to monitor the travel of contaminants from the wastes applied to the soil.

This research has received Public Health Service support since December 1966.

THE MODE OF ACTION OF PECTIN ENZYMES

Dr. James D. Macmillan, Department of Biochemistry and Microbiology, Rutgers University, New Brunswick, N. J.

Grant No: SW 00049-01
Fiscal Year 1967
Support: $21,577

PURPOSE: To describe and compare the mode of action of various plant and microbial pectinesterases. The studies will indicate if pectin is completely or partially esterfied when originally formed by the plant.

PROCEDURE: The study involves specific tests to determine if the esterases act in a random or in a linear manner with respect to the polygalactutonide chain. If the enzyme operates linearly as suspected, the direction

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of the action will be determined in terms of the reducing end of the pectin molecule. Pectinesterase from tomatoes in particular will be investigated, in addition to studies to compare the mode of action of pectinesterases from various plant and microbial sources.

As a long-term goal, the structure of naturally-occurring pectins will be examined relative to using pectic enzymes as analytical tools.

This research has received Public Health Service support since September 1966.

USING WASTES FORMED IN VEGETABLE AND CHEESE PRODUCTION

Dr. Amihud Kramer, Department of Horticulture, University of Maryland, College Park, Md.

Grant No: SW 00058-01
Fiscal Year 1967
Support: $52,404

PURPOSE: To investigate the possibility of utilizing raw food materials ordinarily disposed of by the processing and packaging industries. These nutritious organic liquid and solid wastes amount to millions of tons yearly. Studies will be conducted on tomato wastes and cottage cheese whey, and possibly lima beans, sweet potatoes, and various cheese wastes for their use as new foods or additives to food.

PROCEDURES: Wastes from tomato harvesting, processing, and canning will be evaluated by chemical, biological, and nutritional techniques. Ensiling characteristics of seven sub-samples of the entire tomato plants (above ground) will be conducted on representative samples from three eastern factory locations. The silages will be analyzed and used in feeding trials to evaluate their nutritional acceptance. Ensiling will consist of sealing fresh, dry, and mixed material in heavy duty polyethelene bags and storing for sixty days.

Processing of cottage cheese whey will be investigated to find techniques which can produce economical and palatable additives for human consumption. The whey solids will be concentrated at five moisture levels. The following five methods of drying will be used: Flame drying, spray drying, drum drying freeze concentration, and reverse osmosis. Other studies will investigate the possible use of whey products in aerobic and anaerobic microbial fermentation to develop condiments and other commercial products.

This research has received Public Health Service support since January 1967.

OPTIMAL POLICIES FOR SOLID WASTE COLLECTION

Dr. Cornelius W. Kruse, Department of Environmental Health, The Johns Hopkins University, Baltimore, Md.

Grant No: SW 00061-01
Fiscal Year 1967
Support: $31,577

PURPOSE: To study the feasibility and economics of establishing transfer points in waste collection systems of large cities. This is a computer oriented systems-analysis study to devise more efficient use of manpower and equipment which would permit the improvement of sanitary quality.

PROCEDURE: This study would develop information concerning the characteristics of optimal policies for use in urban decisions by engineers and city councils. A mathematical simulation model based on data available from the cities of Baltimore and Tulsa, and from Los Angeles County will be made to

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investigate the location and spacing of transfer stations. Such problems as crew size, frequency of collection, vehicle routing, and type of equipment will be analyzed and such improvements such as container trains and jeep-type trucks for pulling will be considered.

This research has received Public Health Service support since January 1967.

CITRIC ACID FROM CITRUS WASTES BY FERMENTATION

Dr. Sterling K. Long, Citrus Agricultural Experiment Station, The University of Florida, Lake Alfred, Fla.

Grant No: SW 00062-01
Fiscal Year 1967
Support: $25,523

PURPOSE: To develop a procedure of converting the waste products of citrus processing plants and citrus molasses into useful products such as citric acid.

PROCEDURE: Selected canning plant waste waters of high Biochemical Oxygen Demand (BOD) content will be used to dilute citrus molasses to the optimum sugar concentration for citric acid fermentation. In preliminary studies, tap water will be used for the dilutens. In these studies, the conditions and additives required to make the substrate

suitable for production of citric acid by strains of Aspergillus niger will be determined.

Three different sizes of fermentors are planned for these studies. Fernbach Shake Flasks (0.3 liters) will be used to determine the optimum concentration of molasses, determine possible effects of interfering ions, and determine optimum environmental conditions for citric acid production in shake culture. In a 13.5 liter fermentor, the effects of aeration, stirring, pH, and temperature will be studied. For the final phases, results from the first two studies will be scaled-up for pilot plant studies with a 100 liter fermentor.

This research has received Public Health Service support since January 1967.

PIPE TRANSPORT OF DOMESTIC SOLID WASTES

Dr. Iraj Zandi, Department of Civil Engineering, University of Pennsylvania, Philadelphia, Pa.

Grant No: SW 00063-01
Fiscal Year 1967
Support: $42,724

PURPOSE: To investigate the feasibility of application of technology of solid transport in water carrying pipes to the collection of solid waste, as well as economical comparison with truck collection system.

PROCEDURE: The study includes three principal sub-objectives. In the first, the technology will be examined, in which the hydrodynamics of various combinations and concentrations of solid waste slurries will be looked into. In the second, the stochastic processes governing the generation of solid wastes will be evaluated and their implications for the design of the pipe system studied. For this, analytical models for water-carrying, pipe removal systems will be constructed. In the third, a quantitative (economic) evaluation of domestic solid waste services will be made, and analytical eco-

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nomic decision models for solid waste systems constructed. Thus, meaningful comparisons of pipe systems and conventional systems can be made.

Major equipment used in this study includes eighty-feet-long loops of pipes of varying diameters equipped to ascertain flow rates, pressure losses, density, and high capacity pumps.

This research has received Public Health Service support since September 1966.

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Part IV

Training Grants Supported During Fiscal Year 1966–67

Dr. P. W. Purdom, Environmental Engineering and Science, Drexel Institute of Technology, Philadelphia, Pa.

Grant No: SW 00002–01
Fiscal Year 1966
Support: $39,039

PROGRAM: This grant initiated a training program in solid waste disposal at the master's level. The program is established as a specialized curriculum within the existing Departments of Biomedical Engineering, Environmental Engineering, and Science. The emphasis is on solid wastes disposal with graduates trained in local solid waste management and for administration of state and Federal solid waste programs.

Depending upon the electives selected and prior education, students will be candidates for degrees in environmental engineering, civil engineering, and science. The curriculum will provide courses in environmental health design and operation of collection and disposal systems, as well as in general engineering, planning, and administration. Besides the interdisciplinary approach at the institute, a close working relationship exists between the institute and State and local governments.

This program has received Public Health Service support since July 1966.

Dr. Frederick G. Pohland, Civil Engineering, Georgia Institute of Technology, Atlanta, Ga.

Grant No: SW 00003–01
Fiscal Year 1966
Support: $33,254

PROGRAM: This grant started a specialized interdisciplinary training program in solid waste technology at the master's level. The program will be administered by an interdisciplinary committee, principally from the School of Engineering (Sanitary) and the School of Industrial Engineering.

The program is oriented towards the education of engineers in the unit processing utilized in disposal, systems analysis, and the optimization of collection systems, as well as the economic and administrative aspects of solid wastes management.

Students take a curriculum in solid wastes technology and related disciplines, and attend seminars and special workshops. Major emphasis is on Civil, Sanitary, Industrial, Chemical, and Mechanical Engineering.

This program has received Public Health Service support since July 1966.

Prof. Eugene A. Glysson, Civil Engineering, University of Michigan, Ann Arbor, Mich.

Grant No: SW 00005-01
Fiscal Year 1966
Support: $40,129

PROGRAM: This grant supports an expanded teaching program in solid wastes at the master's level. It is an interdisciplinary approach developed around the Civil Engineering Department and involving related fields such as Environmental Health, Architecture, Geology, Chemical Engineering, and others.

The curriculum emphasizes public health engineering aspects of the solid wastes problem. Continuing courses in the Civil En-

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gineering Department serve as a core of the curriculum for the solid waste program. The program is designed to train personnel more effectively to apply present knowledge to the solid waste problem, and to develop new knowledge and methods in this field.

This program has received Public Health Service support since July 1966.

Dr. Joseph F. Malina, Jr., College of Engineering, University of Texas, Austin, Tex.

Grant No: SW 00007-01
Fiscal Year 1966
Support: $37,555

PROGRAM: This grant is designed to initiate an instructional and research program in the disposal aspect of solid wastes at the master's level. Training will be offered as a specialty within the existing Environmental Health Engineering program, in cooperation with the Department of Chemical Engineering. Objectives include the training of graduate students, the development of a competent health-related teaching and research training program, and the opportunity for both faculty and students to study new approaches to the disposal of solid wastes.

Students specializing in solid wastes take specific courses amounting to at least half the hours required for the master's degree. Their training is directed towards solving problems of municipal refuse disposal. Research efforts will be directed towards solid wastes disposal problems.

This program has received Public Health Service support since September 1966.

Dr. Charles T. Harding, Department of Civil Engineering, University of Florida, Gainesville, Fla.

Grant No: SW 00004–01
Fiscal Year 1967
Support: $37,632

PROGRAM: Support of this program is designed to begin master's level training which emphasizes solid wastes, in a newly formed Department of Bioenvironmental Engineering. The program will provide training of field personnel for design and operation of solid waste disposal facilities, as well as research personnel for the development of basic data needed to design effective waste disposal systems.

Students specializing in solid wastes will take specific courses amounting to about half the hours required for the Master's degree. As the program develops, a systems analysis approach will be included.

An interdisciplinary all-university committee will coordinate research and training in solid wastes. Initially this committee will include chemical and sanitary engineering, botany, and soils.

This program has received Public Health Service support since January 1967.

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Dr. James H. Schaub, Department of Civil Engineering, West Virginia University, Morgantown

Grant No: SW 00006–01
Fiscal Year 1967
Support: $68,358

PROGRAM: Support of this program is designed to expand master's level teaching which emphasizes solid wastes. To enlarge on this program, research in broad areas of the economic and engineering aspects of municipal refuse handling, land reclamation, and related special problems will be encouraged.

Students specializing in solid wastes will take specific core courses amounting to at least half the hours required for the master's degree. Qualified non-engineering graduates can enter the environmental engineering program on open enrollment plan.

The graduate education and research at the university has an interdisciplinary approach. This is shown by an exchange of lectures between Sanitary Engineering and Preventative Medicine, a joint research project on sanitary landfills between Bacteriology and Civil Engineering, and a joint laboratory effort between Chemistry and Sanitary Engineering.

This program has received Public Health Service support since January 1967.

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4.8 COMPOSTING OF MUNICIPAL SOLID WASTES IN THE UNITED STATES, ANDREW W. BRIEDENBACH, DIRECTOR, SOLID WASTE MANAGEMENT RESEARCH STAFF, U.S. ENVIRONMENTAL PROTECTION AGENCY (1971).

"* * * inefficient and improper methods of disposal of solid wastes result in scenic blights, create serious hazards to the public health, including pollution of air and water resources, accident hazards, and increase in rodent and insect vectors of disease, have an adverse effect on land values, create public nuisances, otherwise interfere with community life and development; * * * the failure or inability to salvage and reuse such materials economically results in the unnecessary waste and depletion of our natural resources; * * * "

SOLID WASTE DISPOSAL ACT,
October 1965.

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FOREWORD

To gain more comprehensive knowledge about composting as a solid waste management tool and to better assess the limited information available, the Federal solid waste management program, within the U.S. Public Health Service, entered into a joint experimental windrow composting project in 1966 with the Tennessee Valley Authority and the City of Johnson City, Tennessee. A high-rate composting demonstration plant was also established at Gainesville, Florida under a solid waste management grant. The objectives of these projects were to investigate and demonstrate the economic and technical feasibility of composting municipal refuse. The operational experience gained there and elsewhere are presented in this report.

Composting, properly practiced, can be a nuisance-free way to recycle organic solid wastes without significantly polluting water and land resources. Composting municipal refuse is technically feasible, but it costs more than sanitary landfilling and can cost more than incineration.

The problems that have prevented composting from becoming an accepted method of solid waste treatment relate primarily to the inability of local governments to accept the concept that the process should be properly supported by adequate municipal funds, as are incineration, sewage disposal, and water treatment. The process cannot succeed with

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results from the sale of salvaged material or final compost; the market is not that large or predictable. Finally, waste disposal by composting is not the total answer, but rather one approach to be considered in a solid waste management system.

RICHARD D. VAUGHAN,
Deputy Assistant Administrator
for Solid Waste Management.

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PREFACE

From its 1966 beginnings to the present, when we near the end of the project, our experimental research in composting has been very much a team undertaking. It has encompassed substantial efforts by two Federal agencies and a municipality.

We are indebted to the Tennessee Valley Authority (TVA) for the foresight and concept of developing a composting system in a part of the country where, if composting municipal solid waste were successful, the soil would benefit from the application of organic amendments. The design and operation of the facility at Johnson City have been the sole responsibility of TVA, under Dr. O. M. Derryberry. F. E. Gartrell, O. W. Kochtitzky, Carroll Duggan (agriculturist on site), and Virgil Rader (foreman) are just a few of the TVA people who participated. Two Johnson City managers, David Burkhalter and James Mosier, were responsible for the initiation and implementation of the municipal contribution from Johnson City.

For our own part, two U.S. Public Health Service officers and a chemical engineer have served at successive times at Johnson City as the Project Engineer. These men devoted their time and energies around the clock. Each Project Engineer was supported by a small staff, and these personnel were likely to become completely caught up in the project. During his tenure, each Project Engineer reported to a Cincinnati-based manager, four in all, each of whom became almost as engrossed in the project as those stationed at Johnson City. All of these workers at different times

have devoted their various skills and energies to reporting the results of the study.

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The first Project Engineer was John S. Wiley, already well known prior to his arrival at the project for his pilot research on composting, which dates back to at least 1951. Gordon Stone, who served under Mr. Wiley until the latter's retirement, succeeded him in August 1967. When Mr. Stone became the solid waste management representative in what is now the Environmental Protection Agency's Region II, Carlton Wiles, a chemical engineer, was appointed Project Engineer, a capacity in which he still serves. For most of the study period, Fred J. Stutzenberger was microbiologist, Donald J. Dunsmore was staff engineer, Richard D. Lossin was chemist, and Marie T. Presnell was administrative assistant. The chief Cincinnati-based managers were Charles G. Gunnerson followed by Clarence A. Clemons.

John Ruf was Project Engineer of the independent but companion Public Health Service study in Gainesville, from which input was gathered for this paper. Dr. W. L. Gaby and his staff at East Tennessee State University worked closely with our personnel in determining that compost was safe under the conditions of the study for agricultural use.

Thus, the report, like the project itself, cannot be attributed to only a few people but is a contribution from all of us to the sum total knowledge of composting municipal solid wastes. The impress of all these various curiosities, intelligences, and modes of inquiry is reflected in this document.

ANDREW W. BREIDENBACH,
Director, Division of Research and Development,
APRIL 1971. *Office of Solid Waste Management Programs.*

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SUMMARY

Composting, the biochemical degradation of organic materials, is a sanitary process for treating municipal, agricultural, and industrial wastes.

Properly managed windrow or enclosed, high-rate digestion composting, either of which may also process raw or partially digested sewage sludge, will produce a product safe for agriculture and gardening use. Compost cannot be considered a fertilizer. Its main value seems to be its high organic content as a soil conditioner, which may provide poor soils with better tilth, water-holding capacity, and improved nutrient-holding capacity.

The present technology of composting will permit the recycling of organic waste materials back to the soil without significant pollution of water or land resources. Economically, composting does not compete on a net-cost-per-ton processed basis with either landfilling or incineration of municipal refuse. Evidence gathered from many sources indicates that the rather high cost of producing compost is not sufficiently offset by income from its sale to permit the process to compete economically with other acceptable systems. For a few favored communities some of the costs of composting may be recovered by the sale of salvageable items. The most optimistic estimates of an income-producing market for compost suggest that only a small fraction of the waste generated by

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a unit of population could be marketed as compost. Many feel that if the techniques of landfilling and incineration, however, fail to keep pace with increasingly stringent environmental protection criteria or, manage to do so, but become more and more expensive, reflecting all the costs associated with their processes, composting may become a relatively more important tool in resource system management that could accommodate various proportions of municipal, industrial, and agricultural wastes. Additional support is required for a successful composting venture. This support has, in the past, developed from various combinations of political, speculative, and intuitive factors.

Preliminary studies have shown that the land may be able to accept large quantities of compost without harming its crop-producing ability. The land could thus accept compost as part of a refuse disposal system that recycles the organic wastes back into the soil in a highly assimilable and unobjectionable form. Should such a situation occur, various levels of government and private enterprise might find it beneficial to approach the production, distribution, and assimilation of compost jointly.

The factors that will influence the future of the composting process as

a municipal solid waste management tool are the net costs and benefits of the process, as compared with other waste management processes. As new technology is developed and priorities change on the use of land, water, and air, the cost and usefulness of composting, as well as other solid waste management systems, will be influenced by four factors: cost per ton of solid waste for each alternative processing and disposal

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system; acceptance of more stringent standards for environmental quality; availability of systems to meet the standards; public policy decisions requiring beneficial recycling rather than land or sea disposal of wastes.

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COMPOSTING OF MUNICIPAL SOLID WASTES IN THE UNITED STATES

Chapter I

Background

Composting is the biochemical degradation of organic materials to a humus-like substance, a process constantly carried on in nature. For many centuries, farmers and gardeners throughout the world have practiced composting by placing vegetable matter and animal manures in piles or into pits for decomposition prior to use. The first significant development in composting as a systemized process took place in India in 1925.* Sir Albert Howard developed a process involving the anaerobic degradation of leaves, garbage, animal manures, and night soil for six months in pits or piles.(*1*) The method, known as the Indore Process, was later modified to include more turning to hasten aerobic action.(*2*) The Indian Council of Agriculture Research improved the method by laying down successive layers of refuse and night soil. This system is used under the name of the Bangalore Process.(*2*, *3*) Similarly, in 1922, Beccari patented a process in Italy using both anaerobic and aerobic decomposition in an enclosed system.(*4*)

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The Beccari and Indore processes, although readily adaptable to mechanized methods, did not attract U.S. interest for several reasons. The time factor involved was unsuited to the American cultural pattern; the objective was foreign to the American heritage of wastefulness and

* Mention of commercial products or processes throughout this report does not imply endorsement by the U.S. Government.

unrelated to any recognized need; and the processes involved land areas not suited to our urban centers and to the volume and variety of our wastes. Furthermore, anaerobic composting accomplished nothing that a good sanitary landfill might not do in time with less cost and trouble, particularly when, in contrast to India, there was no demand for the final product.

Interest in composting for the disposal or treatment of municipal refuse arose in the early 1920's. In 1932, the first full-scale European composting plant was established in The Netherlands by a nonprofit utility company N. V. Vuilafvoer Maatschapij (VAM). This plant uses the van Maanen process, a modification of the Indore process, in which unground refuse is composted in large windrows.(*2*) Also in the 1930's the Dano process appeared in Denmark, and Emerson patented a similar process in the United States. In 1949, the Frazer-Eweson Process was developed in the United States. In general, at least 16 types of composting processes were identified (Chapter II).

During the 1950's, basic studies and research on composting for municipal waste treatment were conducted at the University of California, by the U.S. Public Health Service, and at Michigan State University.(*5*, *10*) A comprehensive monograph on *Composting and Sanitary Disposal and Reclamation of Organic Wastes* was published by the World Health Organization

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in 1956.(*11*) An annotated bibliography of references on composting was also made available during this decade.(*12*)

A review of municipal composting projects throughout the world was published in 1961 by Davies.(*3*) Composting developments in the United States during the 1960-1965 period, including difficulties experienced by composting plants, were reported by Wiley and Kochtitzky.(*13*) The International Research Group on Refuse Disposal (IRGRD), 1956 to 1967(*14*, *15*, *15a*) also provided information on composting.

Although the feasibility of the composting process was established by these basic studies, there were unknowns in its large-scale application in this country. The European experience was not applicable due to the difficulty of translating costs, differences in the character of the refuse, and a different philosophy about composting. Most plants constructed in the United States were enterprises that depended on profit; they charged municipalities fees and expected to receive an income from salvage and the sale of compost. Wiley and Kochtitzky concluded that the inability to dispose of large quantities of compost at a favorable price was probably a major factor in the closing of six of nine plants during the period 1962-1964.(*13*)

In February 1966, the U.S. Public Health Service (USPHS), the Tennessee Valley Authority (TVA), and the Municipality of Johnson City, Tennessee, entered into an agreement to undertake a joint research and demonstration project in solid wastes and sewage sludge composting.(*16*) This report has drawn in part on the data collected and experience gained in conjunction with this project and from a USPHS demonstration

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project at Gainesville, Florida, to provide information relative to composting developments in solid waste management.(*17*, *18*) Chapter I reviews composting technology. Chapter II briefly describes processing systems and types of plants and provides a listing of municipal composting plants and their status as of December 1969. Chapter III deals with broad engineering, chemical, and microbiological aspects of composting municipal refuse, with and without the addition of other organic wastes. It also presents information to help answer such questions as "Is the finished product safe to distribute and use?" and "Are restrictions or precautions necessary for use of compost?" Much of this chapter draws upon results of studies conducted at Johnson City and Gainesville.

In general, the economics of composting are confusing. Lack of reliable cost data from operating plants and a number of intangibles are some of the factors that combine to cloud the economics of composting. This report discusses composting economics based upon information available in 1969. Capital and operating costs for the research and development plant at Johnson City and the demonstration plant at Gainesville are provided in Chapter IV. Based on this information, cost projections for larger plants are given. A report on preliminary compost utilization and marketing studies is presented in Chapter V. The role composting is expected to have in future solid waste management systems is discussed in Chapter VI.

Although portions of this report are concerned with results obtained at Johnson City, it is not within its scope to present specifics of the studies conducted. Details of the project are published separately.(*17*)

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Chapter II

Composting Municipal Refuse: Processes and Types of Plants

COMPOSTING SYSTEMS

There are more than 30 composting systems identified by the names of their inventors or by proprietary names. In general, the systems are

classified either by the method of preparation of the refuse or by the method of digestion. Sometimes both classification schemes are used in the description.

In most systems, refuse is prepared for digestion by comminuting it in raspers or in various kinds of mills, including hammermills, chain mills, and wet pulpers. Sometimes a process is named for the type of mill used, such as the Buhler or the Hazemag. Digestion is accomplished in windrows, pits, trenches, cells, tanks, multistoried or multidecked towers or buildings, and in drums and bins. There are 16 types of composting processes commonly in use (Table 1).

Present day composting plants generally provide for five basic steps in processing the refuse: preparation, digestion, curing, finishing or upgrading, and storing.

Preparation. Processing of the refuse prior to composting involves several operations, which typically may include receiving, sorting, magnetic separation, grinding, and adding sewage sludge.

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TABLE 1. TYPICAL COMPOSTING PROCESSES[1]

Process name	General description	Location
Bangalore (Indore)	Trench in ground, 2 to 3 ft. deep. Material placed in alternate layers of refuse, night soil, earth, straw, etc. No grinding. Turned by hand as often as possible. Detention time of 120 to 180 days.	Common in India.
Caspari (briquetting)	Ground material is compressed into blocks and stacked for 30 to 40 days. Aeration by natural diffusion and air flow through stacks. Curing follows initial composting. Blocks are later ground.	Schweinfurt, Germany.
Dano Biostabilizer	Rotating drum, slightly inclined from the horizontal, 9′ to 12′ in diameter, up to 150′ long. One to 5 days digestion followed by windrowing. No grinding. Forced aeration into drum.	Predominately in Europe.
Earp-Thomas	Silo type with 8 decks stacked vertically. Ground refuse is moved downward from deck to deck by ploughs. Air passes upward through the silo. Uses a patented inoculum. Digestion (2 to 3 days) followed by windrowing.	Heidelberg, Germany; Turgi, Switzerland; Verona and Palermo, Italy; Thessaloniki, Greece.
Fairfield-Hardy	Circular tank. Vertical screws, mounted on two rotating radial arms, keep ground material agitated. Forced aeration through tank bottom and holes in screws. Detention time of 5 days.	Altoona, Pa., and San Juan, P. R.
Fermascreen	Hexagonal drum, three sides of which are screens. Refuse is ground. Batch loaded. Screens are sealed for initial composting. Aeration occurs when drum is rotated with screens open. Detention time of 4 days.	Epsom, England.

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Frazer-Eweson	Ground refuse placed in vertical bin having 4 or 5 perforated decks and special arms to force composting material through perforations. Air is forced through bin. Detention time of 4 to 5 days.	None in operation.

TABLE 1. TYPICAL COMPOSTING PROCESSES[1]—Continued

Process name	General description	Location
Jersey (also known as the John Thompson system).	Structure with 6 floors, each equipped to dump ground refuse onto the next lower floor. Aeration effected by dropping from floor to floor. Detention time of 6 days.	Jersey, Channel Islands, Great Britain, and Bangkok, Thailand.
Metrowaste	Open tanks, 20′ wide, 10′ deep, 200′ to 400′ long. Refuse ground. Equipped to give one or two turnings during digestion period (7 days). Air is forced through perforations in bottom of tank.	Houston, Tex., and Gainesville, Fla.
Naturizer or International	Five 9′ wide steel conveyor belts arranged to pass material from belt to belt. Each belt is an insulated cell. Air passes upward through digester. Detention time of 5 days.	St. Petersburg, Fla.
Riker	Four-story bins with clam-shell floors. Ground refuse is dropped from floor to floor. Forced air aeration. Detention time of 20 to 28 days.	None in operation.
T. A. Crane	Two cells consisting of three horizontal decks. Horizontal ribbon screws extending the length of each deck recirculate ground refuse from deck to deck. Air is introduced in bottom of cells. Composting followed by curing in a bin.	Kobe, Japan.
Tollemache	Similar to the Metrowaste digesters.	Spain; Southern Rhodesia.

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Triga	Towers or silos called "Hygienisators" in sets of 4 towers. Refuse is ground. Forced air aeration. Detention time of 4 days.	Dinard, Plaisir, and Versailles, France; Moscow, U.S.S.R.; Buenos Aires, Argentina.
Windrowing (Normal, aerobic process).	Open windrows, with a "haystack" cross-section. Refuse is ground. Aeration by turning windrows. Detention time depends upon number of turnings and other factors.	Mobile, Ala.; Boulder, Colo.; Johnson City, Tenn.; Europe; Israel; and elsewhere.
van Maanen process	Unground refuse in open piles, 120 to 180 days. Turned once by grab crane for aeration.	Wijster and Mierlo, the Netherlands.

* References: 2, 3, 13, 19–34.

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The receiving equipment is designed to act as a refuse reservoir and to provide an even flow of refuse through the plant. It usually consists of a hopper and some device that begins moving refuse through the plant at the rate at which subsequent operations can process it.

As the refuse leaves the receiving area, noncompostables, bulky items and salvageable materials such as tires, large pieces of wood and metals, rags, plastics, rubber, leather, wood, glass, nonferrous metals, and paper may be removed by hand. Ferrous metals are removed then or later by magnetic separators. This sorting protects the machinery, improves the quality of the final product, and provides for salvage. Ballistic separation of heavier articles and pneumatic separation of light materials are sometimes applied after grinding.

Refuse grinding reduces particle size to facilitate handling, digestion, and mixing of the materials. Some processes, for example, the van Maanen and Dano, do not require grinding prior to digestion. In these cases, the compost is ground prior to distribution. Some recent work has been done in an effort to develop machinery capable of reducing the particle size of refuse on the composting field.(*13*)

The moisture content of ground refuse is important for proper digestion. Most values given for proper moisture content range between 45 and 65 percent by wet weight. Work at Johnson City has indicated that 50 to 60 percent moisture by wet weight is needed for good decomposition.(*17*) The moisture content of the ground refuse must, therefore, be adjusted to proper levels in preparation for digestion. Raw or digested sewage sludge may be added in liquid form to provide moisture. This will also

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provide some additional organic, inorganic, and trace materials while providing for a sanitary disposal of the sludge. If the amount of sludge to be added is greater than that necessary as a source of moisture, the sludge must be dewatered accordingly. Other wastes, such as animal and poultry manures, and canning wastes can also be added.(*17*)

Digestion. Digestion or decomposition is carried out either in open windrows or in enclosures. The principal objective is to create an environment in which microorganisms will rapidly decompose the organic portion of the refuse. Most modern plants use aerobic rather than anaerobic decomposition. In aerobic decomposition, microorganisms requiring free oxygen degrade the waste. To furnish the oxygen, air is introduced into windrows by turning and into enclosed systems by forced draft and agitation. Heat, which is generated profusely, reaches 140F to 160F (60C to 70C) or higher. The heat destroys pathogenic organisms, weed seeds, fly ova, etc. Decomposition proceeds rapidly and does not produce excessively unpleasant odors.

If the decomposing mass is not aerated, the free oxygen is soon exhausted and a different microflora begins to grow. These anaerobes obtain oxygen from the various compounds in the waste and decomposition proceeds much more slowly. In the van Maanen system, the windrows are anaerobic, and the composting time required is four to six months. By way of contrast, aerobic windrow composting takes only about six weeks and aerated enclosed systems only a matter of days. In anaerobic composting systems, peak temperatures are only about 100F to 130F (38C to 55C), foul odors arise, and pathogens may survive.

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In methods having long digestion periods, the process includes a rapid decomposition stage and a "ripening" or curing period. In the methods involving shorter digestion, the agitation and aeration in enclosures are carried on during the earlier, more active decomposition period, and curing follows. Satisfactory stabilization is attained when the compost has the characteristics of humus, has no unpleasant odor, high temperatures are not maintained even though aerobic conditions and desirable moisture content exist, and the carbon to nitrogen ratio (C/N) is such that the humus can be applied to the soil.(*11*) Although a C/N of 20 is widely accepted as the upper limit for final application to the soil, the actual availability of the carbon and nitrogen is the determining factor and, in practice, the ratio is often higher.(*11*)

The time required for digestion depends on the initial C/N if proper moisture, particle size, and aerobic conditions are maintained. Studies at the University of California on the windrow composting of mixed refuse showed the following with regard to the more active decomposition period(*7*, *11*):

Initial C/N:	*Approximate days required for composting*
20	9–12
30–50	10–16
78	21

If optimum conditions exist and the initial C/N is 30 to 35, refuse will take on the color and odor of humus in 2–5 days of active decomposition.(*7*) The C/N may not, however, be lowered by the decomposition to a level satisfactory for most uses.(*7*, *11*)

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In practice, refuse has a higher initial C/N than is considered optimum. More of the carbon is in the form of cellulose and lignin, which resist decomposition. Gotaas doubts whether materials with a high C/N or even with one above 25, can be adequately decomposed in 3 or 4 days if they contain cellulose or lignin.(*11*) Thus, the high-rate mechanized digesters produce a material that is given a curing period, which includes further digestion without aeration.

Curing. Curing time to permit additional stabilization depends on the use to be made of compost. If it is to be used in hotbeds, where the heat of decomposition is desirable, it can be applied as soon as the active stabilization phase is over. Compost can be applied with little curing to fields or gardens that are not to be planted for some months. If planting is to take place immediately, stabilization must have advanced to the point at which further decomposition will not "rob" the soil of nitrogen.

In a windrowing system that calls for frequent turning for aeration, composting can be satisfactorily carried out in approximately six weeks with another two weeks for curing and drying.

Mechanical processes use various curing periods. The Dano process uses as little as 7 to 10 days storage for further stabilization after the material leaves the digester.(*11*) In Aukland, New Zealand, however, where Dano digesters are also used, 3 to 4 months are given to curing.(*35*) At Altoona, Pennsylvania, where a Fairfield-Hardy digester is used, the curing or maturing time is one to three weeks.(*21*, *22*) The Naturizer-type plant at St. Petersburg, Florida, is reported to provide 10 days to two weeks for curing.(*22*, *23*)

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Finishing. Screening, grinding, or a combination of similar processes is done to remove plastics, glass, and other materials from the compost that might be objectionable in its use. If the compost is to be utilized as an erosion control measure in isolated places, it can be applied without being ground or screened. For the "luxury gardening" market, such materials must be either removed or reduced to an acceptable size. Additional upgrading, such as pelletizing or fortifying with commercial fertilizer, may also be accomplished to satisfy various markets.

Storage. The demand for compost in quantity is greatest in the spring and fall. A plant must, therefore, provide storage space for up to at least six months of production. The compost can be stored outdoors in piles. The storage period can, in fact, serve as the curing phase if the compost is put into low piles until heating has ceased and is then piled higher. Compost can be stored for later finishing or the finished product can be stored; it may have to be placed under cover.

SOME RECENT APPLICATIONS OF COMPOSTING

European Practice. Since 1960, the literature has contained reports of about 2,600 composting plants operating outside the United States; 2,500 are small plants in India.(*24*) About 100 plants have operated elsewhere, including Great Britain (Table 2). Nine plants have operated in West Germany since World War II but have processed less than 1 percent of that nation's refuse.(*25*) On the other hand, one-sixth of the refuse collected in The Netherlands is processed in composting plants.(*25*) The van Maanen type plant, which was established in 1932, is still in operation

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TABLE 2. WORLDWIDE DISTRIBUTION AND TYPES OF COMPOSTING PLANTS EXCLUSIVE OF THE UNITED STATES[1]
[Operating at some time during the period 1960–1969]

Process	Argentina	Austria	Belgium	Brazil	Czechoslovakia	Denmark	Ecuador	England	Finland	France	Greece	Iceland	India	Israel	Italy	Jamaica	Japan	Netherlands	New Zealand	Norway	Philippines	Poland	Puerto Rico	Saudi Arabia	Scotland	South Africa	Southern Rhodesia	Spain	Sweden	Switzerland	Thailand	U.S.S.R.	West Germany	Total
Bangalore													2,500																					2,500
Dano			3	2		12	1	2	2	1		1		2	2		16	4	1	1	1	1		2	6	1		1	6		2		70
Windrow					20									1		1		5											1		3		31
Tollemache															2												1	4					7
Earp-Thomas											1																		1		1		3
van Maanen																		2															2
Caspari																																1	1
Fermascreen								1																									1
Fairfield-Hardy																							1										1
Jersey								1																									1
Triga		1								3																					1		5
Becarri										(2)					(2)														1				(2)
Other		1																												1		4	6
Total	1	4	3	2	20	12	1	4	2	?	1	1	2,500	3	?	1	16	11	1	1	1	1	1	2	6	1	1	4	1	9	1	1	11	

[1] References: 2, 3, 12, 20–26, 28, 30, 33, 34, 36–42.
[2] Unspecified number reported.

and produces 160,000 tons of the country's annual total of 200,000 tons of compost.(*25*)

The large number of composting plants in India is the result of an intensive program whose objective is to utilize all organic wastes on farmland. It was started by the government in 1944 and is still being supported. By 1959, the annual production of compost was 3.34 million tons. The Bangalore process is most commonly used. Hand labor, which is plentiful and inexpensive, is used extensively. Land comprises the major portion of capital costs, since the only construction needed is a series of trenches.

Operational and cost data on some European and Middle Eastern composting plants have recently been reported.(*14*, *15*, *26*, *43–48*) Only a small fraction of municipal refuse is composted in Europe; it ranges from less than 1 percent in West Germany to 17 percent in The Netherlands. Operational data on selected plants are available (Table 3).

At 12 plants studied Kupchick, which serve a total of 3,136,000 people, 45 percent of the refuse processed became compost. About 70 percent of the product was sold at an average of $2.73 per ton, which is equivalent to about $0.90 per ton of refuse processed.(*44*) Conditions which favor sales are not uniformly distributed and result in a wide range of potential revenue. Most European cities have, therefore, selected less expensive refuse disposal methods.

Buchs and Turgi in Switzerland are of particular interest. Incineration is replacing composting there but the compost plants must remain operational so that the product remains available for those who are willing to buy it despite its high cost.

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TABLE 3. EUROPEAN AND MIDDLE EASTERN MUNICIPAL REFUSE COMPOSTING PLANTS

Type and location of plant	Population served	Year constructed	Year of observation	Operating features: Pre-shredding	Operating features: Sewage sludge	Refuse tons/year	Compost[1] tons/year
Windrow:							
Arnhem, Netherlands	130,000	1961	1967	Yes		26,500	18,000
Blaubeuren, West Germany	20,000		1967	Yes	Yes		2,000
Buchs, Switzerland	40,000		1967	Yes	Yes		
Lagny, France	75,000	1964	1965	Yes		17,500	13,200
St. Georgen, West Germany	14,000		1967	Yes	Yes		450
Stuttgart, West Germany	75,000	1959	1967	Yes	No		
Tehran, Iran	2,500,000	[2]	1969	Yes	No	[3] 300,000	
Tel Aviv, Israel	700,000	1963	1965	Yes		200,000	74,000
Wyster, Netherlands	800,000	1927	1967	No	No	160,000	55,000
High rate[4]:							
Bad Kreuznach, West Germany	45,000	1958	1967	No	Yes	8,000	2,600
Bristol, England	90,000	1964	1965			[3] 17,000	0
Cheadle, England		1965	1965			9,000	
Duisburg, West Germany	90,000	1957	1967	No	Yes		10,000
Edinburgh, Scotland	210,000	1958	1965	Yes		32,500	5,300
Gladsaxe, Denmark	80,000	1948	1965			19,000	13,200
Haifa, Israel	170,000	1959–64	1965			46,500	26,000
Heidelberg, West Germany	30,000	1955–62	1967	Yes	Yes		650
Hinwill, Switzerland	100,000	1964	1967	Yes	Yes	19,000	8,800
Jerusalem, Israel	120,000	1968	1969	No			
Olten, Switzerland		1964	1965	Yes		10,000	
Rome, Italy	700,000	1964	1965	No		100,000	66,000
Soest-Baarn, Netherlands	54,000	1958	1965			10,000	4,500
Soisson, France	27,000	1963	1965			9,500	5,500
Thessaloniki, Greece	400,000	1966	1968	Yes	No	[5]	0
Turgi, Switzerland	70,000		1967	Yes			
Versailles, France	82,000	1967	1967			50,000[3]	

[1] Volumetric figures converted assuming 300 lb/cu yd (dry weight).
[2] Under construction at reported cost of $3,500,000; construction halted prior to installation of compost handling and processing equipment.
[3] Estimate; based on 300 days operation at rated capacity.
[4] Enclosed systems with mechanical turning, often with forced aeration.
[5] Not operating in June 1968 because product could not be disposed of; international loan in default.

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Some recent proposals and projects for composting municipal refuse in Europe and the Middle East were unsuccessful for reasons similar to those reported in the United States. The municipalities or other operating agencies did not choose to provide the additional financial support required for composting and selected a less expensive disposal alternative. (The additional support is needed to cover the increased production and utilization costs, and it might be furnished in the future if other than strict economic factors are considered. Some of the added costs might

be recovered in the form of the agricultural and other benefits derived from using compost.)

Some plants have such features as recycling of the compost, complicated materials-handling or processing procedures, or the use of inocula, which add to production expense; these reflect intensive promotional efforts. On occasion, provision is made to pay the municipality for the raw refuse; this is invariably an explicit warning of financial problems to come. In Tehran (where construction on a partially completed plant was halted) and Istanbul (where construction never proceeded beyond the groundbreaking stage) published estimates of potential revenues from compost sales ranged from half to the full wholesale value of all the fruits and vegetables entering each city.(*45*, *49*, *50*)

Information from Israel presents a mixed picture. Michaels reported that in five of the seven districts which form the State of Israel, either windrow or Dano composting plants are utilized to process refuse from 43 percent of the total population.(*51*) The largest operating plant in the world is the windrow plant at Tel Aviv; the newest is the Dano plant

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for 120,000 of Jerusalem's population. However, in the Ashkelon area to the south, an existing windrow plant is to be replaced by a sanitary landfill.

Cost figures from Europe and the Middle East are consistent with those reported by municipal compost plants elsewhere, including plants in the tropics, whether closed down as the Kingston in Jamaica(*40*) or operating as at Bangkok, Thailand.(*52*, *53*)

United States Practice. Prior to 1950, composting of municipal refuse received almost no attention in the United States. The need for new disposal methods, accompanied by an interest in returning organic wastes to the soil, stimulated basic studies and research on composting of organic wastes.(*5–10*) Eighteen composting plants were funded between 1951 and December 1969 (Table 4). As of the latter date, plants at Altoona, San Juan, Houston, and Johnson City were operating at essentially design capacity, those at Boulder, Mobile, and St. Petersburg were operating on a demand basis, and the Gainesville plant had recently closed down while alternative means of support were sought to replace the assistance previously provided under a U.S. Public Health Service grant. One plant, at New York, was under construction under a $1.3 million loan that had been provided by the U.S. Department of Commerce to provide employment in an economically stagnant area.(*56*) Except for the Johnson City plant, which is a Federally supported research project, present planning requires significant sales of compost in order for the plants to be viable.

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TABLE 4. MUNICIPAL SOLID WASTE COMPOSTING PLANTS IN THE UNITED STATES (1969)[1]

Location	Company	Process	Capacity ton/day	Type waste	Began operating	Status
Altoona, Pa.	Altoona FAM, Inc.	Fairfield-Hardy	45	Garbage, paper	1951	Operating.
Boulder, Colo.	Harry Gorby	Windrow	100	Mixed refuse	1965	Operating intermittently.
Gainesville, Fla.	Gainesville Municipal Waste Conversion Authority.	Metrowaste Conversion	150	Mixed refuse, digested sludge.	1968	Operating.
Houston, Tex.	Metropolitan Waste Conversion Corp.	do	360	Mixed refuse, raw sludge	1966	Operating.
Do	United Compost Services, Inc.	Snell	300	Mixed refuse	1966	Closed (1966).
Johnson City, Tenn.	Joint USPHS-TVA	Windrow	52	Mixed refuse, raw sludge	1967	Operating.
Largo, Fla.	Peninsular Organics, Inc.	Metrowaste Conversion	50	Mixed refuse, digested sludge	1963	Closed (1967).
Norman, Okla.	International Disposal Corp.	Naturizer	35	Mixed refuse	1959	Closed (1964).
Mobile, Ala.	City of Mobile	Windrow	300	Mixed refuse, digested sludge	1966	Operating intermittently.
						[p. 23]
New York, N.Y.	Ecology, Inc.	Varro	150	Mixed refuse		Under construction.
Phoenix, Ariz.	Arizona Biochemical Co.	Dano	300	do	1963	Closed (1965).
Sacramento Co., Calif.	Dano of America, Inc.	do	40	do	1956	Closed (1963).
San Fernando, Calif.	International Disposal Corp.	Naturizer	70	do	1963	Closed (1964).
San Juan, P.R.	Fairfield Engineering Co.	Fairfield-Hardy	150	do	1969	Operating.
Springfield, Mass.	Springfield Organic Fertilizer Co.	Frazer-Eweson	20	Garbage	1954, 1961	Closed (1962).
St. Petersburg, Fla.	Westinghouse Corp.	Naturizer	105	Mixed refuse	1966	Operating intermittently.
Williamston, Mich.	City of Williamston	Riker	4	Garbage, raw sludge, corn cobs	1955	Closed (1962).
Wilmington, Ohio	Good Riddance, Inc.	Windrow	20	Mixed refuse	1963	Closed (1965).

[1] References: 2, 13, 22–23, 27–29, 31, 54–55.

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CHAPTER III

Engineering, Chemical, and Microbiological Aspects of Composting

As systematized and mechanized composting operations were developed, engineering problems increased. Various digestion arrangements were developed and patented, and some work was done on special grinders. In most cases, the material-handling equipment used had been developed for other industries and modified to process refuse. Although considerable laboratory or small-scale work has been done in the last 20 years in the United States and the basic technologies are known, adequate experience in design and operating compost plants has not yet been accumulated. As a result, most plants have gone through a period of "cutting and trying" with different types of machinery and plant layouts before going into production.

The laboratory work done on the physical and chemical aspects of composting serves as a basis for process control in full-scale plants. The extreme heterogeneity of raw refuse and other factors, however, result in the composting of mixed municipal refuse being practiced, in some respects, as an art with laboratory research serving as a guide.

This chapter discusses the general engineering, chemical, and microbiological aspects of composting, based on observations made and data

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accumulated over nearly two years at Johnson City and a year at Gainesville. (Separate reports present the details of the engineering, chemical, and microbiological studies performed at these plants.)(*17*, *18*)

ENGINEERING ASPECTS

General Design Criteria. A number of criteria must be considered in designing and operating a compost plant. One is to obtain all the information possible about the population to be served and the amount and type of refuse it generates. For example, a domestic refuse high in cellulose may make the material resistant to attack by microorganisms,(*57*) and the composting process may have to be changed accordingly.

On a national scale, seven pounds of urban (domestic, commercial, institutional, and municipal) solid wastes are generated per capita per day. This figure includes garbage, rubbish, trash, ashes, demolition debris, street sweepings, dead animals, abandoned vehicles, etc.; it does not include industrial or agricultural solid wastes. The amounts collected vary according to seasonal, climatic, and socioeconomic factors. Production rates for individual areas must, therefore, be determined by surveys.

A second design criterion is the length of the workweek. Thus, a plant

operating on a five-day workweek is required to accept refuse at 1.4 times the rate for a seven-day design capacity.

Another factor is the number of shifts to be worked per day. To process equal amounts of material, a plant operating on two shifts does not need some of the large refuse-handling machinery or grinders that

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a one-shift operation has to use. The receiving area must, however, allow for storage for processing during the second shift of about one-half of the refuse delivered to the plant during the day. Digestion, storage, and curing elements must be sized for the total tonnage received.

Refuse Handling. Plants must provide an area appropriately designed for receiving refuse and large enough to store at least one day's delivery. The refuse moves from the receiving area to size-reducing equipment, frequently via a picking station, where salvageable items, noncompostables, and large items that might damage equipment are removed.

The flow of refuse from the receiving area should be controlled. Some hoppers are discharged to an oscillating belt to achieve this control while others may use a leveling gate. Arching or bridging often occurs in the receiving hopper and may be more acute if a leveling gate is used.(*17*) The operation often proceeds more smoothly if one or both of the hopper's long sides are nearly vertical.

If the incoming refuse has been compacted, as in a transfer trailer, it must be broken up and pushed into the hopper. A front end loader has been successfully used for this purpose.(*17*)

Endless moving belts are widely used to carry refuse from station to station. When hand picking is practiced, the bed of refuse should not be more than 6 inches deep; belt width and speed are the determining factors. If the belt is too wide, the pickers cannot reach its center. If the belt traverses any space outside a building, covers must be provided. They must be easily removable and high enough and wide enough that refuse does not catch on them. Sideboards or skirts should be used to keep refuse from falling from the belt.

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Ground refuse moves more easily than raw. The belts should be wide enough or have sideboards to prevent spillage and minimize cleanup problems. Bucket elevators work well in lifting ground refuse, and screw feeds can be used to move it horizontally in troughs. Narrow openings, restrictions, or chutes must be avoided because ground refuse clogs easily.

In freezing weather, it may be necessary to heat the belts where they come in contact with the end pulleys. Wipers should be installed on the belts near the drop-off points, so that refuse, especially ground refuse, does not stick to the returning undersides and drop on the floor.

Hoppers and bins that hold refuse or ground refuse only temporarily

should have moving belts in their floor or have openings large enough for the refuse to be pulled by gravity through the bottom.

Separation of Noncompostables and Salvage. Most plants remove as many noncompostables (wood, plastics, glass, metals, rags, etc.) as possible before the refuse reaches the size-reducing equipment. If this is not done, some picking of bulky items is necessary, either at the receiving point or from a belt, to protect the equipment. When salvaging is practiced, the material removed is usually classified, and an effort is often made to remove paper. At Johnson City, where no salvaging is practiced, two pickers can handle up to 50 tons of refuse in six to eight hours.(*17*) In Gainesville, where paper and metals are salvaged, six pickers are used to process 125 tons per day.(*18*)

At most plants, ferrous metals are removed by magnetic separators. These may be in the form of a permanently magnetized head pulley installed on the raw or ground refuse belt or an overband type that uses an electromagnet. If two grinders are used in series, the magnetic separator may be located between them.

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Rejected material at Johnson City has averaged 26 percent by weight of the incoming refuse.(*17*) At Gainesville, about 10 percent is removed as salvaged paper while another 10 to 30 percent is rejected.(*18*) Some composting plants are trying to salvage up to half the incoming refuse by using special mechanical devices. Rejected, unsalvageable material must be moved to a disposal site. A market is usually available for paper and metal, and cans, glass, and certain plastics can be sold in some areas.

In Europe, refuse often has a high ash content. Rotary and vibrating screens are sometimes used to remove the ash from raw refuse before it is ground.(*58*)

Comminution. Refuse is usually ground or shredded to improve materials-handling and digestion operations. Most of the machines now used were originally designed for use with homogeneous types of materials.

The most common grinding device is the hammermill. It usually consists of high-speed swing hammers connected symmetrically on a horizontal shaft and cutter bars that have grate openings through which the refuse is forced. Refuse fed into the mill is comminuted by the application of high tensile and shearing forces. Tensile force is applied as the swinging hammers flail the refuse against the breaker plates. The shearing forces come into play as the hammers force the refuse through the grate openings. Hammers are of various types, and some are better suited than others to produce the shredding action needed. Several types of double-rotor mills have been developed in Europe,(*58*) and at least one is manufactured in the United States.

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Hammermills require relatively large motors and must have the capacity and power to handle a flow of refuse that resists grinding; the capacity depends on the particle size desired. It is common practice to use two mills in series; the first produces a rough grind while the second reduces the particles to two inches in the largest dimension. Refuse is abrasive and the hammers must be frequently refaced. It has been found at Johnson City that the hammers need rebuilding after 30 to 40 hours of use.(*17*)

Since hammermills operate at 1,200 to 3,500 rpm, they produce noise and vibration. The machines should, therefore, be mounted on dampening materials, and the feed chute should be flexible or have a flexible connection.

A specialized shredder or rasper developed in The Netherlands consists of a large vertical cylinder that surrounds a vertical shaft on which heavy arms are mounted. They rotate horizontally above a perforated floor. Pins or studs, mounted in panels on the floor and along the sides of the cylinder, shred the refuse, and the particles then fall through the perforations. The revolving arms are hinged and swing when they meet resistance.

Raspers operate more slowly than hammermills and require less power, but they have a greater initial cost and require more floor space. Performance data indicate that the perforated plates and pin plates in the 10-tons-per-hour (rated capacity) rasper at Johnson City, need replacing after griding about 10,000 tons of refuse (approximately 1,500 operating hours).(*17*)

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Refuse must build up in the grinding compartment for about 20 minutes before effective grinding begins. If the flow of refuse stops, the machine runs at a diminishing rate of production until empty. It should, therefore, be kept full throughout the day for the greatest efficiency. The perforated floor acts as a sieve and retains oversize material that can be discharged at intervals through a chute. Raspers must be cleaned out frequently, but they are so designed that workmen can easily enter the grinding compartment.

Since large pieces of dry cardboard may build up in the machine and overload it, water is sometimes sprayed on the refuse either before it reaches the rasper or after entering it. This procedure may prove disadvantageous if sewage sludge is to be added after grinding, because the refuse may become excessively moist if the sludge is not sufficiently dewatered.

Wet pulpers, such as the one at Altonna, Pennsylvania, where cans, bottles, and other noncompostable items are not normally received in the garbage are also used to comminute refuse. They consist of a large bowl

that holds a rotatable steel plate studded with hardened steel teeth. After the bowl has been partially filled with water and the plate is rotating at about 650 rpm, raw refuse is dumped in. It is whirled against the teeth and shredded. The resulting slurry, which contains about 5 percent refuse solids, is subsequently discharged through a horizontal bar screen. It must be dewatered by 40 to 50 percent to be digested.

Addition of Sewage Sludge and Other Organic Wastes. Sewage sludge may be satisfactorily composted along with a community's refuse. The

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cost is about the same, in some cases less, as for conventional systems that use anaerobic digestion, drying beds, and subsequent disposal.(*17*) It is usually mixed into ground refuse in mixing drums.

When using sludge, the water content of the ground refuse-sludge mixture will normally be greater than that desired for composting unless the sludge is dewatered somewhat. Certain factors must, however, be considered when sewage sludge is added (Figures 1a–3a).

It is not practical to use sludge prior to rasper operations because it contaminates the refuse, which may have to be later cleaned from the rasper. Water is, therefore, often added before and during the grinding process. The amount used has an effect on the sludge dewatering operation. When a hammermill is used, water is added after grinding, and all of it may normally be obtained from sewage sludge.

Raw sludge is preferred to digested sludge because it can be dewatered more readily and has a higher nutrient content. (Digested sludge can, nevertheless, be used). The amount of dewatering necessary depends on the ratio of sludge to refuse to be processed and the initial water content of the sludge and the refuse as received. Depending on the amount to be removed, dewatering can be accomplished in gravity tanks equipped with vacuum filters, in centrifuges, or by using rotating cell gravity filters. Gravity tanks with picket agitators may suffice in many cases. In humid climates, water is removed mechanically from sludge and refuse.

Adding other organic wastes to municipal refuse before it is composted appears feasible as a method to dispose of such wastes. The composting process is apparently not affected, and the nutrient contents of the compost may, in fact, increase.(*17*)

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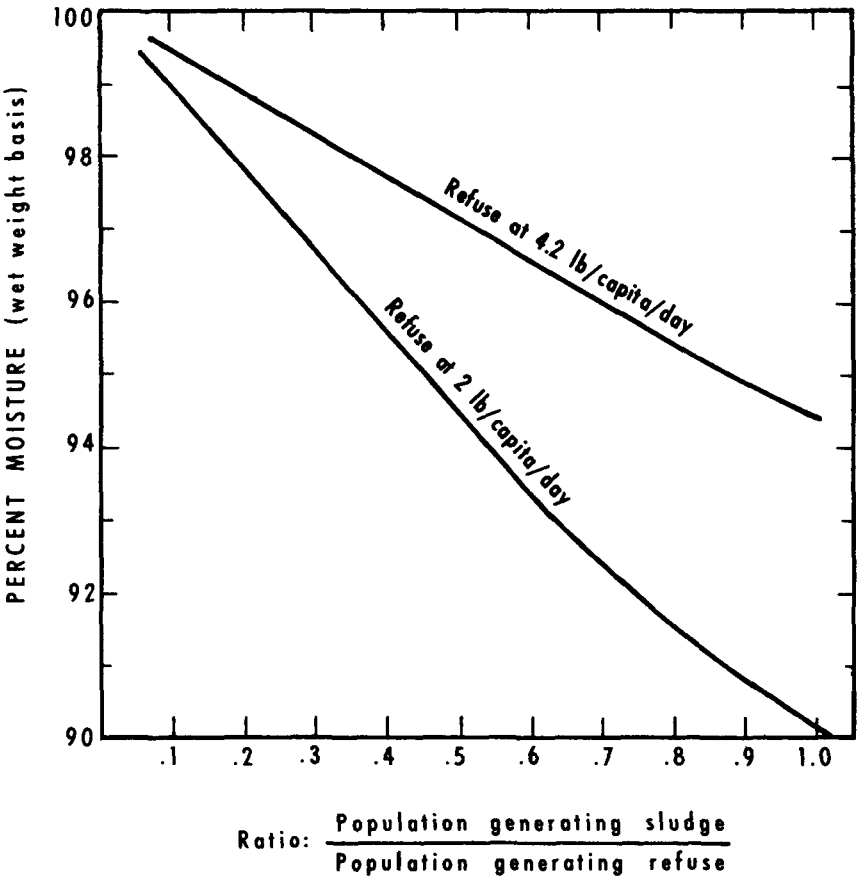

FIGURE 1.—Assuming that a water content of 60 percent is to be maintained in the sewage-sludge-refuse mixture, sewage from only 27 percent of the population can be handled as received, where the refuse is generated at a rate of 2 lb per capita per day. However, at a per capita generation of 4.2 lb refuse per day, about 50 percent of the sewage sludge generated can be handled without dewatering, assuming 3 percent solids. Refuse received with 35 percent moisture (wet weight). Sludge solids are generated at .119 lb per capita per day. Rejects amount to 25 percent of incoming refuse.[59]

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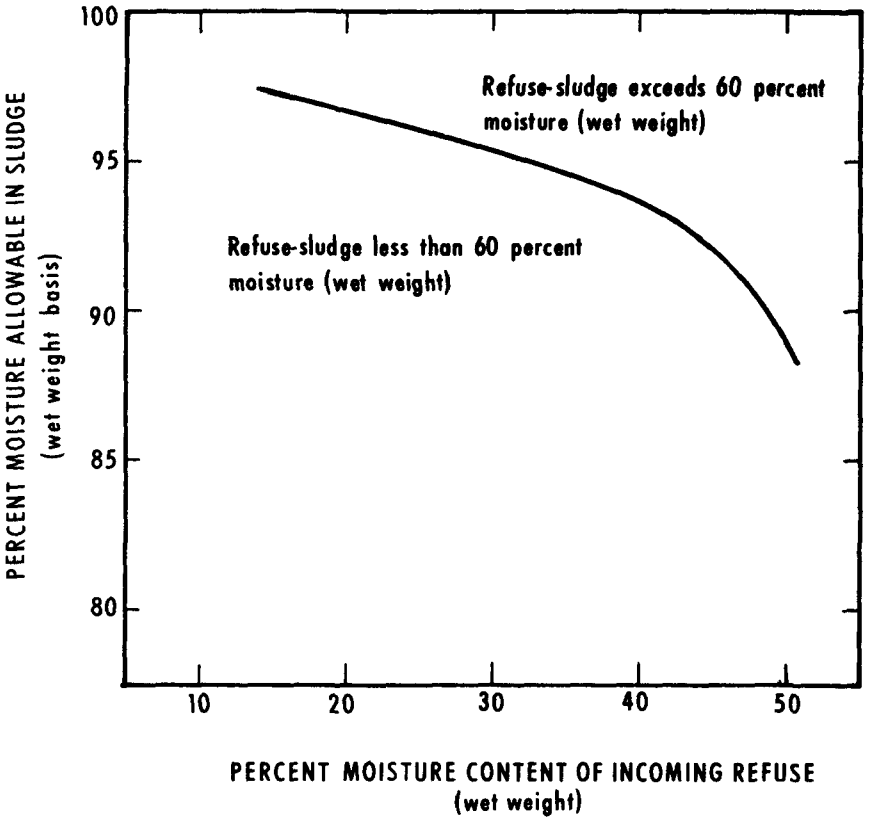

FIGURE 2.—Refuse is not uniform in its water content. To obtain a desired 60 percent moisture level in the ground refuse-sludge mixture, the amount of dewatering required will change with the change in moisture content of the refuse. The refuse is received at a rate of 4.2 lb per capita per day before removal of 25 percent noncompostables. The refuse and sludge are from the same population with sludge (3 percent solids) generated at 0.119 lb per capita per day.

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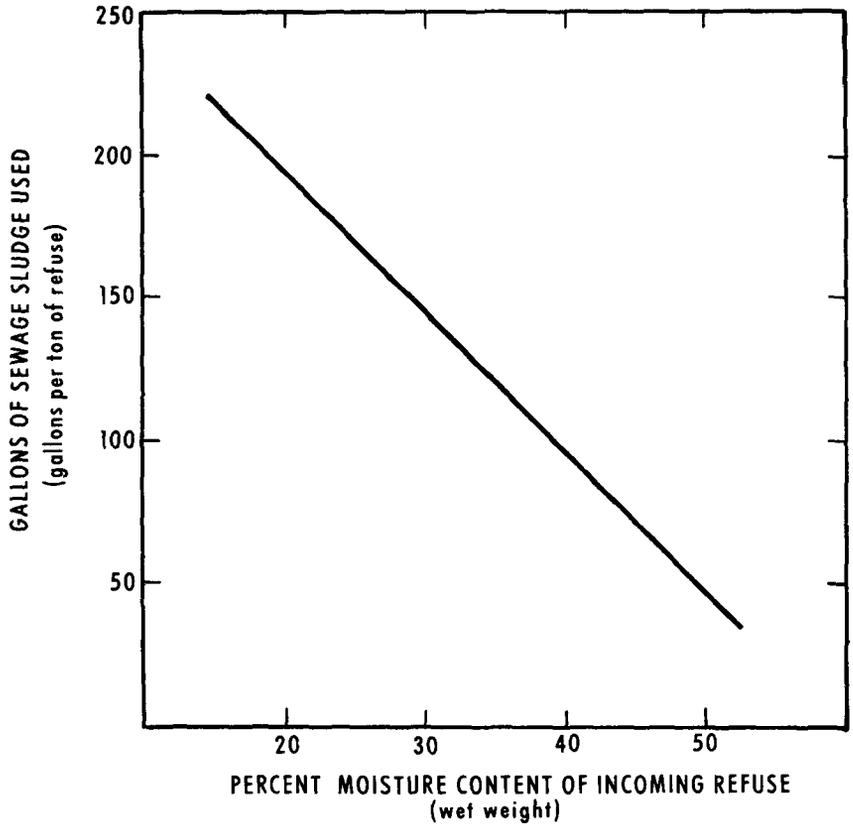

FIGURE 3.—The amount of sewage sludge (gallons) at 3 percent solids that can be used without dewatering varies in direct proportion to the moisture content of the incoming refuse. Actual amount of refuse ground and mixed with sludge would be 75 percent of that received. These proportions would result in a mixture containing 60 percent water by wet weight.

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Efforts have been made to have water added automatically by an electrical-mechanical system, but such techniques have not worked well. Experienced plant operators can often tell by the mixture's appearance and handling characteristics when a moisture range of 50 to 60 percent has been reached.

Digestion. Aerobic composting or digestion is carried on in windrows or in such enclosures as aerated tanks or bins. The success of any aerobic method depends on aeration, mixing, and maintaining the proper moisture content. In most plants, efforts are made to maintain aerobic conditions to avoid odors, obtain higher temperatures, and achieve more rapid decomposition.

Experience has shown that unground refuse can be composted, but normally it is first ground so that the particles average $1\frac{1}{2}$ to $2\frac{1}{2}$ inches in their largest dimension. This encourages rapid decomposition either in windrows or in enclosed systems. At Wijster and Mierlo in The Netherlands, however, unground refuse is windrowed according to the van Maanen process, which calls for only one turning; composting takes four to six months. In the Dano system, the refuse usually introduced into the digester is unground. The constant turning of the drum reduces the size of the particles as they are digested. Where windrow turners are used, they may also shred the material as they mix it.

In the windrowing process, aeration and mixing can be accomplished by using a front-end loader or a clamshell bucket on a crane. Turning machines with a shoveling or screw arrangement are also used. These turners are designed to pick up the material from a belt and place it

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on the ground. Another type turning machine, with a rotating drum on which teeth are mounted, straddles the windrow and turns it in place.

Some preliminary turning experiments conducted at Johnson City indicated that the windrow should be turned at least once a week.(*17*) Two turnings per week produced the best decomposition; more frequent turnings proved less efficient because temperatures in the windrows dropped. (Higher temperatures are needed to destroy pathogens.) The degree of decomposition obtained was determined on the basis of appearance, odor, and low carbon content.

In windrow composting where supplemental aeration is not normally provided, the moisture in the material must be kept at 50 to 60 percent by wet weight to keep maximum decomposition proceeding. If the moisture content is higher, water fills the voids in the compost and slows the biological process by denying it sufficient oxygen. On the other hand, dry windrows may cool and fail to decompose properly; water is, therefore, incorporated into the mass. In wet weather, the windrows may have to be

turned frequently to help release the moisture. Too much wetness may cause the decomposition to became anaerobic and give rise to odors. At Johnson City, windrows normally remain in the field for at least six weeks and temperatures of up to 160F are maintained.(*17*) The compost is then moved to a curing shed where it is allowed to dry for two weeks or longer. Experience has indicated that high relative humidity will prevent satisfactory air drying.

In enclosed composting systems, forced or natural draft air is provided for digestion. The material is intermittently turned in the

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tank by a special apparatus or constantly turned by mixers, rakes, or the rotating digester. Digestion takes 3 to 10 days; the longer period produces a more stable product.

As in windrow composting, insufficient oxygen in an enclosed digester creates odors and slow digestion. Water content must be maintained at between 50 to 60 percent. This level may be higher if means for efficient air transfer have been provided. Temperature profiles are comparable to those observed in windrow composting.

At Gainesville, the refuse is kept for about two weeks in two parallel digestion tanks, each 330 feet long, 20 feet wide, and 10 feet deep. Air is periodically introduced through perforated plates in the bottom. The tanks are equipped with movable conveyors for removing the compost; the conveyors can also mix the material but are not used for this purpose.

Curing. The period of active, rapid, digestion is followed by a slower stabilization period, called curing. In the windrowing process, if proper conditions for decomposition are maintained, digestion and curing form a continuum. Compost is usually removed from the field and cured under cover. It is then ready for many uses, but further stabilization or curing goes on for months.

Finishing. Compost can be used for various purposes as received from the windrowing field or digester. Often, however, it does not have uniform-size particles and may contain bits of plastic, glass, or other nondecomposable objects. It is usual practice, therefore, to finish the compost by regrinding and screening it. When these steps

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are taken, the moisture content should not exceed approximately 30 percent by wet weight. This may vary, however, depending on the finishing process used and the desired results. In proper climatic conditions, air drying alone may yield a product dry enough for satisfactory finishing, but mechanical dryers may have to be used in humid and wet areas. At Johnson City, air drying has proved difficult all year, especially during wet winter months.(*17*)

Hammermills may be used for regrinding. Screens can be rotary or

vibrating types and have perforated plate, square mesh, or piano wire type screening elements with openings up to ½ inch. In the last type, the transverse wires (which are very taut and are perpendicular to the flow of compost) can be at least ¼ inch apart and the longitudinal supporting wires up to 10 inches apart.

Regrinding can precede or follow screening. In the latter case, the material retained by the screen is sent to the grinder and then screened again. Small particles of glass, whose presence is usually objectionable, can be removed by machines using one or more of the principles described later.

For some uses, such as land reclamation or erosion control in isolated places, compost need not be finished. For general agriculture, a coarse grind is satisfactory, whereas for horticultural and luxury gardening the product must be finer. Reground and screened compost is ready for use as a soil conditioner or may serve as a carrier for fertilizers and blended products. Pelletizing, especially with blending, is sometimes done.

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Storage. The use of compost in quantity is seasonal, being more in demand during the spring and fall. A plant must, therefore, be able to store its production for six months or more. Curing and storage can be combined by piling the compost after its heat has diminished or disappeared. Rough compost can be stored for later grinding or the finished product may be stored. Storing in the open may be feasible in some cases.

SPECIAL PROBLEMS

Glass Removal. Glass removal presents a problem. Pieces and articles of glass are broken as the refuse is collected and transported to the plant as well as by the receiving and processing machines; complete removal is, therefore, impossible. Glass crushers, often simply two spring-loaded rollers that exert pressure on each other, are sometimes used to break the material into small sizes.(*58*) Hammermills can pulverize glass particles to some extent, but a rasper's capability is minimal.

Many European plants have an apparatus that uses gravity and the differences in the inertial energy and resiliency of particles to remove glass (Figure 4).(*58*) A ballistic separator impels the material horizontally or at a slight upward angle. Dense and resilient particles travel farther than those that are soft and nonresilient. Although the separation is not definitive, it is satisfactory. The "secator" relies on gravity and particle elasticity to remove heavy and resilient bits of material. The bounce plate is so positioned that the compost or ground refuse lands forward of the center of rotation of the drum and is carried

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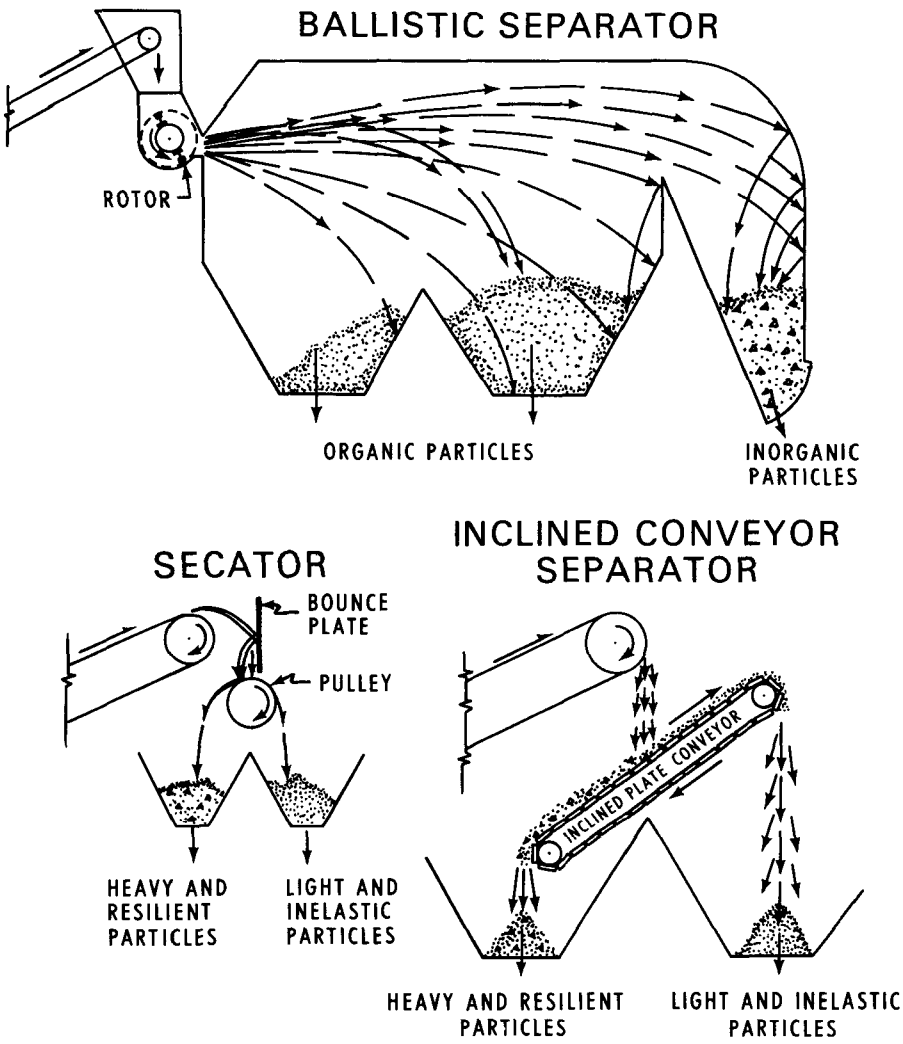

FIGURE 4.—Types of inertial separators.

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to the far bin. The resilient particles bounce off the plate to hit the drum back of the center of rotation and bounce into the near bin. In the inclined conveyor separator, the belt is made of steel plates. Heavy and resilient particles bounce down while softer ones continue upward and are deposited in another container.

Another type of separator, known as a "stoner," employs a diagonally included, perforated, vibrating table or plate. The material to be separated is deposited on the plate and is "fluidized" by an upware flow of air through the plate. The lighter particles are thereby separated from the heavier ones and are transferred across the plate, then down to a discharge point. Heavier particles are carried upward and discharged at the top.

Plastics Removal. Removing plastic film and similar items may also present special problems. Some film can be removed by pneumatic devices, but their development has not been perfected. Dense plastic particles also give trouble. Small, flexible items can be deformed to allow them to pass through a hammermill or a rasper, after which they resume their shape in the ground refuse. Salvaging molded plastics is being investigated in some areas.

Handling Problems. Compost requires special material-handling techniques. It tends to stick to chutes, sides of hoppers, inside surfaces of dump trucks, etc. One operator in this country has used a Teflon compound on the inside surfaces of dump trucks that carry large quantities of compost. Bulk shipments in railroad cars present unloading problems, because the compost will not flow by gravity from conventional cars, as do coal or crushed stone.

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Weight and Volume Losses. As previously mentioned, 20 to 30 percent (by wet weight) of the incoming refuse is not compostable, and some of this is removed. The remaining refuse is comminuted to aid the digestion process, which, in turn, further reduces the volume. The weight lost is in the form of the two principal products of decomposition, carbon dioxide and water; it amounts to 20 to 30 percent of the dry weight.

Experience gained at Johnson City and Gainesville indicates that each ton of incoming refuse will yield, after processing, about 1,000 pounds of compost having a moisture content of approximately 30 percent.(*17*, *18*)

The volume reduction achieved in composting has created considerable interest in preparing refuse for landfilling by grinding it or by grinding then composting it. In addition to occupying less space, the ground material has other apparent advantages: it looks better than raw refuse, does not contain large pieces of paper that can blow about, and is less attractive to rodents. If it has been composted as well as ground, the

refuse has an even better appearance, gives off fewer odors, restricts fly breeding, requires less or possibly no cover, and occupies less area. Since it has been digested, the compost—if well composted—should subside less and produce less gas than raw refuse. It has been estimated that if a given amount of raw refuse were divided into equal parts, one of which was buried untreated in a landfill and the other was first composted, the latter would occupy 21 percent less space.(*60*)

Another source states that if refuse containing noncompostables is ground and then composted, it can double the life expectancy of the standard sanitary landfill for a given depth of fill.(*61*)

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Work being done at Madison, Wisconsin, has shown that milled refuse, compacted to a depth of six feet with a D-8 bulldozer, takes up only about half the volume in a landfill as unmilled refuse handled in accordance with usual sanitary landfill practices.(*62*) Further reduction in volume may be achieved by using special compactors. It is likely that if the material had also been composted, even less space would have been required. At Johnson City, 42-day-old compost has 28 percent less volume than ground but uncomposted refuse. This compost, however, does not contain the proportion of noncompostables contained in the previously mentioned raw refuse.(*17*, *63*)

These observations indicate that if refuse is milled (except items that could jam or damage the machinery) and then composted, its volume is reduced by at least half. Composting costs in this case would be reduced as there would be little sorting, compost could be removed from the digesters as soon as a practical point of decomposition had been reached, no curing or drying period would be needed, and no finishing would be required.

Epilog. Only general engineering problems, and some solutions, have been discussed. Although many plants have had to use a "cut and try" approach to design, construction, and operation, there does exist sufficient knowledge to permit a good engineering design of compost plants. The problems are varied, and many offered a new challenge to the design engineer. However, with proper techniques the problems can be overcome. It would be reasonable to expect, as in the case with many past products, that if compost plants become popular, along with good

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product development programs, equipment, buildings, and engineering, problems will become more routine and relatively less expensive to handle. It is not intended to imply that the actual cost of composting will decrease in the future. It may be possible, however, that the differences

that exist today between the cost of composting and the costs of other refuse treatment methods may decrease in the future.

ENVIRONMENTAL ASPECTS

Composting plants may affect the surrounding environment and the neighborhoods in which they are situated, because they are potential sources of odors and may provide breeding places for flies and rodents. Good management, especially the maintenance of aerobic conditions in the composting refuse, can, however, minimize the odor problem. Managers should insist on meticulous housekeeping and avoid holding unground refuse from one day to another.

Adult flies and fly larvae and pupae are brought into a plant with the refuse, especially if the collection system does not provide frequent pickups. At the receiving point, the application of the residual insecticide around the unloading apron and on the walls of the receiving building has successfully killed larvae migrating from the refuse.(*17*) Grinding also destroys many of the larvae and pupae.

Flies are also attracted to fresh ground refuse, and they may breed during the digestion period if proper conditions are not maintained. On the other hand, the temperatures reached in aerobic composting are lethal to fly larvae and eggs.(*11*) Care should, therefore, be taken to

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ensure that all portions of the windrows reach these temperatures. This can be done by proper shaping and piling prior to turning. If the windrows are turned approximately every three days, this may also aid in controlling flies by breaking their life cycle.(*11*, *17*) The judicious use of an insecticide will also help.(*17*) Rodents can be controlled with posions and by denying them hiding places.

Noise and dust may be hazardous to the workers. Since hammermills can generate intolerable noises, they should be isolated from the building by dampening materials. Materials falling into a metal-sided reject hopper from a picking station may also cause excessive noise. Lining with wood or some other soft material can ameliorate this condition.

In areas where much coal is burned, ash-impregnated refuse may be a problem because of the dust generated. The same could be true if street sweepings are part of the refuse.

CHEMICAL ASPECTS

Carbon-Nitrogen Relationship. The rate at which organic matter decomposes is determined principally by the relative amounts of carbon

and nitrogen present. In living organisms, the ratio is about 30 to 1 and, theoretically, this should be the optimum ratio in municipal refuse also.(*11*) In actual practice, however, it is much higher. Composting, nevertheless, can successfully create a product suitable for agricultural use, since it is pathogen- and nuisance-free and is produced in a reasonable length of time from refuse having initial carbon-to-nitrogen ratios ranging from 21 to 78.(*64*)

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As composting proceeds, the causative organisms use the carbon for energy and the nitrogen for cell building. The C/N becomes smaller with time, since the nitrogen remains in the system while the carbon is released as carbon dioxide.

If fresh or insufficiently decomposed compost, with high carbon and low nitrogen values, is applied to soil, the continuing microbial activity could, in theory, rob the soil of nitrogen if the ratio exceeds 20:1. In practice, however, a higher ratio can be tolerated if the carbon is not readily available to the organisms, i.e., is in the form of paper.(*11*, *57*)

Experience at Johnson City indicates that refuse with an initial ratio of between 39 and 49 will decompose in about six weeks into a compost with a ratio of between 28 and 35, a median reduction of 27 percent. The product is safe with respect to health, has a satisfactory appearance and odor, and is comparable to that produced by other plants and systems.(*17*) In preliminary experiments at Gainesville on refuse and refuse-sludge mixtures, the initial ratios generally ranged from 57 to 68. After digestion, the span was 54 to 59, a 6 to 14 percent reduction.(*18*)

Composition of Compost. The composition of compost varies widely, and data have been collected on the values of certain constituents observed at Johnson City (Table 5). Carbon, nitrogen, phosphorus, potassium, sodium, and calcium occur mostly in a combined form; iron and aluminum, and possibly magnesium and copper, are present primarily as uncombined metals. The values found for nitrogen, phosphorus, potassium, calcium, and percent ash correspond to those found by investigators of other composts.(*65*)

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TABLE 5. ELEMENTS IN 42-DAY-OLD COMPOST AT JOHNSON CITY

Element	Percent dry weight (average)		Range (all samples)
	Containing sludge (3%–5%)	Without sludge	
Carbon	33.07	32.89	26.23–37.53
Nitrogen	0.94	0.91	0.85– 1.07
Potassium	0.28	0.33	0.25– 0.40
Sodium	0.42	0.41	0.36– 0.51
Calcium	1.41	1.91	0.75– 3.11
Phosphorus	0.28	0.22	0.20– 0.34
Magnesium	1.56	1.92	0.83– 2.52
Iron	1.07	1.10	0.55– 1.68
Aluminum	1.19	1.15	0.32– 2.67
Copper	<0.05	<0.03	----------
Manganese	<0.05	<0.05	----------
Nickel	<0.01	<0.01	----------
Zinc	<0.005	<0.005	----------
Boron	<0.0005	<0.0005	----------
Mercury	(1)	(1)	----------
Lead	(1)	(1)	----------

[1] Not detected.

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Gotaas has reported that the organic content of compost is between 25 and 50 percent by dry weight(*11*); at Johnson City, it has been 60 to 70 percent for finished compost.(*17*)

Compost is not a fertilizer but is comparable to a good topsoil because of its nitrogen, phosphorus, and potassium content. Since it has a high organic content, it helps to provide good tilth, water-holding capacity, and nutrient-retaining capacity when mixed with poor soils.

Although such elements as iron and aluminum occur in relatively high amounts, they are present as metals and metal oxides and should not pose any problems. Aluminum is a major constituent of most soils, and causes difficulties only in very acid soils, those with a pH well below 5.0.

As is the case with fertilizers, liming agents, and other materials placed on the soil, consideration should be given to the effects of soluble salts present in compost and drainage must be provided so that they do not accumulate in the soil.

Moisture in Composting. To achieve the greatest decomposition, the water content of compost should be maintained at 50 to 60 percent by wet weight, and aeration should be provided. As water is added, the compost becomes more compact and this reduces the amount of air present. Anaerobic conditions then arise and objectionable odors are created. If too much water is introduced, the material becomes difficult to handle and too dry for finishing. On the other hand, if the moisture

content falls below 50 percent, high temperatures are achieved in the center of the mass and it gives off few odors, but the rate of decomposition slows.

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Composting Temperatures. Temperature readings made in a composting mass may indicate the amount of biochemical activity taking place. A drop in temperature could mean that the material needs to be aerated or moistened or that decomposition is in a late stage.

It has been noted that the windrowing method produces a typical temperature profile. Temperatures between 150F and 160F (66C to 71C) are easily reached and maintained for about 10 days (Figure 5). Temperatures between 140F and 150F (60C to 66C) can be kept for about three weeks. Temperatures of up to 170F (77C) have been observed in the center of a composting mass. Time-temperature relations are important in freeing the compost of pathogens.(*17*) At Johnson City, it has been found that a single weekly temperature reading will help determine if composting is progressing normally and that temperatures necessary to destroy pathogens are being maintained.(*17*)

At Gainesville, the compost has sometimes reached 180F (82C) on the sixth day of composting in open-tank digesters. Forced aeration is used at this plant, but agitation is provided only intermittently or not at all.(*18*)

On the Fairfield-Hardy digester at Altoona, Pennsylvania, temperatures between 140F and 160F (60C and 71C) are normally attained and occasionally rise to 176F (79C). In this enclosed system, the composting material is continually agitated for 7 to 9 days; forced aeration is used.

Composting pH. The initial pH of refuse at Johnson City is usually between 5 and 7 unless a large amount of alkaline material is present.

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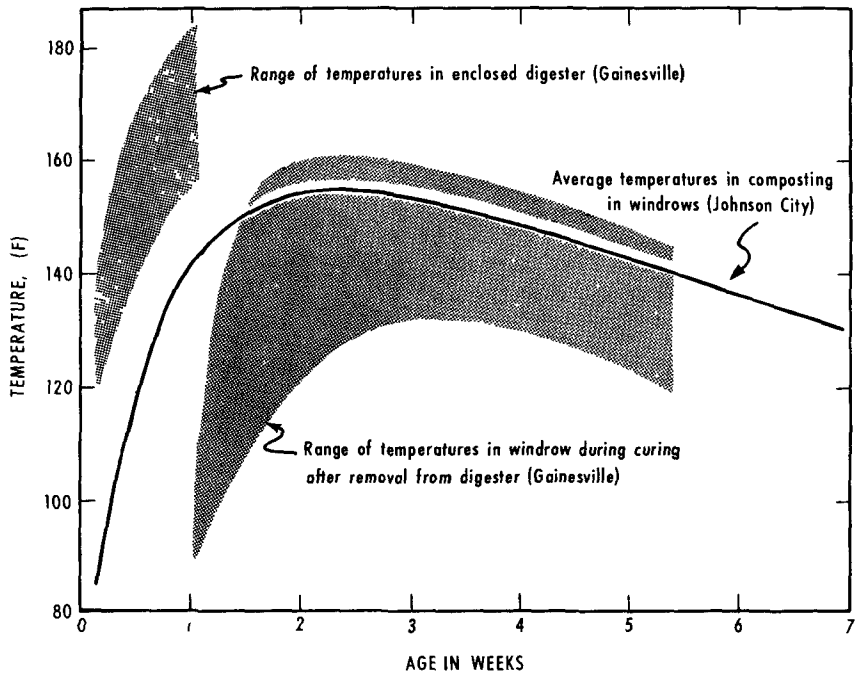

FIGURE 5.—Typical and comparative temperature profiles obtained from composting municipal refuse indicate that temperatures in excess of 140F are easily attained during aerobic composting.

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On an average, the refuse is at least three days old when it arrives. The pH drops to 5 or below in the first two to three days of composting and then begins to rise; it usually levels off at about 8.5 and remains there as long as aerobic conditions are maintained (Figure 6). If the compost becomes anaerobic, as it does when stored in deep piles at Gainesville, the pH drops to about 4.5.(*18*)

Ordinarily, pH is not used for process control, but if an operator knows the normal pattern it follows, he may be alerted to the presence of unusual substances if differences are noted.

MICROBIOLOGICAL ASPECTS

General. Composting as a microbiological process is the conversion of biodegradable organic matter to a stable humus by indigenous flora, including bacteria, fungi, and actinomycetes, which are widely distributed in nature. In composting, however, such selective factors as moisture content, oxygen availability, pH, temperature, and the carbon/nitrogen ratio determine the prevalence and succession of microbial populations. As Waksman, Cordon, and Hulpoi have pointed out in extensive studies on the aerobic composting of manure and other organic matter, a variety of microorganisms has a number of specific functions, all of which are interrelated in the total process.(*66*) During the course of composting, both qualitative and quantitative changes occur in the active microflora; some species multiply rapidly at first, change the environment, and then disappear to allow other populations to succeed them.

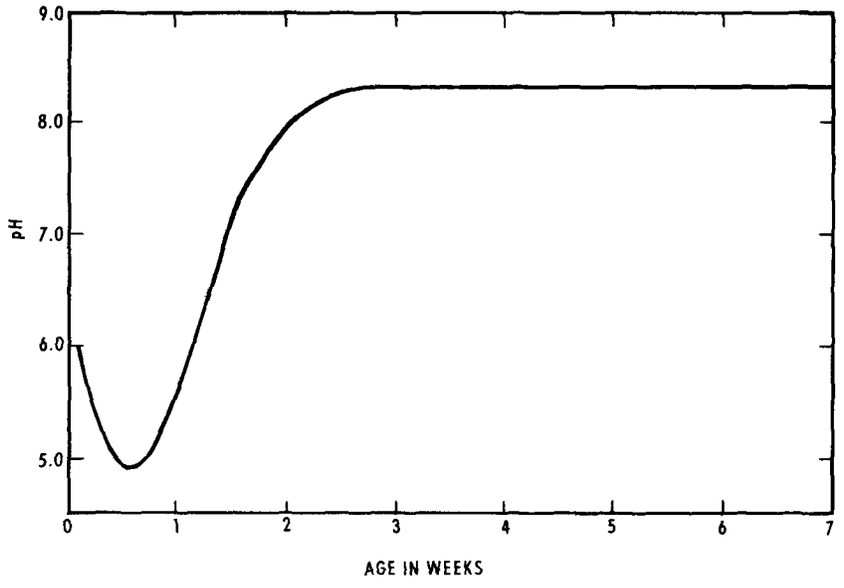

FIGURE 6.—A typical pH profile obtained in windrow composting proceeds from an initial acidic condition within the first week to become rather alkaline.

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When composting begins, the mesophilic flora (microorganisms able to grow in the 77F to 113F (25C to 45C) temperature range) predominate and are responsible for most of the metabolic activity that occurs. This increases the temperature of the composting materials, and the mesophilic populations are replaced by thermophilic species, those that thrive at temperatures about 113F (45C). This rise in temperature is influenced to a great extent by oxygen availability. When municipal refuse is composted at Johnson City, for example, windrows kept for the most part aerobic reach temperatures up to 167F (75C) and produce few objectionable odors. When a windrow is allowed to become anaerobic through lack of turning, however, the temperature peaks at about 130F (55C) and drops much lower after the first two weeks of composting.

Even though composting materials usually contain a wide range of active flora, many attempts have been made to develop an inoculum of microorganisms that would speed the decomposition process. Their use has, however, usually proved to be of little value.(*11*) Nevertheless, it would seem worthwhile to study the merit of adding nitrogen, phosphorus, or other elements to supply essential nutrients for the active flora in the composting of straw, paper, and other materials that, alone, are nutritionally unbalanced.(*67, 68*) The key to successful composting in the United States may well depend on acquiring the ability to degrade the increasingly

high concentrations of cellulose found in solid wastes.(*57*) Advances in this area appear to depend on the gathering of more knowledge about the functions of specific flora in the composting process, a field in which relatively little research has been done.

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Pathogen Survival in Composting. Studies conducted at Johnson City and by Morgan and MacDonald indicate that properly managed windrow composting turns out a product that is safe for agricultural and gardening use.(*17, 69*) Proper management consists of keeping the moisture content at between 50 and 60 percent by wet weight, maintaining aerobic conditions by turning the material periodically, and assuring that the windrows are thoroughly mixed.

Specifically, investigations made at Johnson City in conjunction with East Tennessee State University showed that:

1. Pathogenic bacteria that may be associated with sewage sludge and municipal refuse were destroyed by the composting process after being inserted into windrows;

2. There was a consistent, inverse relationship between the number of total and fecal coliforms in the compost and the windrow temperatures recorded. A heat range of 120F to 130F was sufficient to reduce the coliform populations significantly, often to a level at which they could not be detected by the Most Probable Numbers Method. Significant numbers of coliforms reappeared, however, when the temperature dropped during the last stages of the composting process.

3. *M. tuberculosis* was normally destroyed by the 14th day of composting if the temperature had averaged 149F (65C). In all cases, the organisms were destroyed by the 21st day.

4. Composting that attains a temperature range of 130F or higher for as little as 30 minutes also deactivates the polio virus.

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5.There are no references in the literature to any sanitation workers having been infected by fungi as a result of handling solid wastes. This suggests that there should be no restrictions put on the use of compost.

No extensive studies regarding pathogen survival in mechanical composting systems in the United States have been completed, but there are indications that the product is safe to use if it has been properly mixed in a mechanical digester-composter and then cured.

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Chapter IV

Economic Considerations

Composting in the United States has not been looked upon as a method of waste disposal but as a business; as such, it has had an unsuccessful history. Considering it as a disposal method, the expectation of a profit or an income to balance the cost adds a burden not imposed upon landfilling or incineration. Thus, one deterrent to more widespread development of composting as a means of municipal solid waste treatment in this country has been this widely advanced premise that composting must produce a profit, or at least pay its own way. No other method of waste disposal or treatment is expected to accomplish such a goal.

In the last 20 years, the technology of composting municipal refuse has been investigated rather intensively, and there is the knowledge and equipment to enable engineers to design mechanized compost plants and to produce compost. Although corresponding information on costs is much less satisfactory, it has become increasingly apparent that composting is not an inexpensive method of refuse treatment.

This chapter considers the monetary aspects of composting. Further research in the use of compost in agriculture and land management may help to furnish a gauge by which to measure economic benefits not now quantified. Elements of the cost of disposal by composting, expressed

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as a gross cost per ton for processing raw refuse, and the credits that may accrue from salvage, the sale of compost, and other considerations are discussed.

A reader attempting to discover the cost of composting is confronted with an array of costs ranging from about $2.50 to $20.00 per ton of refuse processed.(*70*, *71*) Cost figures for individual plants are available but variations in size, methods of operation, plant complement and wage scales, number of shifts, accounting systems, financing details, land costs, and final disposal make comparisons almost impossible. Until recently, the principal source of such information was Europe. To apply costs developed in Europe or elsewhere to composting in the United States is even more difficult. Because of this lack of reliable cost data on the construction and true operating costs of composting plants in general, the major portion of the information that follows is based on observations of the U.S. Public Health Service—TVA Composting Project, Johnson City, Tennessee, although it is limited to the general conclusions and aspects of costs as derived from these observations.

CAPITAL COST

Windrowing Plants. Estimates of the capital costs for various capacity windrow composting plants, based on the actual costs encountered for the Johnson City composting plant, range from $16,560 per ton of daily capacity for a 50-ton-per-day plant to $5,460 per ton of daily capacity for a 200-ton-per-day plant on a two-shift operation (Table 6.) The estimates of the total yearly capital investments for these

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TABLE 6. ESTIMATED CAPITAL COSTS FOR WINDROW COMPOSTING PLANTS

Item of cost	Daily plant capacity in tons per day (T/D)				
	52 T/D (Johnson City plant, 1 shift)[1]	50 T/D (1 shift)[2]	100 T/D (50 T/D 2 shifts)[3]	100 T/D (1 shift)[3]	200 T/D (100 T/D 2 shifts)[3]
Buildings	$368,338	$210,000	$231,000	$231,000	$251,000
Equipment	463,251	482,700	482,700	607,100	607,100
Site improvement[4]	126,786	126,800	126,800	152,000	152,000
Land cost[5]	7,600	8,400	12,400	12,400	21,200
Total cost	965,980	827,900	852,900	1,002,500	1,031,300
Total cost per ton daily capacity	18,580	16,560	8,530	10,020	5,156

[1] Actual cost of the research and development PHS-TVA Composting Plant at Johnson City, Tennessee.
[2] Based on Johnson City cost data adjusted for building and equipment modifications.
[3] Estimates based on actual Johnson City cost data projected to the larger daily capacity plants.
[4] Includes preparation of composting field with crushed stone and needed utility lines.
[5] Land costs are estimated based on approximate land values near Johnson City, Tenn., of $800 per acre.

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plants on the basis of cost-per-ton-of-refuse-processed, range from $6.15 for the 50-ton-per-day plant to $2.01 for the 200-ton-per-day plant on two shifts.

The actual initial capital costs for the USPHS–TVA Composting Plant were $18,580 per ton daily capacity (Table 7). On a per-ton-refuse processed basis, the yearly capital investment cost is $12.98 (at 34 tons per day in 1968). Operated at the design capacity of 52-tons-per-day, the yearly capital investment cost would have been $6.88 per-ton-refuse processed.

The capital cost of $965,980 for the Johnson City plant is subject to some qualifications. A high proportion (38 percent of plant cost) is in buildings, partly because of the multi-story design with equipment installed on the second- and third-floor levels. More ground-level floor space and simpler framing, as used in common mill buildings, with installation of machinery independently of the structure would have permitted a less expensive structure. Similar reductions were used in the

cost projections for the other plants. A case in point is the 150-ton-per-day plant at Gainesville, Florida, where the cost of the building, estimated at $150,000, is approximately 11 percent of the total plant investment.

These cost estimates include equipment for processing sewage sludge from the population generating the refuse. Since these composting plants include sludge processing equipment, caution must be exercised; costs developed here cannot be directly compared with capital costs of landfills or incinerators that do not include equipment for sludge processing.

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TABLE 7. ESTIMATED INVESTMENT COSTS FOR WINDROW COMPOSTING PLANTS (1969)

Item of cost	Plant capacity in tons per day (T/D)				
	52 T/D (Johnson City, 1 shift, 7,164 tons, 1968)[1]	50 T/D (1 shift, 13,000 T/year)[2]	100 T/D (2 shifts, 26,000 T/year)[2]	100 T/D (1 shift, 26,000 T/year)[2]	200 T/D (2 shifts, 52,000 T/year)[2]
Construction	$958,380	$819,500	$840,500	$989,100	$1,071,100
Land costs	7,600	8,400	12,400	12,400	21,200
Total	965,980	827,900	852,900	1,001,500	1,092,300
Depreciation/year[3]	47,920	41,000	42,000	49,500	53,550
Interest/year[4]	45,080	38,600	39,800	46,200	51,000
Cost per ton daily capacity	*18,580*	*15,560*	*8,530*	*10,020*	*5,460*
Cost per ton refuse processed	12.98	6.12	3.15	3.68	2.01
	[5] (6.88)	[6] (5.38)	[6] (2.76)	[5] (3.28)	[6] (1.73)

[1] Actual costs of plant as built at Johnson Cty. Plant operates on 1-shift day. Cost per ton based on 1968 level of 7,164 tons of refuse processed.

[2] Based on Johnson City plant cost data adjusted for less elaborate equipment, buildings, and modifications.

[3] Straight line depreciation over 20 years of buildings and equipment, excluding land.

[4] Bank financing at 7½ percent over 20 years. Yearly figure is average of 20-year total interest charge. Land cost included.

[5] Cost of Johnson City plant adjusted to design capacity of 13,520 tons refuse processed per year.

[6] Estimated cost without sludge processing equipment.

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Enclosed Digestion Plants. Enclosed digestion plants are similar to windrowing plants with respect to receiving, sorting, grinding, adding sewage sludge, final grinding and screening, curing, and storage. Plants of both types require area for the storage of compost for curing and stockpiling. Seasonal use of compost makes stockpiling necessary. The estimates for the windrow plants include land for storage, in rectangular piles 15 feet high, of 6 months' production. Land required for the composting area is also important. Land costs used in the estimates were $800 per acre; this figure is consistent with land values near the Johnson City plant. By way of comparison, land near the Gainesville plant costs about $4,000 per acre.

Comparing the capital costs per-ton-refuse-processed for the digestion systems of a 150-ton-per-day windrowing plant with those of an enclosed type plant, shows that, although the windrowing plant requires more land, capital cost per ton processed will be less for a reasonable range of land prices. Many of the other costs associated with these plants would be similar (Table 8).

Other Countries. Capital costs reported in 1965 for European plants vary from $0.76 to $1.91 per ton of raw refuse processed using the windrow methods. For enclosed systems, the range was $1.18 to $3.98. (*44*)

It must be noted again that it is difficult to compare plant costs because of such factors as variations in size, type, and operation. Comparisons with foreign plants are even more difficult. The complexity of construction will, of course, influence costs. In warm climates, heating of buildings may not be necessary. For windrowing plants, the

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TABLE 8. ESTIMATED INVESTMENT COSTS FOR COMPOSTING PLANTS
[Windrowing and Enclosed Digestion Systems]

Item of cost	150-ton/day capacity	
	Windrowing	Enclosed
Construction and equipment	[1] $185,500.00	[2] $300,800.00
Depreciation [3]	9,280.00	15,040.00
Interest (7½ percent) [4]	8,660.00	14,040.00
Capital cost per ton daily capacity	1,237.00	2,005.00
Total cost per ton refuse processed	0.46	0.75
Land	9,300.00	2,640.00
Interest (7½ percent)	430.00	120.00
Cost per ton daily capacity	62.00	18.00
Cost per ton of refuse processed [5]	0.01	<0.01 (.003)
Total cost		
Per ton of daily capacity	[6] 1,300.00 (1,550.00)	2,023.00
Per ton of refuse processed	[6] 0.47 (0.52)	0.75

[1] Based on costs from PHS–TVA Composting Plant at Johnson City, Tennessee, and land at $800 per acre.
[2] Based on costs from composting plant at Gainesville, Florida, and land at $4,000 per acre.
[3] Straight line depreciation of equipment and buildings over 20 years.
[4] Average yearly interest, bank financing over 20 years.
[5] Computed from interest only; land is assumed not to depreciate.
[6] Computed with comparable land values estimated at $4000 per acre.

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size and spacing of the windrows will influence land requirements. In wet periods and in humid climates, mechanical dryers may have to be installed.

OPERATING COSTS

Windrowing Plants. Estimates of the yearly per-ton-of-refuse-processed operating cost for windrow plants of varying capacities, again made by projecting the actual costs encountered in operating the composting plant in Johnson City, ranged from $13.65 for the 50-ton-per-day plant to $8.70 for the 200-ton-per-day plant on a two-shift operation (Table 9).

Actual costs for operating the Johnson City composting plant in 1968 were $18.45 per ton of refuse processed (Table 10). The nature of the research conducted there and the inability of the Johnson City municipality to deliver enough refuse for operation at full-plant capacity are some of the reasons for the seemingly high cost. A cost of $13.40 per ton of refuse processed was projected for operating this plant at full-design capacity (52 tons per day) in 1969, with some modifications for the research work being conducted. Labor expenses for 1968 amounted to about 75 percent of the operating costs. In 1969, they accounted for approximately 78 percent.

Up to 30 percent of the refuse delivered to a compost plant is noncompostable. If salvaging is not practiced, all of this material should be disposed of in a sanitary landfill. An estimated cost of from $.50 to $1.00 per ton of refuse processed must then be added to operational

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TABLE 9. ESTIMATED YEARLY OPERATING COSTS FOR VARIOUS CAPACITY WINDROW COMPOSTING PLANTS

Plant capacity (tons of refuse processed/day) (T/D)	Number of shifts	Plant operating costs (dollars)			Operating costs per ton refuse processed (dollars per ton)
		Operations	Maintenance	Total	
52 T/D 1968 Johnson City (7,164)[1]	1	$99,575 [2] ($139,817)	$32,590 [2] ($41,200)	$132,165 [2] ($181,017)	$18.45 [2] ($13.40)
50 T/D (13,000)[3]	1	133,950	43,700	177,650	13.65
100 T/D (26,000)[3]	2	213,795	59,150	272,945	10.50
100 T/D (26,000)[3]	1	197,850	59,850	257,700	9.90
200 T/D (52,000)[3]	2	357,015	95,400	452,415	8.70

[1] Figure in parentheses is total tons of raw refuse processed in 260-day work year.

[2] Costs projected for operating USPHS–TVA composting plant at design capacity of 52 tons per day (13,520 T/year) in 1969.

[3] *Estimated costs based on USPHS–TVA composting project operating cost data.*

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TABLE 10. ACTUAL COST OF OPERATIONS FOR THE USPHS–TVA COMPOSTING PLANT (1968)[1]
[7,164 tons processed in 210 days]

Activities	Operations								Maintenance						
	Salaries and benefits	Supervision	Electric power	Utilities (excluding electricity)	Truck use	Supplies and materials	Miscellaneous	Total	Salaries and benefits	Supervision	Supplies and materials	Repairs	Miscellaneous	Total	Total
Receiving[1]	$6,905	$1,181	$59			$28		$8,173	$974	$250	$661	$480		$2,365	$10,538
Picking and sorting	8,116	1,388	17			319		9,840	305	78	30			413	10,253
Disposal of rejects[2]	7,351	1,258			$3,524	38		12,171	620	159	56			835	13,006
Grinding:															
Rasper	3,211	549	770					4,530	2,134	548	2,925			5,607	10,137
Hammermill	39	7	17					63	231	59				290	353
Composting:															
Hauling and handling	5,930	1,015	28		5,764	327	$50	13,114	3,073	789	677	140		4,679	17,793
Turning and wetting	4,615	790				291	21	5,717	2,342	600	1,548	783		5,273	10,990
Curing	982	168			224	9		1,383	45	12		15		72	1,455
Storage	2,477	424			577		48	3,526							3,526
Operation and maintenance Grounds, buildings, and utilities			1,165					1,165	4,506	1,156	509		$68	6,239	7,404
Cleanup of process and receiving buildings	9,556	1,635				123		11,314							11,314
Office and laboratory	6,123	1,048	378	$614		800	144	9,107							9,107
Other	1,712	293		134	1,044	4,519	624	8,326							8,326
Regrinding and screening	4,293	734	130		1,230			6,387	846	217			409	1,472	7,859
Sewage sludge processing	3,350	573	54			782		4,759	2,970	762	1,395	218		5,345	10,104
Total	64,660	11,063	2,618	748	12,363	7,236	887	99,575	18,046	4,630	7,801	1,636	477	32,590	132,165

[1] At plant site.
[2] Includes cost of haulage to landfill (no landfilling costs.)

costs. If the compost must be eventually disposed of in a landfill, the additional cost per ton of refuse processed may reach $0.50.

High-Rate Digestion Plants. Operating cost data for many of the high-rate digestion plants is incomplete, adding to the difficulty in comparing costs. Yearly operating costs per ton of refuse processed for the Gainesville plant were $7.56 for 157 tons per day and $6.94 for 346 tons per day.(*18*) Operating costs for some European plants have ranged from about $1.51 to $2.76 per ton of refuse processed.(*44*)

Total Cost of Composting. The estimated total costs per ton of refuse processed for various composting plants ranged from $3.85 to $20.65 (Table 11). The range for windrowing plants, estimated from data obtained from the USPHS–TVA project, however, was from $11.23 for a 200-ton-per-day plant to $20.65 for the 50-ton-per-day plant. The total cost for the high-rate digestion plant at Gainesville was estimated at $10.53 per ton of refuse processed at 157 tons per day and $8.58 per ton of refuse processed at 346 tons per day.

The $32.31 per ton cost of composting municipal refuse at the USPHS–TVA composting plant (Table 12) is subject to the qualifications as stated in the discussion of its capital and operating costs. The projected cost of $21.16 per ton of refuse processed at full operating capacity is also subject to the same general qualifications.

PARTIAL RECOVERY OF COSTS

The cost of composting municipal refuse may be reduced in several ways. Direct returns are possible if compost and salvageable material

TABLE 11. SUMMARY OF TOTAL COSTS FOR COMPOSTING PLANTS[1]

Capacity (tons/day)	Number of shifts	Type plant[2]	Capital cost (per ton/day)	Cost per ton refuse processed		
				Capital	Operating[2]	Total
50	1	W	16,560	6.12	14.53	[4] 20.65
100	1	W	10,000	3.68	10.62	[4] 14.30
100	2	W	8,530	3.15	11.22	[4] 14.37
100	1	HR	5,400(70)	1.66		
157	1	HR	8,830	2.97	7.56	[5] 10.53
200	1	HR	4,800(70)	1.48		
200	2	W	5,460	2.01	9.22	[4] 11.23
300	1	HR	8,600(72)	2.76		
300	?	W	5,000(72)	1.53	5.00	[6] 6.53
300	1	HR	5,000(73)	1.45	2.40	3.85
300	1	HR	4,500(70)	1.38	5.12	6.50
346	2	HR	4,420	1.64	6.94	[7] 8.58

[1] Cost data provided for plants other than Johnson City and Gainesville, were used without adjusting to current economic conditions.

[2] W, windrowing; HR, enclosed high-rate digestion.

[3] *In the case of the 50-, 100-, and 200-tons-per-day windrowing plants, an estimated cost of $0.88, $0.72 and $0.52 per* ton of refuse received has been included for landfilling rejects.

[4] Projected from Johnson City composting project data, at 26,000 tons per year per 100 tons per day capacity (260 days), straightline depreciation of equipment and buildings over 20 years. Bank financing at 7½ percent for 20 years. Includes disposal of rejects into landfill.

[5] Actual data from Gainesville plant with interest at 7½ percent over 20 years, at 45,000 tons per year (286 workdays). Includes sludge handling equipment and disposal of noncompostables remaining after paper salvage.

[6] Actual data from Mobile, Alabama, composting plant. Components of costs not known.(44)

[7] Gainesville plant at 90,000 tons processed per year.

Note. Figs. in parentheses, see references.

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are sold. An indirect benefit may derive from processing sewage sludge with the refuse and disposing of it as a component of the compost.

TABLE 12. ACTUAL COSTS FOR USPHS-TVA COMPOSTING PLANT, JOHNSON CITY, TENN.[1]

Tons per day	Capital cost-per-ton daily capacity	Cost per ton refuse processed		
		Capital	Operating[2]	Total
34 (7,164 tons/year)[3]	$18,580	$12.98	$19.33	$32.31
52 (13,520 tons/year)[4]	18,580	6.88	14.28	21.16

[1] Based on actual costs of Johnson City composting plant with 7½ percent bank financing over 20 years. Equipment and buildings depreciated over 20 years (straight line). Operating costs based on actual costs for calendar year 1968.

[2] Includes costs for landfilling rejects.

[3] Actual processing for 1968 operations.

[4] Operations projected to full capacity.

Compost Sales. The price at which compost can be sold depends on the benefits to be obtained from its use and what customers are willing to pay for such benefits, which have yet to be accurately ascertained. One source estimated a benefit value of $4.00 per ton of compost for the

first-year application on corn.(*74*) In this case, the value of the benefit might pay only for hauling. However, corn is a relatively low-priced crop, and the compost may have more value in other uses. Benefits from using compost over a number of years and residual benefits over a period of time from one application may increase its value. TVA is conducting studies on the use of compost to help answer some of the questions relating to its value.

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Compost has been sold for horticultural use, and viniculture may offer a market in some areas. Conditioning or improving the product by screening, pelletizing, bagging, and providing well-planned sales promotion and distribution may result in a greater gross return. Compost may also be sold in bulk, finished or unfinished, as well as fortified with chemical fertilizers.

The University of California estimated in 1953 that farmers would pay from $10 to $15 per ton(*71*); in fact, they showed little interest. A plant in San Fernando, California, sold compost in 1964 at $10 per ton.(*75*) Other sources estimated a bulk selling price of $6.00 per ton in 1967.(*70, 72*) In 1968, a St. Petersburg plant attempted to sell compost for commercial agriculture at $9.00 per ton. The Lone Star Organics Company, Houston, Texas, was reported by one source to have sold compost at $12.00 per ton and at $6.00 per ton by another source.(*72*) The Gainesville plant has sold compost for about $7.00 per ton. This was for a ground, unfortified, unpelletized product.

Altoona FAM, Altoona, Pennsylvania, sold a pelletized product in 1966–67 for $16.50 per ton (bulk basis) and $42.50 per ton in 40-pound bags. In the 1967–68 season, orders were taken at $20.50 per ton in bulk.(*72*)

Because of the prices that might be obtained from the luxury gardening market, a few favored municipalities may expect to operate a self-supporting compost plant. Note, however, that the markets being promoted for existing plants include areas with distances up to 1,000 or more miles, indicating a diffuse, low-level demand at this time. Also, the price

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obtained must absorb costs of final conditioning and marketing. Possibly, $3 to $7 could be obtained at the plant for compost in bulk. Since the yield of compost (30 percent moisture) is about 50 percent of incoming refuse, the revenue from sales would be approximately $1.50 to $3.50 per ton of raw refuse processed. Although this income is used for discussion, the possibility must be considered that all or part of the compost cannot always be sold.

Sale of Salvaged Materials. The income from salvaging depends on the cost of salvaging operations, the volume of salable materials, and the prices paid for the recovered materials. There may, however, be no market for salvaged materials in some localities. One source has stated that salvage can be practiced to at least the break-even point if a 300-ton-per-day capacity plant is located near an industrial city.(*73*)

Materials most easily salvaged for which a market often exists are paper, metals, rags, and glass. There may develop a market for some type of plastics. Actual data on the income possible from salvaging are few. The plant at Gainesville is equipped to salvage and market paper and metals. In 1968, paper was sold at $15 to $20 per ton. Shredded cans at destination could have been sold for $20 a ton, but shipping charges made this impractical. Although few rags were salvaged, they brought $18 per ton at the plant, baled. Projections for this plant have shown an expected net income from salvaged paper of $1.50 per ton of refuse processed.

A feasibility study for a 300-ton-capacity composting plant in Michigan assumed that paper would be salvaged in the amount of 15 percent; metal and cans, 9 percent; and glass, 10 percent of incoming refuse.

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Paper was assumed to be salable at $10 to $15 a ton, metal and cans at $8 to $12 a ton, and glass at $8 to $10 a ton. The estimated income from the salvage of each category was $1.80, $0.90, and $0.80, respectively, per ton of refuse received, totaling $3.50.(*72*)

The price of paper, for which there is the greatest market, can fall to as little as $5 per ton. At these times, such plants as the Gainesville installation and the hypothetical one mentioned above would obtain an income from paper of only $0.40 to $0.75 per ton of refuse received. According to one source, the total to be expected from salvaging without sophisticated equipment might be in the range of $1 to $2 per ton of refuse received.(*70*)

Composting Sewage Sludge With Refuse. A composting plant may be operated to obviate part of the cost of handling the sewage sludge received from the population it serves. For a 200-ton-per-day plant processing all of the sludge from the population generating the refuse, the estimated savings could range from 0 to $35 per ton of sludge solids, depending on degree of treatment. Based on this estimate, the credit to composting would be from 0 to $1 per ton of refuse processed. These estimates are based on data from the windrowing plant at Johnson City. Savings might be greater for plants using high-rate enclosed digesting systems.

Composting and Landfill Operations. There is interest in reducing landfill requirements by grinding and composting refuse prior to depositing into the fill. The crushing of cans and bottles, the reduction in size of other noncompostables, and the reduction of the volume of

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organic material by digestion will reduce the volume of the refuse. The digestion results in a less noxious material, less gas production in the fill, and possibly less subsidence. The compost is less attractive to rodents and insects and its appearance is more acceptable to most people. Less cover will be needed as it may be applied only to prevent a fire hazard and to keep small pieces of plastic film, shards of glass, and bits of metal from showing, as compost for landfilling will not be finished to remove these.

It has been stated that with good compaction, the landfill volume required will be about half that required for well compacted, unground refuse. More work will be required in this area on the compactibility of compost. Organic materials tend to be springy on compaction.

Landfill sites are becoming scarcer near urban centers especially due to the resistance of citizenry to such operations. When sites are found at greater distances the same difficulty is often experienced where people do not want the city's refuse disposed of in their area. Composting may offer a solution in some cases. The reduction in volume can result in savings in handling costs, and sites nearer to cities may be tolerated where pre-digested material is deposited.

It would thus appear that composting may effect savings where hauls are long, but will not provide savings in land costs unless they are very high. Where the availability of land is the problem and not the cost, composting could extend the life of landfills. Well digested, but unfinished compost could be used for fills in many places in a community and the unused product could be put into landfills. The recovery

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of salvageable materials would reduce the volume of material to be composted and to be disposed of by landfill.

NET COST OF COMPOSTING

Estimates of the net cost of composting municipal refuse have been developed (Table 13). Although the costs for processing sewage sludge have been included, no credit was given to the composting plant for savings which might be realized by not processing the sewage at a sewage treatment plant.

The net costs estimated for the windrowing plants range from $18.65 (per ton of refuse processed) for the 50 ton-per-day plant to about $7.73 (per ton of refuse processed) for the 200 ton-per-day plant on two shifts. Net costs for the high-rate plant at Gainesville, Florida, were estimated at $6.90 (per ton of refuse processed) at 157 tons per day to about $3.45 (per ton of refuse processed) at 346 tons per day (Table 13).

Composting Costs Compared with Sanitary Landfilling and Incineration. Even with an income from compost and, in some cases, from salvage sales, most composting plants show a deficit or an expected deficit. Based

entirely on economic considerations, most composting plants would not, at this time, be able to compete with sanitary landfilling as a refuse treatment method.

As with compost plants, the operating costs reported for incinerators vary greatly, due to the same factors that cause differences in composting costs, land values, labor costs, residual disposal, etc. For incinerators constructed after 1950, averaging a daily input of 375 tons, the operating

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TABLE 13. ESTIMATED NET COSTS OF COMPOSTING (DOLLARS)

Plant capacity (tons/day)	Type of plant[1]	Number of shifts	Total cost per ton refuse processed[2]	Estimated potential income per ton processed		Estimated net cost per ton refuse processed[3]
				Compost sales	Salvage sales	
50[4]	W	1	$20.65	$2.00–$3.50		$17.15–$18.65
100[4]	W	1	14.30	2.00– 3.50		10.87– 12.30
100[4]	W	2	14.37	2.00– 3.50		10.94– 12.37
157[5]	HR	1	10.53	2.00– 3.50	1.63	5.40– 6.90
200[4]	W	2	11.23	2.00– 3.50		7.73– 9.23
300[6]	HR	?	7.88	3.24	3.50	1.14
300[7]	W	?	4.03			
300[8]	HR	9	3.85	3.00– 6.00		
346[9]	HR	2	8.58	2.00– 3.50	1.63	3.45– 4.95

[1] W, windrowing; HR, high-rate digestion, enclosed type.
[2] Estimated costs included sludge processing.
[3] No credit has been estimated for handling sewage sludge.
[4] Estimated from 1968 data from the Johnson City composting project. Costs include depreciation, interest, land, and operations.
[5] Projected costs for Gainesville plant at 39,000 tons per year.
[6] A hypothetical plant [72]
[7] Based on data from Mobile, Alabama, plant[72]; all components of cost are not known.[44] There was no sludge processing.
[8] Reported costs do not include administration [72,73]
[9] Projected costs for operating Gainesville plant at 90,000 tons per year.

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costs have been reported at $3.27 to $4.05 per ton.(*76*) A 168-ton-per-day incinerator reports a total cost of $6.40 per-ton-processed,(*77*) while a 300-ton plant is estimated at $5.20 per ton.

Investment costs of municipal incinerator plants are currently in the range of $7,500 to $10,000 per ton of capacity based on 24-hour operation.(*78*) The average for those in operation in 1968 was $7,100 per ton of capacity.(*82*)

Although references to incinerators with costs between $3,000 and $5,000 per ton of daily capacity can be found, those now being planned are more complicated and costly because of new or contemplated air pollution control measures. Costs to achieve these new criteria may have the effect of

almost doubling the price for small incinerators and adding at least 30 percent to the cost of larger plants.(*77*) An 800-ton-per-day plant considered for Washington, D.C., was estimated at $4,500 to $5,400 per ton of daily capacity. The additional cost per ton for installing air pollution control equipment was $2,800 to $3,700.(*79*)

In comparing cost of compost plants to incinerators, note that a direct comparison is not correct for incinerators operating continuously for 24 hours, as most of the compost plants considered operate only on one 8-hour shift. Also, the composting plant cost includes sewage sludge processing equipment not included in incinerators.

Thus, although the capital costs for composting plants are greater than those for landfilling, they fall in the range expected for incinerators. Some compost plants in the 300-ton-per-day size range may equal some incinerator costs without the benefit of income from salvage and

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compost sales. At present, however, indications are that many will not. The 150- and 200-ton-per-day plants may compete economically with incineration if there is an assured market for compost and salvaged materials. Plants under 100-tons-per-day capacity appear uneconomical.

The accurate prediction of a market for compost and salvage materials and the intensive cultivation of this market is thus essential in determining the economic potential for a given compost plant and will help determine whether incineration is less expensive than composting for a given community.

SUMMARY

This chapter considered primarily the economic factors in conjunction with composting. At this time, composting cannot compete economically with sanitary landfilling when the net costs are compared. However, the larger size plants fall into the cost range which may be expected for incinerators operating with appropriate air pollution abatement devices.

A burden has been placed on composting which has not been imposed on sanitary landfilling and incineration: a premise that composting must pay its own way. This has led to many compost plant failures and has probably deterred many municipalities from composting their refuse.

There are intangibles such as nuisance-free disposal associated with composting that have not been quantified. These intangibles, once quantified, may induce a community to compost even if the product must be disposed of by giving it away. If this becomes the circumstance, there may still be a benefit to the public of a kind which cannot be credited to other refuse disposal methods.

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Chapter V

Agricultural and Horticultural Utilization of Municipal Compost

AGRICULTURAL PRODUCTIVITY AND SOIL EROSION CONTROL

An excellent review of plant and soil relationships and the results of studies on compost utilization are contained in a recent paper by Tietjen and Hart.(*80*) The following discussion of benefits and limitations of composting related to agricultural productivity and soil erosion control draws heavily upon that paper.

Plants can grow in almost any type of soil, but its fertility is closely related to the amount of organic matter it contains and particularly to the amount of nitrogen present. Organic matter includes humus, roting plant roots, bacteria, fungi, earthworms, insects, etc. When a virgin soil is cultivated without being fertilized, its organic content and yield are reduced with time (Figure 7). High productivity can be maintained if manures or chemical fertilizers are applied in the amount and at the time the crop needs such nutrients. Over long periods, higher yields result from the use of combined chemical and manure fertilizations (Figure 8). This was confirmed over a 9-year period in which chemical fertilizers with compost added were applied to soils (Figure 9). Increased crop yields may, however, be obtained more economically if chemicals alone are added.

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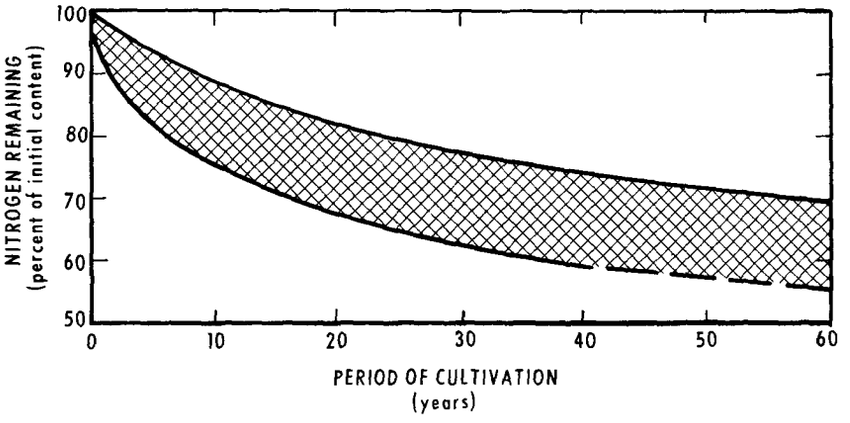

FIGURE 7.—Effect of cultivation on nitrogen content of soil.[80,81] Soil repeatedly cultivated without fertilization for replenishment of nitrogen.

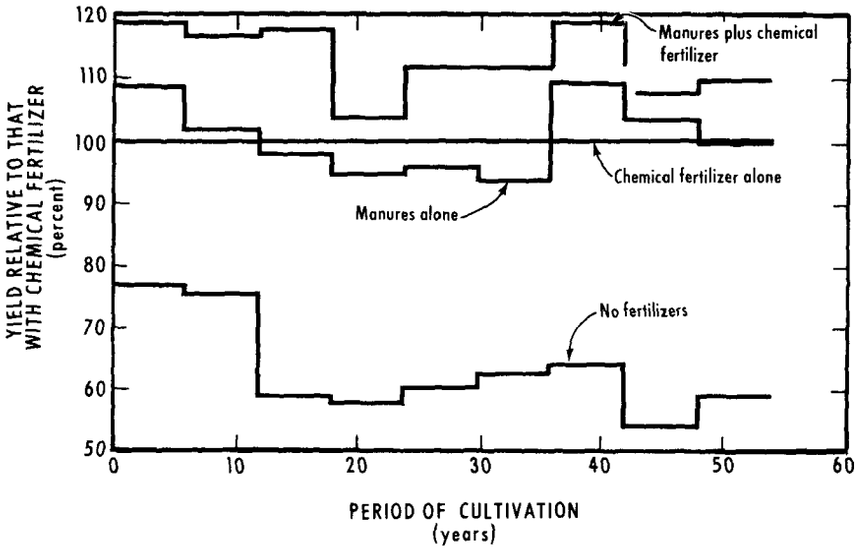

FIGURE 8.—Relative yields of winter wheat with different fertilizer treatments.[80]

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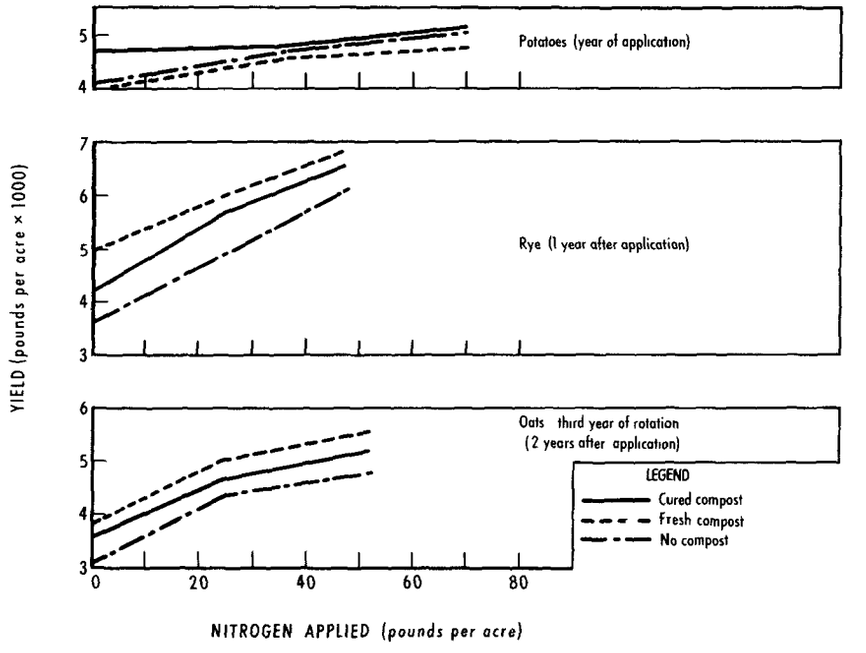

FIGURE 9.—Data from a 9-year experiment by Tietjen and Hart indicated that there may be yield benefits from the use of compost.[80]

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With regard to supplying plant nutrients, compost neither performs as well as chemical fertilizers nor meets the legal requirements established by several States for designation as a fertilizer. A typical compost contains approximately 1 percent nitrogen, one-quarter percent phosphorus, and one-quarter percent potassium. The slightly higher values that result when sewage sludge and municipal refuse are composted together are derived from the sludge.

The type of soil is an important factor to be considered in evaluating how the continued use of a chemical fertilizer will affect productivity. If the soil is low in organic matter, the continued use of chemical fertilizers that do not have an organic amendment may decrease crop yields over a period of time. The benefits of using compost to supply organic matter to various types of soils, and the other benefits that might be derived from its continued use over a long period of time have not been adequately defined.

Tietjen and Hart point out that yields are not the only consideration in evaluating the benefit of compost. They report the following additional information on the 9-year experiment mentioned above. The nutrient levels of the crops were measured each year. Potatoes grown on composted plots averaged 6 percent more nitrogen, phosphorus, and potassium per pound of crop harvested than those grown on uncomposted but fertilized plots. On an average, compost-grown rye and oats had 4 percent and 9 percent higher nutrient contents, respectively. These are significant increases.

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Organic matter affects the physical characteristics of soil. Benefits that may be obtained by the addition of humus (from compost) to soil are improved workability, better structure with related resistance to compaction and erosion, and increased water-holding capacity. Improved workability is generally described as tilth; it is measured by the farmer in terms of easier plowing or cultivation which results in savings of power and time. Better structure and improved water-holding capacity are particularly important for erosion control on steep slopes. Comprehensive research on erosion control of hillside vineyards was conducted by Banse at Bad Kreuznach, Germany. The results of his field tests on compost applied every three years to a 30° vineyard slope showed that compost was very effective in reducing erosion (Figure 10).(*80*)

Tietjen and Hart indicated that it is difficult to put an economic value on compost applications for improvement of soil physical properties. They concluded that an improved water-holding capacity has not yet been related definitively to either increased yield or reduced irrigation requirement, nor has improved soil workability been related to a lower plowing

and cultivation cost.(*80*) In basic agriculture, maintenance of acceptable soil physical properties and prevention of erosion are obtained economically through such practices as crop rotation (often with legumes, green manuring, contour farming, and fallowing). Although compost application might improve soil physical characteristics or erosion control still further, an economic analysis to prove the worth of composting has not yet been made.

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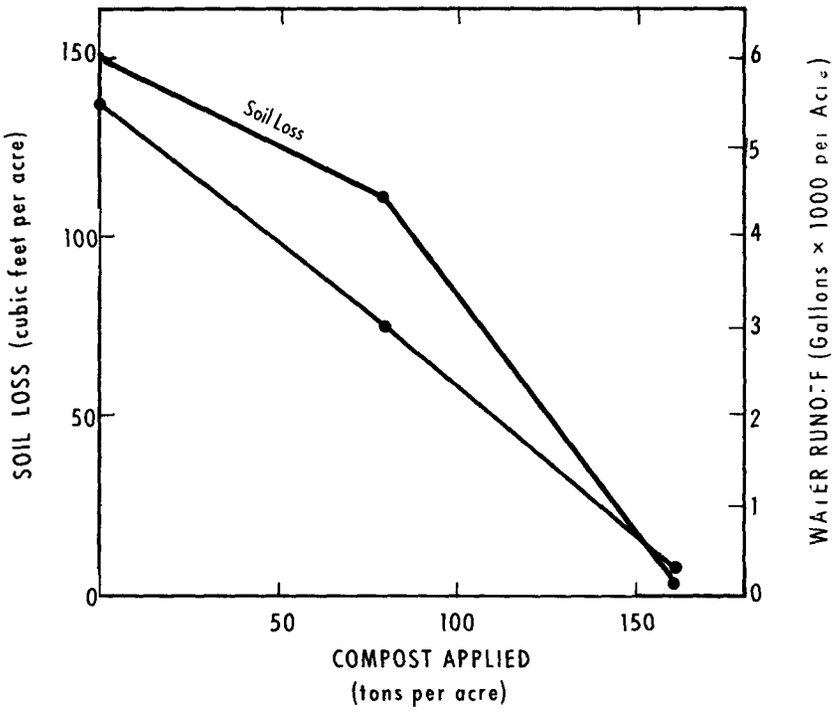

FIGURE 10.—Compost applied every three years to vineyard slopes at Bad Kreuznach, West Germany was found to be effective in preventing soil erosion and water runoff.[80]

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The preceding examples of potential benefits from compost utilization are derived from Europe where compost has been used more extensively than in the United States. There is, therefore, a need for quantitative data on its costs and the benefits in this country.

Although there has been considerable speculation about the values of trace elements, qualitative evidence indicates that the benefits derived

result from the humus component when compost is applied to lawns. There is sufficient information regarding commercial agriculture. (*82*)

DEMONSTRATION AND UTILIZATION

None of the compost produced at the Johnson City plant has been sold. Prior to March 1969, the then Bureau of Solid Waste Management asked TVA to restrict the uses to which it was put pending the evaluation of possible health hazards. These restrictions and the lack of a suitable finished product limited the activity of TVA's Division of Agricultural Development in its utilization studies.

Where owners agreed to abide by such restrictions, 4,691 tons of compost were placed on 208 demonstration areas and two experimental sites between July 1, 1968, and May 31, 1970. The latter, which are at Johnson City and Muscle Shoals, Alabama, are "in-house" or TVA undertakings. The demonstration areas are on public lands or private farms whose owners have agreed to allow the agriculturist to supervise the application of compost and to follow the progress of the plantings. Many were selected because they were depleted, nonproductive, or problem areas where fertilizer alone had not been successful. In each case, the farmer has planted an untreated area for comparison purposes.

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The bulk of the material used in Fiscal Year 1969 was neither reground nor screened and represented 80 percent of the total produced during the year. About 57 percent of the demonstration areas was established between mid-March and the end of June 1969.

Tobacco is grown on 81 of the demonstration plots, corn and grain sorghum on 23, garden vegetables on 35, grass or sod on 23, shrubs and flowers on 24, fruit trees on 5, and soybeans on 1. Erosion control and land reclamation are studied at 5 plots. Three golf courses and 8 miscellaneous plots are also involved. Both of the experimental sites have 52 test plots, 12 × 30 feet each, to which compost is applied at a rate of 4 to 200 tons per acre; a fertilizer additive is used sometimes. One site is in corn and the other in grain sorghum.

The rate of application on the demonstration plots ranges from 10 to 100 tons per acre for corn and 5 to 30 tons per acre for tobacco. By evaluating the experimental sites over a $3\frac{1}{2}$ year period, TVA expects to determine the merits of various application rates of compost and fertilizer.

Three other soil improvement demonstrations deserve special mention. Two involve erosion control and the reclamation of strip mine spoil bank areas. One project is being conducted in cooperation with TVA's Strip Mine Reclamation Section and the other with the Southern Soil Conservation Committee in Mercer County, West Virginia. In the third

demonstration, approximately 100 tons of compost were shipped to Oak Ridge National Laboratory and used as a soil amendment to help establish a growth of white clover for special ecological studies. Radioactive

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solid wastes had been buried at the site under very poor soil, and earlier efforts to grow vegetation on this soil had been unsuccessful.

During the first 16 months of operations at the Gainesville plant (March 1968–June 1969), 17,514 tons of compost were produced and 1,774 tons were sold. Another 5,841 tons were donated for various public uses, leaving over 55 percent to be stockpiled or disposed of in some manner. The proximity of the St. Petersburg compost plant has undoubtedly restricted the amounts that can be utilized, and some compost was shipped up to 170 miles away. It has been applied at rates varying from 1 to 10 tons per acre at citrus groves, 16 tons per acre for strawberry crops, and up to 100 tons per acre for pine and fern seedlings. Observations indicate that growth, crop yield, and erosion control improved. Long-term information is required to determine benefit-cost relationships. Some results from Northern Florida, however, have indicated that at least 20 tons per acre of compost must be used to achieve meaningful benefits.

HORTICULTURAL UTILIZATION OF COMPOST

The demonstrated benefit of compost applied to lawns has been previously mentioned. The "luxury" market, which includes private lawns, gardens, golf courses, hothouses, and similar applications, is governed by an entirely different set of factors from those that apply to agricultural markets. The luxury market is small-scale, labor-intensive, more sensitive to aesthetic, conservationist, and emotional considerations, and less able to evaluate extravagent promises of benefits that

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are claimed by advertisers of competing products. In contrast, large-scale agriculture is characterized by the need for showing profits over short periods of time comparable to that considered by other industries.

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Chapter VI

Potential of Municipal Refuse Composting in the United States

With present technologies of solid waste production and disposal, together with currently effective economic and environmental constraints, most communities are not willing to fund the cost of composting their

municipal refuse. Other chapters in this report have identified the factors upon which this decision is based.

THE PROBLEM

In 1967, there were an estimated 260 million tons of solid wastes generated by urban domestic, commercial, institutional, and municipal sources. The 1970 level is estimated at approximately 300 million tons. With a 50 percent yield, this would provide 150 million tons of cured compost. (The other 50 percent would be accounted for almost equally by weight lost during composting and material sorted from the incoming refuse as salvage or rejects to be disposed of separately.) Cured compost typically contains 30 percent water and weighs about 600 pounds per cubic yard. The volume of the 150 million tons of compost produced would, therefore, be 500 million cubic yards. The fraction of municipal compost that can be marketed depends upon the costs of producing and applying it, relative to the benefits derived from using it.

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Compost is not a fertilizer but a soil conditioner. Some feel that its important value lies in its organic matter, which may improve the physical properties of the soil. Observations indicate that it will make soil easier to till, increase its porosity, raise its moisture-absorption and -holding ability, and prevent the leaching out of nutrients, including fertilizer. It also increases the biological activity in the soil, which stimulates plant growth. Although compost is not a fertilizer, it can be blended with chemical fertilizers.

It is generally accepted that the cost of composting and the need to enrich the product or supplement it with chemical fertilizers restrict its marketability to buyers in the specialty fertilizer field. In this respect, municipal compost is in competition with aged cattle manure from dairies and feed lots and with peat moss.

AGRICULTURAL EFFECTS FROM COMPOST UTILIZATION

Although there are some benefits and some drawbacks associated with the utilization of municipal refuse compost, the economic realities associated with commercial agriculture or horticulture, which would be affected the most, have discouraged the widespread production and consumption of compost. Even barnyard manures, which are relatively rich in nitrogen, have become a disposal problem because their assumed cost-benefit ratios compare unfavorably with those of chemical fertilizers. Organic materials, including compost, have been cited by Kilmer as "the

nearest thing to a cure-all for soil problems that we have."(*83*) Municipal compost, however, is at a disadvantage, because it has low nitrogen values

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and contains plastic and glass fragments. Since World War II, the availability of artificial fertilizers has "* * * led to the situation in which nitrogen from chemical fertilizers is cheaper than that from manure, even if only handling charges of the latter are taken into account* * *."(*84*) It is probably valid to state that the farmer has followed the established practice of industrial or commercial solid waste producers and determined that waste disposal practices with the least immediate expense must be followed in order to maintain his competitive position. Like his urban counterpart, the farmer has assumed that environmental problems resulting from inadequate disposal techniques will be solved when "research" provides an effective method, hopefully at no increase in cost.

A dilemma results from accepting the validity of compost systems—they turn out a product that may have some value but they cost more to operate than the end product is apparently worth. McGauhey suggests that this dilemma be solved by postponement. Conversion of a "low-value waste material that nobody wants into a low-value resource that nobody wants" should be deferred. This can be done, McGauhey suggests, by placing solid wastes in landfills until their value warrants mining and recovering them.(*82*)

Bowerman has recommended that composting be applied to regional solid waste management in the Fresno, California, area.(*85*) He proposes that poultry and livestock manures with low carbon–nitrogen ratios be mixed with municipal refuse and composted. The product, along with that resulting from fruit and vegetable processing wastes, would be applied to the land at a rate of 75 tons per acre per year. According

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to Bowerman, 20 percent of the nation's municipal refuse could be processed and disposed of in this way by the year 2000. Digested sewage sludge could also be disposed of onto the land. Except for its suggestion that a market might be developed for the compost, the proposal is an example of a rather advanced systems approach to regional solid waste disposal problems based on existing technology.

THE POTENTIAL OF COMPOSTING IN RESOURCE SYSTEMS MANAGEMENT

Resource systems management is defined as directing and maintaining the development and utilization of air, water, mineral, and living resources and their interactions under steady-state conditions. This means that

proper incentives and recycling technologies must be found to ensure that elements, compounds, mixtures, and total energy maintain essentially their historical distribution in time and space.

The economics of scale that are utilized in resource development, processing, transportation, and disposal become diseconomies at that point at which materials are finally returned to the environment. These diseconomies are minimized by returning residuals to the environment through dispersed rather than concentrated mechanisms. Engineering control can provide greater initial dilution or dispersion. For example, a large number of factory chimneys or stacks discharging steam and carbon dioxide to the atmosphere is preferred on both economic and environmental grounds to a single stack through which a combined discharge of carbon dioxide and water would go. Modern sewers that discharge sewage treatment plant effluents or cooling waters into marine or lake waters have

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multiple discharge ports spaced over perhaps a half-mile, not just a single port at the discharge end. On land, farming of digested sewage sludge, oily sludge from refinery operations, or livestock manures promotes more rapid assimilation by the environment than if these wastes are concentrated in a small area. The organic residual of municipal refuse may also be rapidly assimilated by the soil provided that it is dispersed and has good physical, chemical, and sanitary characteristics. Compost is amenable to such initial dispersion and assimilation.

Although the utilization of compost from municipal refuse has been successful for a long time in a number of foreign countries, results in the United States have not been encouraging because of economic considerations. Because Americans have an attitude that composting plants—unlike other methods used to process or dispose of wastes—must operate at a profit or at least break even,(*82*) all of them have either shut down or are operating under some sort of subsidy. The latter development is enthusiastically supported by some conservationists.(*86*) The comparative costs for different methods of refuse disposal vary from zero to $50 per ton (Table 14).

A community may or may not be geographically located to maximize salvage of paper, metal, and other materials at a compost plant. Net costs of $8 to $12 per ton may be expected in favorable locations (Table 15).

The factors that will influence the future of the composting process as a municipal solid waste management tool are the costs and benefits of the process, as compared with other municipal solid waste management

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TABLE 14. DIRECT COSTS FOR THE DISPOSAL OF SOLID WASTES[1]

Disposal method	Dollars per ton
Promiscuous dumping and littering	[2] 0
Open dump, usually with burning	½ to 2
Sanitary landfill	1 to 3½
Incineration, current technology	[3] 8 to 14
Incineration, with air pollution control	[3] 9 to 15
Composting	8 to 30
Sea disposal of bulk material [4]	1 to 10
Sea disposal of baled, barreled, or otherwise contained material	[5] 7 to 50

[1] Costs are for the middle 80-percentile range for disposal only; they do not include collection, transportation, or indirect environmental costs.

[2] The cost to the public for removal and subsequent disposal is from $40 to $4,000 per ton.

[3] For installations featuring heat recovery, add $3 per ton.

[4] Wet weight basis; for example, sewage sludge at 95 percent moisture, dredging spoils, waste oils.

[5] Costs are at dockside; higher costs are those associated with toxic or otherwise hard-to-handle wastes.

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processes. The present and potential technology of composting will permit organic materials to be recycled back into the soil without significantly polluting water or land. The cost is, however, higher than that associated with other acceptable management methods. On the other hand, changes in designated priorities on the use of land, sea, or air may occur as per capita waste generation rates rise. For example, a decision by Southern Californians to eliminate backyard incineration of household refuse led to a reevaluation of other alternatives available at the time. Similar incidents may well happen.

TABLE 15. ESTIMATED COSTS FOR COMPOSTING MUNICIPAL SOLID WASTES IN FAVORABLE LOCATIONS

Costs	Plant input	
	50 tons/day	300 tons/day
Operating and capital	$10 to $20 per ton	$8 to $12 per ton.
Income:		
Paper, metal, and miscellaneous salvage	0 to 2 per ton	2 to 5 per ton.
Compost	*0 to 4 per ton*	[1] *0 to 2 per ton.*
Net Cost:		
Range	4 to 20 per ton	1 to 10 per ton.
Probable	12 per ton	8 per ton.

[1] Costs are per ton of refuse processed; assuming a typical 50 percent compost yield, the actual sale prices for the compost would be twice the values shown.

The potential usefulness of all solid waste management systems, including those that employ composting, will be influenced by changes

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during future decades of the value assigned to, or the emphasis placed upon, any of the following four factors: the acceptance of more stringent standards for environmental quality; the availability of systems to meet these standards; cost per ton of solid waste managed for each available system; public policy decisions requiring beneficial recycling rather than land or sea disposal of wastes.

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