

BASIC ISSUES ON SOLID WASTE MANAGEMENT
AFFECTING COUNTY GOVERNMENT

MAY 1973

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FOREWORD

NACo is deeply indebted to the many county officials who participated in this project. The many hours devoted by both elected officials and by county professional personnel have resulted in a compilation of issues and recommendations of importance to all working in the solid waste management field.

The task force was chaired by Commissioner Fred Nierman, Chelan County, Washington and consisted of the following members: Deane R. Anklan, County Engineer, Ramsey County, Minnesota; Robert Becker, General Manager, Solid Waste Disposal Authority, Onondaga County, New York; Edward W. Chen, Deputy Chief Administrative Officer, Prince George's County, Maryland; Robert Curry, Director, Environmental Control Department, Jefferson County, Texas; R. A. Edwards, Administrator, Prince George's County, Maryland; Gerald Ferguson, Assistant to the Director, Environmental Planning, Beaver County, Pennsylvania; William S. Hutchinson, Jr., Deputy Director of Public Works, Jacksonville-Duval County, Florida; Milton Johnson, County Engineer, Clayton County, Iowa; Robert Roller, General Manager, Solid Waste Disposal District, Chemung County, New York; James A. Smith, Jr., Commissioner, Jefferson County, Texas; Vishu Varma, Project Coordinator, Environmental Planning and Management Project, Nashville-Davidson County, Tennessee; and Thomas W. Wehrle, Deputy County Counselor, St. Louis County, Missouri.

NACo membership and staff commend the Office of Solid Waste Management Programs (OSWMP) of EPA for seeking recommendations from the states, cities and counties on solid waste issues. The views presented in this report are NACo's and do not represent those of the Environmental Protection Agency.

This project was performed under the Environmental Protection Agency grant S. 802294 by the National Association of Counties Research Foundation and was directed by William R. Maslin, Jr., Project Director and Marian T. Hankerd, Deputy Project Director; with assistance from Marlene Glassman.

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Introduction

The Office of Solid Waste Management Programs (OSWMP) of the Environmental Protection Agency (EPA) awarded a grant to the National Association of Counties (NACo) in November, 1972 to solicit the opinion of county officials to aid OSWMP in identifying key policy issues and the possible impact of these issues on county government.

To address these issues, NACo established a task force of 13 county officials representing a national cross section with diverse professional backgrounds to identify the basic issues of the national solid waste picture.

General areas requiring further study were outlined at the first meeting of the task force. As a result, three committees were set up to explore in more depth the areas of incentives, regulations, and operations.

The three committees' recommendations were summarized and forwarded to the task force for

consideration. At the final meeting of the task force, these recommendations were thoroughly reviewed. From this list, eleven basic issues were identified which present the counties' views on solid waste. Additionally, NACo's Steering Committee on Environmental Quality accepted the task force's recommendations and incorporated them into NACo's policy statement on solid waste. This report represents the judgment of that cross section's experience in the area of solid waste management.

Appendix A contains a listing of the 13 task force members and members of the three committees. Appendix B is a summary of the task force's preliminary deliberations and the charge to the three committees by the task force. Appendix C lists the issues and recommendations issued by the task force. Appendix D, Discussions on Issues are details of the issues as discussed by the county officials. Appendix E lists a definition of terms.

Summary

An Overview of the Problem

Counties view, with alarm, the administration's drastic reduction in funds available to the solid waste program for FY 74. A major environmental problem has been recognized and great strides are being taken to address solutions. NACo believes that the initiative provided by the national solid waste program, resulting from the Solid Waste Disposal Act of 1965 and the Resource Recovery Act of 1970, should not be lost.

We particularly laud the elimination of open dumps, the sponsoring of improved disposal techniques, action toward resource recovery, generation reduction studies and the development of training programs. The counties also are concerned with the increasing energy needs of this country and the potential use of solid waste products as fuel for power.

While the counties agree with the view of many administration officials that solid waste is basically a local problem — particularly in the area of collection, storage and disposal of non-hazardous waste — we observe that many problems must vigorously be attacked, directed and funded by the federal government. For example, problems not local in scope are generation reduction, resource recovery, handling and disposal of hazardous wastes, demonstration and dissemination of data on improved techniques, urgent personnel training needs for all levels in the solid waste system, continuing research and development requirements, funds needed by some local governments to start acceptable solid waste programs. Federal funds are needed to organize and execute these phases of a national solid waste program.

Recommendation Highlights

Hazardous Wastes

Hazardous waste, in its many forms, is not restricted by county boundaries. Therefore, the county officials feel that due to the relatively small supply of hazardous solid waste products locally, and to the interstate nature of the problem, regulation and enforcement of standards relating to hazardous solid wastes should be at the national level.

Most counties do not have the technical capability to analyze a particular hazardous waste product to find out if it should be treated before disposal. This capability is more apt to be at the state level. For this reason, counties see the actual collection, intrastate transportation and disposal being rightfully located with the state government and coupled with this, the necessary enforcement powers. When a large employer in a county, with a small population, tends to mishandle its hazardous waste effluent, the county finds it difficult to exercise the proper enforcement authority. Additionally, a state could provide uniform requirements and the capability to arbitrate among other levels of government (cities, counties, townships) in carrying out these functions. The federal government also must control and enforce the interstate transportation of hazardous wastes and establish ultimate disposal locations. At the county level, decisions on ultimate disposal of hazardous wastes, from manufacturing processes, for example, are difficult to make as there may be no legal site for disposal within its boundaries. For some items perhaps there are only a few places within the United States where materials can be disposed.

Recycling

The task force believes the best way to encourage local government and the citizen to become involved in recycling activities, is the use of incentives. Various members cite examples where recycling on a small scale is successful, but these are usually in areas where a market exists locally, i.e., a glass plant, a used-oil refinery, a steel mill, etc. However, it is noted that these are usually isolated cases and unless profitable, this type of recycling will not be done.

Experimental resource recovery systems now going on in several locations also were discussed. The task force is primarily concerned that the cost of resource recovery prohibits effective solutions. The task force recommends resource recovery systems be examined to consider the marketability of the end product. National markets should be identified and the entire problem should be addressed by the U.S. Department of Commerce as opposed to the Environmental Protection Agency.

The task force expresses concern over the number of auto hulks in their counties, and the need for legislation to finance the cost of disposal and recycling. The subject of a trust fund for disposal of costly items was discussed and it is felt that should a trust fund be established, there should be a pass-through from the trust fund to the local agency responsible for the disposal of the product.

Research and Development Programs

The task force feels EPA should augment its research and development efforts. Particular areas requiring further study include the control of leachate and methane gas generation, compaction density versus settling rates, the rate of leachate attenuation of various solid waste components, and the long term environmental effect of material going into the landfill.

Research and development should be directed toward the means to dispose of difficult items, whether through burying, recycling, or partial reprocessing. Items particularly identified were tires, automobiles, trees and tree stumps, liquid waste, oil, sewage, sludge, animals and animal byproducts.

A study by EPA, is needed to independently evaluate all solid waste demonstration programs. Too much advance publicity on the effectiveness of various public and industrially sponsored programs is detrimental to the overall national effort. Claims of great performance have caused local governments to procure or install systems, due to local pressures, before they are fully tested, or without understanding that a system was

effective only in a particular geographical region. Therefore, the task force specifically urges EPA to evaluate these systems independently from any evaluation by the sponsor of the project. Also they feel a need for a consumers guide to commercial hardware, from rolling stock to capital equipment. County officials want to know not only what this equipment can do, but also its limitations, its realistic life, maintenance problems, etc.

It also is recommended that EPA should augment its technical clearing house service by abstracting and distributing to all levels of government, information collected on solid waste management. Smaller counties, whose need is greatest, are those which are not in the mainstream of public information distribution systems.

Energy Crisis

One problem which kept surfacing throughout the discussions is ways to encourage and develop economical techniques for using solid waste in alleviating the growing energy crisis. Several experimental efforts, now underway, were discussed. However, the economies of these systems have not been proven.

Training Needs

The task force is concerned that the new budget as proposed by the administration would drastically curtail the current excellent training programs of EPA. In fact, they recommend EPA should augment these programs at the university level by developing courses in solid waste management and related engineering problems. They feel that this would only occur if supported by federal grants. Additionally, efforts should be made by the administration to strengthen other professional development programs. It is also noted that several states sponsor courses in conjunction with EPA or at state universities which have proven useful. This effort should be expanded to the remaining states. This expanded effort also should be directed to instructing managers on training their own personnel.

The task force feels EPA should launch an improved public relations campaign to train the public to recognize the growing solid waste problem; to make all citizens understand that they are part of the problem; that the problem must be addressed and solved; but that it will take their cooperation as well as money.

The general feeling of county officials is that local government's role should be minimized in the area of hazardous waste; however, they feel local government should have the option of adopting regulations which are more stringent than either federal or state regulations when hazardous solid waste disposal might impact on local zoning or land use plans.

Generation Reduction

Regarding non-hazardous solid waste activities, the task force believes the federal government must lead the effort to reduce the generation of solid waste, since only at the national level is it possible to control manufacturers, packaging practices and other causes contributing to solid waste problems. It is too large a task to be handled by local or state governments.

The task force feels that state government should only develop **guidelines** for the storage, collection, processing, and disposal of non-hazardous solid waste. Counties have had and are having bitter experiences with the states in air and water regulations. Many states have issued operational standards whereas performance standards would be adequate. They feel such variations as population and geology throughout the state, mandate that guidelines must be general enough to fit a variety of circumstances. The general consensus is that local government should set **operational standards** on storage, collection, transportation, and disposal of non-hazardous solid wastes.

Enforcement

Coupled with the problem of regulation is enforcement. Local government, of course, must enforce its own standards. However, to do this, counties must have the power. If proper enabling authority does not exist, the state should aid the county in obtaining the authority. The task force expresses the hope that with proper federal support, state government can ease the restrictions on local governments, i.e., the lack of enabling authority, bonding limitations, and other similar constraints, which enable local government to provide proper solid waste management.

The task force feels local government should set standards on vehicles and contract operators to ensure citizen protection. Such standards should include mandatory use of devices on vehicles in transit, to prevent trash from flying off, and controlling the length of time garbage is stored before disposal. Further, local government should set standards on the level-of-service, and control over serviced areas.

Fiscal Incentives

The task force discussed various types of fiscal incentives all levels of government could use to upgrade solid waste activities. The task force recommends there should be a federal grant program but it should be limited to fund local government's initial acquisition costs of solid waste facilities which exceed their bonding limitations. This particularly is needed in rural areas where the cost of converting from open dumps to sanitary landfills has a severe impact on those counties with limited tax bases. Therefore, site acquisition and preparation costs, purchase of on-site equipment, and in some cases, rolling stock costs should be augmented by the federal government.

The establishment of pilot solid waste projects should be initiated by the federal government, not by local government.

When low interest, long term federal loan programs are established, these loans should be sufficiently flexible to accommodate new technologies and breakthroughs. It is pointed out many counties that took 20 and 40 year loans have been trapped by the original conditions of the loan and now, ten or fifteen years later, the situation has changed and they are bound by these original requirements. Therefore, flexibility is needed.

The federal government should create tax incentives for industry, by allowing preferential tax treatment for research and development leading to reduction of products entering the waste stream, and by accelerating depreciation on capital expense related directly to solid waste management. Definite concern is expressed that unless there is an incentive, be it positive or negative, industry will not react.

The task force feels that when a state establishes procedures for effecting compliance at the local level, proper enabling legislation must be enacted which would allow local government the authority to finance and operate solid waste management programs.

Finally, local government's major responsibility is to establish a self-sustaining solid waste management system. Local governments should consider charging user fees, the use of other local revenue sources if user fees are not adequate or any combination thereof. Also they must promote public acceptance of solid waste programs.

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APPENDIX A

Task Force and Committee Membership

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President, Mobile County Commission
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APPENDIX B

Preliminary Discussions

The task force met in Washington, D.C., on November 30 - December 1, 1972. EPA representatives briefly reviewed the issues on national solid waste. These views are summarized in the paper entitled "The Federal Role in Solid Waste Management Present and Future" - a speech given by Samuel Hale, Jr., John Hill, and H. Lanier Hickman, Jr. Copies were made available to the members of the task force prior to the meeting. The task force deliberated for two days on the basic issues. A summary of the major recommendations resulting from this meeting follows.

After their deliberations, the task force set down preliminary recommendations, summarized below, that were submitted to three committees for detailed study.

MAJOR RECOMMENDATIONS

Federal Role

- Federal regulation should be restricted to the hazardous waste category, Type I, as defined by EPA
- A clear definition should be provided for Type II waste to distinguish it from Type I; the term "small quantities" must be clarified
- Federal regulation should apply to the generation of waste in all categories
- There should be no federal control over state and local governments in the disposal of non-hazardous waste. The

federal government should encourage state and local governments to develop their own solid waste management programs

- The federal government should not tell local people how to establish solid waste management programs; rather, the government should provide advice
- A study should be made of federal offices involved in solid waste management activities to include investigation of overlapping federal programs, agencies and bureaus in the field of solid waste management
- EPA should supply information describing financial aid available for solid waste management activities
- Experts in solid waste management activities should be made available to train local personnel
- EPA should sponsor a strong national research, development, and evaluation program in the field of solid waste management. The program should serve as an information distribution system, disseminating technical information and acting as a clearinghouse. Information should be provided on existing programs, developmental and experimental, and be supplemented by an evaluation (often the criteria and goals established by a program are neither

realistic nor feasible)

- EPA should research realistic pollutant discharge data including tolerances
- EPA should develop technical equipment specifications
- The federal government should regulate and enforce solid waste activities on military bases
- EPA should aid state government in setting standards

State Role

- Establish a training program which perhaps could lead to certification of state solid waste managers or operators
- Supply technical assistance to local government
- Monitor local solid waste enforcement procedures
- Establish a revolving fund for construction of solid waste facilities and/or equipment
- Enjoin the federal government to aid states by bolstering debt programs
- Use federal funds (block or categorical grants) to assist local government
- Guarantee local bond issues

ADDITIONAL STUDY EFFORT

The task force considers three areas to be in need of further study. Therefore, it recommends that three committees be established to look at the issues related to:

- Incentives
- Regulations
- Operations

Committee on Incentives

The committee on incentives would study ways to upgrade local solid waste management in the areas of:

- Finance
- Public Relations

● Penalties

EPA should know how to assist local government in raising standards in the handling of solid waste. The task force suggests that the above points be discussed in depth to determine ways that these problems can be addressed by the federal government. Under finance, the committee is asked to consider user fees, utility type operations, general funds, general obligation bonds, state and federal funds, guaranteed loans, group bonds, federal incentives for establishing utility, or proper user fees.

Under public relations, the committee is asked to determine how to sell local citizens on establishing a viable solid waste program.

Under penalties, the committee is asked to discuss what types of penalties should be applied against the citizen, industry, and/or local jurisdictions which may not be adhering to the local and/or state ordinances.

Committee on Regulations

The committee on regulations should discuss the counties' viewpoint on the regulation of solid waste by the three levels of government. The task force believes that:

- The federal government should establish guidelines on non-hazardous solid waste
- The states should set general standards and monitor enforcement
- State regional divisions and local governments should work together to develop standards
- Local government should develop, implement and enforce specific standards

The committee would offer guidance to the federal government on controlling the generation of solid waste. Finally, the committee should look at the penalties that would determine whether the county government is in the position of dealing with local industry, for example, in the enforcement of solid waste regulations. Further, intergovernmental relations and how the counties deal with regional authorities, municipal corporations and large cities within their geographical confines should be studied.

Committee on Operations

The committee on operations would determine the counties' role in solid waste management. Historically, counties have been primarily concerned with collection, transportation and disposal of solid waste. Regarding the problems of technical assistance, what level of government should supply technical assistance and at what level, of the solid waste management structure? Similarly, manpower training should be addressed. What level of manpower needs training? Should this be by federal, state, or local government? Which level is most capable and which is most likely to have the greatest success? Who should fund this assistance? Problems associated with research and development should be discussed. What are the solid waste research and development needs as seen from the county viewpoint?

Organization of the Committees

To provide continuity to each of the three committees, task force people should be represented on each committee. The following representatives were chosen:

Committee on Incentives:

Chairman: Fred Nierman
Commissioner
Chelan County, Washington

Member: William Hutchinson
Deputy Director of Public Works
Duval County, Florida

Committee on Regulations:

Chairman: Robert Curry
Director
Environmental Control Dept.
Jefferson County, Texas

Member: Edward Chen
Deputy Chief Administrative
Officer
Prince George's County, Maryland

Committee on Operations:

Co-Chairman: Deane R. Ankla
County Engineer
Ramsey County, Minnesota

Co-Chairman: Robert Roller
General Manager
Solid Waste Disposal District
Chemung County, New York

At the conclusion of the three committees described above, their deliberations would be summarized and forwarded to the task force for study. A second meeting would be held by the task force after study of the three committees' recommendations whereupon a county position would be forwarded to the Environmental Protection Agency, Office of Solid Waste Management Programs.

APPENDIX C

Issues and Recommendations

1. ISSUE:

What level/levels of government (federal, state, local) should regulate hazardous solid waste activities?

RECOMMENDATIONS:

The federal government should:

- Set standards on the amount of hazardous solid waste generated by regulating the producers (manufacturers)
- Set standards on all interstate and international transportation of hazardous solid waste
- Set guidelines on the collection, storage, intrastate transportation and disposal of hazardous solid waste
- Promote efforts to stimulate research on recovery of hazardous solid waste and create markets for recycled materials

State government should set standards on collection, storage, disposal and the intrastate transportation of hazardous solid waste

Local government may adopt regulations more stringent than federal or state regulations on hazardous solid waste disposal short of total prohibition

EPA should promote a system of labeling solid waste (containers) to promote communication between producer and disposer, particularly in the

area of hazardous wastes

The location of hazardous solid waste disposal sites should be registered with the federal government as well as with the local government

2. ISSUE:

What level/levels of government (federal, state, local) should enforce hazardous solid waste activities?

RECOMMENDATIONS:

Federal government should enforce standards for generation, interstate and international transportation and recovery of hazardous solid waste

State government should enforce standards on collection, storage, disposal and intrastate transportation of hazardous solid waste within the state

Local government should have the power to enforce standards on the collection, storage and disposal of hazardous solid waste within its boundaries

3. ISSUE:

What level/levels of government (federal, state, local) should regulate non-hazardous solid waste activities?

RECOMMENDATIONS:

The federal government should:

- Establish standards to decrease the generation (particularly in packaging) of non-hazardous waste

- Set guidelines on processing, disposal and recovery of non-hazardous solid waste sufficient to give incentives and establish markets for solid waste products

The state government should:

- Set guidelines on storage, collection, processing and recovery of non-hazardous solid waste
- Set performance standards on the disposal of non-hazardous solid waste
- Set standards on intrastate hauls and on liquid solid waste haulers

Local government should:

- Be empowered to set operational standards on non-hazardous solid waste activities including storage, collection, weight limits for vehicles and for the vehicles themselves
- Set standards on processing

Within a single geographical area, federal agencies should conform, at least, to the standards of the local area. The local government should have jurisdiction.

Non-hazardous disposal sites should be recorded with the local land records authority showing on the document that the land had been used as a sanitary landfill site.

4. ISSUE:

What level/levels of government should enforce regulations of non-hazardous solid waste activities?

RECOMMENDATIONS:

Local government must enforce all standards set by local government. The cost of enforcement of federally imposed standards shall be borne by the federal government. (Funds should be supplied by the federal government to the states through to local government or preferably, by the federal government directly to local government.)

5. ISSUE:

What type of operational standards should local government apply to collection, transportation and disposal of non-hazardous solid waste?

RECOMMENDATIONS:

Local government should set standards on vehicles and contract operators

Local government should regulate the hauling routes of contract collectors and transfer stations

Local government should set disposal standards on:

- Pre-site selection
- Site development
- Site operational standards
- Monitoring criteria for site operations

6. ISSUE:

What is the counties' opinion on federal grants or loans?

RECOMMENDATIONS:

Federal government should establish a grant system to fund local governments' acquisition costs for solid waste facilities, beyond bonded limits

A low interest, long-term federal loan program should be established. The loans should be sufficiently flexible to accommodate new technology and breakthroughs

Federal lands should be made available for use for solid waste purposes

7. ISSUE:

What type of fiscal incentives should be considered by the federal government to accelerate improvement of solid waste activities at the local level?

RECOMMENDATIONS:

The counties endorse recycling. However, to accelerate recycling at the local level, the federal government must provide incentives, such as the establishment of an Environmental Trust Fund

The federal government should create tax incentives for industry by allowing preferential tax treatment for research and development and by accelerating depreciation on capital expense related directly to solid waste management

8. ISSUE:

What incentives can the states give to local government?

RECOMMENDATIONS:

States should develop realistic standards compatible with federal guidelines

States should:

- Establish procedures for effecting compliance at the local level
- Establish enabling legislation to allow local government to finance and operate a solid waste program. States should support local efforts to obtain enabling legislation
- Consider tax incentives for industry by allowing preferential tax treatment for research and development and by accelerating depreciation on capital expense related directly to solid waste management. The states should also consider allowing individuals a direct tax credit for being part of an approved and operating solid waste management program

States should encourage local governments to include solid waste facility sites as part of the land-use section of its comprehensive plans. If such action is beyond the capability of some local governments, states should assist in this function

States should work toward solutions for both industry and local government before implementing controls

When there is a deliberate violation and a feasible alternative exists, a penalty should be imposed (i.e., dollars, cease and desist order, withholding of incentives). If a feasible and practical alternative does not exist, the penalty should be deferred

9. ISSUE:

What incentives can local government consider to upgrade their solid waste activities?

RECOMMENDATIONS:

At the local level, the major local responsibility is to establish a self-sustaining system. In doing so, local government should consider:

- Charging user fees
- Use of other local revenues
- A combination of the above

Local government should promote public acceptance of the solid waste program

Local government should encourage implementing both civil and criminal charges for littering and local government should ensure a vigorous enforcement program

10. ISSUE:

What areas of research and development require additional emphasis?

RECOMMENDATIONS:

Particular areas requiring study are problems relating to sanitary landfills including control of leachate and methane gas generations; density compaction versus settling rates; and rate of leachate attenuation of various solid waste components

Efforts should be made to identify national markets for resource recovery systems

The problems of disposal of unusually difficult solid waste products, including tires, automobiles, trees, tree stumps, industrial wastes, liquid waste, oil, sewage, sludge, animals, animal fat and by-products should be addressed by EPA

EPA should initiate a program to evaluate all solid waste demonstration programs

EPA should augment its technical clearinghouse service to abstract and distribute to all levels of government, information collected on solid waste management

As a general recommendation, the federal government should consider and encourage the development of economical techniques to use solid waste to aid in alleviating the growing energy crisis

II. ISSUE:

What are training needs as viewed by local officials?

RECOMMENDATIONS:

States are urged to establish training schools and develop short courses and assume responsibility for developing practical operator training programs by using local expertise

EPA personnel should be made available to attend important local meetings upon request

EPA should launch an improved public relations campaign to train the public to develop

and support proper solid waste management practices

EPA should promote educational programs at

the university level in solid waste management and engineering, to be supported by federal grants, and should strengthen professional development programs

APPENDIX D

Discussions on Issues

1. ISSUE:

What level/levels of government (federal, state, local) should regulate hazardous solid waste activities?

1.1 RECOMMENDATIONS:

The federal government should:

- Set **standards** on the amount of hazardous solid waste generated by regulating the producers (manufacturers)
- Set **standards** on all interstate and international transportation of hazardous solid waste
- Set **guidelines** on the collection, storage, intrastate transportation and disposal of hazardous solid waste
- Promote efforts to stimulate research on recovery of hazardous solid waste and create markets for recycled materials

1.1.1 DISCUSSION:

The federal government, by virtue of the Commerce Clause of the United States Constitution, has authority to prevent certain hazardous products from contaminating the solid waste stream within a time period of ten years. This constitutional authority exemplifies the importance of the federal role in hazardous solid waste activities.

The task force believes the federal government must set **standards** on the amount of hazardous solid waste that can be generated by regulating the manufacture of products which result in hazardous solid waste. However, certain implications cannot be overlooked. This concern is expressed as follows:

If the federal government adopts standards limiting the amount of hazardous solid waste to be generated, then the federal government could tell an industry that it could not use a certain process because that process would generate hazardous industrial waste. Is this desirable? Do we really want to tell a manufacturer that he cannot use a particular process?

Serious problems are associated with the interstate transportation and disposal of hazardous waste that must be handled by the federal government in coordination with appropriate state and local officials.

There are certain areas which the federal government obviously must control: e.g., the movement and disposal of radiological items, the movement and final disposal of hazardous waste from the military (poison gas, germ warfare). Similarly, locations must be designated where all types of hazardous waste can be deposited. Often there is just no place legally where local industry can dispose of hazardous wastes. Locations must be designated; otherwise, the illegal disposition of these products will continue.

The last recommendation above, relating to resource recovery of hazardous solid waste is answered, in part, in that the federal government has determined that resource recovery is a priority item in the scheme of solid waste management. The task force maintains:

If the federal government maintains that we need resource recovery, it must set standards and insure the economic feasibility of such recovery programs, particularly in the area of hazardous solid waste.

If the federal government does not set guidelines on recovery, how will the materials

eventually be used? If the responsibility falls to the fifty states, a unified solution would be difficult. Standards and guidelines must be flexible. Needs differ in the highly industrial states (where capabilities and an adequate supply of recyclable materials exist) from those in rural states and counties. For example, a poor county with a rural population should not have to meet guidelines for the disposal of ten pesticide cans as would a large county with ten barrels. The federal government must also insure that new technologies are developed in the resource recovery area.

Also, we can't continue to bury all hazardous wastes, since damage to the environment in many instances can't be estimated. Much of it should be rendered inert, or recycled. The task force can visualize the federal government prohibiting the use of certain hazardous materials in manufacturing or in industrial processing due to its potential hazard to the solid waste stream.

All of the recommendations above properly fall into the realm of federal government regulation, because of the federal government's capability and powers. In addition, county government's limited financial resources must not be overlooked. One county official stated:

I would be delighted to have the federal government control hazardous waste because we (the county) do not have the capability. It would be too expensive for us to handle these types of problems.

1.2 RECOMMENDATION:

State governments should set standards on collection, storage, disposal and the intrastate transportation of hazardous solid waste.

1.2.1 DISCUSSION:

The task force regards the federal government as the level of government to set standards on hazardous solid waste generation and interstate transportation. The state however, is seen as the proper unit for setting standards on hazardous solid waste collection, storage, disposal and intrastate transportation, based on federal guidelines.

As pointed out in recommendation 1.1, the federal government should set guidelines on the handling of these wastes, but the state should be responsible for standards within its borders. To assure uniformity throughout the state, state standards are necessary. Further, since many counties do not have an adequate technical staff, or enforcement capability, the state must be asked to supply the technical expertise required. For

example, if an industry brings 50,000 gallons of sulphuric acid to the county disposal site, the question arises, what is the proper method of disposal. Should it be neutralized first? If so, how? Proper technical guidance is required. Regional considerations dictate that the state is the proper level of government to set these standards.

The state can exercise various options in hazardous solid waste collection, storage and disposal. States can do this by becoming an operator, by contracting with a private operator or by contracting with cities and counties where disposal facilities exist.

We do not want to limit the right of the state or other governmental agencies to handle disposal on a contract basis. The latest figures show that the private sector is handling 51% of the municipal waste and 94% of the industrial waste. This includes collection and disposal. These people are in business to make money; they are professional, they have staffs; whereas, in many of our smaller or isolated counties, there is no way the local government can handle that problem other than by licensing some professional.

Intrastate transportation of hazardous wastes also must be the responsibility of the state, under guidelines set by the federal government (recommendation 1.1).

The state should provide uniform requirements and arbitrate with other levels of government such as cities, counties, townships and other agencies. Implementation should be carried out at the local level, but the state must make the necessary general requirements.

1.3 RECOMMENDATION:

Local governments may adopt regulations more stringent than federal or state regulations on hazardous waste disposal short of total prohibition.

1.3.1 DISCUSSION:

The task force views local government's role in hazardous solid waste activity as primarily that of disposal. The county's role should be one of leadership in planning, coordinating and regulating final disposal. The task force believes that local government should be assured of flexibility in disposal and related activities. It is important though, that a viable working arrangement exist among all levels of government.

One county official states:

Counties should participate in the decision making process. For example, zoning laws must give some protection to the county. A state might say, 'we'll put it right down here whether you like it or not.' There must be some kind of working arrangement in which local government can have input in the deliberations.

Counties do not want to deal themselves completely out of the picture. For example, an industry might want to initiate a certain disposal procedure and the state might approve, but the counties may object. The county should save certain procedural responsibilities for themselves to assure that disposal fits local desires.

The final decision must rest with those who have the authority, but there should be some mechanism for counties to show their opposition.

Transportation is a necessary step in the disposal process and counties should exercise a certain amount of control in that area. Local government would like to preserve the option on the route to be used, the precautions, safeguards and so on.

1.4 GENERAL RECOMMENDATIONS:

- EPA should promote a system of labeling solid waste (containers) to promote communication between producer and disposer, particularly in the area of hazardous wastes
- The location of hazardous solid waste disposal sites should be registered with the federal government as well as with the local government

2. ISSUE:

What level/levels of government (federal, state, local) should enforce hazardous solid waste activities?

2.1 RECOMMENDATION:

The federal government should enforce standards for generation, interstate and international transportation and recovery of hazardous solid waste.

2.1.1 DISCUSSION:

Since the task force views the federal government as the proper level for setting standards on the generation and interstate and international transportation of hazardous solid

waste, it believes the federal government should also enforce those standards.

Local government should not be the enforcing body when a standard affects the nation as a whole or when hazardous waste is generated in one state (or nation) and moved between states (or nations).

Additionally, a task force member stated:

It is more logical for the federal government to promulgate and enforce regulations against large manufacturing companies that have hazardous products. Because of the nature of the industries that create hazardous waste and their involvement in interstate commerce (and because of our constitutional laws) the states should be able to monitor regulations through inspection and testing activities.

The transportation of hazardous solid waste over international borders can pose problems for counties situated near the borders. The federal government should enforce its standards.

It has been the experience in my county (which borders on an international boundary) that when a chemical plant on the foreign side of the border spills mercury into the international waterway, the county level of enforcement is completely impractical and ineffective. This enforcement must be at the federal level.

2.2 RECOMMENDATION:

State governments should enforce standards on the collection, storage, disposal and intrastate transportation of hazardous solid waste within the state.

2.2.1 DISCUSSION:

The task force looks to the state government as the level of government to set standards on the collection, storage, disposal and intrastate transportation of hazardous solid waste (see section 1.2). Since the federal government should enforce standards it sets, the task force, therefore, believes it is appropriate for a state government to enforce standards it sets. The state must develop suitable standards and then enforce them.

The county is not the appropriate level of government to enforce standards on interstate and international transportation of hazardous solid waste. Furthermore, the county should not be declared the enforcing agent for the intrastate transportation of hazardous solid waste.

When there is a large city within a county, it is impractical to expect the county to tell the large city how to handle intrastate transportation of hazardous waste. The state must be the enforcing body.

2.3 RECOMMENDATION:

Local government should have the power to enforce **standards** on the collection, storage and disposal of hazardous solid waste within its boundaries.

2.3.1 DISCUSSION:

Local government must have jurisdiction over the collection, storage and disposal of hazardous solid waste which is generated and disposed of within its confines, while at the same time adhering to guidelines and standards set by the federal and state government. The county role is explained by one county official:

We should keep in mind that the county must represent its constituency. Surely, we want to cooperate with the state and federal government but the county must also be responsive to the wishes of the people.

The following illustrates the complexities of the issue:

Testing the toxic content of materials received for disposal constitutes a major problem. Often such testing requires the services of a consultant firm. Thousands of dollars may have to be spent to assure that conditions are satisfied. Counties feel that there should be federal money available to help pay these costs. If, as in another instance, material is shipped from another state into one of our disposal sites, and we have to go out to make perimeter studies to make sure that it is safe above and beyond what the federal government might have regarded as a nominal inspection procedure, who should pay for that?

The task force in making the above recommendation considers it essential that federal agencies conform to standards which apply locally. Specifically, military bases are cited as examples of federal violation of solid waste management practices.

Some military bases are not even conforming to local standards — they are disposing of hazardous material on the ground.

3. ISSUE:

What level/levels of government (federal, state, local) should regulate non-hazardous solid waste activities?

3.1 RECOMMENDATIONS:

The federal government should:

- Establish **standards** to decrease the generation (particularly in packaging) of non-hazardous waste
- Set **guidelines** on processing, disposal and recovery of non-hazardous solid waste sufficient to give incentives and establish markets for solid waste products

3.1.1 DISCUSSION:

The task force views the federal government as the proper level for setting standards for hazardous solid waste, as discussed in Issue 1. Moreover, the federal government is considered the appropriate level to establish standards to decrease the generation of non-hazardous waste.

The federal government, in the task force's opinion, should set sufficient guidelines on non-hazardous solid waste recovery so as to provide incentives toward the establishment of markets for solid waste products.

The task force in discussing recovery of non-hazardous solid waste and its economic ramifications, has set down the following points as illustrative of county concerns:

If the federal government is to place emphasis on resource recovery, it must set **guidelines** and ensure the economic feasibility of such programs.

The two must go together because the federal government can't say, 'you shall do it' and then tell the local government that it has to take every tin can, paper, glass, etc., out of refuse, process and sell it. There is no use in telling local governments that, because a local government can't finance it.

The federal government can't set the same recovery **guidelines** that apply to a big city and to a small county, where one year's collection is not large enough to justify resource recovery operations. If the federal government sets **guidelines**, it must consider the different volumes of materials collected. It should therefore, be up to local

communities to set **standards** under federal **guidelines**. If it is going to be economically feasible for the counties to do so, the counties will do it; otherwise they won't.

All the research that we talked about is going to go into recovery (and very recently we've been told that recovery is never going to work unless the materials from large areas are combined). We will be crossing state lines and therefore, federal **guidelines** are clearly needed.

3.2 RECOMMENDATIONS:

State governments should:

- Set **guidelines** on storage, collection, processing and recovery of non-hazardous solid waste
- Set **performance standards** on the disposal of non-hazardous solid waste
- Set **standards** on intrastate hauls and on liquid solid waste haulers

3.2.1 DISCUSSION:

State **guidelines**, rather than **standards**, on storage, collection, processing and recovery of non-hazardous solid waste are deemed necessary by the task force. These guidelines must be general enough to apply to a variety of circumstances. As stated by one county official:

Our state has **guidelines**, but they're directed toward a specific effort such as tires, or milling operations that must be carried out in a specified manner. We have a milling operation that will be modified from the Madison idea and used in an area with a high water table. Our state regulations defined the activity. I'd call this a guideline only for a specific project; these are not state-wide guidelines.

Discussion item 1.2.1 deals with the need for uniform **standards** in the disposal of hazardous solid waste. This same concept of uniformity applies to **performance standards**, rather than rigid **operational standards**, set by the state for non-hazardous solid waste disposal. It is important that this distinction in standards be made since **operational standards** disregard variations in volume of trash generated, amounts of air pollution generated (if burning is involved), difficulties of frequency of collection in widely scattered areas, as well as climatic conditions.

A task force member explains:

There was burning of trash in a county with an entire population of 254 persons. The standards there were exactly the same as in another county with a population of 2 million persons. There's got to be a solution to this problem.

Another task force member underlines the importance of **performance standards** set by the state.

We look to the state to be sure that the adjoining county has similar controls to ours. We want controls established in our county to be equalled in the next county. Performance standards must therefore be enforced by the state. These would prevent the setting of too strict regulations in one county which could have a negative economic impact on attracting industry. If regulations in one county are too severe, industry most likely would move to a county that has less severe regulations. This would be particularly hard on counties actively trying to promote industrial expansion. Statewide **performance standards** on disposal would lessen this problem.

The task force deems it necessary for the state to set standards on intrastate hauls. The following example points out the need for such standards especially when considering the impact of citizen reaction to the movement of solid waste within a state:

A township in our county had a summertime population of 3,000 - 4,000 and a wintertime population of 1,000. There were two dumps. The summer people would throw their garbage in the dumps. The state said, 'close down the dumps.' Now, with these dumps closed, there is citizen reaction to the small township taking its trash into an adjoining township. We see this as creating tremendous citizen problems litigation-wise, unless regulations make sure these types of problems will not be created.

3.3 RECOMMENDATIONS:

Local government should:

- Be empowered to set **operational standards** on non-hazardous solid waste activities including storage, collection, weight limits for vehicles and for the vehicles themselves

- Set standards on processing

3.3.1 DISCUSSION:

Throughout the task force and committee deliberations, concern was expressed over those federal and state regulations which are inapplicable to certain counties. Local governments, as stressed by the task force, must have the power to adopt more stringent regulations than those set at the federal or state level (as stated in recommendation 1.3). While the state should set **performance standards** on non-hazardous solid waste activities, the task force believes local governments should set **operational standards** to assure the feasibility of operational requirements. Often **operational standards** set by the state are not germane as described below.

No doubt every state will have a permit system with local government. Under it, there is an approval provision for a land disposal facility. If you say you are going to have your landfill in a certain place, the state will subject it to a geological survey and then a permit will be issued. It must be operated so that it will not pollute the air or water. However, in many states, the state operating standards say 'thou shalt have a six foot litter fence around every landfill' whether there is a wind there or not. 'The access should be 22 feet wide.' Those are operating standards that have nothing to do with the environment or what we're trying to protect. Operating standards should be set by local people.

The task force believes that local government should set **operational standards** on non-hazardous waste storage, collection, weight limits for vehicles and on the vehicles themselves. One committee member states his concern:

We fear at the local level that unrealistic regulations imposed by state or federal government might not apply to our particular area. Large counties have greater problems and can meet higher standards than smaller counties. Small counties, in some cases, can't afford to buy one garbage truck. This is the reason why we must be in control as much as possible at the local level.

Another member states specific areas of county concern:

County governments must provide the mechanism to control and regulate collection, i.e., control of equipment, quality of personnel, frequency of pickup,

relation to public health, types of storage containers, control of rodents, flies and vectors.

The task force recommends that local government set standards on the processing of hazardous solid waste. Since most processing standards must meet air and water standards and OSHA regulations, no other specific recommendations on the subject were made.

3.4 RECOMMENDATION:

Within a single geographical area, federal agencies should conform to the **standards** of the local area. The local government should have jurisdiction to ensure that its standards are met.

3.4.1 DISCUSSION:

Counties which use public lands for solid waste disposal sites, or which supply solid waste disposal services to a federal agency, find that federal guidelines are interpreted differently by these agencies. A severe burden is therefore placed on the counties.

Moreover certain standards are unduly severe and costly especially for rural counties. Daily cover when volume is low is one of the problems. The county often cannot afford the expense of keeping a bulldozer at a landfill to cover refuse only one or two hours a day.

County officials would prefer to discuss these problems with officials of the U.S. Forest Service and the Bureau of Public Lands, before finalizing any new regulations.

3.5 GENERAL RECOMMENDATION:

Non-hazardous disposal sites should be recorded with the local land records authority. The document should state that the land had been used as a sanitary landfill site.

4. ISSUE:

What level/levels of government should enforce regulations of non-hazardous solid waste activities?

4.1 RECOMMENDATION:

Local governments must enforce all standards set by local governments.

4.1.1 DISCUSSION:

As discussed previously, the task force feels it is appropriate for the level of government which sets standards to also enforce them. Therefore, local governments must enforce all standards set by local governments. This goes beyond simply the

enforcement of local standards by local governments. The regulations and authority of other levels of government and other agencies of government must be considered. For example, the county must work with the state to obtain enforcement authority by securing enabling legislation. The county must be prepared to deal with problems caused by state regulations which are more detailed than appropriate for county government. Also to be considered is the type of court in which action will be taken and the type of cases tried. The role of the citizen is a significant part of enforcement activities.

Enabling legislation differs from state to state. Although the task force recommends that local governments enforce all local standards, lack of enabling authority, two solid waste state organizations, bonding limitations and other similar constraints make this recommendation difficult to implement. However, with proper federal legislation, state governments can ease these restrictions. Local governments must therefore act in a unified manner to ensure that proper state legislation is passed.

State-local relationships are important for the effective enforcement of solid waste standards at the local level. Several examples are cited:

In one state, the county is now involved due to recent state legislation. The county is involved not as a collector, transporter, or resource recoverer, but as an enforcing agent. State standards and guidelines have given the county responsibility to see that landfill operators meet standards. This is enforced by state law.

In another example, the state relationship to the county is much broader:

The state ensures that the counties provide adequate facilities. The counties work in one of two ways. They may franchise private contractors, giving them exclusive franchises to service a given area. The franchises are subject to competitive bids, or counties give a limited number of permits and allow competition among the collectors. At the same time, the county imposes the conditions under which contractors will operate the disposal site. The state has gotten into this activity by making every disposal operator apply for a state permit. So, the state really has control. The county, philosophically, has taken the responsibility to ensure proper service is given.

One task force member describes how his county relates to state agencies:

The solid waste act in my state has two parts, industrial and municipal. The municipal part is under the state department of health, by statute. The counties may adopt regulations under the act, even though they cannot pass ordinances. The regulations have the effect of law. Counties can hold hearings; they can issue permits. They can do anything the state can do under this act.

However, our counties are required by law to bring in the state in litigation on pollution control cases. They have to be a party to the court action in several ways. So counties depend heavily upon the state air and water control agencies to set high fines.

On the other hand, counties can take cases to local courts. If you're controlling at the local level, you need to be able to get into the lowest court.

You can take a violator into a JP court for a fine up to \$200. Then, you turn him loose. The next day, if he persists, you can fine him again. However, if the fine is \$1,000, you must go to the county court and bring in the state as a party to it. But you don't really have the time to pursue this course of action. Under the solid waste act, if a local entity goes to court, the state attorney general has to join in the suit.

A health officer also speaks of county/state relationships and stresses the importance of using the lowest court possible for enforcement:

Formerly, we had to go to district court for every citation by our health department. It took a prominent case 15 years to get through the district court, due to lack of political continuity between supervisors and the county attorney. The county health department finally wrote their own rules and regulations, without state help or the county attorney's help and put everything into the JP court. Now we're able to get things done. You need the lowest court possible to handle the lighter cases. However, when you are combating industry, particularly the bigger ones, you need to call on the state for help.

Enforcement problems vary among counties. The example below emphasizes problems in local enforcement:

The state and federal government enact standards and guidelines which local government must follow. You are expected to implement them by rigid enforcement or else the program becomes meaningless. For example, if you have standards for air pollution, but no one enforces them, what's the sense of having standards? The same will be true with solid waste disposal. It is easy for the state to legislate on these matters and then pass it on down to the local communities for implementation. By the state saying 'you fine a citizen for dumping garbage on the side of the road, then you prosecute him' is not going to solve the problem. Our experience has shown that counties have many different types of problems. One county may have problems with shopping complexes that generate so much improperly stored trash. You need the ability to take that entire complex to court. You can't afford to take each individual shopowner to court.

Conversely, many counties don't have this type problem, as collection authority is mandated by the state. In some areas local politics may enter into enforcement actions against a favored industry or business, however one county solved this by giving their health department citation authority. When someone creates a problem, he can be cited. The minute he is cited, that removes all resistance from the county council, district attorney and so on because it puts him in court.

Much of the task force discussion focused on the use of citizen action for enforcement. One county official speaks about the implications of enforcement by local citizenry:

Citizen action is an effective tool. Where the county might not have the ability to take on a large automobile manufacturing company, ten neighbors can get together and hire an activist lawyer. Something is done. You eliminate politics. Politics is an important consideration at the local level, especially in a town that has a single industry that may be a polluter. The local elected officials are very reluctant to go too hard on the industry for economic reasons.

Citizen activism in solid waste management often reinforces the county role as enforcing agent.

When the county government is charged with responsibility for enforcing solid waste disposal to ensure that industry and everyone within the county gets their solid

waste to the proper disposal area, pressure groups and local citizens may come to county officials who are the first persons on the firing line. They will say that there are rats in a particular area full of trash, 'close the trash heaps down and get that junk out of there.'

The county has to enforce standards. The onus is then right at our doorstep.

Citizen activism mounts when large industry pollutes. One committee member, a lawyer, related this experience:

In our community, we have four large automobile plants. From our experience with air pollution, citizen activist groups or an individual citizen will come to the county commission saying 'look at that dirty air coming from that factory. Close it down.' The commissioner then turns to his legal staff and says, 'we have this ordinance, get going.'

But the legal staff often doesn't have that capability. We have a state ordinance on air pollution. A good thing about our state law is that it retains a provision (and an enforcement aspect that we would like to see in any law) to preserve the citizen's right to go to court, regardless of the governmental entity, to enforce environmental regulations. If the citizen has a complaint about a polluter and a government doesn't have the capability to enforce the regulations, the citizen suit can force them to conform. It has been very effective. For example, look how effective the Sierra Group has been.

In rebuttal to this discussion on citizen actions the following point is made:

The presumption is that you authorize citizen suits because the citizen stands on the side of right. He knows what is good for the world and he's going to correct matters. In many instances, where a citizen stuck his oar in, he did not — in fact — stand on the side of right. He was using the side of right as a pretense or sham for grinding some type of ax. For example, a fairly large municipality is discharging an extremely poor quality of effluent. Due to pressure from the state water quality board, they attempted to correct this flaw awhile back. The desire on the part of the community was there. But a good citizen has stopped

progress for six years based on the inadequacy of the environmental impact statement. Therefore, citizens do not always stand on the side which is right.

Yet, the task force maintains that the validity and effectiveness of citizen suits must not be underestimated.

4.2 RECOMMENDATION:

The cost of enforcement of federally imposed standards shall be borne by the federal government. (Funds should be supplied by the federal government to the states through to local government or preferably, by the federal government directly to local government).

4.2.1 DISCUSSION:

The financial implications of this statement received much attention. The task force maintains as an overall general recommendation, that if the federal government sets standards, it must back them up with funding.

The financial problems counties have regarding enforcement is illustrated by a county attorney:

We've been through the carrot and the stick proposition with the federal government on air pollution. The state got the money, and the county adopted an ordinance because it was directed to by the state. Then the revelation came, 'county, you enforce the ordinance.' The county doesn't have the money to enforce the ordinance. The county funded the program to get the health department involved, but to go out to attack polluters, bring them into court and obtain injunctions is a costly procedure. Also, we don't have qualified technicians to give us the expert input needed in this litigation. The county doesn't want to be thrust into that position again.

A specific example of a county's predicament in financing the enforcement of a federal regulation:

Occasionally, we will have to dispose of a truckload of contaminated food. The Treasury Department say, 'you shall bury it.' We have to spend an extra \$300 to \$400 to bury that load. Whom do we send the bill to? These costs are imposed by higher authority.

5. ISSUE:

What type of **operational standards** should local government apply to collection, transportation and disposal of non-hazardous solid waste?

5.1 RECOMMENDATION:

Local governments should set **standards** on vehicles and contract operators.

5.1.1 DISCUSSION:

Collection is traditionally and necessarily a local function. Since collection vehicles are such an integral part of the collection operation, the task force finds it is necessary for local governments to set standards on these vehicles. As one county official stated, "If you are going to haul waste, you must have standards. You can't haul it in open gondolas." Vehicle standards should be set according to classification of the vehicle by type and use. Types of vehicles include satellite and transfer vehicles. Uses would include collection of septic waste, wood and brush, industrial refuse, and acid and inert materials.

Failure to exercise control of collection vehicles creates nuisances. As one county official explains:

As one county official explains:

Waste is piled up to the top of some collection vehicles, and it's blowing off along the road — you can see it from a mile away. This is a nuisance. You must have control of all vehicles. Some departments may require that a truck be covered, but perhaps a ton-and-a-half stake body is covered but the guy has to shovel his load off by hand. You can't have him tying up a transfer station or a spot like that. Thus the need for standards.

Vehicle licensing and its association with state law are discussed below:

Under our county licensing system, we have a "Y" license (trucks can operate in the innercity and in certain areas within the metropolitan boundaries). When it leaves that area, it immediately falls under state law — subject to all licenses and procedures that go along with it.

I believe that by setting standards for vehicles on a county level, a village may set a lesser standard as long as the refuse collector operates only in that village for a certain purpose. For example, we have many alley pickup vehicles — little carts where the guy scoots down the alley and loads up 10 or 15

houses and then meets the big truck at the end. They can travel only in the municipality where they are licensed as a garbage collector. We aren't licensing them as motor vehicles (maybe we should). We might also consider regulating other types of vehicles which offer different types of pickup service, septic waste, industrial refuse, acid, etc. A tree hauler doesn't need the same sort of compactor unit as does the residential hauler. These are the types of local standards we should apply.

A successful example of local control is shown in the following:

We work with municipal governments from two directions. The municipal government works out a contractual arrangement with a private solid waste corporation. We review these contracts and their capability to handle this municipal waste. If we feel that the corporation can adequately handle it, we recommend that they negotiate the contract for a lump sum payment to the corporation by the municipality. The municipality will collect the necessary monies, usually from collection fees, and write the private corporation one check for the service.

The private corporation is chosen by the bid process. We just went through this with a municipality of about 5,000 population. They calculated it was costing them through municipal pickup, \$3.33 per living unit, per month. They felt that they could get a better deal through a private contractor. They put out the bids and came up with \$2.50 per unit, per month. They saved 83 cents or 25%.

Another approach we use is to have a municipality declare itself an "open territory." We then negotiate and regulate the private corporation that wins the bid. We issue permits, approve his equipment, his disposal methods and his frequency of collection. The County Commission must approve collection fees. If the municipality is declared an open territory, it will fall within a franchised area in which this corporation can operate. No other private contractor can infringe upon his territory. It is similar to a public utility. Once the County Commission approves the franchise for a given territory, then he operates this franchise under the contract conditions and no one else can encroach upon it.

To implement the collection, transportation and disposal system, many counties contract with private firms. The task force believes that local government must set standards to assure a proper system is implemented. Such standards would set level-of-service and control of the serviced area. For example, a county could set a minimum level of service; for instance, pickup will be once a week (or twice a week) or, from the backyard or curbside.

Another official stated how his county controlled contract haulers:

In order to eliminate unnecessary waste caused by overlapping of collections, my county encouraged the main operators to organize an association. They now have a systematic, planned operation. Each operator has his own territory and has eliminated overlapping of services.

5.2 RECOMMENDATION:

Local government should regulate the hauling routes of contract collectors and transfer stations.

5.2.1 DISCUSSION:

In the task force's opinion local government regulation is particularly needed over hauling routes and vehicle weight limits of contract collectors. The need for local control over these matters is illustrated below:

From mid-February until mid-May a great number of our roads have restricted load limits. Haulers, under the guise of doing something about their own operations, have gotten a temporary permit to operate at 11 tons per axle. While we still have the right to select the routes over which they travel, many of our routes are designed to handle 9 ton axle weight loadings. During the spring thaws, a number of those roads cannot handle higher axle weights. Now the contract haulers have proposed a bill to the state legislature to get route selection taken away from the local government so they can haul the 11 tons anywhere. The first time they get onto a five ton axle weight road with an 11 ton load, they are going to find themselves hauling their material out by the bucket load. It will severely damage our roadways and not only that, it's going to louse up the whole system.

Also, routing systems must be developed that will satisfy local jurisdictions and problems created by multiple municipalities. One committee member describes his problems as follows:

We find that one municipality may not want another municipality to go through its streets to get to the disposal site. So, you've got a problem of developing a routing system that will satisfy local jurisdictions. I had one mayor tell me, 'you're not coming through our town with that garbage.' I shot back at him with, 'well, we sure don't want your garbage disposed of out in the county. If you don't want our garbage trucks to come through your municipality, where are you going to dispose of yours? Let's have you dispose of your refuse within your own municipal boundaries.'

This is a real problem, when one municipality is not dominant. Also, there is the problem in towns of 2,500 - 3,000 people. This town is not large enough to develop an efficient collection system as far as manpower or equipment is concerned.

There is a need for research in the area of pickup and transport equipment. Often local laws are being bent to suit equipment. The task force believes that the federal government should encourage manufacturers to develop equipment that suits the highways.

5.3 RECOMMENDATIONS:

Local government should set disposal standards on:

- Pre-site selection
- Site development
- Site operational standards
- Monitoring criteria for site operations

5.3.1 DISCUSSION:

Efficient collection and transportation operations of the solid waste management system discussed above cannot be fully assessed without consideration of disposal. Local governments must also set standards on disposal. The three operations work together to form a system, and local government regulation is necessary for all three stages of operation.

Many factors must be considered in establishing disposal standards. Under the first step (pre-site selection), traffic flow, environmental impact and daily control requirements must be considered in addition to site location.

In pre-site selection one must consider the environmental impact of the site. One committee member notes:

A site could be developed economically, but environmental considerations may not be satisfied. I think that you've got to look at the overall program before you decide. One landfill site may be the cheapest to develop, but it may have a heavier residential impact than a rural site. You also must consider the cost of hauling to the site.

State and federal requirements often impact on local site development criteria. Accordingly, local government should consider land use planning, air and water standards and geological studies. Concomitantly, site operational standards should conform to state and federal requirements.

Monitoring of the disposal site operation must not be neglected. The task force believes that monitoring should be performed by the county and/or state as the situation requires. Again, federal and state requirements determine implementation and enforcement criteria.

6. ISSUE:

What is the counties' opinion on federal grants or loans?

6.1 RECOMMENDATIONS:

Federal government should establish a grant system to fund local governments' acquisition costs for solid waste facilities, beyond bonded limits.

6.1.1 DISCUSSION:

Grants were discussed at length. At first, the task force wanted no federal solid waste grants. However, the smaller counties are concerned about the relatively large initial costs of converting many small county dumps to a proper sanitary landfill operation. Costs include site acquisition, ground preparation, purchase of on-site equipment, and in many cases rolling stock. These costs present too great a burden for rural counties with a low tax base. The magnitude of the problem is indicated by the fact that there are over 1,800 counties in the United States with fewer than 25,000 persons.

A rural county administrator speaks from the small county viewpoint:

We have many small counties in the south that do not have proper solid waste disposal systems. The idea is to get them involved as soon as possible. Starting costs in any

program. The incentive must be the availability of capital funds because those initial costs really hurt the small county.

An interesting input on the subject was supplied by an investment banker who has had experience with municipal financing.

As for federal grants, you should go beyond the initial stage. In what areas do you need an infusion of funds? If you want to start a utility operation on solid waste, ask, 'where do we (counties) get \$800,000?' In the investment banking industry we say, 'if you know how many users you have, how much you can generate from user fees, and what costs are going to be, we can tell you very quickly if you can have \$800,000 or only \$400,000.' What we find is that you don't have enough money to get started in a solid waste program primarily due to land acquisition costs. They're just too great to plug into the initial program. You can't go out today and buy land you know you'll need in ten years because you don't have the funds to do it; and it's too unpopular. So, you wait ten years and compound the problem. It would appear to us, as bankers, that site acquisition is a good place for a federal grant mechanism. On the other hand, with rolling stock, which has a short life, user charges should refinance this equipment. Along with all this, we need some type of formula so the federal government can readily look at your operations and say you need a larger grant in a specific area.

The task force also discussed federal grants for pilot projects. If the federal government wants a pilot project in a particular location, (due to its geology, topography, type of waste streams, and so forth) then the federal government should initiate the action, not the local community. If you allow local communities to be the applicant, you have everybody asking for local funds.

One official said:

We have a real problem with categorical grants. Everybody wants his fair share. Are we trying to get a certain amount of money locally, or are we trying to eliminate a problem? When we have categorical grants, we have the carrot. But we have project delays until the carrot becomes available. So solutions to our problems are delayed.

6.2 RECOMMENDATIONS:

A low interest, long-term, federal loan program should be established. Loans should be flexible to accommodate new technology and breakthroughs.

6.2.1 DISCUSSION:

In discussing federal loans, the task force emphasizes the point that long-term commitments are administratively expensive and may preclude later alternative funding modes. The need for flexibility is cited by one member:

Some years ago our county received a \$41,000 federal loan for a sanitary sewer study. The study was made and plans were drawn. About a year later a metropolitan sewer district was formed to take over the sanitary sewers. The plans were given to them, but they did not follow them. About four years later the federal government sued for that money. The loan has been contingent on the money being used as stipulated in our plan. In the meantime, a new political entity came in and took it over. We had a problem; the government wanted the money back since the plans were not used. We eventually paid back the money, although the problem was not our fault.

The task force was also concerned about the restrictions of long-term loan agreements. For example:

We received a 40 year loan at 2%. Now we wish we had never heard of federal government 2% loans, because there are so many restrictions attached. It is strangling us to death.

Another experience:

With all the state restrictions, it's a real problem to obtain one of these loans. We looked into the Farmers Home Loan and we got them to guarantee a maximum 5%. We said we didn't want to go through all the required red tape, so we got a loan from our local bank which handles most of our business, to buy it under 5%.

An investment counselor expresses his thoughts on federally guaranteed loans:

There's a lot of talk about federally guaranteed loans, the proposals to establish an URBANK. They are not the proper vehicles for the expansion of the municipal bond market. Municipal bond legislation or

federal or state assistance should not be subject to elaborate administrative procedures (or red tape). Here again, any time you get into a loan program you're going to get administrative procedures that retard progress. Everybody needs money; however, massive funding is not the answer, since there is not enough money in the world to do all the things that EPA wants. So, we must find some way to carry our programs locally. We know that sometimes a massive amount of money — "the carrot" — will enable you to do some programs. More often than not programs are delayed because the carrot is there and local government won't start a program till you give them the funds. Many delays occur because of federal programs.

On the other hand, any kind of tax credit will speed up progress. When industry can expense their research and development, they're going to accelerate their programs.

6.3 RECOMMENDATION:

Federal lands should be made available for use for solid waste purposes.

6.3.1 DISCUSSION:

Much federal land in the western part of the United States is ideally suited for solid waste management programs. Through a permit system, some of this acreage is available for local governments to use. Under present arrangements, much of this land is not available. In Washington state, the Forest Service is insisting that solid waste management by local government be removed from federal forests.

The National Association of Counties sponsored a bill in the last Congress that would give the Forest Service the power to sell or transfer land to local governments for much needed public purposes. Unfortunately, the bill never got out of conference. The Forest Service is the only public lands agency that does not allow local governments to buy lands for this purpose.

7. ISSUE:

What type of fiscal incentives should be considered by the federal government to accelerate improvements of solid waste activities at the local level?

7.1 RECOMMENDATION:

The counties endorse recycling. However, to accelerate recycling at the local level, the federal government must provide incentives, such as the

establishment of an Environmental Trust Fund.

7.1.1 DISCUSSION:

The task force discussed various means to encourage local government and its citizens to move more rapidly into recycling. All recommendations tend to return to the need for fiscal incentives.

One county's experience in recycling follows:

The contractor at the disposal site is trying to recycle. He has a bunch of old fellows separating cans, bottles and paper. He's losing money at it. He thinks it will pay in time, but it is a small community. The volume is small, there should be some kind of funding available to augment this effort.

Another experience in transporting waste for recycling is cited:

In a federally funded study, the engineer thought perhaps we should transport solid waste to neighboring counties to achieve better efficiency in recycling. A railroad company official, when approached about the transportation, saw too many problems in the idea.

Industrial recovery presents other problems:

Our ordinance restricts us from taking industrial waste unless it is by permit. We have a timber industry that has a bark residual that they used to burn. That polluted the air, so they can't burn anymore. They now have mountains and mountains of bark. The leachate from it is now polluting our streams. Hopefully, some use will be found for this bark, but the only incentive to industry currently is to offset the cost of having to pile it up. The industry is looking at the problem. They can't bury it; there's too much of it. They'd fill our landfills in two hours.

One member of the task force cautioned that if counties dispose of industrial solid waste, there is a tendency for industry to stop finding ways to recycle and reuse its materials. If industry does it on its own, you're going to reduce public funding needs to stimulate recycling. Other funding solutions were discussed.

The funding discussion centered on auto hulks. One idea was to require every vehicle hulk to be licensed yearly. Another suggestion was that a fee to cover final disposal be paid at the time of

purchase. A variation of that was to tax the owner each year, rather than the original purchaser, therefore the disposal fees would be amortized by all of the owners.

The current problem was stated as follows:

Junk cars are sitting all around the country, because the last owner cannot afford to dispose of it. The reason the salvage operator won't pick up the vehicle, is that the salvage price of the vehicle is not enough to justify his efforts. If the salvage price is high enough, he can pick it up and haul it to the disposal (recycling) area.

It was pointed out, that this is what Oregon is doing with the bottle idea — raising the price of the bottles to make it worth while to pick them up.

Following the previous line of reasoning, it was suggested that we should also consider disposal not only of auto hulks, but all types of bulk material.

The rationale for establishing a trust fund was that the task force did not want fees to drop into the general fund account and disappear. Since local government would be the agency responsible for disposal, the funds should come back to the local level. The county should get the money on a formula basis, similar in form to that developed for revenue sharing. It was made clear that the guidelines would, of course, differ from current revenue sharing guidelines.

7.2 RECOMMENDATION:

The federal government should create tax incentives for industry by allowing preferential tax treatment for research and development and by accelerating depreciation on capital expense related directly to solid waste management.

7.2.1 DISCUSSION:

The committee suggests that industry could improve not only its solid waste management, but also accelerate its recycling efforts if it received tax breaks for such efforts. Currently, any efforts to reduce solid waste stemming from industry are at industries' expense. There may possibly be a payoff in side benefits, but if some type of preferential tax treatment was granted for their research and development effort in reducing the amount of solid waste generated, or to recycle its effluent, there might be acceleration of this activity nationwide.

One county official gives an example with dual results:

Coors Beer offered to take over the county's waste disposal. They are a high user of energy and with fuel gas being in short supply at this time, they want to use the combustible material in solid waste as a source of energy for the brewery and in their ceramics plant. If this is feasible here, why wouldn't it work elsewhere in the United States? Coors is also purchasing back empty beer containers. If they take over the dump operation, they will continue to recycle these materials and use combustibles as a source of energy.

Two examples of incentives were cited which are direct and indirect results of the new Oregon law. It is now illegal to sell beverages in a non-returnable container in Oregon. The price tag on the bottle is high enough that the kids are retrieving them from refuse piles and from along the roadsides. This appears to be a pretty good incentive.

However, in the state of Washington a similar law was defeated. But, they don't have bottles on the roadside ditches anymore, because industry got the message and they took care of the problem themselves. This might be called **incentive of concern**. Industry became concerned with the fear of being regulated, so that became an incentive.

How can state and federal governments offer incentives in the form of tax relief for both citizens and industries? If a county had an effective solid waste program in which the householder separated his solid waste and the waste remained separated all through collection, transfer and disposal, individuals could then be allowed a direct tax credit on their federal and/or state income tax. The solid waste program would have to be approved on a county-by-county basis and would have been approved at the regional or national solid waste level. If the system was not properly operated, the tax credits could not be allowed. There would then be a general clamor from the public to the political structure to have a proper system implemented.

The task force decided not to include this recommendation due to the improbability of any action at the national level to implement such a tax program, and because of the difficulty the Internal Revenue Service would have in determining which citizens were entitled to tax credits.

8. ISSUE:

What incentives can the states give to local government?

8.1 RECOMMENDATION:

States should develop realistic standards compatible with federal guidelines.

8.1.1 DISCUSSION:

The reduction of red tape is important in getting effective solid waste programs in counties. Compatible federal and state requirements would promote this reduction. Until there is more compatibility, there is less and less incentive for counties to participate in federal and state programs.

8.2 RECOMMENDATION:

States should:

- Establish procedures for effecting compliance at the local level
- Establish enabling legislation to allow government to finance and operate a solid waste program. States should support local efforts to obtain enabling legislation
- Consider tax incentives for industry by allowing preferential tax treatment for research and development and by accelerating depreciation on capital expense related directly to solid waste management. The states should also consider allowing individuals a direct tax credit for being part of an approved and operating solid waste management program

8.2.1 DISCUSSION:

In some states, counties do not have the power of eminent domain in solid waste affairs. Enabling authority would be of assistance. Some counties, even though federal funds are available, cannot acquire the desired property for landfill, since they do not have the power of eminent domain. Also, the states are a source for loan assistance since they control local finance laws and often can obtain capital necessary to make the loans. For example:

Washington state has the Job Now Program which contains a wide range of social service programs. Solid waste is one of them. Bonding authorities were tapped by the voters last November for this measure and they have sold \$10 million of bonds for

solid waste management. The money will be used for grants and loans for the local jurisdictions.

Other discussions on funding assistance are closely related to federal incentives (Section 7.2).

8.3 RECOMMENDATION:

States should encourage local governments to include solid waste facility sites as part of the land use section of its comprehensive plans. If such action is beyond the capability of some local governments, states should assist in this function.

8.3.1 DISCUSSION:

Discussion on including solid waste facilities in the comprehensive plans of the counties reveals two opinions:

You are getting too specific when you designate solid waste disposal sites in a comprehensive plan, since comprehensive plans are general type plans and designate growth areas. The planner in selecting a solid waste site must take the plan into consideration.

These plans project growth trends and where the population is going to be. It ought to be included in the plan.

The task force agreed that these site locations should be included, especially due to the increasing requirements that comprehensive plans in federal and state programs must include environmental considerations.

Moreover, the task force urges state participation in the planning process when the county is unable to do so. Some small and rural counties do not have the personnel to make comprehensive plans. Encouragement from the state should actually include performance by the state when appropriate.

8.4 RECOMMENDATIONS:

- States should work toward solutions for both industry and local government before implementing controls.
- When there is a deliberate violation and a feasible alternative exists, a penalty should be imposed (i.e., dollars, cease and desist order, withholding of incentives). If a feasible and practical alternative does not exist, the penalty should be deferred.

8.4.1 DISCUSSION:

On the subject of penalties or negative incentives, the task force agrees all alternatives be exhausted before penalties (or controls) are imposed.

9. ISSUE:

What incentives can local government consider to upgrade their solid waste activities?

9.1 RECOMMENDATION:

At the local level, the major local responsibility is to establish a self-sustaining system. In doing so, local government should consider:

- Charging user fees
- Use of other local revenues
- A combination of the above

9.1.1 DISCUSSION:

Committee members could not make firm suggestions on ways to establish self-sustaining systems because of the variety of local practices and requirements. Concerning the problem of competition one task force member states:

At what point should county government compete with private enterprises? Where do we fit into the picture? We need an adequate supply of refuse to pay off our investment. Because of competition with other counties and other private landfills, we don't get the volume we need. In some areas private contractors are taking the refuse out of the counties and putting in private landfills in other counties.

There also are problems in metropolitan areas of sites and authority:

Our neighboring county is completely populated. There is no open space so solid waste is shipped to our county. We charge them for it and get income for the county. We never had an importation problem here. There were so many dumps in the county that it was an absolute relief to get rid of our seven county area dumps. Now, of course, with the landfills, we have a better operation.

In summary, the task force feels each local government must make an effort to fund the cost of solid waste operations as a business in spite of local constraints.

9.2 RECOMMENDATION:

Local government should promote public acceptance of the solid waste program.

9.2.1 DISCUSSION:

Public acceptance of a local solid waste management program is essential. Local governments must work actively to gain public acceptance.

One major problem is to get the public to use landfills. One county official said that his county had just opened up two landfills, but the biggest problem was to educate the citizens to use them. Unfortunately many of the old roadside dumps were still around. They are considering placing green boxes around the roadside, but in a county with a population of 50,000 this is an expensive operation to initiate.

Public information programs can help to achieve public acceptance. One county was about to have a garbage crisis. They were two months away from no place to put the garbage. The public relations director proposed asking the public and the press to view the proposed landfill sites. This program promoted public acceptance of the problem of considering new land sites for landfills.

By keeping all of government informed of plans, court actions and delays can be avoided. One official said:

I live in a township north of the populous area of the state. The south end of the county has a series of cities generating solid waste. The cities joined together and formed a solid waste disposal authority for hauling and picking up waste. They acquired a piece of land in our township for disposal, without informing anyone. Then they came to the township board and told them they were going to use this land for a sanitary landfill. A law suit was initiated by the citizens and by the township. It was finally resolved. After the authority filled the land, they planted it, put trees on it and will give it to the township for a park.

9.3 RECOMMENDATION:

Local government should encourage implementing both civil and criminal charges for littering and should ensure a vigorous enforcement program.

9.3.1 DISCUSSION:

Littering on roads is a problem common to all jurisdictions. Solution is difficult. Fines can be established by the jurisdictions, but enforcement is difficult. In other words, everyone has this problem but few have ways to solve it.

10. ISSUE:

What areas of research and development require additional emphasis?

10.1 RECOMMENDATIONS:

Particular areas requiring study are problems relating to sanitary landfills, including control of leachate and methane gas generation; density compaction versus settling rates; and rate of leachate attenuation of various solid waste components.

10.1.1 DISCUSSION:

The task force urges EPA to conduct research on the mechanics of decomposition of solid waste deposited in landfills. Questions were raised regarding how much is known about lateral or vertical transfer of gas generated by decaying material. Although known to be a function of various materials, what effect does compaction, soil condition, moisture, ambient heat, etc., have on the rate of decomposition and gas formation?

What are the long-term effects on the future environment of material going into the landfill? What are the long-term effects of milled and baled wastes? From this follow the problems of ground settling as a result of subsurface decomposition. Curves are needed to show settling rates as a function of the density of compaction.

The above information is needed to determine future uses of landfill sites, particularly when the land would be used to support roads or light structures.

10.2 RECOMMENDATION:

Efforts should be made to identify national markets for resource recovery systems.

10.2.1 DISCUSSION:

The task force discussed various phases of resource recovery, dwelling on the experimental systems in San Diego, Baltimore and Delaware, and the recovery of industrial wastes that could be augmented locally. Cost was seen as a universal problem. Program direction and major costs must come from the federal level.

After studying various methods of recovery, one official believes that shredding will play a part in any resource recovery facility, based on today's technology.

Those officials who have had successful recovery efforts are limited to recovery of specific items which are profitable due to local industrial needs. Glass is recovered in upper New York state because many glass factories are nearby. The St. Paul area is able to dispose of cardboard. Birmingham steel mills accept junk cars, and St. Louis has an oil reclaiming plant nearby. However, these are only local markets, where transportation costs are low.

Separation of material was discussed by all the groups that met, and each one independently considered it to be too costly, and could not be profitable unless the costs were either underwritten by the federal government, or recovered through marketing. Both solutions are directed to the federal government.

The task force advises that resource recovery systems be examined to consider the marketing of an end product as a function of various regions. However, national markets should be identified. One official observes markets should be identified by the Commerce Department, rather than EPA, since the Commerce Department has been studying market development for years.

10.3 RECOMMENDATION:

The problems of disposal of difficult solid waste products, including tires, automobiles, trees, tree stumps, industrial wastes, liquid waste, oil, sewage sludge, animals, animal fats and by-products should be addressed by EPA.

10.3.1 DISCUSSION:

Tires are difficult to dispose. They "float" to the top of landfills. They can't be burned, and shredding is limited to only a few facilities. While several local efforts exist, there is no immediate prospect for a national market for used tire materials. This is a growing national problem that should receive serious consideration by the federal government.

The problem of auto hulks is well known. Since they cannot be burned any more, many industries that used to accept burned-out hulks, do not want a car that has tires, upholstery, plastic trim, etc. The problem of getting old autos to a "squasher" has been discussed above under Issue 7, Incentives.

Trees and stumps present a serious problem to landfill operators due to their large volume. Again, burning restrictions aggravate this problem. Officials from areas of low-density populations suggest the relaxation of burning restrictions as a means of alleviating the rural problem. As one official said:

What's wrong with a little wood smoke?
Does anyone really know why you can't
stand a little wood smoke?

Another official, from a highly populated eastern county, said:

We have some communities in the county
where 50% of their waste in equivalent
landfill comes from trees, stumps, etc.

In discussing the use of chippers, one member states, "I've never seen one that you could run a stump through." One company told a county official they would take all the wood chips the county could bring in, provided the trees were skinned before they were chipped. EPA should initiate a research program on how to get rid of tree trunks and stumps. They cannot be compacted in landfills, and they cannot be burned. One highway engineer stated they were using a portable curtain burner to dispose of trees from highway construction; but have problems with air pollution. Concerning secondary effects, one official said he had never seen anything create more leachate than a tree limb.

Other industrial operations that present serious waste disposal problems include slaughter-houses and chemical plants. Slaughter-houses generate animal fats and various by-products. Chemical plants generate paint, thinner, oil residues and sludges. Previously, these wastes have been burned or dumped into waterways.

The task force questions whether counties should be responsible for the disposal of industrial waste products. Some agreed that industry should pay all costs for disposal, but the problem is, what is the proper means of disposal? How do you dispose of it properly? This is a question properly addressed to EPA. It was suggested that EPA then develop an answering service that local governments or industry could call and receive advice. A full scale national effort is required to develop proper and economical disposal of industrial wastes.

10.4 RECOMMENDATION:

EPA should initiate a program to evaluate all solid waste demonstration programs.

10.4.1 DISCUSSION:

The task force believes that too much advance publicity on the effectiveness of various public and industrial sponsored developments is detrimental to the national effort. Claims of great performance have caused many local governments to procure or install disposal systems (due to local pressures) before they had been fully tested or before it was understood that a particular system is effective only in a certain geographical region.

The task force urges EPA to evaluate these systems independently from the governmental entity sponsoring the project. This evaluation effort should be expanded to include commercial products in the solid waste field. In other words, a consumer's guide to solid waste hardware is needed, which would include items from rolling stock to capital equipment. What can this equipment do? What are its limitations, its realistic life, maintenance problems, etc?

10.5 RECOMMENDATIONS:

EPA should augment its technical clearinghouse service to abstract and distribute to all levels of government, information collected on solid waste management.

10.5.1 DISCUSSION:

Too often technical information received by local government is available only through the media or industry. One official states:

As pointed out to me by EPA, this type of information is available, it is just not known that it is available.

The task force acknowledges that EPA has several information retrieval systems. But information is not getting down to the local governments, where it is needed. The technical dissemination effort should be supplemented by an information service telephone number, such as WATTS line. Information could be provided on locations of specific types of solid waste facilities and specific solid waste system locations. Direction could also be given on proper means of disposal of industrial wastes, etc.

10.6 GENERAL RECOMMENDATION:

As a general recommendation, the committee suggests that the federal government consider and encourage development of economical techniques to use solid waste to aid in alleviating the growing energy crisis.

10.6.1 DISCUSSION:

Experimental efforts to generate either power or steam by combining solid waste products with fuels, such as the St. Louis experiment, were discussed, as well as efforts by Coors Brewery, Nashville-Davidson County, and the 3M Company. However, the economics of these experiments were not known.

Concern was expressed that 'burying' of these potential resources is an extremely wasteful process. Efforts must be accelerated to recover these waste products. When products can't be recovered, they should be used as fuel for the generation of energy.

10.7 PRIORITIES:

The task force suggests the following EPA funding priorities for research and development items.

PRIORITY	SUBJECT
1	Energy Conversion
2	Market development for recovered resources
3	Evaluation of demonstration programs

Although no priority is given, the task force urges the following efforts be funded:

- Sanitary landfill research
- Special item disposal studies
- Information dissemination

11. ISSUE:

What are the training needs as viewed by local officials?

11.1 RECOMMENDATIONS:

- The Environmental Protection Agency should promote educational programs at the university level in solid waste management and engineering, to be supported by federal grants, and should strengthen professional development programs.
- States are urged to establish training schools and develop short courses and assume responsibility for developing practical operator training programs by using local expertise.

11.1.1 DISCUSSION:

The discussion on training needs opened with several questions directed to the task force.

Do you feel that solid waste programs could be upgraded if you had training programs or technical assistance, and if so, in what form? Can the federal government best administer such a program or should it be carried out at the state or local level? EPA has training facilities; is this the best mechanism to train most local personnel? What level of government should fund local training efforts?

EPA's Cincinnati training program is reported to excel in the area of solid waste management. But when a supervisor or bulldozer operator attends, he is not familiar with the terminology used by the instructors. We must have various levels of training.

University-level courses in solid waste management should be instituted. One member said that when hiring for the position of sanitary engineer with experience in the field of solid waste he received 45 applications, and only three said they had some experience with landfills. The universities just don't pay attention to solid waste as a discipline. These programs should be encouraged, but to expand this effort, colleges of engineering need funds, and this is where federal grants would be most rewarding.

Several states sponsor solid waste courses in conjunction with EPA or state universities. Such courses have proven useful and should be expanded in other states. Courses should (among other subject areas) be directed toward training managers to train their personnel. As put by one sanitarian:

If anyone has worked for industry, they must have had at least three courses in operator training. It's not to teach you to perform the job; it's to teach you how to teach the guy who is doing the job.

This led to a detailed discussion on the need for practical experience by instructors. The task force concludes that instructional staffs should live with the problem to gain practical experience. On-site training is recommended for all instructional programs. The state should develop training schools. They could get several counties together and students could live on the landfill or ride route trucks for about a week. This is the kind of training we need. We need very little classroom education for these people.

The state should use local expertise for training. The task force believes a practical operator's training school combining state and local personnel is needed, since many local people have far more expertise for teaching field approaches than do state personnel.

Practical training is so important because it can be viewed as initiating a teaching process. One operator properly trained can then properly train other operators.

11.2 RECOMMENDATION:

EPA personnel should be made available to attend important local meetings upon request.

11.2.1 DISCUSSION:

The task force encourages EPA personnel to assist them by attending important local meetings. The county position, when enforcing federal regulations, often needs support vis-a-vis citizen questioning and possible objections to imposed regulations. It is noted that EPA personnel do not want to get involved in local affairs. One committee member illustrates this situation as follows:

When we restrict a person from pouring a can of DDT down a hole and tell him he has to dispose of it at a particular location and in a particular manner, that puts the onus right on us. I think the federal government should come in and assist us in explaining the situation. They have to tell the people that we're faced with a series of federal guidelines and/or standards that have been developed for specific reasons.

So often in public hearings, citizen groups have all the answers and the county has no expertise except their own staff. This is where EPA people are needed to say that the county has a viable program or endorse the county's efforts by stating the county is trying to meet federal standards.

11.3 RECOMMENDATION:

EPA should launch an improved public relations campaign to train the public to develop and support proper solid waste management practices.

11.3.1 DISCUSSION:

The public relations aspect of a solid waste management program is the basis for a sound program. Public acceptance of solid waste management practices implemented by all levels of government is needed. The task force calls on EPA

to launch an improved public relations campaign to foster interest in and development of solid waste management practices. One member compares the need for a PR campaign on solid waste to the air pollution campaign.

It is further suggested that EPA initiate a series of TV announcements that can be used on local stations. The local people could then build on the federal announcements.

One official states:

I resent the picture of a dump with all the tin cans and the rats. The implication is there's some villain somewhere who has caused all this. I would like to see a positive rather than negative program. The environmentalists are responsible for this negative approach. It is ineffective to say 'write to Washington.'

At the conclusion of the task force meeting, members were asked to list their priorities for funding training programs. The following priorities were agreed upon.

PRIORITY	SUBJECT
1	Technical information dissemination
2	Technical training
	(1) At policy/political level
	(2) Professional-level program development
	(3) Operator training program development
	(4) Development and implementation of university-level courses
3	On-site technical support (Vehicle scheduling, cost accounting, manpower development, technical advice)

APPENDIX E

Definition of Terms

This list of definitions is an effort to standardize terms used in this report. Most terms have been extracted from the "Solid Waste Management Glossary," prepared by the EPA's Federal Solid Waste Management Program.

However, definitions were not available on guideline, standard, regulation, performance standard and operating standard. Therefore, the definitions below are those generally agreed upon by sources in and about the federal government.

COMMERCIAL SOLID WASTE: Solid waste generated by stores, offices and other activities that do not actually turn out a product.

DISPOSAL: The orderly process of discarding useless or unwanted material.

DUMP: A land site where solid waste is disposed of in a manner that does not protect the environment.

EFFLUENT: The substance that flows out of a designated source.

GENERATION: The act or process of producing solid waste.

GUIDELINE: A recommended standard. Not having the force of law.

HAZARDOUS WASTE: Any waste or combination of wastes which pose a substantial present or potential hazard to human health or living organisms because such wastes are nondegradable or persistent in nature or because they can be biologically magnified, or because they can be lethal, or because they may otherwise cause or tend to cause detrimental cumulative effects.

INCINERATION: The controlled process by which solid, liquid, or gaseous combustible wastes are burned and changed into gases, and the residue produced contains little or no combustible material.

LEACHATE: Liquid that has percolated through solid waste or other medium and has extracted dissolved or suspended materials from it.

NON-HAZARDOUS WASTE: Normal household, commercial, industrial and agricultural waste.

OPERATING STANDARDS: (Process standards) On treatment - Specifications of treatment procedures or process conditions to be followed... On disposal - Minimum site design and operating conditions... (In other words) an operating standard is a rule which specifies procedures required to achieve an end result.

PERFORMANCE STANDARDS: On treatment-Restrictions on the quantity and quality of waste discharging from the treatment process... On disposal - The amount or quality of leachate allowed from a disposal site... (In other words) a performance standard is a rule that requires a specified result.

RECLAMATION: The restoration to a better or more useful state or the obtaining of useful materials from solid waste.

RECOVERED RESOURCES: Materials which still have useful physical or chemical properties after serving a specific purpose and can, therefore, be reused or recycled for the same or other purposes.

RECOVERY: The process of obtaining material or energy resources from solid waste. Synonyms: extraction, reclamation, salvage.

RECYCLING: The process by which recovered resources are transformed into new products in such a manner that the original products lose their identity.

REGULATION: A list of procedures and requirements of an agency.

REUSE: The reintroduction of a commodity into the economic stream without any change.

SANITARY LANDFILL: A site where solid waste is disposed using engineering techniques to dispose of solid waste on land in a manner that protects the environment by spreading the waste in thin layers, compacting it to the smallest practical volume, and covering it with soil by the end of each working day.

SCRAP: Discarded or rejected material or parts of material that result from manufacturing

operations and are suitable for reprocessing or recycling.

SLUDGE: A semi-liquid sediment.

SOLID WASTE: Useless, unwanted, or discarded material with insufficient liquid content to be free flowing.

SOLID WASTE MANAGEMENT: The purposeful, systematic control of the generation, storage, collection, transport, separation, processing, recovery and disposal of solid waste.

STANDARD: A rule that requires compliance — Having the force of law.

STORAGE: The interim containment of solid waste, in an approved manner, after generation and prior to ultimate disposal.

TRANSPORT: The movement of wastes from the point of generation to any intermediate transfer points, and finally to the point of ultimate disposal.