

CHAPTER E - SOLID WASTE MANAGEMENT AND LOCAL GOVERNMENT:
WORKING FOR A SMOOTH AND EXPEDIENT TRANSITION TO
RESOURCE RECOVERY AND CONSERVATION IN
SOLID WASTE MANAGEMENT
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ABSTRACT

The problems of the planning and administration of solid wastes by local and county governments are considered and recommendations are made for improvements in administration. The problems of the distribution of authority are discussed and a proposal is made for a joint effort between local and county government, and Oakland Scavenger Company, for the development of a resource recovery system for Alameda County.

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Introduction

Poor information, a complicated administrative system, and a capital intensive economic system which has an emphasis on the disposal rather than the recovery of wastes, complicate the issues surrounding the future of solid waste management for the San Francisco Bay Area as well as the entire nation. As landfill costs increase, resource recovery will become a major part of any economically efficient waste management system. In anticipation of the transition to resource recovery systems, this report examines the existing solid waste management system in Alameda County, and attempts to identify improvements in administration which will facilitate the transition to resource recovery with a minimum of costs and time delays. The majority of the material for this paper has been derived from conversations with people working in the field. The problems of planning and the distribution of responsibility among different levels of government are considered and a proposal is made for a coordinated management program involving the Joint Powers Authority, Alameda County, and Oakland Scavenger Company. The costs of resource recovery systems are predominantly transition costs associated with the change from disposal systems to recovery systems. Given these circumstances, the role of government can be seen as that of a catalyst; a catalyst which works to minimize the transition costs of changing the solid waste management system.

Planning and Information

Planning for solid waste management is currently undergoing many changes at all levels of government. Federal as well as state laws, and local, county, and regional agencies are intertwined in a structure whose description is beyond the scope of this paper. Planning for solid wastes has been plagued by inadequate information and an emphasis on the disposal of wastes. Although resource recovery has been in practice

in this country for various materials at different times, the lack of technical and economic certainty for resource recovery makes planning for these systems very difficult.

As funds from the Federal Resource Conservation and Recovery Act of 1976 (RCRA) become available and the U.S. Environmental Protection Agency (EPA) continues to develop an extensive information bank, planning for resource recovery will become less cumbersome. Unfortunately, a great deal of planning has been done, or will be done, before the RCRA funds generate much of the information needed for making sound decisions about resource recovery systems development. The State of California has taken some steps toward financing solid waste planning through the creation of state and county solid waste management boards, and enacting the landfill tax (SB 650), but the Alameda County Solid Waste Management Plan and the ABAG Regional Solid Waste Plan (one of four sections in ABAG's Environmental Management Plan) have been developed without the pool of information and experience that SB 650 and RCRA funds will develop. In effect, inadequate information encourages officials to delay making decisions until decisions are either forced by deadlines or until better information is available. It is clear that increasing the amount of information available to local and county governments is necessary, but the costs for gathering such information are very high except where existing low cost information sources can be utilized. Voluntary public effort can develop significant amounts of information through the work of non-profit organizations, universities, and private corporations. The present report is an example of such 'free' information.

The importance of involving the public cannot be over-emphasized. (For discussions of public education and awareness, see Section VI, Chapters A and B). Without clear mandates from the public on the problems of solid waste management, the implementation of solid waste disposal alternatives will be a long and difficult task. One need only look back as far as the California drought of 1975-77 to see the impact of public concern and awareness. Under those circumstances the public responded to water rationing so well that in most Bay Area counties water conserved exceeded the reductions requested by water utilities. From this example it is clear that given the motivation, 'We the people' can form a more perfect solid waste management system!

Revenues for planning in solid waste management can serve several purposes when derived directly from collection fees or taxes on the waste stream. If the majority of revenues for planning and development come from a tax or fee on the disposal of wastes, then individuals and organizations will pay for planning and development according to some measure of the burden placed on the solid waste system. Such a tax would be an effluent charge in effect. Additional charges levied on hazardous or high disposal cost wastes could act as incentives for industrial waste producers to either pre-treat wastes or change production techniques to minimize output of heavily taxed wastes. The advantages of a solid waste tax are several: 1) The revenues from a tax can be used for research and development of solid waste disposal alternatives; 2) The cost of disposal to producers of waste is closer to the total (social plus private) costs of disposal than the costs under current collection rates; 3) By exempting certain types of wastes (e.g., organics), the composition of the waste stream can be manipulated to improve the efficiency of operation of energy and mixed waste

resource recovery systems; 4) Source separation (including recycling) is encouraged as the cost of disposal increases; and 5) Source reduction is encouraged as the price of disposal increases.

Potential difficulties in levying taxes on the waste stream include: 1) If taxes are levied on a local or regional scale, then regional inequities may encourage the transport of wastes outside of jurisdictions; 2) Uncertainties in the effects of a tax on the composition and volume of the waste stream are inevitable. The SB 650 landfill tax, the only example of such a tax in California, probably has little or no effect on individual disposal decisions. Any tax large enough to affect disposal decisions would show complete results only after long time lags, because changes in industrial production techniques usually involve large capital investments; 3) Special tax rates for hazardous or high disposal cost wastes will be highly controversial unless adequate quantitative evidence demonstrates that the additional costs of the disposal of these wastes are not already accounted for in existing collection rates; 4) Any taxes which attempt to take the composition of the waste stream into account are going to present administrative problems owing to difficulties in determining the appropriate tax rates and measuring the composition of wastes from individual sources; and 5) If such a tax were high enough, it would have adverse effects on low income groups. The most easily enacted and enforced tax is one such as the landfill tax of SB 650 which taxes landfill at a low rate without regard to the composition of the wastes.

An important aspect of the tax proposal is that the magnitude of the tax need not be set according to some long-range policy goal, but can be set at some experimental level initially and adjusted periodically as the effects of the tax on the solid waste stream manifest themselves over time. While setting an explicit mandatory resource recovery level has the advantage of offering a well defined objective, this type of policy alone provides no direct incentive for resource recovery and conservation (disincentive for disposal) as the tax policy does. A tax policy can serve as an enforcing policy under a general policy for an explicit level of reduction in solid waste landfilling. The advantage of a tax over a system of fines and penalties is that the tax allows firms to adjust their output of solid waste according to their marginal costs of disposal which provides the least total cost per unit reduction of solid waste disposal.

Distribution of Authority and Responsibility for Programs

The perennial problem of establishing and distributing authority is central to solid waste management where the problems of property rights, land use controls, regulation of pollution, local vs. regional control, and private vs. public management spawn a widely variable set of attitudes and approaches to the management of solid wastes. It is clear that authority and responsibility for the elements of solid waste management must be well defined before the technical and economic problems of solid waste management can be addressed directly. What follows are some general guidelines for the distribution of authority and responsibility which convey the importance of the roles that each level of government can play as well as the limits at each level of government.

The success of source separation programs and collection systems depends heavily on local attitudes and tastes. If source separation and collection systems are administered by local governments, then

planning of these systems can be tailored to local attitudes and tastes which strongly influence the success of these programs. While some increases in efficiency may be available through regional planning and operation of separation and collection systems, pilot programs for source separation have revealed that regional or county source separation programs will be ineffective for a large part of the Bay Area's population at this time (M. Baumann, Berkeley Public Works, oral communication, 1978).

The high capital costs of energy and mixed waste resource recovery facilities, as well as the volume dependent economics of these systems, are best handled by county and regional governments. The City of Alameda's proposed refuse-derived fuel plant faces the problem of getting enough garbage to operate the plant. The Alameda Bureau of Electricity which is building the plant is forced to contract for wastes from outside the city (Don Powell, oral communication, 1978). Without coordination at the county and/or regional level, the development of numerous energy and resource recovery plants within a county or region could create a demand for garbage which would compete with material recovery (e.g., source separation) and source reduction programs. Since programs such as source reduction, composting, and labor-intensive recycling preserve the materials resource base instead of burning it, a demand for combustible wastes could cause increased environmental disruption by reducing the levels of source reduction, composting, and labor-intensive recycling while maintaining high levels of virgin materials use.

Programs for source reduction, such as packaging and container laws, have been successful when enacted at the state level (See Section II, Chapter A on source reduction). Local container and packaging laws are not only difficult for local governments to administer, but because cities and counties seldom represent the entire area of supply for beverage and other plants, the manufacturers of regulated goods will have difficulty in adjusting to regulations on a local basis. As mentioned earlier, taxes on the waste stream can induce transport across local and regional boundaries unless the tax is levied by the state or federal government. Since transport to avoid taxation may use more energy and does not increase resource recovery or conservation, such transport would not be desirable.

Given the establishment of well defined authorities and responsibilities for solid waste management, a new set of problems is created by the differences between the states of solid waste management in different local governments. For example, the Alameda County Solid Waste Management Board (ASWMB) receives funds for planning and some of these funds are representative of Berkeley's population. Berkeley will receive little or no benefit from these funds because the city has its own solid waste management plan and is at a state of management which is ahead of the county as a whole.

On the other hand, without the funds representative of Berkeley's population, planning for the county would suffer. If Berkeley had these funds, the effect would be a widening of the gap between the county and Berkeley.

The development of a regional identity is prerequisite to a regional approach in solid waste management. Essentially this means broadening the sense of community in the minds of decision-making officials and the general public. Betty Croly of the Alameda County Planning Department sees regional identity as a critical aspect of solid waste planning and management. In her work with the Joint Powers Authority (JPA), lack of recognition by JPA board members that they have common interests, goals and a group identity has been the limiting factor in the JPA's ability to make progress on solid waste contract issues. Solid waste management is everybody's business because we all produce solid waste, and until the general public and officials recognize the common ground of solid waste disposal problems and the need for highly coordinated efforts, the major hurdles in solid waste management will not be technical, but those of social and political organization and cooperation.

Development of a Resource Recovery System for Alameda County

Alameda County is now developing its solid waste management plan for the next twenty years. By utilizing an efficient mixture of public and private finances, the county can develop resource recovery at a lower total cost than the private or public sectors could develop independently.

Oakland Scavenger Company (O.S.) collects refuse across city boundaries, which allows O.S. to realize an economy of scale not available to cities operating individually within the county. O.S.'s collection system is the only operating element of regional solid waste management in Alameda County. Unfortunately, the company's ability to raise capital is limited by its collection rates and total revenues, and being a private firm, the company pays a higher interest rate on capital debt than the county government does. As O.S. plans for a highly capitalized transfer station and resource recovery facilities, the company needs to enter into long-term (20-25 year) collection contracts to insure revenues for payment of capital debts. The JPA, which consists of representatives from each city receiving O.S. service, is the agent for negotiating these contracts with the company. The JPA contracts involve service for approximately 850,000 people living in Alameda County (Croly, Alameda County Planning, oral communication, 1978).

County government can play an important role in the development of a mixed waste resource recovery facility by providing the low interest capital available to it as a government. The facility could be planned jointly by the county and O.S. By using public capital, the development of a resource recovery facility could be achieved at a lower total cost to the public (See Conclusions and Recommendations by Bruce Ring). It is expected that when federal construction grants become available for resource recovery facilities, these grants will be oriented toward public rather than private systems. Under these circumstances, a county financed system would be eligible for these grants. Using public finance also eliminates the need for the long-term contracts which O.S. now requires. By shortening the length of contracts, cities will have more opportunities to modify their collection contracts so that they are compatible with any composting, source separation, or other solid waste programs which are developing. The county could repay the capital debt incurred in building the facility through a waste processing fee and/or revenues from recovered materials. This charge would be independent of the charge levied by O.S. for collection

services, although the charges could be summed on a single bill for individual service recipients. O.S. would continue to operate its collection system much in the same way that it does at present. If county operation of a resource recovery facility is undesirable, then the operation of the facility could be contracted out to a private firm (perhaps O.S.), but again such management contracts would be for a shorter term than the proposed JPA contracts.

If the JPA re-establishes public ownership of the waste stream, then O.S. is clearly identified as transporter of wastes and a number of simplifications in the solid waste systems will occur. Currently O.S. owns all solid waste as soon as it is in the garbage can. Traditionally this has been done to place the liability for handling of wastes on the company rather than on the public. However, the costs of liability insurance are paid by the general public regardless of whether the costs are paid through collection rates or through taxes. By retaining public ownership of the wastes, the public clearly establishes its right to control the ultimate fate of solid wastes, including the sale of recovered materials and any revenues from the sale of these materials. As the value of recovered materials increases, revenues from recovered materials will be able to pay off a significant portion of the capital debt incurred in construction of a resource recovery system. As regulatory efforts are stepped up by the EPA and other agencies, the county would be able to respond directly as processing facility owner and waste stream owner, instead of re-negotiating contract agreements with O.S.

In allowing O.S. to act as transporter of wastes but not owner, the company's operations would not differ substantially from what they are at present. The company would maintain its contracts to collect across city boundaries which would preserve what exists of a county-wide collection system. Cities such as Berkeley could utilize the processing facility according to their needs, perhaps partially pre-processing waste at their own local modular processing and transfer station. If O.S. was designated as operator of the resource recovery facility, then O.S. could expect some increase in total revenues.

City governments, acting through the JPA, would have more flexibility under short-term contracts for developing source separation programs and modifying collection systems to fit these programs. By eliminating the long-term contract which is currently being developed, much of the long-range uncertainty which complicates the contract can be eliminated. The long-term contract includes clauses for re-evaluation of resource recovery, conditional ownership of wastes subject to changing values for materials recovered from the waste stream, and rebates to cities for revenues from recovered materials. These clauses could be eliminated in the shorter term contract made possible by public ownership of the waste stream and the processing facilities.

A separate contract would be negotiated for the operation of the resource recovery facility and open bidding for the operations contract would encourage efficient management of the facility. County ownership and design control of the facility insures that the facility will be conformable with the

county solid waste management plan and adaptable to the changing policies of federal and state governments.

The key advantage of this approach is that it identifies resource recovery as a distinct process separate from the collection system. While these two elements of solid waste management are related, providing separate contracts for each element increases the flexibility of the solid waste system for both local and county government.

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