

## CHAPTER D - LEGAL ENVIRONMENT OF SOLID WASTE MANAGEMENT

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### ABSTRACT

Recent technical developments in solid waste management have been spurred by the emerging view of solid waste as an energy and materials source. Successful implementation of many of these developments is largely dependent upon state and federal legislation. Senate Bill 650 is representative of legislative developments in solid waste management. This comprehensive legislation package considers recycling, energy-resource recovery, and litter management. Legislated packaging specifications that promote waste reduction comprise another technique for attacking solid waste problems. Detailed consideration of each alternative to landfill will be necessary if new ways to handle our solid waste are to become reality. Such legislative developments are sure to complement technological developments in solid waste management.

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The use of solid wastes as a potential energy and materials source is an emerging environmental concern. Almost 50 cities throughout the nine Bay Area counties have community recycling and landfill recovery programs within their borders. Feasibility studies of energy generation through recovery facilities have been proposed in five of these communities. The Association of Bay Area Governments (ABAG) has compiled county summaries of solid waste management plans in its Draft Environmental Management Plan. County-wide conceptual studies of energy recovery from solid wastes have been recommended by seven counties (ABAG, 1978). The ABAG study also includes short-term county plans for solid waste management. Among these are standardization of waste collection, revision of ordinances to conform to minimum health standards, purchase of landfill sites, and construction of additional transfer stations (ABAG, 1978). These proposals for streamlining present collection and landfill operations emphasize the experimental and not fully legitimate status of solid waste reduction, recycling, and resource recovery practices.

State and local legislation is, and can be, an important vehicle for putting these alternatives to landfill operations into practice. To do this, however, proponents of recycling and resource recovery will have to establish a political base. Legislative proposals encouraging alternative management of solid wastes will have to have political muscle behind them simply to oppose established operations. The atmosphere at one San Francisco hearing on the possibility of curbside pickup of separated recyclables is typical of the climate pervading the solid waste management decision-making process. This meeting illustrates the political barriers to legislation on this subject.

On May 23, 1978 a public hearing on the necessity for legislation to promote a curbside pickup recycling program for San Francisco was held. Supervisor Molinari, one of the three members making up the governmental services committee, expressed his satisfaction with the city's present garbage collection service. At the same time he expressed his opposition to recycling as an inconvenience for San Francisco's elderly residents living in multi-story buildings. He also deplored the aesthetic damage that would result from the replacement of the single garbage can by three containers. Supervisor Quentin Kopp, also a member, questioned the purpose of the hearing. He felt that recycling proposals for the city should be presented to the committee in draft proposal form rather than as a collection of ideas for discussion. As a result, the hearing on recycling feasibility was tabled.

Comprehensive examination and discussion of recycling possibilities is essential for the development of solid waste practices alternative to present landfill operations. Input from public and private professional experts are key informational sources. The feasibilities of resource recovery, source separation, and recycling cannot be expected to be improved by present solid waste services. Although some materials are recovered at landfill sites, the vast majority of the San Francisco Bay Area's solid wastes are landfilled. Improved solid waste management may require our society to re-evaluate present manufacturing practices that involve disposable products.

This chapter presents an inventory of solid waste legislation and ideas for expansion in this area. The solid waste management techniques to be considered are recycling, resource recovery, litter reduction, and source reduction.

California's State Solid Waste Management Board estimates that a 30% reduction of the 20 million tons of municipal waste generated per year in California is possible if recycling efforts are maximized. More specifically, the estimate includes a 7% reduction from the recycling of newspapers, 8% from bottles, 5% from beverage and vegetable cans, and a 9% reduction from cardboard recycling (Reiterman, 1977). Recycling may be encouraged by several kinds of legislation including those affecting recycling center viability, markets for the secondary materials or recyclables, and packaging of manufactured and food products.

As a rule, scavenger companies in the Bay Area have vested interests in maintaining landfill operations. Past practice shows little change from simple collection and landfill activity by local garbage companies. Closing of a landfill site has frequently meant purchase of another site farther away. Increased user fees have compensated for increased costs of longer transport hauls, additional transfer stations, and expensive landfill sites. Oakland has purchased a dumping area at Altamont Pass in the Livermore Valley, approximately 88 km (55 miles) away. San Francisco hauls its solid waste to Mountain View, a distance of 65 km (40 miles).

A different political climate, such as that found under conditions of laissez faire, would ease recycling center entry into communities and allow the public a choice in its solid waste management scheme. Most private garbage collection services operate as de facto monopolies, much like

American electric power suppliers. The public may be unaware of recycling as an alternative or feel inconvenienced by an interruption of the seemingly efficient, large-scale mechanization of solid waste collection and disposal. California Assembly Bill 1318 (1977) is an attempt to bring scavenger companies under a kind of public scrutiny like that exercised over their power producing counterparts. The bill requires the availability of an annual, standardized financial statement from all garbage companies. The scavenger company will be treated as a public utility. As a result, responsibility for sound solid waste management will be more fully shared between public agencies and private companies than it is at present. This bill is an important step toward regulating the scavenger company's exclusive franchise on solid waste management. This and other steps toward re-definition of the collection company role in solid waste management may also serve to promote recycling as an economic activity.

California Assembly Bill 860 (1977) already provides grants-in-aid for recycling centers and source separation programs. This bill is clear in its objective to stimulate community recycling centers. Technical counseling, financial support, and public relations development are immediate areas of concern. California Senate Bill 650 (1977) will be another source of support for the recycling center. 25% of the State Litter Control, Recycling, and Resource Recovery Fund established by Senate Bill 650 will be in the form of grants for the creation of community recycling centers.

The recycling center is an entity which is new for insurance companies to deal with. At present, the recycling centers are classified as junkyards. The working environment of the recycling center is not subject to the same types of hazards as is the junkyard. However, the center is subjected to the high insurance and workmen's compensation rates of the junkyard. The present insurance rates are heavy economic burdens for most recycling centers. If the existence of the recycling center is to be encouraged, then a formal definition of the center will be needed to erase the unfair economic costs of high insurance rates (John Barry, personal communication).

The market for secondary materials has traditionally been risky and unstable. The poor competitive position of recyclables has continually threatened the economic viability of recycling centers throughout the United States. This market situation also has a self-perpetuating aspect. Risky markets have led to a reluctance on the part of buyers to establish long-term purchase contracts. Legally imposed floor prices and price escalation clauses could stimulate a competitive status for secondary materials (Wentworth, 1977). Senate Bill 650 also designates 5% of its fund for market feasibility studies of recyclables.

Mandatory purchasing of recyclables will stimulate a market for the recycling programs. California Assembly Bill 2636 (1978), an elaboration of Assembly Bill 1404 (1977), would prescribe a paper recycling program for California public schools, community colleges, state universities and colleges. This program would require the purchase, whenever possible, of recycled paper at up to 5% more than the cost of a similar quantity of virgin paper. Assembly Bill 1404 currently requires all state agencies to give preference to recycled paper by such a differential purchasing practice whenever possible. Local public agencies are authorized to consider this practice. This purchasing preference for recycled paper would be



part of an entire recycling program for the collection of papers, implementation of public relations activities, and exclusion of potential contaminants or non-recyclable paper from all paper purchases. Markets for other recycled items may be encouraged through similar differential purchase plans. One example would involve the use of garden trimming derived compost as a soil conditioner for public park plantings.

California Assembly-Senate Concurrent Resolution 48 (1977) addresses itself to the issue of discriminatory freight rates. The U.S. Interstate Commerce Commission transport rate for newsprint waste is cheaper by \$13.20 per ton than the intrastate rate for the same quantity of newsprint as established by the California Public Utilities Commission. This rate difference amounts to a 50% savings in purchase price for all out-of-state sales. It is cheaper to purchase newsprint waste from, say Nevada, than from a seller located within California. Stimulation of indigenous markets is the objective of this resolution. This legislation suggests to the California Public Utilities Commission that it lower its freight rates to accommodate secondary materials markets within California.

If freight rate differentiation exists favoring virgin over recycled materials, then equalization of these rates will promote competition to the recycled materials market. If the purchase of secondary materials is to have high priority, then differential pricing favoring recyclables through equalized or even lower freight rates can be considered. A product charge at the point of manufacture of containers using virgin materials might be an alternative means of establishing a price differential. The scarcity of certain virgin materials would then be reflected by a higher selling price.

Another economic incentive for the purchase of recyclables is offered by California Assembly Bill 1125 (1977), which considers the depletion allowances for virgin materials use. Depletion allowances have been used traditionally in the U.S. to allow virgin producers compensation for the use of non-renewable resources. They have also acted as incentives to deplete scarce resources. While these tax based allowances have continued to encourage the use of virgin materials, secondary materials use has been discouraged. Assembly Bill 1125 provides a tax credit for post-consumer waste purchases and so encourages the use of recycled materials. This bill should help to de-penalize the use of secondary materials.

The 1975 Berkeley Container Deposit ordinance requires a consumer charge of refundable deposits on all beverage containers, whether the containers are returnable or not (Grey, 1978). This ordinance would encourage the purchase of recyclable bottles since the consumer would be refunded on returnable bottles only. Such deposit ordinances could develop the market for the returnable bottle and encourage the use of recyclables.

Packaging regulation and specifications can be implemented to encourage recycling. Legislative restrictions on packaging material may encourage use of materials conducive to recycling. Alternatives to recycling-resistant wax-coated and plastic-coated containers, for example, can promote the recycling

philosophy. The bimetal can, being a mixture of two metals, tends to disrupt the post-consumer collection of metals. Contamination occurs when this can is added to the pure aluminum collections. The bimetal can may be mistaken for an aluminum can because it is easily flattened and does not have a seam. These are the principal traits used to identify an aluminum can (John Barry, personal communication). If recycling is to have a high priority among solid waste disposal techniques, then packaging materials changes should be considered in all areas where secondary materials use is possible. Legislation could be the basis for change in present resource consumption through packaging manufacturing.

Specification of packaging material can educate the public and promote the recycling effort. A uniform labeling law could "advertise" recycling. Table 1 is a survey of beverage cans and bottles labeling applicability to the recycling effort. Eleven of the nineteen beverage cans surveyed do indicate that the container is all-aluminum and recyclable. Four of the remaining eight cans do promote anti-littering through "please don't litter" type slogans.

The State Solid Waste Management Board estimates a 5% reduction in wastes is possible with the recycling of beverage cans and vegetable cans. Taken in this light, voluntary efforts by beverage companies appear only partially effective. The survey shows far less than 100% participation in this labeling effort. Without some mandate for labeling of container type, maximal diversion of solid wastes to re-use will not occur.

The survey of beverage bottles did point out the need for easily seen recycling and anti-litter slogans on bottle and can labels. Anti-litter phrases on bottles are located on the bottom of the sides of the container. The embossed, 1/4 inch high letters are hardly discernable. Words printed on the label are more easily seen.

California Senate Bill 1855 (1978) elaborates on the State Solid Waste Management Board provision for sites for conversion of solid waste to energy and recoverable resources. This bill would provide funds for preconstruction activities and thus minimize the risk of investment into refuse-energy facilities. Senate Bill 1855 guarantees repayment of debts from energy recovery projects and finances the cost of additional equipment. Toward the same end, Senate Bill 650 will allot 20% from its fund for research and development for energy-resource recovery projects.

Senate Bill 1855 deals with the need for coordination among the recycling and resource-energy recovery strategies by requiring the consideration of source separation and waste reduction efforts in the geographical area of future recovery sites. The existence of both recycling and solid waste-energy recovery, techniques which often compete for some of the same kinds of trash, has resulted in one-way contracts to guarantee a solid waste flow to some energy-recovery facilities. The contract between the City of Milwaukee and the American Can Company requires the delivery of 250,000 tons per year of a set composition of solid waste. The City of New Orleans must reimburse its resource recovery operations for failure to deliver the trash quota. The Connecticut Resource Recovery Authority is responsible for assuring trash delivery and will administer increased users fees to make up revenue losses resulting from sub-quota trash supply. Saugus, Massachusetts prohibits source separation and recycling in areas

Table 1: Labeling of beverage cans and bottles that encourage recycling and/or anti-littering.

Source: Author's survey.

COMPANY	BRAND	LABELING	LOCATION OF LABELING
Adolph Coors	Coors, 16oz. can	all aluminum-recycle	vertical letters on side
	Coors, 32oz. bottle	please help fight litter	embossed near bottom
Anheuser-Busch	Budweiser, 12oz. can	pitch in!	embossed on top
Bireley's	Orange Soda, 12oz. Can	-	can has seam
Coca-Cola	Sprite, Coke, Tab, Fresca, 12oz. can	all aluminum can, please recycle, don't litter	printed on side, embossed on top
	Coke, 48oz. bottle	no deposit, no refill	printed on label
General Foods	Country Time Lemonade, 12oz. can	-	can has seam
Miller Brewing	Miller High Lite, 12oz. can	recyclable aluminum, please don't litter	printed on side, embossed on top
	Miller High Life, 1 qt. bottle	-	-
Mission Beverage	fruit drinks, 10oz. bottle	not to be refilled, dispose of properly	embossed on side
	fruit drinks, 28oz. bottle	no deposit, no return, no refill, dispose of properly	printed on label, embossed on side
National	Colt'45, 16oz. can	please don't litter, recyclable aluminum	vertical letters, embossed on top
	Colt'45, 1qt. bottle	no deposit, no refill, dispose of properly	embossed above label
New Century Beverage	Mug Root Beer, 12oz. can	-	can has no seam
	Hawaiian Punch, 12oz. can	dispose of properly, please don't litter	can has seam
	Mountain Dew, 12oz. can	all aluminum, please recycle	-
Olympia Brewing	Olympia Beer, 12oz. can	all aluminum can, dispose of properly, please don't litter	red, vertical letters on side
	Hamm's, 16oz. can	recycle aluminum, please don't litter, dispose of properly	printed on side, embossed on top
	Olympia Beer, 1qt. bottle	recycle bottle, please don't litter	embossed near bottom

(continued)



Table 1 (continued)

COMPANY	BRAND	LABELING	LOCATION OF LABELING
Pabst Brewing	Burgermeister, 1qt. bottle	dispose of properly, no deposit-no refill	embossed near bottom
	Pabst Blue Ribbon, 12oz. can	please don't litter, all aluminum-recycle	embossed on top, printed on side
Pepsi Cola	Pepsi Light, 12oz. can	all aluminum, please recycle	printed on side
	Pepsi, 1 liter bottle	dispose of properly, no refill	vertical letters on label
Rainier Brewing	Rainier Ale, 12oz. can	all aluminum, recycle can, please don't litter	printed on side
Schlitz Brewing	Stout Malt Liquor, 1qt. bottle	-	-
	Stout Malt Liquor, 16oz. can	please don't litter, dispose of properly	can has no seam
Schweppes	Tonic Water, Club Soda, 32oz. bottle	return for deposit, money back bottle	printed on label, embossed near bottom
7-Up	7-Up, 32oz. bottle	no deposit, dispose of properly, not to be refilled	vertical letters on label, emboss near bottom
	7-Up, 12oz. can	-	can has seam
Shasta	soft drinks, 8oz. can	don't litter, please recycle, recyclable aluminum can	printed on side, embossed on top
Suncrest	soft drinks, 12oz. can	dispose of properly, please don't litter	can has seam

operating energy-recovery facilities.

A combination of techniques used as an approach to solid waste management would permit management flexibility in both policy and practice. Solid waste could be handled in several ways including reduction, conversion, and re-use.

The anti-litter campaign is a significant part of the solid waste management issue if Senate Bill 650 is an indication of preferred policy. The California Litter Management Act (AB 879) of 1977, which initiated litter management programs, a state litter management fund, and uniformity of litter standards is also evidence of legislative work in this area. Senate Bill 650 proposes state-wide litter control through public relations efforts beginning with the uniformity and specification of mandatory litter receptacles.

Keep America Beautiful (KAB) is a national agency whose anti-litter campaign typifies efforts on this front. According to KAB spokesman Robert Nihen, KAB emphasizes behavioral, physical, and situational factor modification as being the means for dealing with the litter habit. The KAB strategy is an extensive public relations program which markets an anti-litter philosophy to target audiences (school children, consumers, car owners, etc.). KAB provides motivated communities with its "Clean Community System," which is a package of public relations materials and team workshop programs. In response to inquiries about legislative matters, the policy of KAB "is not to get involved in legislative . . . rather, KAB serves as a resource agency on solid waste management." KAB attempts to change those attitudes which foster the littering habit; however, legislative development is a vital aspect of KAB strategy. The goals of the organization are to update litter ordinances, improve technology (trash receptacles, litter surveys), educate the public, and enforce litter regulations. Through the KAB Clean Community System, litter ordinances have been initiated and amended. Mandatory receptacles, specification of violations and fines, designation of a regulatory agency, development of litter collection practices--these are some legislative developments in this area (Robert Nihen, personal communication).

KAB has been criticized as being dominated by packaging and container manufacturing industries. 18 of the 41 members of KAB are identifiable packaging companies. These are Mead Packaging, National Can Corporation, The Aluminum Association, The Commercial Tin Mill Products, U.S. Steel Corporation, Owens-Illinois, International Paper Company, American Can Company, Glass Bottle Blowers Association, Coca-Cola, Federal Paper Board Company, National Soft Drink Association, Aluminum Company of America, Reynolds Metals Company, Glass Packaging Institute, Pepsi-Cola, National Steel Corporation, and United Paperworkers. More significantly, 6 of the 11 members of the executive committee of KAB are representatives of the packaging industry (Robert Nihen, personal communication).

If the anti-litter policies of KAB are dominated by the packaging and container manufacturing industries, then there is the possibility of a narrow perspective in litter management. Anti-litter campaigns may be considered the "cure-all" for solid waste management problems. Preoccupation with one strategy runs the risk of establishing inflexibility in solid waste practices. Even more



importantly, the anti-litter movement is dealing with the aesthetic problems associated with a tiny, misplaced fraction of the whole solid waste stream, rather than dealing with the pressing need for recycling, resource recovery, and waste reduction. The litter movement is only the beginning in the management of solid wastes.

Waste reduction efforts may be seen by such an association as running counter to its continued economic viability. Resource recovery, on the other hand, might be promoted by such an association as adequate solid waste management, because it allows for the waste generation, which is the direct result of packaging generation. The anti-litter program alone or a combination of anti-litter programs and resource recovery in solid waste management, if touted as a comprehensive solid waste management technique, may diminish concern for the recycling and waste reduction efforts.

Priorities within each industry tend to be reflected in the policies of KAB. Kaiser Aluminum does place newspaper advertisements for flattened aluminum and lists the locations of its mobile "Can-Do" pickup van (San Francisco Progress, 1978). Industry can participate in the recycling effort. The anti-litter campaign can also supplement resource recovery and recycling programs by providing a small but significant input to waste generation for a geographical area.

San Franciscans for a Cleaner City is a local anti-litter agency. According to spokesman John Roumbanis, his agency also employs behavioral modification approaches through public relations efforts and litter ordinance development and enforcement. He maintains that his agency has been successful in instilling a sense of consumer responsibility to reduce solid waste littering. School litter programs and business donations of uniform trash receptacles are the principal mechanisms of attitude change employed by this agency (John Roumbanis, personal communication). SFCC realizes the importance of mobilizing public support for the litter issue. This extensive public relations program, if extrapolated to cover all aspects of solid waste management, from the aesthetics to the conservation of certain resources, could be an integral part of a management plan for the Bay Area.

Solid waste reduction is still a poorly developed environmental issue. Packaging innovations conducive to waste reduction must, for the present, be left to individual industries. In spite of these difficulties, ABAG does include in its Draft Environmental Management Plan some suggestions for waste reduction. These include reduction of excess packaging, prohibition of disposable containers, standardization of containers, increased service life of containers, and design conducive to repair of containers, rather than disposal and replacement (ABAG, 1978).

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