POSITIVE STEPS TOWARDS WASTE REDUCTION: FOCUS ON DISPOSABLE DIAPERS

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INTRODUCTION

On May 5, 1989, thirty policymakers and advocates from across the country came together for a one-day policy seminar to discuss waste reduction, using single-use "disposable" diapers as a case study. The Washington, D.C. seminar was co-sponsored by the National Center for Policy Alternatives and Environmental Action Foundation. This policy report is a summary of the strategies discussed at that meeting and the current state legislation and municipal ordinances addressing various aspects of the diaper problem that were reviewed. It is presented as a resource to our colleagues who are undertaking similar waste reduction efforts in their areas.

Diapers are a good case study and an appropriate target for waste reduction advocates because, with the exception of newspapers and beverage containers, they are the single consumer product that contributes the most to the solid waste stream. The 18 billion single-use diapers that are discarded every year have a significant impact on a nation that is rapidly running out of landfill space and on local budgets which must meet ever escalating disposal fees. The annual disposal costs for diapers alone exceeds $300 million.

The other important factor that affected the working group's discussions was that there is a readily available and cost effective alternative to the use of single-use diapers — natural, recyclable, cotton diapers. It is surprising to most people that the extensive market share — approximately 85% of all diaper changes — of single-use diapers is a dramatic shift that has occurred in only the last 15-20 years. The growing public awareness and concern about the environmental problems that have resulted from the "throwaway ethic" is likely to provide the public and political support to reverse that trend.

Environmental advocates, policymakers, and solid waste regulators are taking many approaches to the solid waste crisis. The initial success of recycling efforts is leading to increasingly sophisticated approaches to waste reduction and to the targeting of specific components of the waste stream. Legislation and regulations are currently under consideration in a number of states which specifically address the environmental and solid waste problems caused by single-use diapers. Many more are considering legislation which could be adapted to address this problem.

This policy report is intended to review those legislative initiatives and to summarize the innovative approaches discussed by the policy seminar participants.

The policy approaches discussed at the seminar were grouped into four categories:

- Public Education
- Overcoming Institutional Barriers
- Financial Incentives / Disincentives
- Regulatory Action

Significant attention was paid to the issue of so-called "biodegradable" single-use diapers so that issue is considered separately in this summary.

Public Education

Recent experience shows that when the public is made aware of an environmental problem and voluntary solutions, a significant percentage will change consumption habits and adopt practices which mitigate the problem. Phosphates in detergents and the use of aerosol sprays are two examples where significant shifts in purchasing preceded final government action. Heightened public awareness of the solid waste crisis following the media attention focused on the homeless garbage barge last summer has consumers looking for ways to help by reducing their household waste. Indeed, the symbol of the barge can be a useful one in educating the public about the environmental implications of single-use diapers; the diapers disposed of in the U.S. would fill a garbage barge every six hours.

The working group felt that public education was essential to complement other regulatory efforts to achieve waste reduction. They identified several public sector approaches to initiate local and statewide public education efforts:

(1) A recent study by Carl Lehrburger, Diapers In The Waste Stream: A Review of Waste Management and Public Policy Issues, provides a comprehensive overview of the national statistics on diaper waste and general policy recommendations. (See Executive Summary, Appendix I.) In order to establish a database to support state or local policy initiatives, the working group suggested identifying diapers as a separate category in state and municipal solid waste analyses and conducting a study of the current amount of single-use diaper waste. (Note: a formula for quantifying single-use diapers in the solid waste stream developed by Carl Lehrburger is included in Appendix II .) It would also be useful to identify related disposal costs, implications for landfill capacity, and potential public health hazards resulting from mixing human waste in the solid waste stream. In addition to releasing the results of these studies to municipal solid waste officials, a news release to the regional media would aid their dissemination to the general public.

(2) Conduct public hearings on waste reduction, including disposable diapers, aimed at eliciting citizen and organization recommendations for programmatic solutions.

(3) Include information on cotton reusable diapers in the public education campaigns of government sponsored and private recycling campaigns.

(4) Include information about the environmental impact of single-use diapers in real estate tax bills, bills which relate to waste disposal costs, or utility bills. This model has already been used for energy conservation and environmental information in many municipalities, including Newark, New Jersey.

(5) Distribute information about the environmental implications of using cotton vs. single-use diapers to doctors, childbirth educators and human service agencies. Three states have taken the lead with public programs: (A) The New York State Consumer Protection Board has produced a pamphlet for widespread distribution; (B) Rhode Island has initiated an education program; and, (C) the King County Nurses Association (Seattle, Washington) received a grant from the County Department of Sanitation for its education program about disposable diapers.

(6) Establish a clearinghouse for information on what consumers can do to reduce household waste, including information on alternatives to disposable diapers, a list of diaper services in the area, etc.

Overcoming Institutional Barriers

The working group found that in a number of states day care center operators mandate the use of single-use diapers. In some, this is actually a legislative requirement. Likewise, they recognized that most new parents are introduced to single-use diapers through their extensive use in hospitals. It would be a significant boost to the public education effort and stimulate consumer awareness of a more environmentally sound alternative if that trend were reversed.

As a first step, policymakers should encourage waste reduction by insuring that existing institutional barriers to the use of recyclable cotton diapers are removed. Secondly, government purchasing programs can be used to support the waste reduction effort by requiring public institutions, including hospitals and day care centers, to use cotton diapers. The same requirement could be applied to institutions receiving government funds and subsidies. For example, Connecticut House Bill 6641 (Appendix III) which passed this month requires state government to phase out the use of disposable products, including those used in "patient care." A modification of this legislation could be applied to diapers used in hospitals receiving state funds. [In this context, a Maryland legislator who is a former nurse has raised the concern about the use of pins with cloth diapers in institutional settings. The use of either the new "pinless" diapers with velcro closure tabs or the velcro closure diaper covers which use cotton diapers as a liner effectively address this concern.]

The working group also suggested ways in which the policies of social service agencies might complement waste reduction efforts. Since the use of diaper services is less expensive to consumers than the purchase of single-use disposables, public agencies providing support to low-income families could provide information about cotton diapers in their materials for distribution.

Financial Incentives and Disincentives

The working group focused on state and municipal power to establish financial incentives or disincentives as a means of facilitating the growth and development of recycling businesses, including diaper services, to encourage environmentally sound consumer choices, and to recover direct disposal costs through user fees.

Several approaches were suggested:

(1) As an economic development initiative, a state or municipality could provide tax exemptions and/or credits for recycling businesses, which should specifically include diaper services. Some states currently provide exemptions from state taxes for the purchases of recycling equipment. The Oregon Department of Environmental Quality, for example, has a program whereby persons who make a capital investment in a recycling facility may be eligible to receive up to a 50% credit against state taxes. These types of programs may be general or targeted to specific economic development areas. Participation in the program could also be linked to meet other state objectives, such as a program in which diaper services provide low or no cost services for an introductory period to low-income families.

(2) State or municipal small business development assistance and/or job creation initiatives could be targeted to diaper services.

(3) A waste fee could be enacted to cover all or a portion of the cost of disposal of single-use products, including disposable diapers. The working group suggested that the revenue from this fund be used for public education to expand waste reduction and recycling efforts. In addition, the enactment of the waste fee and the media coverage it generates would increase public awareness of the solid waste problems associated with single-use products.

In the 1988 legislative session, New Jersey considered legislation to enact a tax on the manufacturers of "disposable, 'one-way,' nonreuseable or nonreturnable" products, which included single-use diapers. Senate Bill 126 (Appendix IV) was not enacted in that session, but the model is receiving serious consideration by other jurisdictions across the country. The Board of Supervisors of Contra Costa County, California is currently holding hearings on a possible waste fee or tax which has received extensive national publicity and occasioned strong industry opposition.

Regulatory Action

The working group realized that legislative efforts to ban single-use diapers entirely would be impractical as well as politically impossible. The realistic goal is to use regulation,

combined with public education, to encourage consumers and institutions to use single-use diapers solely for travel and other specific uses and to use cotton diapers as a more environmentally sound alternative for their regular method of diapering.

One regulatory approach which is under consideration in a number of states is to ban the sale of all "non-biodegradable" diapers. The issue of biodegradable plastics is a very controversial one and was discussed in depth by the working group. The primary concern was that the new "biodegradable" diapers will not solve the serious environmental and solid waste problems caused by disposing of single-use diapers. More information on the biodegradable issue is contained in the final section of this report, however, two legislative initiatives are summarized here.

This Spring, Nebraska became the first state in the nation to enact such a "biodegradable" bill. Legislative Bill 325 (Appendix V) would prohibit the sale of non-biodegradable single-use diapers after 1993. In its final stages, the bill was amended to include a provision that the "biodegradable" diapers must be available in sufficient consumer quantities and at a competitive price.

A comprehensive bill was introduced in New Jersey in 1988. Senate Bill 127 (Appendix VI) prohibits the sale or distribution of any "item, packaging or packing material, product or device . . . commonly referred to as 'disposable,' 'one-way,' or nonreusable, nonreturnable." The bill specifically refers to infant products "composed, in whole or in part, or plastic or other petroleum-based nondegradable materials." Any measures which encouraged biodegradable plastics was of such concern to the working group, that the matter was considered worthy of its own focus and is considered in the final section of this report.

The working group also reviewed two approaches to labeling legislation that are currently under consideration:

(1) Require labels on packages of single-use diapers which indicate the environmental problems associated with their disposal. Legislation to do this is under consideration in the '89-90 legislative session in New York, introduced at the request of the State Consumer Protection Board. (Senate Bill 4710, Appendix VII.)

(2) Another approach to labeling legislation focusing on the problems associated with human waste entering the solid waste stream was considered in the '88 legislative session in Connecticut. House Bill 5326 (Appendix VIII) would have required manufacturers to affix labels on packages of single-use diapers sold in the state warning that soiled diapers contain viruses and microbes which may transmit diseases when disposed of improperly.

The Biodegradable Issue

Playing on the growing public concern about the critical solid waste problems created by single-use diapers, there has recently been a substantial increase in the consumer marketing of single-use "biodegradable" diapers. At the same time, legislatures around the country have had an initially positive response. However, the working group was more alarmed than pleased when they considered these new products and their solid waste implications.

The outer layer of "biodegradable" diapers is composed of a mixture of cornstarch-based resin and plastic. Theoretically, the cornstarch component is to be broken down by the bacteria and fungi in landfills, leaving a residue of polyethylene particles. But due to the compaction of garbage, the lack of air and sunlight and the variability of landfill temperatures and composition, the speed of this organic breakdown is as yet unproven. Indeed, Dr. William Rathje, an anthropologist at the University of Arizona, has found 10-year-old newspapers still intact in Tuscon landfills. In spite of the time factor controversy, however, one thing is certain: the eventual breakdown into small pieces of plastic offers no solution to the landfill capacity crisis because it will not extend the life of landfills which are running out of space.

In addition to the environmental costs, the new "biodegradable" diapers continue the cycle of

public costs associated with the pervasive use of throwaway items. The truth is no single-use diaper offers any respite from the escalating disposal fees faced by most communities. Even if all 18 billion of the single-use diapers disposed of annually in the United States were biodegradable, the public would still be spending $300 million each year for their disposal.

So, from a solid waste policy perspective, the working group strongly discouraged the consideration of "biodegradable" diapers as a policy solution. Colin Isaacs, Executive Director of Canada's Pollution Probe Foundation echoes these findings in his article, "The Biodegradable Myth" (Appendix IX). To summarize other aspects of the biodegradable plastics issue, Environmental Action Foundation's position paper is included as Appendix X.

Conclusion

The tide is definitely turning. As the single-use diaper "is emerging as a symbol of the nation's garbage crisis" (New York Times, 12/10/88), a growing number of environmentally conscious consumers are choosing natural, recyclable cotton diapers. That choice for this generation may begin to reverse what has been a steadily mounting solid waste problem that will affect all future generations. Likewise, the spurt of legislative action and policy advocacy on single-use diapers is genuinely heartening to environmentalists concerned about the long-term implications of our throwaway society.

To assist in developing policy initiatives, the National Center for Policy Alternatives, in cooperation with the Environmental Action Foundation, will maintain a clearinghouse of model state legislation and local ordinances which address different aspects of the diaper problem. We hope this communication will be a two-way street. If you have any information which might be useful, please send copies to:

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SUMMARY REPORT

DIAPERS IN THE WASTE STREAM:
A REVIEW OF WASTE MANAGEMENT AND PUBLIC ISSUES

As the cost of solid waste disposal escalates and the availability of landfills decreases, society is beginning to recognize the need to reduce, reuse and recycle waste. Too easily overlooked for too long, single-use (disposable) diapers now account for approximately 2% of municipal solid waste, and between 3.5 and 4.5% of household solid waste (by weight).

In 1988, approximately 18 billion paper and plastic diapers were landfilled in the United States. ***No other single consumer product -- with the exception of newspapers and beverage and food containers -- contributes so much to our solid waste.***

By Carl Lehrburger

This Summary Report presents the highlights of a 64-page study of the quantitative and qualitative impacts of diaper use on solid waste mangement conducted by Carl Lehrburger during 1987-88. Mr. Lehrburger is a recycling and waste reduction specialist. He currently develops recycling programs and markets secondary materials for Energy Answers Corporation, a waste management company based in Albany, New York.

The topic was addressed from the perspectives of solid waste management, materials reuse, and public policy. Funding support was provided in part by the National Association of Diaper Services, which had no editorial control over its research design or contents. The author hopes the report will be a beginning point for public policy debate, a reexamination of environmental and economic issues resulting from reliance on single-use diapers, and a stimulus to more thorough investigations into alternatives.

EXECUTIVE SUMMARY

The impact of single-use diapers on the nation's solid waste disposal system is staggering:

• In 1988, it is estimated that 3,622,500 tons of single-use diaper waste will end up in landfills. There, the comingling of untreated raw sewage and solid waste will create a potentially unhealthy situation as well as pose a health concern for sanitation workers. ***Dramatic shifts in public policy, how we manage waste and manufacture products are needed to put an end to landfilling of single-use diaper waste.***

•Nearly $300 million is spent annually to discard single-use diapers, which now account for approximately 90% of all diapers sold in this country. Cotton diapers, which are reused 50 to 200 times and then recycled as rags, make up the balance of the diaper market. ***For every consumer dollar spent on single-use diapers, an additional hidden cost of over $0.08 on average must be spent to pay for disposal.***

• In an ironic twist, the percentage of the waste stream occupied by single-use diapers is destined to increase at the very time that states and municipalities are instituting recycling programs aimed at reducing the solid waste stream. ***Even if the number of single-use diapers thrown away stays the same in the coming years, the percentage of solid waste represented by this product will grow as newspapers and glass, plastic and metal containers are diverted through recycling.***

Diapers as Solid Waste

Viewed from a solid waste management perspective, diaper disposal lends itself to a hierarchy of options encouraging, in order of priority: waste reduction; reuse; recycling and composting; waste-to-energy; and, landfilling. From this vantage, cotton diaper usage should be encouraged over single-use diapers because it reduces solid waste and relies on reusable fabric.

Although it is the least desirable disposal option for diapers, landfilling is the current option of choice for most municipalities. Nearly 82% of all diapers purchased find their way to landfills; approximately 10% are reused (cotton diapers); and 8% are incinerated. Unless there is a dramatic change in public policy or the direction of waste management services in the near future, most single-use diapers will continue to be landfilled or burned.

From the perspective of materials reuse, increased use of cotton diapers represents the most immediate and obvious alternative to single-use diapers. Cotton diapers' reliance on reusable fabric, plus disposal of feces to the sewage waste stream, makes this diapering mode superior to single-use diapers.

"Biodegradable" Diapers

The use of biodegradable plastics in single-use diapers does little to alter the undesirability of diapers entering the solid waste stream because none of the collection, transportation or landfill costs will be minimized. Neither the quantity of diaper waste nor the potential for spread of infection from single-use diapers will be eliminated prior to landfilling. Once landfilled, "biodegradable" single-use diapers may not decompose as rapidly as promoters claim because rapid decomposition requires oxygen, which is in short supply under the surface of a landfill. Even if the starch component breaks down, causing the plastic to fall into small pieces, these small pieces of plastic are of little benefit to the environment.

Although well intentioned, the proposed use of biodegradable plastics in single-use diapers will not significantly change the contribution of single-use diapers to mounting solid waste problems.

Public Policy

From a public policy viewpoint, reducing the solid waste impacts of diapers in the immediate and near-term future involves encouraging the use of cotton diapers and/or diaper services over single-use diapers, which emphasize materials reuse and waste reduction. The Federal government could act swiftly and thoroughly by authorizing that all Federally-funded or operated institutions use or dispense cotton diapers. This requirement could extend to military base hospitals, government-operated stores on military bases, and other institutions receiving Federal funds.

On a state or local level, a tax on single-use diapers may be appropriate if directed at alleviating solid waste capacity problems. This policy could also send a strong message to both single-use diaper producers and consumers for the need to develop alternatives to single-use diapers that minimize solid waste. However, from a solid waste management perspective, any contemplated tax or ban on single-use diapers should be put in the larger context of a comprehensive waste management policy that includes all disposable products. As an immediate step, the author recommends educational programs that encourage cotton diaper use as well as a shift from the blatant bias toward single-use diapers in institutional settings.

After encouraging cotton diapers, the most effective reduction of single-use diaper waste will occur at the point of product manufacture. Industries that produce single-use diapers should be encouraged to continue to modify products to generate less solid waste.

In the final analysis, consumers are paying hidden costs for using disposable products, such as single-use diapers. Ultimately, the cost of collection, disposal, and any environmental or medical costs resulting from exposure to these products is borne by the consumer.

Public Health

From a public health perspective, single-use diapers are an infectious waste, since their contents often contain contagious viruses. The viruses from the fecal material of babies is a particular source of concern, since babies are effective carriers of enteroviruses and are usually immunized with live poliovirus and other vaccines. Virus-laden single-use diapers will continue to pose a potential threat to the health of those who handle solid waste, and to society at large, as long as improper disposal of this waste continues.

Efforts should be made on national, state and local levels to understand the health and environmental impacts of single-use diapers in the solid waste stream. Additional review of the subject is recommended to determine to what degree single-use diapers may pose a public health problem, how this potential health concern compares with other elements of the waste stream, and how solid waste and local health codes could be amended to ensure safe and proper disposal of these wastes.

I

CONCLUSIONS

The conclusions of this study are that in light of dwindling landfill capacity, rising disposal costs and potential public health concerns, the use of reusable cotton diapers should be encouraged over single-use diapers, and the elimination of single-use diapers going to landfills is a desirable and reasonable public policy objective.

The author makes the following recommendations:

• Solid waste managers should begin to recognize the overlooked impacts that the increasing quantities of single-use diapers have on the solid waste stream, and should seek alternatives to diaper wastes entering landfills and the solid waste stream.

• Single-use diapers should no longer be ignored and should be addressed in state legislative proposals to minimize or eliminate packaging and plastic waste and disposable, single-use products.

• National economic policies and subsidies should be shifted from promoting single-use diapers and disposable products toward encouraging waste reduction by providing economic incentives to diaper services and cotton diaper users to encourage waste reduction. The issue of how best to process diapers should be viewed from a solid waste management hierarchy that emphasizes, in order of priority: waste reduction; product reuse; recycling; waste-to-energy; and, landfilling.

• Increased use of cotton diapers represents the clear and obvious waste reduction approach to minimize solid waste created by single-use diapers.

• A tax on single-use diapers, as an element of a comprehensive and integrated solid waste management program, is an appropriate public policy to provide incentives for producers and consumers to minimize solid waste and to help raise financial resources to develop and encourage less wasteful alternatives.

• Local and state health officials are advised to review present public health codes in light of current collection and landfill operation procedures. Determinations should be made as to whether discarding unprocessed feces and urine-filled diapers into the solid waste stream and/or landfills poses a health risk and under what circumstances single-use diapers should be defined as "infectious waste."

• The Environmental Protection Agency should review the definition of both "infectious" and "solid" waste to determine under what circumstances changes in collection and disposal practices for single-use diapers are warranted.

• Where public health institutions are involved, a policy of reusing cotton and textile products should be promoted instead of reliance on single-use, throwaway products.

• Research and product development should be encouraged and promoted by diaper manufacturers to develop a flushable single-use diaper as an alternative to the current single-use diaper configuration.

• Single-use diaper manufacturers could be more effective at educating parents on the proper disposal of diaper contents, and should assume a greater responsibility for promoting proper disposal of their products and developing products that encourage easier emptying of fecal content into toilets.

• Increased educational efforts should be made to provide parents, health care and child care providers with information on proper disposal of, as well as alternatives to, single-use diapers.

■ Printed on 100 percent recycled paper.

For a copy of the Lehrburger study or additional information, contact:
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Washington, D.C. 20036

Calculations for quantifying single-use diapers in the solid waste stream

Another way to estimate the quantity of single-use diapers in the solid waste stream is to calculate the percentage based upon data derived from material flow analysis. The following format is utilized:

$$\frac{\text{(average diaper weight) X (total number of diapers sold)}}{\text{total solid waste discarded (weight)}} = \text{\% of waste stream (by weight)}$$

For calculating the percentage of single-use diapers in the municipal solid waste stream, the following imputs are utilized:

Total number of single-use diapers purchased[52] : in 1988, estimated to be 18 billion units.

Average weight of a single-use diaper when discarded: computed at 7 ounces. The author's own estimates based on frequent sampling is 8 ounces/diaper. Results of an unpublished survey by The Garbage Project[53] in the Spring of 1987 indicated an average diaper weight of 6.79 onces (823 diapers), and results of a study undertaken in 1982 indicated an average diaper weight of 6.5 onces (3,172 diapers)[54]. Market researchers have noted a decline in the average daily consumption of single-use diapers per baby. It is assumed that the percentage of decline in the number of diapers used per day is nearly proportional to the increase in average weight of a single-use diaper. Goldman Sachs Research reported in their Research Brief on the Kimberly Clark Corporation in 1986, "Daily (disposable diaper) unit usage before 1984 is unchanged at 7.0 units; 1985's is lowered to 6.9 units, 1986's to 6.7 units, 1987's units to 6.5 units, and 1988-1990's to 6.3 units"[55].

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[52] *CMR Chem. Bus., 8/87, page 27 cites 17 billion units sold in 1987. A conservative 6% growth rate for 1988 is assumed to arrive at 18 billion units. Also "Procter's Gamble -- Is Smaller Better?" by Francis Bouda, Nonwovens Industry, 1/86 which cites 18 billion diapers sold in the U.S. Also "Kimberly-Clark Corporation" by Goldman Sachs Research, Research Brief, April 17, 1986 which estimates 1988 units sold to be 17.79 billion.*

[53] *Unpublished research by The Garbage Project, Bureau of Applied Research in Anthropology, University of Arizona, Tuscan, Arizona, provided to the author by the Director, Dr. William Rathje.*

[54] *See previous footnote.*

[55] *Research Brief, "Kimberly-Clark Corporation", April 17, 1986, Goldman Sachs Research. Table 5.*

Calibrating The Garbage Projects's average diaper weight in 1982 is accomplished by multiplying the weight by the percentage change from 7 units to an estimated 6.5 units used daily cited by Goldman Sachs for 1987. This yields an average single-use diaper of 6.94 ounces in 1987. The author computed the average weight of a single use diaper at 7 ounces in his calculations based upon his own estimate of 8 ounces, The Garbage Projects 1987 study of 6.79 ounces, and The Garbage Projects 1982 study calibrated to 6.94 ounces as cited above.

Total Solid Waste Discarded: Municipal Solid Waste: Franklin Associates table "Products Discarded Into the Municipal Waste Stream" was used to derive 144.9 million tons discarded in 1988.[56] This number was estimated based on last baseline year in 1986 of 140.8 million tons, and an estimated 149 million tons in 1990.

18,000,000,000 diapers	X	7 ozs.	=	7,875,000,000 lbs/yr.;
7,875,000,000 lbs/year	/	2000	=	3,937,500 tons/yr.;
3,937,500 tons/year (diapers)	/	144,900,000 tons (msw)	=	2.71% of msw (by weight).

The above estimate of 2.71% of total solid waste being composed of single-use diaper waste is slightly above the upper range of the five previously calibrated waste composition studies of 1.23% to 2%.

The sampling techniques employed by the five msw waste composition studies did not measure or include other types of single-use diaper waste, such as packaging and manufacturing wastes and baby wipes, which could account for 659,200 tons of solid waste in 1988.[57] This would imply that the actual composition of single-use diaper waste is higher than the 1.57% average of the five studies, and is at or above the high end of the studies or 2% of the municipal solid waste stream, with a statistical diviation of 0.5%.

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[56] *Characterization of Municipal Solid Waste in the United States, 1960-2000, Franklin Associates, LTD., Prairie Village Kansas, upgraded March 30, 1988, EPA Contract No. 68-01-7310.*

[57] *Refer to figure 16.*

III

STATE OF CONNECTICUT

Substitute Bill No. 6641 Page 1 of 7

LCO No.

General Assembly

January Session, A.D., 1989

AN ACT CONCERNING REDUCTION OF PACKAGING MATERIAL AND DISPOSABLE PRODUCTS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (NEW) The commissioner of environmental protection, by regulations adopted in accordance with chapter 54 of the general statutes, may establish requirements and standards for (1) reducing the volume or weight of disposable packaging material manufactured for domestic, commercial, industrial, government, or other use; (2) enhancing the recyclability of disposable packaging material; and (3) increasing the proportion of recycled resources used in the manufacture of packaging material. Regulations adopted under this section (A) may require, without limitation, that labels be provided indicating (i) whether packaging material is recyclable, (ii) and the quantity of recycled material in the packaging, or (iii) whether any toxic substances are in the packaging and (B) may prohibit the use of particular types of or substances in packaging material for the purpose of minimizing impediments to recycling or adverse impacts on the environment, such as the release of harmful substances from land disposal or incineration.

Sec. 2. Section 22a-255c of the general statutes is repealed and the following is substituted in lieu thereof:

The commissioner of environmental protection [may require that symbols be placed on packages sold or offered for sale in the state indicating the packaging is recyclable or made of recycled material when uniform symbols are approved by the states

of Maine, New Hampshire, Vermont, Massachusetts and Rhode Island] SHALL BY REGULATIONS ADOPTED IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 54, ADOPT (1) OFFICIAL SYMBOLS THAT MAY BE PLACED ON PACKAGES INDICATING RECYCLABILITY OR RECYCLED MATERIAL CONTENT AND (2) PROCEDURES FOR THE USE OF SUCH SYMBOLS. ANY OFFICIAL SYMBOL SHALL BE CONSISTENT WITH REGULATIONS ADOPTED UNDER SECTION 1 OF THIS ACT. IN ADOPTING SUCH REGULATIONS THE COMMISSIONER SHALL CONSIDER SYMBOLS ADOPTED OR PROPOSED IN ANY NORTHEASTERN STATE INDICATING A PACKAGE IS RECYCLABLE OR MADE OF RECYCLED MATERIAL.

Sec. 3. (NEW) The publisher of each newspaper sold in this state shall use the following percentage of newsprint with recycled content: For the year ending December 31, 1993, twenty per cent of the amount of newsprint used in 1992; for the year ending December 31, 1994, thirty per cent of the amount of newsprint used in 1993; for the year ending December 31, 1995, forty per cent of the amount of newsprint used in 1994; for the year ending December 31, 1996, sixty per cent of the amount of newsprint used in 1995; for the year ending December 31, 1997, eighty per cent of the amount of newsprint used in 1996 and for any year thereafter, ninety per cent of the amount of newsprint used in the previous year. As used in this subsection, newsprint with recycled content shall be construed to be newsprint with at least forty per cent post-consumer recycled paper.

(b) On or before January 15, 1994, and annually thereafter, each publisher of a newspaper required under this section to use newsprint with recycled content shall submit a report to the commissioner of environmental protection stating the amount of newsprint with recycled content used for the preceding year.

Sec. 4. (NEW) (a) There shall be paid to the commissioner of revenue services by the owner of any resources recovery facility or mixed municipal solid waste landfill one dollar per ton of solid waste processed at the facility or disposed of at the landfill.

(b) Each owner of a facility or landfill subject to the assessment as provided by this section shall submit a return quarterly to the commissioner of revenue services, applicable with respect to the calendar quarter beginning October 1, 1989, and each calendar quarter thereafter, on or before the last day of the month immediately following the end of each such calendar quarter, on a form prescribed by the commissioner, together with payment of the quarterly assessment determined and payable in accordance with the provisions of subsection (a) of this section.

(c) Whenever such assessment is not paid when due, a penalty of ten per cent of the amount due or fifty dollars, whichever is greater, shall be added to the amount due and such penalty shall immediately accrue, and thereafter such assessment shall bear interest at the rate of one and one-half per cent per month until the same is paid. The commissioner of revenue services shall cause copies of a form prescribed for submitting returns as required under this section to be distributed throughout the state. Failure to receive such form shall not be construed to relieve anyone subject to assessment under this section from the obligations of submitting a return, together with payment of such assessment within the time required.

(d) Any person or municipality delivering solid waste to a facility or landfill whose owner is subject to the assessment imposed by subsection (a) shall reimburse the owner for any assessment paid for the solid waste delivered by such person or municipality. The assessment shall be a debt from the person or municipality responsible for paying such assessment to the owner.

(e) Any revenue collected under the provisions of this section shall be deposited in the municipal solid waste recycling trust fund established under section 22a-241 of the general statutes.

Sec. 5. Section 22a-228 of the general statutes is repealed and the following is substituted in lieu thereof:

(a) The commissioner of environmental protection shall adopt regulations in accordance with the provisions of chapter 54 establishing procedures for adopting and amending a state-wide solid waste management plan and for granting temporary variances from the provisions of the plan. Such regulations shall require notice to each affected municipality by certified mail, return receipt requested, and an opportunity for public comment, including regional hearings, and shall assure full consideration of and response to any comments received by the commissioner. The state-wide solid waste management plan shall be adopted and amended in accordance with such regulations, but shall not be deemed to be a regulation for purposes of chapter 54.

(b) On or after January 1, 1987, the commissioner of environmental protection shall adopt a state-wide solid waste management plan which shall incorporate each municipal solid waste management plan approved pursuant to section 22a-227. The commissioner shall amend said plan to include an assessment of the amount of landfill capacity needed in the state for landfills for residue from resources recovery facilities, ash from municipal incinerators and for bulky waste. Such assessment shall include (1) a projection of the annual capacity needed for the twenty-year period commencing on July 1, 1989, and (2) a minimum and maximum number of landfills in simultaneous operation required to dispose of such residue, ash or waste. Such amendment shall be available to the public on or before January 1, 1989.

(c) ON OR BEFORE JANUARY 1, 1990, THE COMMISSIONER SHALL REVISE THE PLAN TO INCLUDE A SOURCE REDUCTION COMPONENT THAT OUTLINES SPECIFIC STRATEGIES TO REDUCE THE SOLID WASTE GENERATED IN THIS STATE BY AN AMOUNT EQUAL TO OR MORE THAN THE AMOUNT REQUIRED TO MAINTAIN THE ESTIMATED ANNUAL PER CAPITA SOLID WASTE GENERATION RATE FOR EACH YEAR TO THE YEAR 2010 DETERMINED BY THE COMMISSIONER IN 1988. SUCH STRATEGIES SHALL INCLUDE MEASURES TO REDUCE WASTE FROM PACKAGING MATERIALS AND DISPOSABLE PRODUCTS.

Sec. 6. (NEW) The commissioner of environmental protection shall develop a public education program on waste reduction. The program shall include (1) promotion of packages and products which are reusable, recyclable or made with post-consumer recycled material and (2) discouragement of packages which are not recyclable, difficult to recycle, are made of virgin materials or have excessive amounts of material or may have adverse environmental impacts when disposed of by incineration or in a landfill.

Sec. 7. (NEW) (a) As used in this section, and section 4b-15 of the general statutes, as amended by section 8 of this act, "disposable product" means any product with an essential part which cannot be replaced, refilled or renewed and for which a reusable product exists and "single-use product" means any nonconsumable product designed to be discarded after one use or customarily used only once and for which a reuseable substitute exists.

(b) The commissioner of administrative services shall develop and implement a plan to eliminate by stages, the use of disposable and single-use products in state government, which shall include an implementation schedule and a list of products that may be affected. The plan shall be submitted to the joint standing committee of the general assembly having cognizance of matters relating to the environment on or before February 1, 1990.

(c) The provisions of this section shall be deemed to apply to disposable or single-use products directly related to patient or veterinary care or medical or scientific research.

Sec. 8. Section 4b-15 of the general statutes is repealed and the following is substituted in lieu thereof:

(a) Each state agency having care, control and supervision of state property, including the judicial department and the joint committee on legislative management of the general assembly, shall prepare on or before [January 1, 1991] OCTOBER 1, 1990, and thereafter periodically update, in consultation with the

Sec. 10. (NEW) On and after July 1, 1989, each retail establishment which offers plastic bags to customers for purchases made at such establishment shall offer paper bags to customers and inform customers that a choice is available. The provisions of this section shall not be construed to require retail establishments to use plastic bags.

IV

SENATE, No. 126

STATE OF NEW JERSEY

Introduced Pending Technical Review by Legislative Counsel

PRE-FILED FOR INTRODUCTION IN THE 1988 SESSION

By Senator RUSSO

AN ACT concerning the taxation of certain plastic materials and items, and supplementing Title 13 of the Revised Statutes.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The Legislature finds that the New Jersey shore region, from Cape May to Sandy Hook, comprises miles of magnificent white sand beaches; that these beaches are the base of the tourism industry of this State, providing many and varied recreational and leisure opportunities; that the fouling and pollution of the Atlantic ocean and consequent beach closings on the New Jersey shore present clear and present danger not only to public health, safety and the general welfare, but to the economy of the shore counties and municipalities; that the proliferation and accumulation in the State's coastal waters of highly-visible, carelessly discarded or illegally disposed of, or both, disposable plastic items and products, including plastic containers, packaging material, personal hygiene products and other medical wastes, constitute an environmental liability and an objectionable and obnoxious form of ocean pollution; and that the most effective and appropriate method to abate this environmental nuisance is to discourage the distribution and use of these items and materials in this State through the imposition of a nuisance tax thereon.

The Legislature further finds that consumer products are increasingly marketed in disposable plastic containers, packages or wrappings, or else made, in whole or in part, from plastic or other petroleum-based nondegradable materials; that these products are aggressively promoted as single-use or throwaway

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items, which products are advertised as light-weight, convenient and disposable; that the grim reality is that these products are an environmental liability rather than a consumers' aid; that the dangers posed to marine life and varied species of birds and land-based wildlife by plastic waste materials are well-documented; that the plastic applicators for feminine hygiene tampon-type devices constitute a persistent and particularly distressing environmental nuisance that find their way into the coastal waters of this State either through gaps in the intrastate or interstate solid waste disposal system, or through wastewater treatment systems, whose filters are insufficient to remove them; that these and other similar plastic "single use" items and materials generate hazardous waste and consume petroleum in their production, and are not biodegradable after disposal, notwithstanding that they offer no protective or other advantage to the retailer or consumer not provided by conventional - and recyclable - paper, glass, or aluminum goods, products and packaging materials; and that a tax on the distribution, sale, and use of plastic single-use items or materials to encourage consumers to purchase and utilize conventional products and packaging materials would be particularly advantageous to this State, a coastal state with thriving marine fisheries and tourist industries.

The Legislature therefore determines that it is the public policy of the State of New Jersey to impose a tax on the distribution, sale, and use of plastic materials and items marketed in plastic containers, and any item, packaging or packing material, products, or device made, in whole or in part, of thermoplastic synthetic polymeric material, or any other petroleum-based non-degradable material routinely discarded after use or consumption, has a useful life of less than six months, and is commonly referred to as a "disposable," "one-way," or nonreusable, nonreturnable product.

2. As used in this act:

"Beverage" means milk, alcoholic beverages, including beer or other malt beverages, liquor, wine, vermouth and sparkling wine, and nonalcoholic beverages, including fruit juice, mineral water and soda water and similar nonalcoholic carbonated and noncarbonated drinks intended for human consumption;

"Commissioner" means the Commissioner of Environmental Protection;

"Department" means the Department of Environmental Protection;

"Director" means the Director of the Division of Taxation in the Department of Treasury;

"Division" means the Division of Taxation in the Department of Treasury;

"Plastic beverage container" means an individual, separate, hermetically sealed, or made airtight with a metal or plastic cap, bottle or can composed of plastic, containing a beverage. The foregoing also includes any beverage container having a capacity of 16 ounces or less, composed of clear polyethylene terephthalate thermoplastic, and commonly referred to as a "plastic can";

"Plastic container" means any hermetically sealed, or made airtight with a metal or plastic cap, container with a minimum wall thickness of not less than 0.010 inches, and composed of thermoplastic synthetic polymeric material;

"Nondegradable" means not capable of disintegrating, by naturally occurring biological or physical processes in the environment within a period of three years after manufacture, into fragments that are small relative to the original size, or into particles of a molecular weight that is low when compared to that of the original material;

"Single-use item or material" means any plastic beverage container or plastic container, or any other item, packaging or packing material, product or device made in whole or in part, of thermoplastic synthetic polymeric material or any other petroleum-based nondegradable material which is routinely discarded after use or consumption, has a useful life of less than six months and is commonly referred to as a "disposable," "one-way," or nonreusable, nonreturnable product, including, but not limited to:

(1) Plastic beverage containers of any size composed of polyethylene terephthalate, commonly referred to as "PET bottles," or high-density polyethylene (HDPE);

(2) Plastic containers composed in whole or in part, of polyvinyl chloride or polyvinylidene chloride, commonly referred

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to a "PVC" or "PVC packaging," or any plastic container composed in whole or in part, of polypropylene or polystyrene with a capacity of less than five gallons;

(3) Any item, packaging or packing material, product or device constructed of polystyrene or any product transported in containers enclosed in or utilizing polystyrene plastic packing materials or other petroleum-based nondegradable material;

(4) Any beverage packaged in nonrecyclable, aseptic packaging composed of aluminum, paper and plastic, in combination thereof, and commonly referred to as a "brick-pack"; and

(5) Any personal care, infant, or feminine hygiene tampon-type device or product composed, in whole or in part, of plastic or other petroleum-based nondegradable material.

"Sold within the State" or "sales within the State" means all sales of single-use items or materials by retailers engaged in business within the State and, in the case of manufacturers, wholesalers and distributors, all sales of single-use items or material for use and consumption within the State. It shall be presumed that all sales of single-use items or materials by manufacturers, wholesalers and distributors sold within the State are for use and consumption within the State unless the taxpayer shows that the single-use items or materials are shipped out of State for out-of-State use;

"Tax period" means every calendar month or any other period as may be prescribed by rule and regulation adopted by the director, on the basis of which the taxpayer is required to report to the director pursuant to this act;

"Taxpayer" means the manufacturer, wholesaler, distributor or retailer of single-use items or materials subject to the tax provisions of this act.

3. a. There is levied upon each person engaged in business in the State as a manufacturer, wholesaler, distributor or retailer of single-use items or materials a tax of 1% (.01) on sales of those products within the State, except any retailer with less than $250,000.00 in annual retail sales of single-use items or materials is exempt from this tax. A sale by a wholesaler or distributor to another wholesaler or distributor, a sale by a company to another company owned wholly by the same

individuals or companies, or a sale by a wholesaler or distributor owned cooperatively by retailers to those retailers is not subject to tax under this 1987 supplementary act. For the purposes of this 1987 supplementary act, "retailer" includes restaurants, one of the principal activities of which consists of selling for consumption off the premises of the restaurant a meal or food prepared and ready to be eaten.

The tax on the sale of single-use items or materials imposed by this subsection shall be in addition to, but not in lieu of, the tax on the sale of litter-generating products imposed pursuant to section 6 of P.L. 1985, c. 533 (C. 13:1E-99.1).

b. Every person subject to this tax (hereinafter referred to as the ("taxpayer") shall register with the director, on forms prescribed by the director, within 90 days of the effective date of this act.

c. Every taxpayer shall, on or before the twentieth day of the month following the close of each tax period, prepare and file a return, under oath, with the director on such forms as may be prescribed by the director. The return shall indicate the dollar value of the sales within the State of single-use items or materials and at the same time the taxpayer shall pay the full amount of the tax due.

d. If a return required by this act is not filed, or if a return when filed is incorrect or insufficient in the opinion of the director, the amount of the tax due shall be determined by the director from such information as may be available. Notice of this determination shall be given to the taxpayer liable for the payment of the tax. This determination shall finally and irrevocably fix the tax unless the person against whom it is assessed shall apply to the director for a hearing within 30 days after receiving notice of the determination, or unless on his own the director shall redetermine the tax. After such a hearing the director shall give notice of his determination to the person to whom the tax is assessed.

e. Any taxpayer who shall fail to file his return when due or to pay any tax when due, as provided by this act, shall be subject to the penalties and interest as provided in the "State Tax Uniform Procedure Law," R.S. 54:48-1 et seq. If the director

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determines that the failure to comply with the provisions of this section was excusable under the circumstances, he may remit any part of the penalty as shall be appropriate under the circumstances.

f. (1) Any person failing to file a return, failing to pay the tax, or filing or causing to be filed, or making or causing to be made, or giving or causing to be given any return, certificate, affidavit, representation, information, testimony, or statement required or authorized by this act, or any rules and regulations adopted pursuant thereto, which is willfully false, or failing to keep any records required by this act or any rules or regulations adopted pursuant thereto, shall, in addition to any other penalties herein or elsewhere prescribed, be guilty of a crime of the fourth degree.

(2) The certificate of the director to the effect that a tax has not been paid, that a return has not been filed, that information has not been supplied or that inaccurate information has been supplied pursuant to the provisions of this act, or any rules and regulations adopted pursuant thereto, shall be presumptive evidence of a violation of this act.

g. In addition to the other powers granted by this section, the director may:

(1) Delegate to any officer or employee of the division any powers and duties he may deem necessary to carry out efficiently the provisions of this section, and the person or persons two whom the powers have been delegated shall possess and may exercise all of the powers and perform all of the duties delegated by the director.

(2) Prescribe and distribute all necessary forms for the implementation of this act; and

(3) Adopt any rules and regulations necessary for the implementation of this act.

h. The tax imposed by this section shall be governed in all respects by the provisions of the "State Tax Uniform Procedure Law," R.S. 54:48-1 et seq., unless otherwise provided by a specific provision of this section.

4. a. "The" Plastics Recycling Fund" (hereinafter referred to as the "fund") is established in the department as a nonlapsing, revolving fund. The fund shall be administered by the New

Jersey Office of Recycling, and shall be the depository for the revenues generated by the tax collected by the division pursuant to section 3 of this 1987 supplementary act, and any interest earned thereon, and any moneys appropriated to the fund by the Legislature pursuant to any subsequent act. The moneys in the fund shall be used solely for the development of systems for the proper disposition and recycling of single-use items or materials, including the provision of State grants to qualified colleges and universities in the State or contracts to private firms which can demonstrate the administrative and technical capability to undertake studies on the proper disposition or recycling of single-use items or materials.

b. The department shall adopt, within one year of the effective date of this act and pursuant to the provisions of the "Administrative Procedure Act," P.L. 1968, c. 410 (C. 52:14B-1 et seq.), any rules or regulations which shall be designed to implement the purpose and provisions of subsection a. of this section.

5. This act shall take effect the first day of the eighteenth month following enactment, except that section 4 shall take effect immediately and section 3 shall be applicable on and after the first day of the sixth month following the effective date of P.L. 1987, c. ... (C. .....) (pending before the Legislature as Senate Bill No. .... of 1987).

STATEMENT

This bill would impose a tax on the sale of "single-use items or materials" exempted by the department to provide funds to finance studies on the proper disposition or recycling of these products. A companion measure, introduced as Senate Bill No. ... of 1987, would prohibit the sale or distribution of plastic materials and items marketed or in a plastic container, and any item, packaging or packing material, product or device made, in whole or in part, of thermoplastic synthetic polymeric material or any other petroleum-based nondegradable material routinely discarded after use or consumption, has a useful life of

less than six months, and is commonly referred to as a "disposable," "one-way," or nonreusable, nonreturnable product. However, the bill permits the Department of Environmental Protection to exempt one or more of these products if (1) there is a compelling public need for the "single-use item or material"; or (2) there is no feasible alternative to the use of the "single-use item or material". Thus, the tax would apply to these exempted products.

The tax is imposed on every manufacturer, wholesaler, distributor or retailer or single-use items or materials at the rate of 1% (.01) on sales of those products within the State. The bill establishes a "Plastics Recycling Fund" in the department to be administered by the New Jersey Office of Recycling, which fund shall be the depository for the revenues generated by the tax. The moneys in the fund shall be used for the development of systems for the proper disposition and recycling of single-use items or materials, and to provide State grants to qualified colleges and universities in the State or contracts to private firms to undertake studies on the proper disposition or recycling of these products.

ENVIRONMENT

Solid Waste

Imposes tax upon the sales within the State of certain plastic items and materials.

V

LEGISLATURE OF NEBRASKA

NINETY-FIRST LEGISLATURE

FIRST SESSION

Legislative Bill 325

FINAL READING

Introduced by Hefner, 19; R. Johnson, 34; Morrissey, 1; Nelson, 35; Beck, 8; L. Johnson, 15; Smith, 33; Pirsch, 10; Schimek, 27; Scofield, 49; Peterson, 21; Elmer, 38; Schellpeper, 18; Abboud, 12; Lindsay, 9

Read first time January 11, 1989

Committee: Natural Resources

A BILL

FOR AN ACT relating to environmental protection; to adopt the Degradable Products Act.

Be it enacted by the people of the State of Nebraska,

Section 1. Sections 1 to 12 of this act shall be known and may be cited as the Degradable Products Act.

Sec. 2. For purposes of the Degradable Products Act, the definitions found in sections 3 to 7 of this act shall be used.

Sec. 3. Biodegradable shall mean degradable through a process by which fungi or bacteria secrete enzymes to convert a complex molecular structure to simple gasses and organic compounds.

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Sec. 4. Degradable shall mean capable of decomposing or deteriorating through a natural chemical process into harmless components after exposure to natural elements for not more than one year.

Sec. 5. Photodegradable shall mean degradable through a process in which ultraviolet radiation in sunlight causes a chemical change in a material.

Sec. 6. Recyclable shall mean suitable for any process of separating, cleaning, treating, and reconstituting waste or other discarded materials for the purpose of recovering or reusing the resources contained therein.

Sec. 7. Retail shall mean sale for use or consumption and not for resale in any form.

Sec. 8. On and after January 1, 1991, a person shall not sell or offer for sale at retail any beverage for human consumption if the beverage container is connected to another beverage container by a device which is constructed of a material which is not biodegradable or photodegradable.

Sec. 9. On and after January 1, 1992, a person shall not sell or offer for sale at retail any bag used for or intended to be used for grass clippings, garbage, yard waste, or leaves which is constructed of a material which is not biodegradable or photodegradable.

Sec. 10. On and after January 1, 1992, a person shall not sell or offer for sale at retail any bag used for or intended to be used for groceries or shopping which is constructed of a material which is not biodegradable, photodegradable, or recyclable.

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Sec. 11. On and after October 1, 1993, a person shall not sell or offer for sale at retail any disposable diaper which is constructed of a material which is not biodegradable or photodegradable if the Director of Environmental Control determines that biodegradable or photodegradable disposable diapers are readily available at a comparable price and quality. The determination of quality shall include a study of the environmental impact and fate of such disposable diapers. The director shall issue his or her determination to the Legislature on or before October 1, 1992. For purposes of this section (1) readily available shall mean available for purchase in sufficient quantities to meet demand through usual retail channels throughout the state and (2) comparable price and quality shall mean at a cost not in excess of five percent above the average price for products of comparable quality which are not biodegradable or photodegradable.

Sec. 12. Any person violating sections 8 to 11 of this act shall be guilty of a Class III misdemeanor.

VI

SENATE, No. 127

STATE OF NEW JERSEY

Introduced Pending Technical Review by Legislative Counsel

PRE-FILED FOR INTRODUCTION IN THE 1988 SESSION

By Senator RUSSO

AN ACT prohibiting the sale or use of certain plastic materials and items, and supplementing Title 13 of the Revised Statutes.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The Legislature finds that the New Jersey shore region, from Cape May to Sandy Hook, comprises miles of magnificent white sand beaches; that these beaches are the base of the tourism industry of this State, providing many and varied recreational and leisure opportunities; that the fouling and pollution of the Atlantic ocean and consequent beach closings on the New Jersey shore present clear and present danger not only to public health, safety and the general welfare, but to the economy of the shore counties and municipalities; that the causes and sources of this Atlantic ocean fouling are varied in nature and, at times, are subject to dispute; that, nevertheless, the proliferation and accumulation in the State's coastal waters of highly-visible, carelessly discarded or illegally disposed of, or both, disposable plastic items and products, including plastic containers, packaging material, personal hygiene products and other medical wastes, constitute an environmental liability and an objectionable and obnoxious form of ocean pollution; and that the most effective and appropriate method to abate this environmental nuisance is to prohibit the distribution and use of these items and materials in this State.

The Legislature further finds that consumer products are increasingly often marketed in disposable plastic containers, packages or wrappings, or else made, in whole or in part, from

plastic or other petroleum-based nondegradable materials; that these products are aggressively promoted as single-use or throwaway items, which products are advertised as light-weight, convenient and disposable; that the grim reality is that these products are an environmental liability rather than a consumers' aid; that the dangers posed to marine life and many and varied species of birds and land-based wildlife by plastic waste materials are well-documented; than the plastic applicators for feminine hygiene tampon type devices constitute a persistent and particularly distressing environmental nuisance that find their way into the coastal waters of this State either through gaps in the intrastate or interstate solid waste disposal system, or through wastewater treatment systems, whose filters are insufficient to remove them; that these and other similar plastic "single-use" items and materials generate hazardous waste and consume petroleum in their production, and are not biodegradable after disposal, notwithstanding that they offer no protective or other advantage to the retailer or consumer not provided by conventional--and recyclable--paper, glass, or aluminum goods, products and packaging materials; and that a total prohibition on the distribution and sale of plastic single-use items or materials would be particularly advantageous to this State, a coastal State with thriving marine fisheries and tourist industries.

The Legislature therefore determines that it is the public policy of the State of New Jersey to prohibit the distribution, sale, and use of plastic materials and items marketed in plastic containers, and any item, packaging or packing material, product, or device made, in whole or in part, of thermoplastic synthetic polymeric material, or any other petroleum-based nondegradeable material routinely discarded after use or consumption, has a useful life of less than six months, and is commonly referred to as a "disposable," "one-way," or nonreusable, nonreturnable product.

2. As used in this act:

"Beverage" means milk, alcoholic beverages, including beer or other malt beverages, liquor, wine, vermouth and sparking wine,

and nonalcoholic beverages, including fruit juice, mineral water and soda water and similar nonalcoholic carbonated and noncarbonated drinks intended for human consumption;

"Plastic beverage container" means an individual, separate, hermetically sealed, or made airtight with a metal or plastic cap, bottle or can composed of plastic, containing a beverage. The foregoing also includes any beverage container having a capacity of 16 ounces or less, composed of clear polyethylene terephthalate thermoplastic, and commonly referred to as a "plastic can;"

"Plastic container" means any hermetically sealed, or made air-tight with a metal or plastic cap, container with minimum wall thickness of not less than 0.010 inches, and composed of thermoplastic synthetic polymeric material;

"Nondegradable" means not capable of disintegrating, by naturally occurring biological or physical processes in the environment within a period of three years after manufacture, into fragments that are small relative to the original size, or into particles of a molecular weight that is low when compared to that of the original material;

"Single-use item or material" means any plastic beverage container or plastic container, or any other item, packaging or packing material, product or device made in whole in part, of thermoplastic synthetic polymeric material or any other petroleum-based nondegradable material which is routinely discarded after use or consumption, has a useful life of less than six months and is commonly referred to as a "disposable," "one-way," or nonreusable, nonreturnable product, including, but not be limited to:

(1) Plastic beverage container of any size composed of polyethylene terephthalate, commonly referred to as "PET bottles," or high-desinty polyethylene (HDPE);

(2) Plastic containers composed in whole or in part, of polyvinyl chloride or polyvinylidene chloride, commonly referred to as "PVC" or "PVC packaging,' or any plastic container composed, in whole or in part, of polypropylene or polystyrene, with a capacity of less than five gallons;

(3) Any item, packaging or packing material, product or device constructed of polystyrene or any product transported in containers enclosed in or utilizing polystyrene plastic packing materials or other petroleum-based nondegradable material;

(4) Any beverage packaged in nonrecyclable, aseptic packaging composed of aluminum, paper and plastic, in combination thereof, and commonly referred to as a "brick-pack;" and

(5) Any personal care, infant, or feminine hygiene tampon-type device or product composed, in whole or in part, of plastic or other petroleum-based nondegradable material.

3. No person shall sell, offer for sale, or distribute any single-use item or material. The Commissioner of the Department of Environmental Protection may, pursuant to criteria adopted by rule or regulation in accordance with the provisions of the "Administrative Procedure Act," P.L. 1968, c. 420 (C. 52:14B-1 et seq.), exempt from the requirements of this act any single-use use item or material otherwise prohibited pursuant to this act for which there is no feasible or practical substitute, that is required pursuant to federal law, or that is necessary to protect the public health, safety, or welfare.

4. The Department of Environmental Protection shall adopt, within one year of the effective date of this act and pursuant to the "Administrative Procedure Act," any rules and regulations necessary to implement this act. The department may temporarily or permanently exempt a single-use item or material, or class of single use items or materials, from this act if it determines that there is a compelling public need for the single-use item or material, or class of single-use items or materials, or that there is no feasible alternative to the temporary or permanent use of the single-use item or material, or class of single-use items or materials.

5. Any person who violates section 3 of this act shall be subject to a penalty of not less than $500.00 nor more than $1,000.00 for each offense, to be collected in a civil action by a summary proceeding under "the penalty enforcement law," (N.J.S. 2A:58-1 et seq.), or in any case before a court of competent jurisdiction wherein injunctive relief has been

requested. The Superior Court and the municipal court shall have jurisdiction to enforce the provisions of "the penalty enforcement law" in connection with this act. If the violation is of a continuing nature, each day during which it continues constitutes an additional, separate, and distinct offense. The Department of Environmental Protection may institute a civil action for injunctive relief of enforce this act and to prohibit and prevent a violation of this act, and the court may proceed in the action in a summary manner.

6. This act shall take effect the first day of the eighteenth month following enactment except that section 4 shall take effect immediately.

STATEMENT

This bill would prohibit the sale or distribution of plastic materials and items marketed in a plastic container, and any item, packaging or packing material, product or device made, in whole or in part, of thermoplastic synthetic polymeric material or any other petroleum-based nondegradeable material routinely discarded after use or consumption, has a useful life of less than six months, and is commonly referred to as "disposable," "one-way," or nonreusable, nonreturnable product.

ENVIRONMENT
Solid Waste

Prohibits the sale and distribution of certain plastic items and materials in this State.

STATE OF NEW YORK

4710

1989-1990 Regular Sessions

IN SENATE

April 11, 1989

Introduced by Sens. E. LEVY, LACK, VELELLA, LAVALLE -- (at request of the Consumer Protection Board) -- read twice and ordered printed, and when printed to be committed to the Committee on Consumer Protection

AN ACT to amend the general business law, in relation to a consumer notice on disposable diapers

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The general business law is amended by adding a new section 399-r to read as follows:

§ 399-r. Disposable diaper labeling. 1. On each box of disposable diapers sold or delivered by a manufacturer within the state of New York after January first, nineteen hundred ninety-one, shall be printed thereon or attached thereto a notice to consumers regarding the environmental impacts of the product. Such notice shall be in letters not less than eight point type and in a color in contrast with the package containing the disposable diapers and shall contain the following statement:

"DISPOSABLE DIAPERS MAY TAKE OVER ONE HUNDRED YEARS TO DEGRADE IN A LANDFILL. THIS PRODUCT HAS SIGNIFICANT ENVIRONMENTAL IMPACTS AND MAY POSE PROBLEMS IN DISPOSAL. DISPOSABLE DIAPERS ARE USED ONCE AND DISCARDED. THIS PRODUCT WILL CREATE SIGNIFICANT DISPOSAL COSTS TO YOUR COMMUNITY IF USED REGULARLY. YOU MAY WISH TO CONSIDER ALTERNATIVE PRODUCTS THAT HAVE LESS IMPACT ON THE ENVIRONMENT."

2. If a manufacturer claims that the disposable diaper produced by him or her is made out of a material that degrades more quickly than similar materials used in the manufacture of such product, the manufacturer may be exempt from the notice required by subdivision one of this section. The manufacturer shall present such evidence of degradability based on

EXPLANATION--Matter in italics (underscored) is new; matter in brackets [ ] is old law to be omitted.

LBD10348-02-9

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scientific data and a nationally reorganized standard for degradability produced by the industry to the commissioner of the department of environmental conservation and to the executive director of the consumer protection board. The commissioner and the executive director shall review the evidence presented and may modify the notice required by subdivision one of this section.

3. Any person, firm, corporation or association or its officers or agents who or which violate any of the provisions of this section shall be subject to a fine not to exceed fifty dollars per box of diapers.

§ 2. This act shall take effect January 1, 1991.

VIII

STATE OF CONNECTICUT

Proposed Bill No. 5326 Page 1 of 1

Referred to Committee on Environment

LCO No. 1219

Introduced by REP. RITTER, 2nd DIST.

General Assembly

January Session, A.D., 1989

AN ACT CONCERNING THE LABELING OF DISPOSABLE DIAPERS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

That the general statutes be amended to require manufacturers to affix a warning on any package of disposable diapers that soiled diapers contain viruses and microbes which may transmit diseases to the general population when disposed of improperly.

STATEMENT OF PURPOSE: To require manufacturers to print labels on packages of disposable diapers concerning the potential health hazards associated with improper disposal of diapers.

OPINION

THE BIODEGRADABLE MYTH!

Biodegradable has been rediscovered by the retail marketing sector as the latest gimmick with which to con the consumer and befuddle the politician. The word has been used on detergents and household cleaning products since the mid-1970s, but now biodegradable is also being used to describe plastic shopping bags, diapers and magazine wrappers. The public's desire to do something good for the environment has finally caught the attention of the advertisers, but, as seems common in advertising, neither the real meaning of the word biodegradable nor the products advertised as being biodegradable have anything to do with protection of the environment.

Dictionaries rarely keep up with current language use, and I found this to be true with the word biodegradable. I expected to find that biodegradable meant having the ability to break down under the action of natural organisms into basic substances like water and carbon dioxide. Indeed, I opened the dictionary expecting to find an environment-friendly definition with which I could lay a complaint of misleading advertising against a biodegradable bag promoter. Unfortunately, a hunt through many dictionaries came up with the definition "capable of decaying through the action of natural organisms." Decay is further defined as "a gradual falling into an inferior condition." In other words, biodegradable means very little!

Surely, people say to me, even if biodegradable only means "capable of falling apart," making disposable products biodegradable will at least help to alleviate our landfill problems.. After all, landfills destroy neighbourhoods, waste prime agricultural or development land, and, because of the uncontrolled mess of material dumped into them, threaten both air quality and water quality. Unfortunately, switching to biodegradable plastics and such products as biodegradable diapers will not help solve any of these problems.

BY COLIN ISAACS

Biodegradable plastic is a mixture of starch and plastic blended together. The starch may be broken down by bacteria in the soil causing the plastic to fall apart. Unfortunately, small pieces of plastic are no better for the environment than "plastic sheet." Biodegradable hucksters claim that small pieces of plastic biodegrade more quickly than plastic sheet, but no less an authority than Dr. David Wiles, director of the National Research Council of Canada's division of chemistry, asserts plastics never break down, no matter what form they come in. In fact, Dr. Wiles goes on to say that it is just as well that plastic does not biodegrade, because breakdown would add to the already serious problem of gas and leachate production, possibly adding toxic chemicals much more damaging to the environment than the plastic wastes themselves.

Diapers are another contentious product. Both biodegradable and disposable diapers are made of a cellulose fibre or paper-like material and a plastic cover. In biodegradable diapers, the plastic is mixed with starch. Paper is one product that really does break down into basic materials under the action of naturally occurring bacteria: after all; that's how trees decay to maintain the viability of the forest. However, the breakdown does nothing to help our landfill situation, because the breakdown products of any throw-away diaper, disposable or biodegradable, take up just as much room in the landfill as the original, so we don't get to put more waste into the landfill, even if we wanted to. Worse still, the problem with diapers in landfills is the human waste. We don't allow medical waste and infectious waste into our landfills for obvious sanitary reasons, yet, each year, millions of tons of soiled diapers, possibly disease infected, are dumped into landfills not equipped to handle them. The environment is put at risk simply by the act of discarding them, even if they are biodegradable!

Biodegradable detergents are another marketing gimmick. Almost all detergent ingredients break down under the action of living organisms in water. Phosphates, often regarded as the environmentally damaging ingredient in detergents after they helped "kill" Lake Erie in the 1970s, are themselves biodegradable, and are actually consumed by living organisms so quickly as to cause runaway algal growth. This "algal bloom" can continue until all oxygen in the water has been used up, leading to the death through suffocation of most higher species such as fish. Phosphates are *too* biodegradable!

Wastes from some biodegradable products can cause problems because their breakdown products are toxic to higher species or because they contain additives or heavy metal salts which are released during the biological breakdown process. Concern of this kind exists for some types of printing ink and cleaning compounds, and for some of the additives included in plastics.

By giving a false sense of security, biodegradable products may remove part of the incentive for the environmentally sound 3Rs approach to waste management — reduce, reuse and recycle. It is clearly better not to produce waste in the first place, or to reuse it, or to recycle it into new products than it is to continue dumping it into landfill sites. Further, biodegradable wastes, especially biodegradable plastic, may pose an even greater threat then just removing the incentive for recycling. Recyclers are being told that plastic waste containing even a fraction of starch will not be accepted for recycling, because the starch interferes with the recycling process and damages the quality and consistency of the recycled product. Plastics are difficult enough to recycle without this added problem! Unlike metal and glass containers, which can be recycled into brand-new containers, recycled plastics are generally used only for secondary products like fence posts or car bumpers where biodegradability is not wanted. Mixing biodegradable plastics into the waste stream will make it even more difficult to find recycling opportunities for waste plastics.

The word biodegradable is rapidly turning into the marketing manager's dream, once again to the detriment of the environment. When the plastic components on your next car fall apart, it might just be due to society's gullibility for the word.

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Solid Waste Alternatives Project

POSITION PAPER ON DEGRADABLE PLASTICS

Plastics are a problem for solid waste disposal. Recent estimates put their contribution at 30 percent of the volume of municipal solid waste. Plastics are also a problem when littered, especially in the ocean where they pose a threat to wildlife through ingestion, entanglement and incidental take.

Concern with these related problems of solid waste disposal and litter has led many policymakers and much of the general public to support so-called "degradable plastics" as a potential solution.

Although the idea that plastics packaging could be made to "disappear" is attractive, the Solid Waste Alternatives Project of Environmental Action Foundation has concluded that at this time, degradable plastics are not a viable solution to either plastics disposal problems or litter.

Our conclusions are based on the following four findings:

1. WE CANNOT DEGRADE OUR WAY OUT OF THE PLASTICS PROBLEM.

Photodegradables are most often promoted as a solution to litter; biodegradables as a solution to landfill volume. But the rates of degradation of both bio- or photodegradable plastics may be too slow, or too varied to reduce these problems. Photodegradables may not degrade fully in the ocean, causing continuing problems for wildlife. Futhermore, landfills are not composting facilities. There is little evidence to suggest that plastics--or any waste for that matter--will degrade fast enough to significantly extend the life of landfills.

A General Accounting Office report, released in September 1988, revealed that there has been little objective research into degradable plastics, no standards set and no agreed upon definitions--all of which are necessary prior to introducing such products into the marketplace.

While there may be specific applications for degradable plastics (such as in fishing nets or composting bags), there are more promising solutions to reducing landfill volume and litter. These solutions include: source reduction, recycling, and banning the dumping of trash in the ocean.

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2. DEGRADABLE PLASTICS POLLUTE THE ENVIRONMENT.

There are serious questions concerning the environmental impact of the end products of the degradation of plastics. Specifically, many plastics products and packaging contain toxic organic chemicals and heavy metals, including lead, cadmium, nickel, and chromium. In non-degradables, these components remain bound into the structure of the plastic. If the plastic is modified to be degradable, it is unclear whether these toxic compounds will be released into the environment.

Although the term "biodegradable" implies that something is environmentally benign, degradable plastics create the same "front-end" pollution problems that nondegradable plastics do--from the depletion of non-renewable resources (oil and natural gas) used as raw materials to the large volumes of hazardous manufacturing by-products.

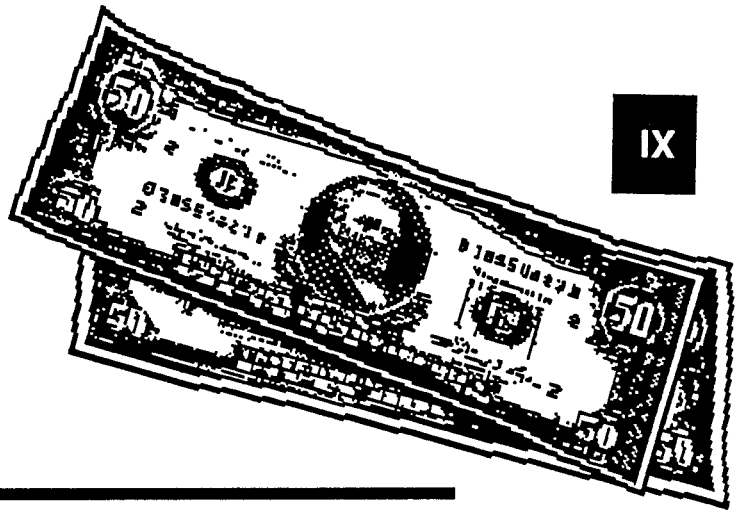
3. DEGRADABLE PLASTICS HARM PLASTICS RECYCLING EFFORTS.

Degradable plastics threaten plastics recycling at a time when the pressure is on to develop viable plastics recycling programs. Plastics recyclers consider degradable plastics to be a "contaminant" in their recycling stream which must be removed. It would be prohibitively expensive to set up plastics collection and processing systems which could separate out the degradable plastics. The Plastics Recycling Action Plan for Massachusetts states that "wide use of degradables would be at cross-purposes to plastics recycling."

4. DEGRADABLE PLASTICS ENCOURAGE A THROWAWAY ETHIC.

Degradable plastics do nothing to change the very patterns of production and consumption that have brought us to today's solid waste and litter crises. In fact, wide use of degradable plastics may well lull consumers into a false complacency at a time when it is necessary to change buying habits. Their use may also reduce pressure on the plastics industry to develop viable source reduction and recycling solutions.

The Economics of Disposable Diapers: A Costly Alternative



The Hidden Costs to the Public

- **18 BILLION**
  Disposable diapers are discarded each year. These diapers represent:

Each year, disposing of single-use diapers costs taxpayers about $300 million.

- **4 MILLION TONS**
  Of solid waste requiring disposal. This costs taxpayers:

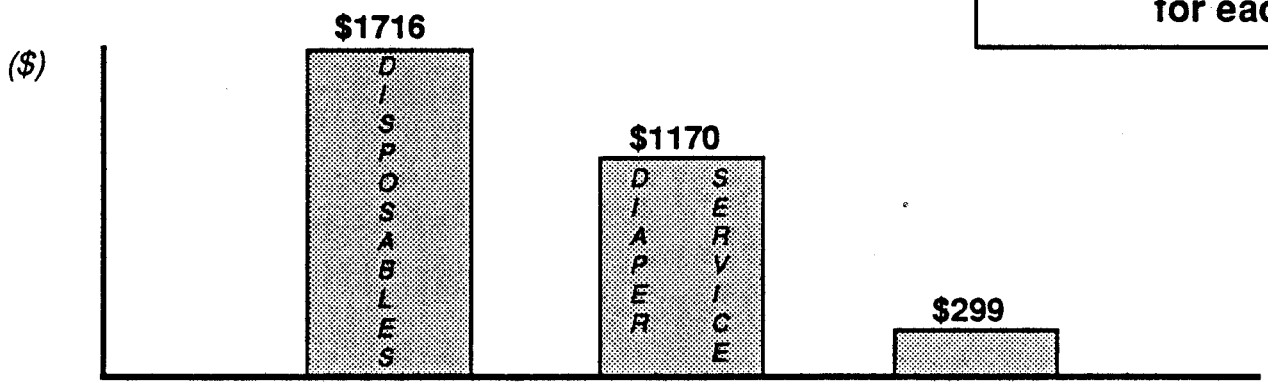
- **$ 300,000,000**
  In disposal charges.

Source: Carl Lehrburger, Diapers in the Waste Stream

Consumer Costs

Over the Diapering Life of a Child

Using cotton diapers can save parents as much as $546-$1417 for each child.



Disposables:
60 diapers per week
over 130 weeks
Total diapers: 7800
Average cost
per diaper: $.22*

Total cost: $1716

**Consumer Reports, August 1987*

Cotton Diaper Delivery Service:
60 diapers per week
over 130 weeks
Average cost
per week: $9.00*

Total cost: $1170

**National Association of Diaper Services*

Cotton Diaper Home Wash:
7 dozen diapers
at $9.23 per dozen= $64.61
Home Laundering cost:
$.03 per diaper use =$234*

Total Cost: $299

**Lehrburger*

The Washington Post

JONATHAN YARDLEY

MONDAY, JUNE 26, 1989

On Diapers and Other Disposables

To the accompaniment of the usual public-relations ruffles and flourishes, Procter & Gamble announced last week that it will underwrite various efforts to recycle plastic and pulp from the $1.65 billion worth of disposable diapers the company sells each year. Reaching its corporate arm around to pat itself on its corporate back, P&G said, "We believe as a company it is our responsibility to insure that our products are good not only for the baby but that they are good for the environment and can be easily recycled, decomposed and incinerated."

If you believe that, then step right up: I'd like you to meet the Tooth Fairy and Jemima Puddleduck and Br'er Rabbit, and then we'll go into the library and have a nice chat with Elvis Presley. As Procter & Gamble rolls out its fat share of the 16 billion disposable diapers in which American babies are swaddled each year, it's about as concerned with what's "good for the environment" as it is with the gross national product of Fiji; what worries P&G is the nasty PR its diapers are getting—last week's announcement came hard on the heels of a devastating NBC News account of the disposal problems they create—as well as the growing movement to attack those problems with legislative action.

To be sure, it is better that an industrial giant such as P&G do something rather than nothing about an environmental problem for which it is largely responsible, but the truth is that it is an evasion of responsibility to treat disposable diapers as a recycling issue. The throwaway diaper is, rather, one of the more blatantly preposterous consequences of the self-indulgence in which the American consumer has wallowed in the postwar era, and until it is treated as such the one certainty is that the problem will only grow worse.

Young parents who wrap their babies' bottoms in Pampers and Luvs may not realize it, but the disposable diaper has been in the American marketplace for a remarkably brief period. As recently as two decades ago, when I was a young father sharing swaddling duties, virtually everyone used cloth diapers; either you bought and washed your own or you rented them from a service. When, at about that time, disposable diapers first became widely available, they were promoted and used largely as an alternative convenience—for families on summer vacation, for example—but not as a permanent replacement.

That came along a few years later, as the disposable diaper improved—the early models were about as soft as sandpaper—and as manufacturers began to realize that a vast new market was opening up, a market founded on the incontrovertible principle that it is easier to dispose than to reuse. Why should people launder cloth diapers, or save them in a covered pail for the diaper service deliveryman, when they could throw paper-and-plastic ones away? Why should they return glass soda bottles to the grocery when they could toss plastic ones in the trash, or on the highway? Why should they wash glass bottles for the milkman when they could chuck cardboard—or, better yet, plastic—ones in the garbage?

It all happened so quietly and quickly that no one noticed until it had become a *fait accompli.* The diaper service almost disappeared—it now gets only 15 percent of the diaper business—and with it went the milkman and the soda-bottle washer. With it, too, went a time-honored if largely unspoken part of the social compact: the shared assumption that resources were to be used to their fullest, not to be disposed of until they had been exhausted. With it, if you like, went the assumption that thrift was a virtue both individual and civic, that saving was desirable and that squandering was not.

Now the prevailing assumption is precisely the opposite. Though the landfills rise in silent testimony to the contrary, we believe that waste is good; we have become a society in which nobody laughs when a spokesman for Procter & Gamble asserts, evidently with a straight face, that disposable diapers are "good for the environment."

Disposability is, if anything, threatening to become the national standard, as much to be rallied around as the flag in which politicians were so noisily wrapping themselves last week. We throw away razors as though they were paper handkerchiefs, and now we are being urged to use disposable contact lenses: Why bother with preserving them when you can toss them? When Kodak and Fuji came up with disposable cameras last year, Consumer Reports—that self-appointed guardian of the middle-class marketplace—said they "made good prints" and would be convenient for "a day at the beach or a boat trip," but had nothing to say about whether a throwaway camera is, in and of itself, desirable.

Probably it is, at least in a society that seems determined to make everything as easy for itself as it possibly can. Precisely how this came to pass is something of a mystery—probably it has much to do with a collective sense of deprivation and entitlement at the end of a decade and a half of depression and world war—but whatever the explanation, there can be no doubt that we believe ourselves to be deserving of any shortcut we can manufacture for ourselves, any convenience—however wasteful it may be is utterly irrelevant—that permits us to make our stay on this mortal coil a trifle less demanding.

That is why, in the flurry of interest stirred by NBC's depiction of diaper waste and the subsequent Procter & Gamble announcement, there was scarcely a word about the most obvious way to reduce the diaper crunch in the landfills. The way to make disposable diapers "good for the environment" is to get rid of them and return to reusable cloth diapers, but that would put too much of a strain on us; it would actually make us work a bit—just as we'd have to work if we returned soda bottles and washed milk bottles—and the message we've sent through our patronage of disposable convenience items is that we don't want to work. The other message we've sent is, to hell with the consequences not merely for the environment but for what might be called, at the risk of terminal self-righteousness, our national character.

Perhaps it's merely old-fashioned, even fuddy-duddyish, to believe that there's no free lunch, that our resources are finite, that we really do have an obligation to leave a few of those resources around for—pardon the cliche—generations unborn. Perhaps it's merely stuffy to believe that waste on the scale at which Americans now practice it is unconscionable—that it serves no purposes save those of sloth and greed, and that whatever benefits may accrue to the manufacturers of the disposable society are more than canceled out by the price it exacts on our resources and ourselves.

If all that is true, and doubtless it is, then mark me down as old-fashioned and stuffy. There are, in a land where the slob is king, worse things to be than that.