

**REPORT OF
THE COMMISSION
TO STUDY AND ADVISE
UPON THE DISPOSAL OF SOLID WASTES
ON BEVERAGE
CONTAINER LEGISLATION**



Senate Document No. 16

**COMMONWEALTH OF VIRGINIA
Department of Purchases and Supply
Richmond
1976**

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TO

THE GOVERNOR

AND THE GENERAL ASSEMBLY OF VIRGINIA

Richmond, Virginia

January 1976

TO: Honorable Mills E. Godwin, Jr., Governor of Virginia

and

The General Assembly of Virginia

I. Origin of the Report.

A. Creation of the Commission.—During the 1973 session of the General Assembly Senate Bill No. 856 was introduced by Senator Walker and passed by both the House of Delegates and Senate to create a Commission to Study and Advise Upon the Disposal of Solid Wastes. Under Senate Bill No. 856 the Commission was directed to study all problems relating to the causes, collection and disposal of solid wastes. The Commission is composed of Dr. Robert F. Testin, Director of Environmental Planning, Reynolds Metals Company, Richmond; William M. Beck, Jr., Professor of Engineering, Old Dominion University, Norfolk; Callis H. Atkins, former chief sanitary engineer, U. S. Public Health Service Ruckersville; Delegate Richard M. Bagley, Hampton; Senator A. Joe Canada, Jr., Virginia Beach; Ernest C. Edwards, Jr., Director, Engineering Services, Mecklenburg Electric Cooperative and Manager, Buggs Island Telephone Cooperative, Chase City; Joseph M. Guiffre, Guiffre Distributing Company, Alexandria; Delegate Joan S. Jones, Lynchburg; J. D. Pennewell, Environmental Research, Wolf Research Corporation, Chincoteague; Delegate James M. Thomson, Alexandria; Senator Stanley C. Walker, Norfolk; and Senator L. Douglas Wilder, Richmond.

B. Senate Bill No. 30 was introduced by Senator Canada in the 1974 General Assembly and amended in the nature of a substitute so that the Commission was directed to study all of the issues contained therein relating to mandatory refund values for beverage containers legislation. The Commission was increased in size by adding two members from the House and two from the Senate to assist in studying this problem and in compiling a report due November 1, 1975.

C. A second bill was introduced as House Bill No. 1017 by Delegate Campbell also relating to beverage container legislation which was reviewed by a subcommittee of House Finance under Delegate Carrington Williams. A formal request to study House Bill No. 1017 was sent by this Subcommittee to the Commission to be included in their report.

D. The Commission in the course of its deliberations has also examined other viable alternatives such as the Washington Model Litter Control Act and the federal legislation sponsored by Senator Hatfield and endorsed in concept by the Environmental Protection Agency. These two alternatives were considered as they relate to the two bills which the Commission was directed to address.

II. Environmental and Related Problems in Virginia as Observed in Commission Hearings.

II. A. Introduction—While this report emanates from the full Commission, it is significant to point out that, at the outset, the Chairman, Robert F. Testin, removed himself from active consideration of the problem due to his employment status with Reynolds Metals Company. A Subcommittee of the Commission was created to consider the problem which consisted of the balance of the Commission members and was chaired by William Beck, Vice Chairman of the Commission. The Commission was charged with the problem of solid waste management as a whole, but was directed to study the “bottle bills” and to file a report specifically on this issue by November 1, 1975. This latter task was undertaken by the Subcommittee.

In addition to the individual attention directed to the problem by each of the members and the consideration given to it at regularly scheduled meetings, the Commission held public hearings to gain the benefit of statewide comments not only in the area of beverage container legislation, but also solid waste management, recycling, resource recovery and other related areas of concern. Hearings were held in Alexandria, Lynchburg, Richmond, South Boston and Virginia Beach. In addition, three hearings were held over a two day period in Southwest Virginia, at Wise, Abingdon and Wytheville. The following comments are the results of the Commission’s consideration of the information obtained collectively from the above sources. These comments hopefully will put the problem in a perspective that will allow evaluation of how it might be solved in Virginia. It is recognized that the situations discussed may vary from locality to locality and that problems of a peculiar nature to a locality may not be completely discussed. This report deals with the issue of beverage container legislation and related matters in order to place the goals of such legislation into context. The objectives of such legislation can be divided into four environmental areas: litter, solid wastes, resource recovery and energy conservation.

B. Litter: What is it?—Often the most difficult task in solving a problem is in the determination of just what the problem is. Webster defines litter as an untidy accumulation of objects that are lying about. Perhaps one could say that litter is the accumulation of

those items indiscriminately discarded by hand. It is somewhat different from trash and garbage, because in most cases those items are discarded in a systematic or orderly fashion to be picked up at a certain time and place. However, it is sufficient to say that there are items indiscriminately discarded and strewn at happenstance locations within the Commonwealth by otherwise law-abiding citizens, (in many or most instances) who have not taken the time to deposit such items into an appropriate receptacle for pick-up. Litter is also generated by household or commercial trash put-outs, uncovered trucks and construction projects.

In 1968 the State Highway Department conducted a survey of the components of litter upon Virginia's interstate and primary roads. The Commission has considered these findings in conjunction with data accumulated in other states and testimony of citizens who have been personally involved in planning programs of litter pick-up. Statistics vary in degree and from locality to locality. At this moment the Commission cannot report upon the exact make-up by component and by percentage relationship of the so called "litter-stream" in Virginia. Visual evidence indicates that cans and bottles do make up a significant portion of all litter and may be considered the prime target of individuals working to clean up the streets and highways of the Commonwealth. For purposes of this report it is not necessary to determine the exact proportion, by piece or by volume, that cans, bottles, or any other class of objects contribute to the totality of litter. It is equally as important to point out that cans and bottles do not comprise all of litter. The Commission considered an offer made by Virginians for a Clean Environment, concerned members of the Virginia beer wholesalers and soft drink associations, to fund a litter survey to be conducted by the State Highway Department. The offer was rejected by the Commission. The Commission determined that if a study should be funded and conducted, it should be done so by the Commission.

C. Litter: Where is it?—The simplest statement is that litter is located at any place where someone chooses to put it, throw it, or where the elements carry it. Although litter is generated by pedestrians, trash put-outs and construction sites, more concern is expressed and most consideration is given to litter on the highways. Testimony and observation show that the problem is not isolated to highways. There exists a problem in parks, playgrounds, beaches, campsites, parking lots, vacant lots, schoolyards, streets and alleys.

The Commission has been made aware that many feel the source of the litter problem is the manufacturers, the distributors and the retail merchants of littered items. All of the above are in some fashion engaged for profit in the availability to the public of those items, such as cans and bottles, which comprise a substantial portion of the litter stream. Although beverage containers and other convenience food packaging comprise a substantial amount of what people observe as litter, it is the people at large who choose to discard them indiscriminately.

The Commission heard substantial evidence of public concern that has generated to the point where groups around the Commonwealth plan and implement projects which involve the

pick-up and/or clean-up of littered areas. For the most part it is the task of the Highway Department and the county and city sanitation workers to pick up litter. The Highway Department allocates \$1.6 million for highway cleanup. No figures are available to determine the cost of additional pick up by citizens, both corporate and private, or by local government. On the whole, what is picked up by the various groups is taken to the landfill and little effort is made to implement a program of separation for recycling and resource recovery.

D. Public Concern.

1. Aesthetic Considerations.—The topic of many statements made at public hearings from industry representatives, interested citizens, environmentalists, farmers, educators and others was that litter in the Commonwealth is an aesthetic problem. Many people tend to believe that Virginia is not so attractive an area to tourists as well as residents of the State because of the accumulation of litter on the highways, streets and rural roads; and parks, playgrounds and beaches. Tourism is a major industry in the Commonwealth; an abundance of litter can only be a deterrent to the aesthetic appreciation of the State.

2. Health Hazards and Property Damage. A second consideration related to this problem is that of litter as a health hazard and cause of property damage. Farmers ruin machinery on cans and bottles thrown onto their property; their animals are injured on broken glass or pop tops removed from beverage containers. Children are injured by falling or stepping on litter on playgrounds or on the beaches. Some elements of the litter stream can be dangerous as health hazards while others only tend to present a problem as related to aesthetic appreciation of any given area of the State, particularly if subject to tourism, especially in the Bicentennial year.

III. Litter and the Law.

A. Discussion of Laws Governing Litter.

At present the laws pertaining to litter in the Commonwealth are contained in §§ 33.1-346 through 33.1-346.1 of the Code of Virginia. Any person who is alleged to have littered as defined in the above sections is guilty of a misdemeanor to be punished accordingly. If the litter is discarded from a motor vehicle in any of the areas specified in the above sections, the owner or operator of the vehicle will be presumed to be the guilty party unless proven otherwise. A conviction in the State of Virginia for littering can result in a fine not less than \$25.00 nor more than \$1,000.00 or a jail sentence of not more than 12 months or both. Any sum collected shall be paid to the court for the eventual use of construction and maintenance of the Highway Department.

B. Application, Impact and Enforcement. During the course of the Commission's public hearings it was evidenced that the litter laws are not so effective as they might be in keeping the State of Virginia clean. Most litter cases taken to court fail to obtain a

conviction and are dismissed. The Sheriff's Association representative gave testimony on the litter problem as stemming to a large extent from poor enforcement of the law. Occasionally a litter case might result in a fine of \$25.00, but courts tend to treat them as somewhat less than significant. It is also a costly, time consuming process on the part of a citizen who must obtain a warrant for someone accused of littering, then appear in court, etc.

III. C. Education of the Public and Use of Facilities.

Statewide programs have been implemented to educate the public as to the problem of littering in the Commonwealth such as Keep Virginia Beautiful, Pitch In and Spruce Up Virginia, Company's Coming! These programs are oriented toward adults and children alike in an effort to curb littering at the source rather than try to control it from the collection and disposal end. The Spruce Up Virginia Company's Coming! program is geared toward the 1976 Bicentennial when it is estimated that Virginia will have a record number of tourists. A statewide program of proper waste disposal and recycling is advocated by this program and the bulk of the activity is to be done on a volunteer basis by Jaycees, garden clubs, school children, women's clubs, business organizations and retired persons.

KVB is a state sponsored but private organization which supplies speakers and material and promotes campaigns and local efforts to fight litter. It will continue the emphasis of Spruce Up, Virginia, Company's Coming! if the program is disbanded.

It is also significant to point out the efforts of the State Highway Department which has designed the Peli Can program. Industry contributed significantly to this program at the outset. It has been successful in areas where the 1700 metal containers have been placed. These cans are interspersed in cities and counties and many will be added when funds become available or when industry or concerned groups provide them.

ARM is Keep America Beautiful, Inc.'s Action Research Model, a project designed to develop a behaviorally-based systems approach to the problem of litter. It is sponsored by KAB's industry members and supporters.

The "model" being tested is not a clean-up campaign, rather a community change process that involves people in solving problems at a local level. The goal of the ARM project which was scheduled for completion in the fall of 1975, is a tested plan of action, with training materials, that can be used by communities across the country without outside specialists and with reasonable assurance of success in reducing litter to manageable proportions. The ARM process suggests the following: (1) getting the facts regarding the origin, location, etc. of litter; (2) involving the people; (3) developing a systems approach; (4) focusing on results; and (5) providing positive information. Richmond has recently initiated an ARM program.

Some progress is being made by these groups and others in the

fight against litter. The promotional and educational aspect is recognized as one of the tools in this fight and appears to be effective in raising public awareness and an anti-litter attitude. It further appears that the public is also becoming more willing to do something to get involved. It is impossible to interpolate this impression with a realistic projection of results and statistics, but people are more aware and concerned about their environment and currently more willing to take an active part in keeping it clean in addition to cleaning it up.

IV. Litter in Perspective. The Commission is faced with an awesome task of studying a variety of forms of solid wastes, such as industrial, hazardous, pathenogenic, demolition and domestic, all of which should be included in a regional solid waste management plan. If regarded in relation to the problem of solid waste management as a whole, litter plays a small role in the problem. Under any proposed plan for restricting beverage containers, some would still find their way into the litter and solid waste stream to a greater or lesser degree. The amount of this residual would, of course, depend on the weight and durability of the beverage containers in the market place after a law requiring deposits or other restrictions were enacted.

Even more important, solid waste management costs are greatly affected by the number of pickups per week, whether curbside or backyard pickup is employed, the distance to the disposal site and the type of ultimate disposal employed. Therefore, the effect of beverage container legislation on the cost of solid waste management is highly speculative. The most important aspect of beverage container legislation relating to solid waste management is that it represents a type (admittedly very specific) of possible source reduction or source separation as an alternative to current solid waste disposal practices. The theory is that each time a container is reused, a new one need not be created.

V. Resource Recovery.

A. Recycling.—One of the major considerations of this Commission in the study of solid waste management is the study of the recovery of resources and energy from solid wastes. In relation to beverage containers, the question of resource recovery or recycling takes on several specific aspects. First, the refillable beverage container represents a form of recycling in that the container is brought back and repeatedly reused. Another form of recycling is to bring the used container back for its material value and reshape it into another container of similar type or perhaps a different product altogether. On-going efforts have been put forward by the packaging industry and dedicated citizen groups in the recycling of beverage containers. Substantial efforts in Virginia have been made in the recycling of aluminum beverage cans. These aluminum cans are returned for cash (currently 15 cents a pound) and are then remelted and processed to make new cans. To a lesser degree nonrefillable glass bottles and steel cans have also been brought back in this manner for recycling.

An alternate approach is to extract the container from the solid

waste stream at municipal or regional recycling plants of one type or another. In this approach a greater variety of products including used beverage containers would be extracted and sold for their material value. Organic materials could be used for energy generation.

The effect of legislation relating to beverage containers on resource recovery cannot be stated with great precision. Refillable containers are today sold with a deposit. The imposition of a deposit on nonrefillable containers might result in higher percentages of them being returned to retailers, wholesalers and manufacturers than is the case today. Another possible result of a deposit on non-refillable containers is the elimination of those packages from the marketplace in any significant quantity. In either event smaller percentages of beverage container wastes would end up in solid waste streams.

Studies have been made to examine the effect that removing the beverage container from the solid waste stream would have on resource recovery plants. Because the economics of resource recovery plants are dependent upon the sale of recovered material and energy resources, the removal of some of these products from the solid waste stream would adversely effect the economics of the plant production.

The extent to which these plants would be affected would be dependent on a number of factors including the type of beverage container currently in the solid waste stream, the type of resources the plant is intended to recover (i.e., Is it primarily dependent on recovering material resources such as metals or is it primarily dependent upon energy resources such as burning organics?) and the cost of alternate solid waste management plans in the area (For example in an area where a resource recovery plant is competing with relatively low cost landfill, the removal of even a small percentage of the revenues could make the concept uneconomical. On the other hand if solid waste disposal alternatives required long hauling distances or more expensive disposal practices such as incineration, the resource recovery plant would not be as dependent upon shifts in one portion of its projected revenues).

V. B. Energy.—The relationship of beverage containers to the problem of energy conservation is quite complex. Proponents of the bottle bill stress the savings of energy occasioned by the reduction of litter and also by the reduction of containers one of whose assets being that they may be thrown away. Opponents cite the petroleum-based energy required to transport refillables and the fact that all energy sources are not equally scarce. The Commission has not been able to determine sufficient reliable information to note a substantial impact upon the question of energy conservation in relation to the enactment of a bottle bill.

VI. Oregon and Vermont Bottle Bills.

The so-called “bottle bill” was first enacted in the State of Oregon in 1971 and became effective in 1972. A similar bill was enacted into law in the State of Vermont in 1972.

A. Concept.

The concept of the bill is that of a mandatory deposit system which provides for a minimum refundable deposit of 5 cents on each beverage container, with the exception of "certified" containers for which the refundable deposit is not less than 2 cents per container. A container is certified in Oregon by the Liquor Control Commission. The purpose of certification is to promote the use of standard beverage containers of uniform shape and capacity. Such a container does not have a permanently affixed label and can be reused by more than one manufacturer.

Every container must clearly indicate its refund value and must be accepted and redeemed by dealers and distributors who normally handle such a container. If the container does not indicate its refund value, they are not obligated to accept it. Anyone may obtain state approval to establish a redemption center where all containers having a refund value may be redeemed.

B. Similarities and dissimilarities.

The State of Oregon, in effect, prohibits the sale of so-called "pop-top" or "pull tabs" cans, ie. cans with detachable parts opened without the aid of a can opener. Oregon has amended its law to allow the payment of refunds to minors.

The Vermont approach to this concept is similar to that of Oregon with several noteworthy exceptions. Vermont began with a one year 4 mill "litter" tax on each beverage container sold. A mandatory refundable deposit followed the expiration of the tax. The refundable deposit in Vermont is not less than 5 cents on all beverage containers. There is no provision for a "certified" container and no prohibition of metal containers which may be opened by detaching a part thereof. All containers must be clearly labeled with the refund value and identity of the state. Like Oregon, redemption centers are allowed with state supervision in addition to the requirement of dealers and distributors to redeem containers that they handle.

Administration of the bill is the responsibility of the Liquor Control Commission in Oregon and the Agency of Environmental Conservation in Vermont. It is significant to note that this has been challenged in State courts and upheld.

C. Impact on Litter.

The impact of the effect of the two bills on litter has been the subject of a number of surveys and studies, and the resulting analysis by proponents and opponents has caused considerable controversy. No useful purpose would be served by the documentation of these studies and surveys other than to comment upon their existence and to mention several items upon which most parties agree.

The measure of the efficacy of the bill in Oregon was attempted by an independent firm, Applied Decisions Systems, Inc. (ADS) at

the request of the Oregon Legislature. The most salient points developed as to the impact on litter were as follows: beverage container litter declined 66% although other forms of litter increased by 12%; the net effect showed approximately 10% reduction of all litter; evidence tended to show that the budget of the Oregon Highway Department increased by about 10%. Figures compiled by the Oregon Environmental Council, a private citizen action group which originally drafted the bottle bill, show a 35% reduction of all litter. These figures were based upon the assumption that beverage containers made up approximately 30% of the total litter stream.

The statistics compiled by the Vermont State Highway Department showed that prior to enactment of the bill, about 32% of the total litter was beverage container litter. An evaluation survey tended to support conclusions that the percentage of beverage container litter decreased by 50% to 60% on four lane highways, by 60% to 80% on two lane highways, by 80% to 88% on state aid roads and by 86% to 92% on town roads. Based upon beverage container litter being reduced by 76%, litter overall decreased by volume approximately 19% to 23% on two and four lane highways, 50% on state aid roads and 70% in towns.

The cited statistics are not authenticated but, however, somewhat supported by visits to these other states by members of the Commission. Two members observed that the highways in Oregon were notably clean; the condition of the highways in Vermont was similar. Interviews with various people in both states indicates that the bottle bill has achieved popular support. Oregonians, particularly, take great pride in their environmental efforts and are willing to support measures that are to them, environmentally beneficial.

It appears the benefits in reduced litter in both states may not be result of less littering; rather, it appears that the guaranteed refund does provide an inducement for others to pick up what thoughtless and unconcerned people have littered, particularly beverage containers.

D. Economic Impact.

The economic impact of the bills is far more confusing and subject to controversy than the effect on litter. The ADS study of Oregon and the information developed in Vermont must be considered very carefully to determine the effects produced.

The question of the increased cost of beverages to the consumer has not been fully resolved. Most analysts of the studies and surveys point out that the initial results may tend to be misleading due to the necessity of a period of adjustment for the public while reconstructing their buying habits.

In a similar view there is little disagreement that sales of beer and soft drinks have decreased in those states. However, analysts point out that the effect of the bottle bill cannot be accurately measured because of the increased costs of ingredients, particularly

sugar, the fuel shortage and other economic factors that are otherwise unrelated to the problem. It is recognized that the excise tax collected by the State will vary according to gross sales of the products.

The question of the impact on the job market is similarly confusing, but it is safe to say that the enactment of the bottle bill has caused some jobs in productions sale and marketing areas to be lost while other jobs have been created due to the increased need for storage, transportation and administration of the "bottle bill" within the states. Dr. Carlos Stern in his report to the Connecticut General Assembly predicted a net gain of some 1,000 to 1,200 jobs in that state upon the return to a returnable system. Most analysts agree that the pay scale of jobs lost tends to be higher than the pay scale of jobs created, and the skills involved tend to be higher in jobs lost than what is required in jobs created.

Most industry members who testified stated that the bottle bill has a decidedly negative impact upon the beverage and beverage-supporting industries. The potential loss due to increased costs to container manufacturers, producers, distributors, and retail outlets varies depending upon their size, location, share of market, and concentration of interest in the beverage industry. A discussion of bare specifics would overburden this report in this area rather than to point out that beverage-related industries would suffer, at least initially, from the enactment of a bottle bill. Opinions differ as to the resulting effects which might cause a decrease in tax revenues to the Commonwealth by loss on income, franchise taxes and potential loss of income to employees as well as loss of sales tax by virtue of decreased consumer buying.

The Commission heard testimony throughout the Commonwealth by all parties described above which outlined specific potential dangers. In addition, testimony was heard of the substantially disruptive effect that the bottle bill would have on the vending machine industry and the small convenience stores. Also, possible advantages might be legislated in favor of businesses in adjoining states near the stateline and the breweries and soft drink manufacturers which are located within Virginia.

E. Position of Proponents.

The proponents of the "bottle bill" are many and argue compellingly that something positive must be done to help cut litter and to conserve energy. They submit that voluntary efforts will not conquer litter and education has not had a significant effect on litter reduction, and enforcement of the existing anit-litter laws is almost non-existent.

Environmentalists stress the deplorable state of our highways, parks and beaches.

Bottles and cans are the most visible forms of litter and, accordingly, must bear the brunt of the effort to reduce litter overall. Also, it must be pointed out that some forms of litter will eventually disintegrate, while bottles and cans will not.

A deposit does not increase the cost of the product because it is refundable. The deposit provides the incentive to dispose of the container properly and remove it from the litter stream. The re-use of containers tends to provide conservation of virgin resources and some savings of fuel and energy.

Proponents point out that the bottle bill in Oregon has not had a disruptive effect on the state or its economy; and that a significant percentage of the people are pleased with the law and feel it is cutting down on litter and helping with the energy problem. Also, the proponents point out that the beer and soft drink industries in the State of Oregon have not been adversely affected to any significant degree by the Oregon bottle bill.

Land fill space in Virginia is rapidly running out, and it is pointed out by the proponents that the deposit system would have an effect on cutting down the volume of litter that will go into our landfills.

The bottle bill would prevent injuries to people and fish and animals. The number of injuries resulting from broken bottles and metal cans is far greater than we have realized in the past. Also, the proponents of the bottle bill point out that livestock are injured by broken bottles and by cans.

Proponents point out that the re-use of containers provide for conservation of virgin resources and the saving of fuel and energy. Citizens are active in support of this approach to begin the task of slowing down the rush towards a "throw-away" society.

F. Position of the Opponents.

It is the opinion of the opponents that: there are at least as many people who oppose the Oregon approach as who favor it, that many environmentalists are opposed to the Oregon approach, that industry has generally been active in seeking solutions to environmental problems, that industry environmentalists recognize that litter is abhorrent and also that waste for waste's sake is abhorrent and expensive. Opponents also feel that the arguments of the proponents are based on emotion and a desire to solve complicated problems with simplistic solutions. Opponents feel that many of the solutions to littering lie in education, law enforcement, good housekeeping by populace at large, and sufficient litter receptacles properly serviced.

Opponents state that: the impact on total litter is slight and bears no reasonable relationship of costs to results, such legislation is discriminatory and makes beverage containers and tab tops the scapegoat for litter, such legislation ignores all other items in litter, the deposits increase costs to the consumer since substantial numbers of containers are never returned, such legislation is an unwarranted intrusion into the free enterprise system substituting "big brother" decisions for decisions made by highly competitive businessmen responding to their customers. Opponents further believe that: because such legislation has the practical effect of creating an all glass environment for beverage containers that

injuries and property damage will increase, because returnable bottles are much larger in dimension and weight that landfills will be negatively impacted, because high trip rates for the bottle are required to conserve energy at the manufacturing level and because those rates are not being met and because critically short gasoline and diesel are needed in much greater amounts for transport, such legislation will have a negative effect on energy.

1. Manufacturers

The manufacturers of cans and bottles, disposable as well as returnable, fear the economic impact of a ban on non-returnable beverage containers. Many manufacturers, particularly the small ones, would go out of business while attempting to convert their operations from one system of returnables and nonreturnables to another system of solely returnables. Can manufacturers fear the loss of their entire product line for beverages, throwing many skilled workers out of work. These increased costs are passed on to the brewers/bottlers.

2. Brewers/Bottlers

Brewers/bottlers also have enormous conversion costs in equipment and space. They would face major hardship. They also fear the reduction of use occasions for their products and higher consumer prices due to higher costs and deposit will dramatically retard sales. These increased costs are passed on to the wholesalers.

3. Wholesalers

Wholesalers would have enormous increased costs of freight, handling, space, trucks and equipment. This is because the returnable bottle is approximately twice the size of a can. Many smaller wholesalers currently have no returnable type containers. Wholesalers feel that: requiring uniformity of packaging curbs competition, consumers should be free to choose for themselves the types of cans and bottles they buy. Many small wholesalers would not be able to raise the capital necessary to stay in business. The additional costs to the wholesaler would be passed on to the retailer.

4. Retailers

Retailers face increased costs of handling and storage. In addition, the non-returnable is a more sanitary package. Empty returnable packages attract insects and vermin. Convenience stores face exceptional problems of space. Vending machine operators face enormous conversion costs. Because of larger packaging, the retailer must choose between increasing display space or reducing the selection of items offered. The retailer passes his increased costs on to the consumer.

VII. Other Considerations.

A. House Bill 1017: Provisions of the Bill.

House Bill 1017 was introduced by Delegate Archibald A.

Campbell in the 1975 General Assembly as a bill to provide a tax on certain containers with specifications as to how the tax should be collected and used. Under the provisions of this bill an excise tax would be placed upon any organization selling wholesale beer, wine or soft drinks in nonreturnable bottles, both glass and metallic, of one half cent per container. The tax would be paid by the wholesaler to the Department of Taxation on or before the fifteenth day of the month to be credited by the Comptroller to a special fund as further specified in this bill.

Every person who recycles containers subject to the tax imposed in the act would receive a payment of one half cent for each container recycled derived from the tax on wholesalers.

The remaining balance of this fund, if any, after deducting administration costs and payments to recyclers, would be divided between the Highway Department for litter pick-up along the highways and the Department of Conservation and Economic Development for the institution of programs of anti-littering education in the Commonwealth.

B. Lack of Comparative Data.

It is difficult to evaluate the effects of a tax of this sort because there is no comparative situation in any other state. Washington State does have an annual litter assessment, but it is applied to a large variety of items in the litter stream rather than beverage containers alone. Cigarette and tobacco products, newspapers and magazines, etc. are taxed in Washington State along with household paper products, cleaning agents, groceries and food for human or pet consumption. House Bill 1017, however, proposes to tax only the beer, wine and soft drink industries which are not responsible for the entire litter stream. It is difficult to assess the impact of this sort of bill with no other similar experience upon which to base it.

C. Position of Proponents.

Those who favor the passage of House Bill 1017 assert that it justly taxes the basic industries involved such as beer, wine and soft drink wholesalers who contribute the most to the litter stream. It is also favoured because it does not tend to pass the cost on to the consumer and yet will not create an economic drain upon these industries' sales. The provisions in this bill also do not create an increased burden for the storage of refillables which is particularly a problem for small grocery stores. A bill of this nature is economically feasible to administer and practical. It is agreeable particularly to environmentalists because it promotes the concept of recycling which is an energy conservation measure. After deducting the cost of administration the remainder of the funds can be used to help alleviate the litter problem by 1) educational programs, and 2) supplementation of the litter pick-up.

D. Position of Opponents.

The prime concern of the opponents of House Bill 1017 is that it is discriminatory in whom it taxes. The law should effectively tax in

proportion all of those who contribute to the litter stream where House Bill 1017 only places an excise tax on beer, wine and soft drink sales. The tax will be passed on to the consumer and result in lower sales. The litter problem will not be solved by solely taxing a portion of those who are responsible for the litter problem, 12% - 16% in the case of the wholesalers.

B. Washington State Model Anti-Litter Control Act.

1. The basic thrust of the Washington State Model Anti Litter Act is the education of the public and the creation by various means of an atmosphere which engenders an attitude to induce citizens of that state to control litter and thereby reduce it. The law further provides for the increased development and use of clean up campaigns. The law provides for the imposition and levy of a tax (which is defined as a litter assessment) on all industries engaged in the business of manufacturing or selling products within the state that contribute to the litter stream. The types of industries assessed are broken down into some thirteen categories as set forth in the statute, and the tax is levied on each industry in the proportion in which its products contribute to the totality of litter. The tax amounts to \$150 per million dollars of gross sales. The law is administered by the Department of Ecology.

2. The most detailed study of the law and its impact on litter has been conducted by the State Highway Department under the direction of the Department of Ecology. State data showed dramatic reductions in litter, but independent analysts and researchers have challenged those statistics with some success. In a report made by URS Company to the Department of Ecology on the effect of the Act, that Company stated that the litter program had achieved an overall reduction of 60% of all litter since its initiation in 1972. The study further showed the makeup of litter in 1975 did not differ substantially from 1971; litter consisted of 51% paper, 5% glass, 11% metal and 32% of other items. An analysis of Washington state figures by Dr. Carlos Stern led him to believe that Oregon had achieved better results in the removal of beverage containers from the litter stream while Washington eliminated less bulky items more effectively. Dr. Stern concludes that it is difficult to assess the success in Washington other than to say that it seems to have been somewhat overstated.

3. It is not possible to state that the Model Anti Litter Act has had no economic impact upon the state of Washington. The imposition of a tax of assessment on industry, of necessity, must have some impact on the economic environment. However, as opposed to the Bottle Bill, it does not employ excessively strong economic incentives, nor single out one or two litter related industries, nor generate excessive transition costs. The assessment does raise over three-quarters of a million dollars in revenue, but its impact on any one industry, or any one class of people, does not appear to have a significant effect.

4. Proponents of the Washington approach argue that it allows an attack on the totality of litter, that it spreads the cost among all industries that contribute products to the litter stream. It allows the

public to make its choice in the market-place and does not place unreasonable burdens on any industry in the development, marketing or packaging of its products. It has the capability of developing public support and interest of citizens by promotion of campaigns and educational schemes, and it does not require a monumental effort to implement either on the part of government or industry.

5. Opponents counter by pointing out that the approach is a no-action approach, particularly those areas which would be affected by the Bottle-Bill. The approach does not provide a means for removal from the litter stream of those items which are viewed most objectionable, cans and bottles. Notwithstanding the data submitted by the state, opponents feel that the Model Anti Litter Act does not reduce litter and simply provides for promotional gimmicks and campaigns which accomplish little more than what is being achieved by concerned citizens. Some opponents further contend that the use of funds should include purchase of containers and augmentation of state and local budgets for disposal of litter.

C. California Legislation.

The California State Assembly Committee on Resources and Land Use compiled a report in the Spring of 1975 to assist the Legislature in developing litter abatement legislation.

This report asserts that litter should be regarded not only as an aesthetic consideration but also as a health problem. Twenty-five per cent of Californians polled state that someone in their family was injured by stepping or falling on litter. 53% could identify immediately at least one area that they felt to be excessively littered. The report also comments on the ineffectual cleanup, law enforcement and educational programs existing at this time and sites the products contributing most significantly to the litter stream.

Based on a litter survey conducted in the state of California, the report classifies litter into 75 product categories based on samples collected from 677 various locations.

This study notes that 22 convenience-type products make up more than 2/3 of all litter. Seven of these convenience products - beer, soft drinks, wine, liquor, candy, cigarettes and cups make up one half of the litter and cause 95% of all litter injuries. The report recommends: (1) notification of Environmental Protection Agency and Consumer Products Safety Commission as to serious and unrecognized problems of litter-related injuries; (2) enactment of legislation banning use of pull tabs on beverage containers; (3) funding of additional research to reduce hazards of broken glass from liquor, wine, beer, soft drinks by such means as protective absorbent sheathing.

The report recommends the Litter Abatement and Resource Recovery Act of 1975 establishing a \$44 million annual program funded by a levy on the principal items in California's litter stream to accomplish the following:

Enable local government to double the rate of litter cleanup of roadsides and recreation areas.

Quadruple the rate of cleanup of ocean beaches, lakeshores, and stream-beds—where 60 percent of all litter injuries occur.

Install and maintain some 11,000 litter receptacles throughout California, which have demonstrated that they will reduce litter by up to 26 percent.

Increase the level of litter law enforcement to provide one litter control officer per 150,000 persons and increase their enforcement effectiveness by changing the act of littering from a misdemeanor to an infraction for the first offense.

Initiate statewide public education and involvement programs aimed at permanently changing public litter attitudes and habits (similar programs in the State of Washington are reported to be at least twice as effective as container-deposit legislation in curbing all types of litter).

Construct a statewide network of resource recovery plants capable of turning our growing mass of litter and solid waste into useful materials and energy; such plants, when fully operational, may be able to afford a bonus for litter of from 15 to 25 percent of the cost of pickup because of the high content of valuable aluminum, steel, and glass.

D. Proposed Federal Legislation.—Senate Bill 613 was introduced in February, 1975, by Senator Mark Hatfield of Oregon. This bill provides for a uniform 5 cents deposit on all beer and soft drink containers and prohibits detachable pull tabs on metal containers. It would go into effect three years after its enactment. In the House, six bills have been introduced with 31 cosponsors. Environmental Protection Agency's position was stated by Deputy Administrator John Quarles: the Agency favors national mandatory deposit legislation. Such legislation would result in increased usage of returnable but not exclusively refillable containers to provide litter, energy and resource benefits. On a national basis, the Environmental Protection Agency figures that beverage container litter would be reduced about 66%. It is anticipated that there would also be a reduction in the current 8 million ton national generation of beverage container waste by 75%, or 6 million tons. Energy savings equivalent to approximately 90,000 to 100,000 barrels of oil a day have been estimated, assuming that non-refillable cans would retain 20% of the market.

As of November 13, 1975, the Federal Register published the Environmental Protection Agency's Solid Waste Management Guidelines for Beverage Containers. These are intended to achieve a reduction in beverage container solid waste and litter which will result in substantial savings in waste collection and disposal costs to the federal government. The guidelines are also intended to encourage utilization of beverage distribution systems which use energy and material resources more efficiently through recycling. This is to be accomplished through a deposit of at least five cents on

each container, paid upon purchase by each consumer and refunded by the dealer when the empty container is returned.

VI. Conclusions.

After considerable deliberation, the Commission offers the following conclusions on the subject of the beverage container, or bottle bill, legislation:

A. There is definitely a litter problem in the Commonwealth of such magnitude as to merit considerable effort to alleviate it.

B. As evidenced in the eight public hearings held in representative areas of the Commonwealth, the citizens of Virginia are aware of the litter problem and desire that this Commission recommend solutions.

C. The Commission has observed that §§ 33.1-346 through 33.1-346.1 of the Code of Virginia relating to the litter problem have not been effective. Very few people are apprehended and few convicted of littering by the courts. The laws governing littering need to be revised to correct known deficiencies and expanded to allow practical application.

D. Although the Commission has thoroughly examined the information from Oregon and Vermont as to their litter laws and reasons for having beverage container legislation, it has found the statistics conflicting. The Commission has noted that Oregon and Vermont vary considerably from Virginia in population, geography, industry, etc., which tends to make it difficult to predict what might take place in Virginia under similar legislation.

E. When viewed in the light of the entire solid waste problem which includes industrial, demolition, hazardous, pathenogenic and domestic wastes, litter plays a minute part. Since litter is a small part of the solid waste problem, it follows that bottles and cans which are a significant, but lesser part of litter, are a smaller part of the solid waste problem. In relation to the total solid waste problems, beverage containers figure in a small way.

F. The Commission is endeavoring to tie any recommendations and/or legislation regarding the litter problem, particularly litter as related to beverage containers, to future plans for statewide solid waste management systems. The Commission has concluded that increased pick-up, enforcement and education of the public should be an interim, three-pronged approach to solving the litter problem.

G. The Commission believes that the bottle bill (S.B. 30) does tend to reduce litter, but it is not recommended for Virginia at this time.

H. The Commission believes that the tax in H.B.No. 1017 is not broad-based enough and it is not recommended for Virginia at this time.

VII. RECOMMENDATIONS:

The litter problem is a minor part of the total solid waste problem. The Commission was charged with the responsibility of studying two pieces of proposed litter control legislation. A determination was made that neither piece of legislation addressed itself to the total litter problem and its relation to the total solid waste problem. Legislation for litter control should be coordinated with or a part of legislation to establish and maintain a comprehensive solid waste program for the State including resource recovery, recycling, collection and disposal systems, landfill site disposal and acquisition systems, energy conservation, hazardous wastes, and the special problems of rural areas including plans for implementing the solid waste management systems. The Commission has determined that the portion covering litter should contain the following recommendations:

- A. A ban of the use of detachable pull tabs from metal beverage containers by January 1, 1978.
- B. Increased education in the schools and of the general public not to litter and to pick up what has already been littered.
- C. An active role of State government in a leadership capacity in the educational aspect of the litter abatement solution.
- D. Better planning as to placement, quality and quantity of litter receptacles.
- E. Litter receptacles required in all highway and waterway vehicles.
- F. Realistic penalties fairly enforced for littering.
- G. Greater cooperation between Highway Department and local governments in the matter of litter control, collection and disposal.
- H. Use of a State litter symbol.
- I. All public areas must have easily available litter receptacles.
- J. If additional tax is needed to implement the above, it should be broad-based in nature.

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Respectfully submitted,

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***Dr. Robert F. Testin**

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William M. Beck, Jr.

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Callis H. Atkins

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Richard M. Bagley

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***A. Joe Canada, Jr.**

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Ernest C. Edwards, Jr.

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Joseph M. Guiffre

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Mrs. Joan S. Jones

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***J. D. Pennewell**

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James M. Thomson

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Stanley C. Walker

.....

Lawrence Douglas Wilder

DISSENTING STATEMENTS

***DR. ROBERT F. TESTIN.**

As noted in Section II. A. Introduction, of the report I did not participate in the deliberations of the Commission on this matter.

***SENATOR A. JOE, CANADA, JR.**

I would like to take this opportunity to dissent from the conclusions and recommendations made by my colleagues on the Solid Waste Study Commission.

We have held extensive public hearings throughout the State of Virginia and have information from many citizen groups and individuals as well. Through these public hearings, and through the information I have been able to discover from the State of Oregon, I am convinced that the Oregon approach to litter control is the best way for Virginia to go. The State of Oregon has had a track record of sufficient duration to give us some hard facts from which we can draw conclusions when trying to decide whether or not the Oregon-type approach would be beneficial to Virginia. In the past we have had only speculation as to what impact the "bottle bill" would have in Virginia, but now we have a state to look to and learn from.

Through our public hearings we have found that most of the opponents to the Oregon approach are from the beverage, or bottle-related, industry. The proponents of the bill are generally citizens who are environmentally oriented, but the most astounding fact is that we have found that liberal and conservative people and people in the middle of the spectrum are all interested. This issue does not seem to follow either liberal or conservative philosophy but interest is shown from both. This is an issue that transcends philosophies and seems to be an area of common ground that people concerned about the environment, conservationists and just concerned citizens can all agree upon.

The purpose of this report is to dissent from some of the conclusions and recommendations of my colleagues on the Solid Waste Study Commission.

There are several major reasons why the Oregon-type bill should be enacted in Virginia. They are as follows:

1. It will save the consumer money.
2. It will save the consumer tax money.
3. It will cut down on the litter problems in our state.
4. It will have a positive effect in helping to cut down on solid waste.

5. It will assist Virginia and show the nation that positive action can be taken toward tackling the energy crisis.
6. It will prove to be an asset for Virginia's economy.
7. It will prevent injuries to people.
8. It will prevent injuries to livestock and damage to equipment.
9. It will reduce revenues and sales.
10. It will be accepted by the public.
11. It will not have too great an impact on small business.

To elaborate on the above reasons:

1. Consumer Money.

The opponents indicates sales would be drastically effected as a result of this type law and that prices would sky-rocket. Let's look at the facts and not the emotional rhetoric that the opponents of the bill have put forth. In Oregon sales and prices both for beer and soft drinks have not been adversely affected to any substantial degree by the passage of this law in that state. Both seasonal and inflationary actions have had a much greater effect on prices. Beer sales have continued to go up in the State of Oregon since the law was enacted. There is a large savings per ounce in returnable containers as opposed to nonreturnable containers. The minimum deposit has resulted in a general shift from nonreturnable containers to returnable containers and, as a result, there has been a savings to the consumer.

The returnable container is economical both for the tax payer who pays twice for the privilege of the throw-away; once in the higher price at the store and again in the ever-increasing taxes required for its collection and disposal. The cost of the beverage per fluid ounce is substantially less in a returnable container than in a throw-away container.

The manufacturers and retailers claim that people continually demonstrate their preference for the one-way convenience container when, in fact, a relatively small variety of beverages are available in returnables. Given little choice, the consumer buys the drinks he desires in whatever container is available.

Often the consumer is unaware that he paid more for the beverage in a throw-away container because the price marked on the returnable package includes the deposit which will be refunded when the bottles are returned.

2. Consumer Tax Money.

This will not require any additional enforcement costs. According to the Virginia Highway Department, Virginia spends over one million dollars for litter cleanup along our highways. The

City of Virginia Beach, for example, spends over \$50,000 a year for picking up litter on its highways, \$20,000 along roadways and \$30,000 in other areas of the city. With the substantial decrease in litter from bottles and cans, the City of Virginia Beach and the State of Virginia would save a great deal of money. The savings that Virginia Beach would realize would apply to every major city and county throughout the Commonwealth.

There would not be an increase in enforcement costs in the State of Virginia if the Oregon-type bill were enacted. There has been no increase in costs in the State of Oregon resulting from the enforcement of the minimum deposit law. The Department of Environmental Quality, Solid Waste Division, Oregon Liquor Control Division, Oregon State Health Division and the State Department of Agriculture have not added extra staff nor incurred added expenditures as a result of the enforcement of this law. We have to believe that the State of Virginia could follow this same pattern if the enforcement of this bill is directed to the ABC Board.

3. Litter Problems in our State.

The Oregon-type bill would have a good effect on litter control in Virginia. It is unrefuted that if the bill is enacted it will cut down on litter; the degree to which it would be cut down is in dispute. The first year after the Oregon bill was enacted, roadside litter in Oregon was reduced 26% on a piece basis and 35% on a volume basis. During the second year, according to a professional engineer's careful analysis, reduction increased to 39% overall by piece count and 47% by volume. The engineer's report is entitled, "Oregon's Bottle Bill Two Years Later." It must be brought out that containers make up a significant percentage of roadside litter. It also must be pointed out that paper, which does make up a significant percentage of litter, usually disintegrates while the bottles, cans and pull tabs remain for many, many years.

4. Decrease in Volume of Solid Wastes.

The volume of our solid wastes is increasing dramatically. Refuse collection in the urban areas of the nation has increased from 2.75 pounds per day in 1920 to over 5 pounds per day in the 1970s and is estimated to reach 8 pounds per day by 1980.

If the trend to throw-away containers continues, by 1980 100 billion such containers will be discarded annually. It might be noted that while the national solid waste growth rate per year is 4%, the rate of increase of throw-away containers is 7.5%. The statistics are hard to evaluate, but it has been indicated in some of the reports I have read that beer and soft drink containers approach 10% by volume of waste collected from households. It is estimated that by 1977 the cost of collection and disposal of beverage containers is projected to increase 66.6 million over the 1969 estimate of 93.3 million dollars.

Elimination of beverage containers from solid waste would substantially reduce the yearly expenditures of state municipalities for collection and disposal of solid waste. It is estimated that all

expenditures for disposal and beverage containers is 19.1 million for 1969. The major portion of the collected expenditures estimated to the 73.4 million dollars in 1969 would be saved if the beverage containers were eliminated from the solid waste stream. The desired results could be achieved by a return to refillable containers. Since the reusable container can be refilled many times, the production demands for new beverage containers would be reduced and the beverage container, as a part of solid waste, reduced correspondingly.

5. Positive Action Toward the Energy Crisis.

A tremendous amount of energy waste is associated with one-way, throw-away beer and soft drink containers. In a study conducted by the Environmental Protection Agency, it is estimated that in 1972, 83.7 billion containers were manufactured for use by the beverage industry. Of that number only 23.8 billion containers were returnable, while 21.5 billion were throw-away glass bottles, 28 billion were bi-metal cans. This study also shows that the energy consumer per use by each of the containers is:

- Returnables.....2,212 BTU's
- Bi-metal cans.....5,316 BTU's
- Glass throw-aways....6,610 BTU's
- Aluminum cans.....8,953 BTU's

Applying these statistics to the total use in the nation, the energy consumption is:

- Returnables.....52.6 trillion
- Bi-metal cans.....148.8 trillion
- Glass throw-aways...142.1 trillion
- Aluminum cans.....93.1 trillion

The waste of energy produced by the use of throw-aways is the equivalent of the amount of energy needed to heat 2.5 million homes of the nation. In terms of the equivalent in electrical waste and energy loss through production of the throw-away container in the United States would be enough to provide the power for an affluent city of 7.5 million dollars for a year.

As Governor Tom McCall of Oregon indicated in his letter of December 1973, addressed to me, if the nation adopted the Oregon approach to solving the energy and litter problems the savings would be equal to 66-2/3% of the energy generated by lowering the highway speeds to 50 MPH nationally.

If we adopt the Oregon-type approach, it would have a significant impact on energy savings.

6. Asset to Virginia's Economy.

a. Employment.

There has been a net increase in employment as a result of the Oregon bill in that state. Dr. Charles Gudger and Jack Baileo of the School of Business and Technology at Oregon State University have calculated a net full-time employment increase of 365 jobs in the State of Oregon as a result of the law. The facts from the State of Oregon, as outlined in the report previously mentioned, indicate that the soft drink bottlers and brewers have increased production and employment due to the increase in washing, sterilization and handling.

b. Public health.

Many opponents of the bill indicate that health would be a significant factor to be considered. The Oregon State Health Division and the Oregon Department of Agriculture have both reported that there has been no increase in nuisance or public health problems as a result of the law. Inspection and sanitation programs that existed before the law have continued to be sufficient to maintain high standards in order to protect the public health. This comes from the State of Oregon Department of Environmental Quality Recycling Information Office.

c. Enforcement costs.

There would be no increase in enforcement costs of this bill in the State of Virginia. There has been no increase in cost to the State of Oregon resulting from the enforcing of the minimum deposit law. The Department of Environmental Quality, Solid Waste Division, Oregon State Liquor Control Division, Oregon State Health Division and the State Department of Agriculture have not added extra staff nor incurred added expenditure as a result of the enforcing of this law. We have to believe that the State of Virginia would follow the same pattern.

7. Injuries to People.

The number of injuries to people resulting from broken bottles and cans and pull tabs are far greater than anyone realizes. The State of California did an official survey which showed that 300,000 Californians were injured annually by stepping on some type of container or pull tab. The medical treatment for these injuries was over \$3,000,000 annually. The Solid Waste Study Commission has recommended the banning of pull tabs and industry has come up with the necessary technology to go along with this. It will become effective in 1978.

8. Injuries to livestock and damage to equipment.

The Virginia Farm Bureau has gone on record, several years ago, as being in favor of this Oregon-type approach in order to do something to prevent the many injuries which have been inflicted on livestock and damage caused to tractors and other farm

equipment. Automobile tires, truck, bus and bicycle tires, and all sorts of damage result to equipment and livestock as result of pull tabs, bottles and cans.

9. Reduction in Revenues and Sales.

Opponents of the bill indicate that the bottle bill would have the results of decreasing the consumption of beer and, therefore, it would decrease the amount of tax revenue to the State of Virginia. This is not true. The State of Oregon has not experienced any decrease in the consumption of beer. In fact, it has gone up continuously. In 1971, 40.6 million gallons of beer were consumed; in 1972, 44.8 million gallons of beer; in 1973, 46.3 million gallons of beer; in 1974, 46.8 million gallons of beer and in 1975, 48.5 million gallons of beer were consumed. And that's a lot of beer! The excise tax is based on the amount of beer that is sold; therefore, the excise tax is not going down but is steadily increasing. According to the Oregon State Liquor Control Board, the premium tax on malt liquor has not decreased in the State of Oregon and the following statistics were furnished from that agency:

	<u>Tax</u>
1971.....	\$1.7
1972.....	1.8
1973.....	1.9
1974.....	1.95
1975.....	2.03

It must also be pointed out that, according to the Oregon State Liquor Control Board, there have not been significant problems with enforcement of this law; therefore, it must be concluded that there would not be a decrease in the State of Virginia of tax revenues but an increase.

10. Public Acceptance.

The most conclusive proof of the worth of the Oregon bottle bill is in its public acceptance. All the studies that I have read, and more specifically the ADS Study, have indicated that over 90% of the people in the State of Oregon approve of the law. In opinion polls taken by Opinion Research Corporation for the Seattle Post Intelligencer newspaper, it was revealed that 68% of the people questioned in the State of Washington favor the Oregon-type law requiring deposits. This was indicated in the February 18, 1975, issue of The Oregonian newspaper.

11. Impact on Small Business.

There are numerous reports that small businessmen would be out of business because they could not afford to add on rooms to their businesses to house returnable containers. Oregon has proved that this is hogwash. The small businessman, in order to house the

increased number of returnable containers, in many cases has simply fenced off a small area where he can store the added containers. The cost of these products has not grossly gone up and, according to the Governor's Office of the State of Oregon, the per ounce beverage cost is competitive with the State of Washington.

Conclusion. The facts in the State of Oregon speak for themselves. They indicate that the bill, after evidence presented in a comprehensive number of studies, is having the effect of decreasing the number of bottles and cans in the litter stream. This, naturally, will result in significant savings in energy, natural resources and landfill space. In addition, the bill will have a significant effect on curbing the injuries to animals, human beings and property by cutting down on the number of bottles, cans and pull tabs in the litter stream. This will have the overall effect of cutting down on medical treatment costs, which are greatly soaring in our country. It will have the additional effect of cutting the cost of picking up litter, which in the State of Virginia a few years ago was over a million dollars on a state-wide basis plus substantial amounts of money on a local basis. I cannot see any significant reason for not enacting this bill and believe that the bill, if enacted, would have a very good effect on the Commonwealth of Virginia as a whole.

***J. D. PENNEWELL**

I am not in agreement with Recommendation B. concerning education, specifically "increased education in the schools...".

During at least one meeting of the Commission I voiced my objections to the suggestion of legislating additional functions upon the school system. As a member of the Accomack County School Board I have observed increased social demands upon the teaching environment and I feel that the school's primary function is the development of learning skills. Therefore, I object to the terminology, connotation, and potential future impact of the recommendation of increased education in the schools.

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