

F I N A L R E P O R T

WASTE VOLUME REDUCTION AND RECYCLING STUDY COMMITTEE

January 1989

AUTHORIZATION AND APPOINTMENT

The Waste Volume Reduction and Recycling Study Committee was formed by the Legislative Council of the 72nd General Assembly for the 1988 interim period. The Council charge to the Committee was as follows:

Develop a long-term waste volume reduction plan which will preserve the state's environment and assist businesses and local communities. Review the progress of state recycling projects and recommend how recycling can be increased. Also examine the role of sanitary landfills in waste volume reduction, recycling, and the implementation of improved waste disposal technology. Submit a final report containing recommendations to the Legislative Council by December 15, 1988.

Legislative members appointed and serving on the Committee were:

Senator Patrick Deluhery, Co-Chairperson
Representative Donald Shoultz, Co-chairperson
Senator Michael Gronstal
Senator Dale Tieden
Representative Donald Knapp
Representative Donald Paulin
Representative Teresa Garman

Representative Donald Paulin resigned from the Legislature during the interim to join Governor Branstad's staff and Representative Teresa Garman was appointed prior to the fourth and final meeting to succeed Representative Paulin as the House Minority member of the Committee.

In addition to the legislative members, the public members appointed by the Council and serving on the Committee were:

Teree Caldwell-Johnson, Des Moines Solid Waste Agency
Phil Mellot
Trish Smallenberger, Grocers Association of Iowa
Dean McAtee
Chris Robbins

MEETINGS OF THE COMMITTEE

The Committee was authorized by the Legislative Council to hold four meetings. The four meetings were held on the following dates:

First meeting: August 18, 1988, in Room 22 of the State House, Des Moines, Iowa.

Second meeting: September 23, 1988, in Room 22 of the State House, Des Moines, Iowa.

Third meeting: October 21, 1988, in Room 22 of the State House, Des Moines, Iowa.

Fourth and final meeting: November 18, 1988, in Room 22 of the State House, Des Moines, Iowa.

All meetings were open to the public and were attended by members of the Legislative Service and Fiscal Bureaus, caucus staff, representatives of various interest groups, the press, and other interested persons. Minutes were taken of all meetings and are on file with the Legislative Service Bureau.

AUGUST 18, 1988, MEETING

1. Timothy Burget, Mayor of the City of Altoona and Chairman of the Des Moines Metro Solid Waste Agency, representing the Iowa League of Municipalities. Mayor Burget described in general terms the magnitude of the waste disposal problem faced by Iowa cities and towns. Mayor Burget recommended several steps toward reducing the volume of the waste stream by up to fifty percent, including source separation of recyclable items, with special emphasis on aluminum and plastics; increased composting and conversion of landfills to centers for redistribution of recyclable materials; mandating manufacturers to produce recyclable products and packaging, including the use of paper bags or degradable plastic; and otherwise providing incentives to encourage recycling. Mayor Burget declared that a reduction of waste production would not necessarily reduce Americans' standard of living, as demonstrated by the fact that the average American produces 5 pounds of garbage per day compared to 2.5 pounds for the average European, enjoying a similar standard of living. One source of Europeans' lower output of garbage is their relatively heavier reliance upon recyclable bottles and containers, according to Mayor Burget.

2. Teresa D. Hay, Administrator, Waste Management Authority Division, Iowa Department of Natural Resources. Ms. Hay described the current structure and policies of Iowa's waste management program. Ms. Hay advanced Department of Natural Resources proposals for improving and integrating waste management, groundwater contamination prevention, and recycling projects. Ms. Hay showed a Department of Natural Resources produced videotape on

Iowa's Waste Management hierarchy. The hierarchy sets forth the waste reduction, recycling, and disposal alternatives in their order of preferred use: 1) Volume reduction (produce less waste at the source); 2) Recycling; 3) Combustion with energy recovery; 4) Volume reduction by combustion; 5) Landfill disposal. Ms. Hay noted in her presentation to the Committee four additional problem areas which should be addressed:

- a. Current administrative rules are inadequate to cover the technological changes in solid waste management.
- b. Groundwater contamination does occur in some sanitary landfills.
- c. The cost per ton of solid waste for disposal is not covered by the current disposal fees.
- d. There is a need for change in thinking regarding the disposal of solid waste.

Ms. Hay made several specific policy proposals with regard to problem components of the waste stream: hazardous substances, white goods (old household and kitchen appliances), lead acid batteries, and waste tires. A proposed Department of Natural Resources bill draft incorporating these proposals was later provided to the Committee at the Co-chairperson's request.

3. Ron Mace, Program Director, Lee County Solid Waste Management Commission. Mr. Mace described a model recycling program at the Lee County facility which reduced the cost of disposal of recycled items from \$16 per ton for landfill disposal to \$9.49 per ton. The program is being expanded in light of this success. Mr. Mace made several recommendations based upon his experience:

- a. Ban open burning.
- b. Prohibit businesses from burning cardboard boxes (high value, recyclable paper).
- c. Ban the disposal of lead acid batteries in landfills.
- d. Ban the burial of waste oil.
- e. Ban the burial of tires.
- f. Ban the burial of grass and similar vegetation suitable for composting.
- g. Require the recycling of paper.
- h. Ban the use of plastics containing fluorocarbons.

- i. Recycle all beverage containers (Mr. Mace noted that a substantial percentage of containers collected under Iowa's bottle bill are landfilled rather than recycled as he believes was intended by the legislation).
- j. Encourage regional recycling efforts.
- k. Encourage mandatory recycling.
- l. A state coordinator should be established to coordinate recycling and solid waste management.
- m. Additional fees should be established on the purchase of tires, batteries, and white goods to cover their true disposal costs.
- n. Government agencies should be required to purchase recycled paper.

4. Cindy Turkle, Administrator, Scott County Landfill. Ms. Turkle stressed the need to develop a statewide public education program regarding waste product management, the development of methodologies and regulations for the disposal of white goods, and the establishment of a state coordinator for waste management at the Department of Natural Resources. Ms. Turkle described in detail the dilemma presented by white goods for landfills and metal recyclers. White goods are old household and kitchen appliances containing resistors and other electrical components containing PCBs (polychlorinated biphenyl). PCBs are hazardous substances and strictly regulated by the federal government. White goods were previously shredded by metal recyclers to recover the metal for reuse in a useable form. The shredding process was discovered to shred the resistors too and release the PCB contained in them, contaminating the metal fluff which is the product of the shredding process, making it a hazardous substance within the current interpretation of federal and state rules. The labor required to manually remove the electrical components is prohibitively expensive and metal recyclers are reluctant to enter the field of hazardous substance management and disposal. The end result, according to Ms. Turkle has been the accumulation and stockpiling of, or even refusal to accept, white goods by landfills since no alternative, practicable disposal method has been offered.

5. Joe Bolkcom, Environmental Advocates, Inc. Mr. Bolkcom presented a summary of the success of the "Toxic Cleanup Day" programs which were conducted in Cedar Rapids and Dubuque in 1986 on a pilot basis, relying primarily upon volunteer labor and fund raising. The program as described by Mr. Bolkcom provides state funds only for the handling, transportation, and disposal of collected household hazardous substances. The volunteer sponsoring organization is responsible for drums, packing materials, volunteers, in-kind and cash support, all administrative costs, publicity, police, and fire protection, and a bomb squad. Mr.

Bolkum stated that he believed the programs were underfunded and placed too high a burden upon volunteer organizations for most communities or for continued long-term success. The high cost per household served of the pilot program was also questioned by the Committee and Mr. Bolkcom.

6. Tony Ciofalo, General Manager, Solid Waste Services, Sioux City, Iowa, member of the Governor's Task Force on solid waste issues, and President of Iowa Chapter of the National Solid Waste Management Association (NSWA). Mr. Ciofalo stated that the NSWA advocates an integrated approach of waste management and discourages reliance upon any one tool. All components of the state's waste management hierarchy are required to manage the entire waste stream and the ideal mix may vary from community to community, according to Mr. Ciofalo. No single panacea or silver bullet existed to magically cure the state's waste volume problems; careful management was the solution advocated by Mr. Ciofalo.

7. Bob Peters, spokesperson, National Solid Waste Management Association. The NSWA represents the 350 private landfill sites nationwide that are responsible for 40 percent of the nation's disposal capacity. Mr. Peters explained that the private sector is responsible for disposal of 60 percent of the residential and 90 percent of the commercial waste produced nationwide. Mr. Peters asked the Committee to keep in mind three unifying principles for solid waste management in its deliberations: (1) there are no "silver bullets"; (2) the need for federal environmental regulations; and (3) the role of the state as the ultimate jurisdiction responsible for the creation and land disposal of waste material. To demonstrate the application of these principles, Mr. Peters suggested that Iowa's Waste Management Hierarchy be viewed as an integrated approach, rather than a list of preferences, as the situation will be different depending upon time and place.

8. John Reindl, Director of the Office of Waste Reduction and Recovery, Wisconsin Bureau of Solid and Hazardous Waste Management. Mr. Reindl presented information on the development and implementation of Wisconsin's waste tire management program and funding scheme. Waste tire problems and hazards were described by Mr. Reindl to be: (1) tires are bulky and tend to "float" to the surface in a landfill, penetrating the sanitary seal; (2) if stockpiled, tires are a fire hazard, health risk (due to disease-carrying mosquitos), and an aesthetic nuisance. The preferred alternative according to Mr. Reindl is recycling and resource recovery, but the process is expensive and the markets limited, particularly when tires are not charged their true cost of disposal in landfills. Resource recovery is a less expensive means of disposal, but not necessarily a profit-making endeavor without correction of the existing market failures. Mr. Reindl suggested use of the fund-raising device employed by Wisconsin to pay for the cost of resource recovery from waste tires: a one-time fee per tire on a new vehicle, charged at the time of registration.

9. Robert Wegner, Iowa Tire Supply. Mr. Wegner described the process and markets for recycling waste tires and business plans he had to operate a portable tire shredder to assist local landfills with their waste tire problem. Included in the information presented was a survey of Iowa landfills conducted by Mr. Wegner describing each landfill's practices and policies with regard to waste tires. Mr. Wegner recommended against placing a fee on the purchase of tires, and opined that charging the end user of the tire would be preferable, especially by ensuring that tires from outside the state would pay their fair share of disposal costs.

10. Walt McDonald, Special Projects coordinator, Bureau of Transportation Safety, Iowa Department of Transportation. Mr. McDonald described the Department of Transportation's waste oil collection demonstration programs in Atlantic and Mason City. To date, the projects have collectively gathered 189 gallons of waste oil despite the fact that according to an Iowa State survey, 50 percent of Iowans change their own oil. The major issue of discussion was the limited hours of access to the "self-service" waste oil collection centers. According to Mr. McDonald, the centers were only open from 8:00 a.m. to 3:00 p.m. weekdays. Concerns preventing extended hours listed by Mr. McDonald included need for supervision, concerns about illegal hazardous waste disposal and liability, and desire to avoid overtime expenses.

11. Jean Ells, Hamilton County Conservation Board. Ms. Ells described a Hamilton County Conservation Board program called Powers of Plastic, Unite Locally and Recycle (POPULAR). The project focuses on collecting plastic milk jugs for sale to and recycling by Plastics Recycling, Inc. of Iowa City, Iowa. The program was described by Ms. Ells to be a successful demonstration of what could be accomplished with voluntary recycling based upon public education and volunteer organization involvement.

SEPTEMBER 23, 1988, SECOND MEETING

1. Alan Polka, Soltex Polymer Corporation, Houston, Texas, representing the Society of Plastic Institute. Mr. Polka presented a ten-minute video tape to the Committee relating to the recycling of plastic products. Mr. Polka described the relative place of plastic in the waste stream and potential for recycling plastics. Included in materials presented to the Committee was a description of the industry-developed marking and grading system to assist in sorting plastics according to type and suitability for various reuses. The potential of degradable plastics to affect the recyclability of plastics was also addressed by Mr. Polka.

2. Deborah Neustadt, Sierra Club. Ms. Neustadt advocated the adoption of mandatory source-separated recycling. Ms. Neustadt presented a summary of legislation and initiatives in other

jurisdictions which she believed were appropriate models for consideration by Iowa. Ms. Neustadt also advocated state purchasing rules to prefer recyclable and recycled products by consideration of life cycle costing and consideration of final disposal costs in purchase contract decisions. With regard to incineration, Ms. Neustadt recommended mandating the prior removal of glass, metal, and plastics to decrease pollution and preserve recyclable components of the waste stream.

3. Norlan Van Beek, Van Beek Enterprises, Biomass Energy Division, Sioux Center, Iowa. Mr. Van Beek described the potential contributions that centralized waste stream separation could make to a state waste volume reduction and recycling policy. Mr. Van Beek also described the equipment and process his company had developed with Lundell Manufacturing Company, which process is in use in Cherokee, Iowa, among other locations and planned locations. Sole reliance upon curbside or "source" separation was discouraged by Mr. Van Beek based upon the reduction rates achieved even in communities where source recycling was mandatory. Mr. Van Beek also encouraged the facilitation of regional or multicounty recycling efforts in order to make recycling more cost efficient.

4. Floyd Hammer, Plastics Recycling, Inc., Iowa Falls, Iowa. Mr. Hammer described the products which his company manufactures from recycled plastics and the market for recyclable plastics. Mr. Hammer described a growing industry relying upon recycled raw materials as inputs and observed that to date supply has expanded to meet demand. To further the growth and to assure stable supplies of recyclable raw materials, Mr. Hammer advocated state subsidization of recycling centers. Mr. Hammer also urged the Committee to recommend that state government consider life-cycle costing, including the cost of final disposal, in its purchasing decisions. To illustrate, Mr. Hammer compared the life-cycle cost of plastic timber manufactured by reclaimed plastic to wood lumber in common government applications. According to Mr. Hammer, despite the plastic lumber's high initial price, its longlife and recyclability make its life cycle cost less than wood.

5. John Munter, North American Conference on Christianity and Ecology. Mr. Munter advocated the reduction of toxicity of the general waste stream by separation of hazardous substances prior to final disposal by any of the hierarchy's alternatives. Mr. Munter advised against reliance upon incineration as a means of final disposal based upon the potential hazard from air pollution and the toxicity of the ash, among other concerns. Mr. Munter's recommendations included: (1) ban nondegradable retail packaging and food utensils made of polyvinyl chloride and polystyrene in retail food establishments; (2) place a small fee on nondegradable packaging to cover the life-cycle cost, including the cost of appropriate final disposal; (3) tax or ban toxic lawn chemicals like 2, 4-D, to make the composting of yard and food waste more acceptable to farmers and nonsoybean based inks to reduce toxic chemicals in the waste stream; (4) impose a 10 cent deposit on all nonreusable containers, but only a 5 cent deposit on

returnables; (5) have high deposits for containers with toxic contents like pesticides or herbicides to prevent improper disposal; (6) adopt Vermont's practice of requiring state purchasing agents to consider life-cycle costs in buying decisions; (7) mandate state purchase of recycled paper, tires, and other products made from recycled materials to promote the development of recycling-based industries; (8) provide a state recycling coordinator; (9) ban state procurement of foam, PVC, and polystyrene supplies as the Berkley City Council has done; (10) phase in a mandatory recycling program beginning with voluntary drop-off centers, increasing to monthly pickups and finally to mandatory curbside or source recycling; (11) compost yard and food waste for agricultural use; (12) do not use sewage sludge for agricultural purposes, but only for landfills or highway construction; (13) use chemical bonding to convert hazardous substances into stable and safe substances; and (14) ban incineration; a more promising alternative is pyrolysis of chlorinated compounds at high temperatures, a process which according to Mr. Munter leaves no toxic effluent.

6. Kurt Smalberg, Steel Can Recycling Institute, Pittsburg, Pennsylvania. Mr. Smalberg discussed the recyclability of steel from the general waste stream, and cited steel's unique ability to be magnetically recovered as a strong advantage for steel packaging over aluminum or plastic. Mr. Smalberg also discussed the white goods PCB problem.

7. Darlene Snow, Manager, Waste Recycling Programs, National Solid Waste Management Association. Ms. Snow discussed successful and unsuccessful waste volume reduction and recycling programs in other jurisdictions and made specific recommendations for Iowa policy makers. Ms. Snow stated that a state recycling law should have certain general aspects including: an advisory committee, realistic goals, flexibility, equal opportunity, recycling by citizens, local government determination of curbside collection methods, recycling education in the public schools, and marketing development for recycled goods with state incentives.

8. Andy Ronchak, Waste Tire Program Administrator, Minnesota Waste Management Board. Mr. Ronchak described Minnesota's waste tire program's development and implementation. Features of the program described by Mr. Ronchak included a grant and loan program, a waste tire storage permit program, and a waste tire abatement program. Mr. Ronchak recommended three rules for Iowa to consider in developing its own program: (1) define the scope of the problem; (2) review other state's programs and select the features most applicable to Iowa; and (3) maximize private sector involvement and cooperation in the program. Mr. Ronchak observed that the presence of regulations in Iowa's bordering states on waste tires would probably increase the flow of waste tires to Iowa landfills, increasing the need for Iowa to adopt a waste tire abatement program of its own. One mistake committed by Minnesota, observed by the Committee, was the placement of the waste tire processing facility at a distant location from Minneapolis and St.

Paul, where the vast majority of Minnesota's population is centered and thus the area from which the vast bulk of waste tires originates. The transportation charges for bulky tires over long distances has proven uneconomical. Mr. Ronchak stated that Minnesota's program is financed by a four-dollar fee paid at the time of initial registration and transfers of automobile titles.

9. Toby Shine, Shine Brothers Recycling (metals), Spencer, Iowa, representing the Northwest and Chicago Chapters of the Institute of Scrap Recycling Industries, Inc. (ISRI). Mr. Shine described the metal recycling industry's current role in waste volume reduction and recycling and observed that scrap metal is the largest U.S. export in dollar value terms. Mr. Shine defined a "scrap processor" and described some of the problems perceived by the industry, especially the problem with white goods. Mr. Shine presented ISRI's national position on recycling solid waste as a guide for state policy. Mr. Shine's six main points were:

- a. Scrap materials are not solid waste, but instead, materials destined for resale or manufacture with an economic value.
- b. There must be sufficient markets to handle existing and future supplies of recycled materials without disruption like materials currently being recovered and recycled or destruction of the market value for the materials (rational market growth).
- c. Government can and should actively promote incremental markets, through the adoption of procurement policies or by providing incentives to manufacturers who consume recycled goods or who produce recyclable goods.
- d. Government should ensure cost-effectiveness of its recycling initiatives in three ways: (1) government should not duplicate existing recycling efforts if there are companies currently doing the desired scrap recycling functions who would perform the needed services; (2) government should not get involved in purchasing recoverable materials for processing in government operated or funded recycling facilities; and (3) government should not pay more to recover and recycle materials than the cost of alternative management or final disposal of the materials.
- e. Existing recyclers should have a fair opportunity to participate in government funded or mandated recycling programs.
- f. The normal flow of scrap material should not be disrupted through government regulation or control; government recycling programs should cover only materials that are discarded or not separated from the solid waste stream.

Mr. Shine encouraged the Committee to remember the state's existing recyclers when encouraging additional recycling and to consider the problems of hazardous wastes like PCB and other environmental liability issues.

10. John Ockenfels, City Carton Company, Iowa City, Iowa, and representing the Northwest and Chicago Chapters of the Institute of Scrap Recycling Industries, Inc. (ISRI). Mr. Ockenfels focused on the potential for increased recycling of paper products and the existing markets for paper products within the state. Mr. Ockenfels stressed that most paper products were not solid waste, but rather were scrap with economic value for sale and reuse. Mr. Ockenfels outlined the potential of scrap markets for various products to absorb additional supply. A state required, but locally developed, recycling plan was recommended, rather than a uniform state plan, to accommodate the differences between different communities, and to permit specialization in the supply markets. Increased use of products made from recycled raw material, especially recycled paper, was recommended to encourage growth in a desirable industry. Mr. Ockenfels recommended against setting statewide mandatory recycling goals for some items, especially those with low recycling rates, because such mandates would not provide the necessary local flexibility to respond to market conditions. Mr. Ockenfels concluded by cautioning against merely creating government funded and supported competition for private scrap processors. Private business, local, and state government must coordinate efforts for statewide recycling efforts to succeed, Mr. Ockenfels recommended.

11. Jim Steffen, Secretary-Treasurer, Nebraska State Recycling Association. Mr. Steffen focused on the need for product and market development to produce an effective recycling infrastructure. Consideration of the potential for interstate cooperation in developing markets was urged. Mr. Steffen listed two preconditions for successful recycling market development for a product: (1) potential markets must be located or established; and (2) product development, distribution, pricing, and promotion must be managed to provide maximum benefit for users of recycled products, the recycling industry, and for the waste management system.

Mr. Steffen suggested the creation of a joint Iowa/Nebraska market management cooperative serving members with recyclable products. The cooperative would assist both public and private members in each of the two necessary steps listed. The cooperative would not itself own, broker, or trade recycled commodities or finished products made from recycled raw materials, or engage in education or advocacy except in promoting its services to members. It would not exist to provide management or technical assistance in the solid or hazardous waste fields. The cooperative's primary function would be marketing services and market development necessary to make what is technically feasible, practical and economically feasible.

12. Gene Crabtree, Waste Recycling, Inc., Lime Springs, Iowa. Mr. Crabtree described the recycling business which he operates and described the difficulties encountered in developing the business, both with government regulation and obtaining government assistance and with market development. Mr. Crabtree explained that much of his raw material is purchased for sorting and processing for the cost of transportation alone, with no additional charge for the material itself. This demonstrated an earlier witness's observation that recycling is often economically beneficial because it reduces the cost of disposal, not because recycling is profitable itself. Mr. Crabtree does not pay his suppliers for the material, but those suppliers avoid the cost of landfill disposal by giving the waste to Mr. Crabtree to sort into its various reusable components.

OCTOBER 21, 1988, THIRD MEETING

1. Bob Armstrong, Senior Vice President, Advanced Recycling, Waterloo, Iowa. Mr. Armstrong discussed curbside sorting as a potential means of waste volume reduction and recycling, and focused on his company's products, including recycling kits to facilitate curbside recycling programs. Also discussed were the features and merits of biodegradable, cornstarch-based, plastic bags. Mr. Armstrong observed that voluntary recycling programs had limited potential for waste volume reduction because of the limited participation rates typically experienced. Mandatory participation is required to permit a curbside program to achieve the 25 percent reduction target of the federal subtitle D program. Waste volume reduction or recycling is not mandatory under current federal law, only encouraged, but Mr. Armstrong explained a mandatory bill is being considered by Congress. A mandatory program must include penalty provisions to be successful according to Mr. Armstrong, but the key element of any successful curbside program is education. Mr. Armstrong recommended Iowa begin the development of a mandatory program now to gain experience and provide education in a voluntary phase before the federal government makes such programs mandatory.

2. Jeffrey Tryens, National Center for Policy Alternatives, Washington, D.C. Mr. Tryens presented examples from other jurisdictions of good and bad waste management policies and made specific recommendations for Iowa. Mr. Tryens stated that incineration is not his preferred method of waste reduction or disposal and encouraged waste avoidance as the first policy choice among many.

3. John Neubauer, Blueberry Patch, Inc., Des Moines, Iowa. Mr. Neubauer described a waste-to-energy and integrated industrial complex proposed for the Des Moines metro area by his company. Mr. Neubauer made the following recommendations to the Committee:

- a. Local communities should be mandated to develop comprehensive solid waste management programs that

simultaneously address the best local mix of waste reduction, recycling, and incineration with energy recovery.

- b. Recycling and waste-to-energy should be regarded as compatible instead of competitive approaches to waste disposal.
- c. Recycling programs should be focused, with careful market analysis at the very beginning.
- d. 20-25 percent target for waste volume reduction through recycling is reasonable and achievable.
- e. Local communities should be granted enough flexibility and time to implement mandated recycling programs.

4. Don Wilson, National Tire Dealers Association. Mr. Wilson addressed the problem of disposing of waste tires. Mr. Wilson observed that waste tires are not hazardous substances, only problematical because of size and physical characteristics, yet are often categorized with lead acid batteries, PCB contaminated white goods or shredder fluff, and other truly chemically hazardous substances. Mr. Wilson strongly cautioned against banning the landfill disposal of tires without providing a practicable alternative. According to Mr. Wilson, the technology exists to recycle or use waste tires in a productive manner: the shredding equipment, while expensive, exists; steel can be recovered, some rubber can be used in recycling, the remainder has high fuel value for use in incinerators and firing kilns properly equipped. Banning tires from landfills without providing for a workable alternative will result in greatly increased incidence of illegal dumping, exacerbating the problems associated with waste tires, not curing them, according to Mr. Wilson. Mr. Wilson also urged that the primary responsibility for waste tires be placed upon the end user and that government should not make tire dealers become recyclers. Government policy must provide a means of disposal acceptable to both business and consumers, advised Mr. Wilson.

5. Tim Wood, Division of Financial Assistance, Iowa Department of Economic Development. Mr. Wood summarized the financial assistance programs available to help recycling businesses or businesses relying upon recycled raw products within the state. According to Mr. Wood, recycling is considered by the Department of Economic Development as a viable economic development project.

6. Dave Burgan, immediate past President of Iowa Landfill Association and Vice-president of Waste Systems, Waste Systems Corporation, Lake Mills, Iowa. Mr. Burgan described the experience of his company with waste management and private recycling. Waste Systems is currently preparing to operate a county-sponsored curbside recycling project in Fairbault, Minnesota. Mr. Burgan advised, based on this experience, that no additional legislation on waste volume reduction and recycling is required at this time in

Iowa. Recycling programs should be encouraged to grow on a voluntary basis, and not made mandatory, according to Mr. Burgan. Mr. Burgan also cautioned against the use of deposit fees on tires and white goods because it might stimulate cheating and the importation of the products from out-of-state.

7. Neil Wright, Central Iowa District Manager, Waste Systems Corporation. Mr. Wright, also of Waste Systems, explained that his company was not selling any particular product, but was rather concerned that state recycling mandates would cause substantial disruptions in the recycling markets. Slow and consistent growth should be encouraged instead so that markets can grow and be developed in an orderly fashion. Market shocks were described by Mr. Wright as a sure way to cause existing and start-up recyclers and industries depending upon recycled products to fail in large numbers.

NOVEMBER 18, 1988, FOURTH AND FINAL MEETING

The fourth and final meeting was primarily reserved for discussion among the members of the Committee and adoption of recommendations.

1. Mr. Norman Rodgers and Mr. Jim Kuhlman, Alcoholic Beverages Division. Messrs. Rodgers and Kuhlman discussed the potential problems contained in a bill draft advanced by Co-chairperson Shultz which would again make the Alcoholic Beverages Division responsible for beverage container deposits under the bottle bill. As part of the privatization of the state liquor store system, Class "E" liquor retailers became responsible for deposits on the bottles. Messrs. Rodgers and Kuhlman recommended against immediately placing the Division back in the deposit loop, and instead recommended leaving the existing system in place, including leaving unclaimed deposits with the Class "E" retailers as an economic incentive to manage the deposit law.

2. Mr. Russell Laird, Iowa Wholesale Beer Distributors, Iowa Wine Distributors, and Iowa Soft Drink Wholesalers and Distributors. Mr. Laird stated that the beverage industry could, with a two-year lead time, accommodate the proposed mandate that no deposit law beverage container be disposed of by landfill.

CONCLUSIONS AND RECOMMENDATIONS

Upon the recommendation of Co-chairperson Deluhery, and the concurrence of other Committee members, the Committee developed its recommendations in general policy language rather than specific bill proposals. The recommendations were intended by the Committee to provide the basis for immediate legislative proposals and as long-term guidance to promote cohesiveness and direction to future legislative action. Several bill drafts and models were advanced by various members of the Committee for consideration by the

Committee. Those bill drafts and models are included in the minutes of the appropriate meeting, or in supplementary mailings to the Committee, also available from the Legislative Service Bureau. None of the bill drafts or models distributed were drafted by or converted to Legislative Service Bureau form, but rather served as examples of policies to be considered by the Committee, in light of the early consensus not to recommend specific legislation.

The policy recommendations adopted by the Committee at its November 18, 1988, meeting were generally referred to by the Committee as its "Ten Point Plan", in that the plan addressed ten general areas of concern. The following is the Ten Point Plan as adopted by the Committee:

WASTE VOLUME REDUCTION AND RECYCLING STUDY COMMITTEE

RECOMMENDATIONS FOR IMPLEMENTATION BY STATE AGENCIES AND THE GENERAL ASSEMBLY Adopted November 18, 1988

I. ADMINISTRATIVE CHANGES

1. Provide funding for and mandate the appointment of a full-time "Recycling Coordinator" to administer state government recycling programs and assist local governments in developing recycling programs.
2. Require all state agencies to submit a waste reduction and recycling plan as part of their budget proposals, with target goals.
3. Require each state agency to establish a wastepaper recycling program by January 1, 1990.
4. Require each state agency to establish a plan for spending a percentage of its total state appropriation on recycled materials.

II. RECYCLING POLICY

1. Require separation of recyclable materials from the waste stream prior to final disposal. The option of using either source separation or centralized aggregate separation of recyclable materials shall be available on the local level.
2. Ban landfill disposal of all items covered by the bottle bill.
3. Promote markets for reclaimed materials and for items manufactured from reclaimed materials, such as plastic fence posts; consider mandating life-cycle costing or consideration of reduced disposal costs at the time of acquisition. Recycling businesses should be given preference in economic development programs, such as the Community Development Betterment Grant program or other

entrepreneurial assistance programs that may be initiated in the future.

4. Promote industries in Iowa that use reclaimed materials.

5. Mandate the development of local recycling plans to be approved by the Department of Natural Resources, rather than requiring a uniform state plan. Begin local programs by encouraging the establishment of voluntary targets and culminating in reasonable state-mandated recycling reduction goals including the recycling of plastics, paper, glass, metals, and other materials which become recyclable. Features of recycling policies should include:

- a. State and local partnership.
- b. State responsibility for setting economically driven goals, provision for financing, aggregation of materials, and development of educational programs and other resource materials.
- c. Vesting of responsibility in local authorities for development of approved programs to meet goals, including development of a collection system with some mandatory recycling features. Local authorities shall be left the flexibility within the mandated program to choose programs which encourage local market specialization.
- d. Require local authorities to provide a detailed study of the composition of their local waste as part of the application process for approval of local plans.
- e. Encourage the establishment of interstate recycling programs.

6. Review of state laws and regulations to ensure that those laws and regulations are not preventing the safe reuse of discarded or reclaimed items, such as glass jars, building materials, etc.

"Recycling" means any process by which solid waste, or materials which will become solid waste, are collected, separated, or processed and reused or returned to use in the form of raw materials or products.

III. WASTE TIRE ABATEMENT PROGRAM

1. Adopt the Wisconsin Model Waste Tire Program with a one-time fee of \$2.00 per tire, which shall be charged upon the registration of a new motor vehicle. (Under the Wisconsin model, the fee does not apply to bicycles, other people-powered vehicles, farm vehicles other than trucks, and all-terrain vehicles.) Features of the program shall include, but not be limited to, the following:

- a. Inventory of existing tire stockpiles.
 - b. Estimation of scrap tire generation by each county.
 - c. Analysis of alternative disposal strategies and technologies, including market studies, cost, and environmental impact.
 - d. Recommendation by the Department of Natural Resources of a plan of action and implementation of the plan by rule.
2. Require the Department of Natural Resources to perform a study and make recommendations on the preferred method(s) of waste tire disposal using the revenues generated by the waste tire fee. Require the Department to adopt rules to implement the recommendation.
3. Pending completion of the Department of Natural Resources study and adoption of rules, ban disposal of unprocessed waste tires in landfills, but permit disposal of shredded tires, incineration, or monofills, subject to the Department's rules.

IV. WHITE GOODS ABATEMENT PROGRAM

Direct the Department of Natural Resources to develop a white goods (old kitchen and large household appliances) abatement program to deal with existing disposal problems in light of the E.P.A. PCB standards and to avoid illegal dumping problems.

V. LEAD ACID BATTERIES

1. Direct the Department of Natural Resources to develop a lead acid battery abatement program.
2. Prohibit the final disposal of lead acid batteries at landfills beginning July 1, 1990.
3. Require persons offering lead acid batteries for sale to accept, at the point of sale, the return of used acid batteries.

VI. WASTE OIL DISPOSAL

Recognize that waste oil disposal is still a problem for individuals. Encourage the development of alternatives for waste oil disposal, by the expansion of Department of Transportation pilot projects, vendor programs, or other programs.

VII. HAZARDOUS WASTES IN GENERAL

Require the state to reduce the toxicity of the waste stream by removing and providing for the proper disposal of hazardous wastes to prevent groundwater contamination from landfills, to prevent air pollution from incineration, and to promote the recycling industry

by avoiding contamination of recyclable or reclaimable materials by hazardous substances.

VIII. COMPOSTING

Encourage the composting of yard waste and discourage its disposal in landfills and waste incinerators. Direct the Department of Natural Resources to develop standards for compost sites, other than those for household use, and to provide guidelines for landfills and local governments in setting up composting operations.

IX. DEGRADABLE PLASTICS

1. Discourage the use of nondegradable plastic bags for garbage disposal and retailer's sacks and consider banning the sale of nondegradable plastic bags within the state after a certain date.

2. Discourage the use of styrofoam and polystyrene foam products in packaging, particularly in food packaging.

3. Discourage state government use of one use disposable plastic products.

X. INCINERATORS AND REFUSE TO ENERGY PROGRAMS

Before the issuance of a construction permit for an incinerator, require an applicant to demonstrate that a front-end separation system is a component of the incinerator project.