

NEWSLETTER

Michigan Coalition for Better Waste Management

1324 Lake Drive, S.E. · Grand Rapids, Michigan 49506

MARCH 1979

The Gull Lake Conference

The Michigan Coalition for Better Waste Management held its first Annual Conference in October, 1978, at the Gull Lake Conference Center, near Hickory Corners, Michigan. The Conference drew together participants from all over the country and from all arenas of solid waste concerns. Present were environmentalists, bureaucrats, industry representatives, engineers, private collectors, elected officials, consultants, and interested citizens. Ideas, opinions and knowledge flowed freely through an intensely packed agenda. It is safe to say that by the end of the two-day session an "esprit de corps" was felt by all. The "encounter" experience was invaluable to all attending, who shared a commit-

ment of working toward solutions to solid waste problems. Hopefully, it will be the first of many such encounters.

Congratulations are to be given to Jeff Dauphin for engineering the conference, and to the West Michigan Environmental Action Council and the Coalition for their efforts in making the conference a success.

This newsletter is devoted to a summary of the conference. Its purpose is to inform those who were not present, recall memories for those who were, and pique interest for those who wish to join us in the future.

Federal Rules and Regulations

Karl Klepitsch, Chief, and Owen Thompson
Waste Management Branch
Region V, Environmental Protection Agency

There's an old tongue twister which goes, "How much wood could a woodchuck chuck, if a woodchuck could chuck wood?" After listening to EPA representatives from Region V, an updated version of that saying might read, "How many rules could a rule-maker make, if a rule-maker could make rules?"

Owen Thompson of Region V, EPA, stated that Washington makes the rules and that Region V must deal with those rules. Right now the EPA is dealing with the Resource Conservation Recovery Act of 1976 (RCRA). Although the objectives of the act---health and environmental protection plus resource conservation recovery---are simple enough, the Act is very broad and comprehensive in scope with many different provisions. The main provisions cover hazardous waste regulatory programs, land disposal aspects, resource conservation recovery aspects, and a technical assistance panels program. Making the rules is one thing, and most of us would agree that the rules are extremely necessary, but to implement and administer them is no easy task. According to Thompson there is much yet to be started, resolved and finished before full implementation of the Act is accomplished.

The rules are equally as complicated, said Karl Klepitsch, Chief of the Waste Management Branch, Region V, as he explained EPA's Guidelines for State Solid Waste Management Plans. The purpose of these guidelines is to assist in the development of state plans. Again, are the guidelines important? Yes. Are they easy to understand? No. The language of the guidelines consists of periodic reviews, regulatory requirements, surveillance capabilities, enforcement systems, compliance schedules, establishment policies, advisory groups, consultations, and state

regulatory development plans---just for starters.

Over \$1 million will be spent on the guideline's programs in 1979, said Klepitsch, with coordination and public participation the most important parts. He also said Region V's role will be to help states understand the programs, to act as a catalyst between states, and to provide public information via plentiful materials.

In spite of the difficulties in working with all these rules and regulations and states, Klepitsch feels optimistic that careful solutions with monitoring of solid waste problems can be achieved. He further feels that responsibility is the key word---responsibility shared by elected officials, bureaucrats, industry and citizens.



Karl Klepitsch

Michigan Program Philosophy

Dr. Howard Tanner, Director
Michigan Department of Natural Resources

According to Howard Tanner, Director of Michigan's Department of Natural Resources, many of our current waste problems are a result of the profit motive. He maintains that resources have been extracted and transported to cities where they have served as man's support base and from which profits were accrued. However, wastes are created from those resources, and the function of the environment has been to assimilate those wastes in the air, land, and water. Since few profits have been realized in the assimilation process, systems for aiding assimilation have been slow in being created and wastes have accumulated. Thus extracted resources have been viewed as profit and wastes as cost.

Tanner feels that government has three areas of responsibility in waste management: 1. Regulation---how and where. 2. Cost sharing---federal, state and local. 3. Innovation---putting ideas into operation. He said the state government has lagged most in the innovation area.

Tanner cited that historically, governmental action on water pollution came first, followed by air pollution, and only recently waste management. Traditionally, solid waste has been viewed as a local problem.

He further stated that the state government is hindered in waste management by viewing things in neat, rigid categories. Communication between departments is also difficult. Thus the governmental structure is not efficient or effective. As an example, the authority for dealing with problems such as solid waste is fragmented between numerous agencies and departments, which interferes with the problem-solving process.

How to Get Involved in the Legislative Process

"Organize, organize, organize. Lobby, lobby, lobby. Get involved in the political process on an every day basis. Know who your legislators are. Talk with them as frequently as you can. Talk with them about issues that concern you. And make it a

State Representative Tom Mathieu



point that they carry your message one step further into the legislative process."

Such was the essence of the message on how to become involved in the legislative process that Representative Tom Mathieu (Chairman of the Special

Tanner explained that problems also exist in regard to who will recover wastes, public or private concerns. A conceptual change needs to occur in considering by-products as resources rather than wastes. He pointed out that many feel solid waste management recovery must be profitable. Yet, sewage plants have seldom been viewed as profit making.

The Director offered some optimism in dealing with sewage treatment. Sludge need not be incinerated but can be added to the land. The Muskegon



treatment system is an example of such use. However, since Americans perceive sewage as filth and are reluctant to grow food with it, application of sludge to forest lands may be an alternative. Such applications may offer rewards in energy, transportation, and employment as well as environmental.

Legislative Waste Management Committee) brought to the conference.

Mathieu's speech was tinged with realistic pessimism: that environmental issues are not popular in the Michigan legislature today, that environmentalists do not have clout in Michigan, that environmentalists do not have money or a lobbyist, and that if and when programs start to be cut due to budgetary problems and the "tax payers revolt", environmental programs will be the first to go.

More optimistic were Mathieu's specific suggestions for legislative involvement: 1. Get involved in the legislative process totally---starting with one person, then two, then a whole committee, and finally the whole legislature---in order to turn votes our way. 2. Know the facts on issues well to be able to talk convincingly about our position and to sway opinions. 3. Do hard lobbying of every senator or representative we know, no matter what committee a bill is in. 4. Demand that legislators who are environmentally concerned be on pertinent, important committees, such as the Appropriations Committee.

Since Mathieu was the engineer of Michigan's newly passed Solid Waste Management Act (PA 641 of 1979), his words of advice are meaningful. His message is loud and clear. The challenge is there. Can we rise to it?

Markets for Michigan's Wastes

What is the "scene" for marketing recycled materials? The answer to that question varies considerably according to panelists who represented five industries - glass, steel, plastics, paper, energy.

Marketing trends seem to be most optimistic for the glass industry, said Irish Karter of the Glass Packaging Institute, Washington, D.C. If it is clean, color sorted with no ceramics or metals in it, 100% of old glass can be used to make new. The greatest incentive for using cullet, reused glass, is in savings derived, explained Karter. Savings occur in energy (it takes less heat to melt cullet), in buying new equipment--to meet present air emission standards (air emission problems are considerably less for cullet), and in the extension of equipment life (using lower temperatures adds years to equipment life). Karter said that although prices for cullet vary around the country, they are on an upward trend in many areas. She indicated that cullet is a good commodity with more of it being used in the future as we get more comfortable with it and get enough of it. The glass industry offers technical assistance to glass recyclers.

Recycling also seems favorable for the steel industry. Vic Zediker, a representative from U.S. Steel, Pittsburgh, Pennsylvania, said, "U. S. Steel heartily endorses the concept of resource recovery from municipal solid waste and considers the recycling of steel cans from these systems a valuable, potential source of raw material for the steel industry." Zediker explained that U. S. Steel has put together several programs to buy back cans from the solid waste stream, from the deposit system, and from private recyclers. They have promoted those concepts through media, have put together books on ways, equipment and guidelines for municipalities, and also have experts who work with communities. They are presently buying bi-metal cans and other steel which has not been processed by burning.

The marketing picture is less promising for the plastics, according to Lad Thomka, of Dow Chemical at Midland. Thomka said, "I would be lying if I could say it's an area where you can expect a lot of recycling in the near future." Thomka did say

there is a large established and growing market for recovering plastics from industry, but there is no market for plastics from post-consumer waste because of lack of volume---only 4% of the total plastic thrown away is from municipal wastes. Another reason is that to separate plastics from mixed waste is difficult and there is no well developed way to do it properly. Problems of separating plastics from one another, necessary because plastics don't mix, adds to the difficulties. Thomka said there are isolated plastic recycling projects around the country, but they are few in number. He mentioned that the plastics industry is "pursuing a theme" of extending the life cycle of plastics by making it more durable, but as of right now there are few answers.

Even less encouraging was the report from the paper industry. John Martinek of St. Regis Paper Company, Battle Creek, Michigan, contended that not much is happening for recycling in the paper industry. Martinek said that the demand is not there for paper. He stated that storage is a problem and that contamination needs to be controlled. No development of a mechanical separation state, which means using source separation, is also an obstacle. In general, Martinek seemed to indicate that getting into the paper recycling business on any great scale is too costly for too little benefits.

Consumers Power Company, represented by Bob Gerzetch of Jackson, Michigan, joined the discussion as an intermediary whose interest is in marketing a fuel to power an energy system. Consumers seems to have few answers, but a willingness to study the feasibilities of new approaches. Gerzetch said that they are studying the possibilities of burning of "waste" wood from forests, burning prepared solid refuse, or utilizing present boiler systems for additional steam cycles. Whatever method Consumers might choose, Gerzetch claims that it is not their intent to make a profit, nor do they want to lose money. They also want to use environmentally sound ways. It is Consumers' policy to support and consider appropriate aspects of solid waste management programs. They are willing to work with any community who so desires.

Source Separation Programs Are Examined

David Cohen, USEPA Washington, D.C.
Chip Clement, SCS Engineers, Long Beach California
Dr. James Bosscher, Calvin College, Grand Rapids, Michigan

"Solid Waste Management Blues" is the song heard too often around the country. Three speakers at the conference were there to change that song to "Things Are Happening Boogie" as they reported on some of the new and innovative solutions being tried in the arena of source separation.

Dave Cohen, of the U.S. EPA in Washington, presented an overview of a national survey on which he has been working. The survey examines separate collection programs, meaning scheduled curb-side collection of recyclables from residential and commercial establishments. It is immense in scope and appears to cover every possible angle of source separation programs, including such factors as distribution of programs, distribution of markets, kinds and amounts of materials collected, ways of marketing materials, kinds of collection vehicles used, who runs the programs, and why programs are successful or not. One interesting fact of the survey is that in 1970 there were two known separate collection programs, and in 1978 there were 219!

The gathering and analyzing of all these facts certainly is a valuable graphic picture of the source separation scene, and EPA can be contacted for more in-depth information.

A more specific look at a source separation case study was presented by Chip Clements, of California's SCS Engineers (and also our farthest hailing conference participant). Clements outlined California's San Luis Obispo's program called SORT--- Separation of Office and Residential Trash---which started as a one-year source separation test with a grant from EPA. It was a voluntary program using a private hauler as the collection agency. Collection was on a once a week basis at curbside with residents sorting materials into three piles of mixed glass, mix metals, and newspaper.

According to Clements the test turned out to be a success story. He cited some of the reasons for that success as being the innovativeness and willingness of the private hauler, a good glass market in California's wine industry, high quality of materials collected, and cooperation by the city's residents. Perhaps the program's success can be best measured on the basis that it has become an

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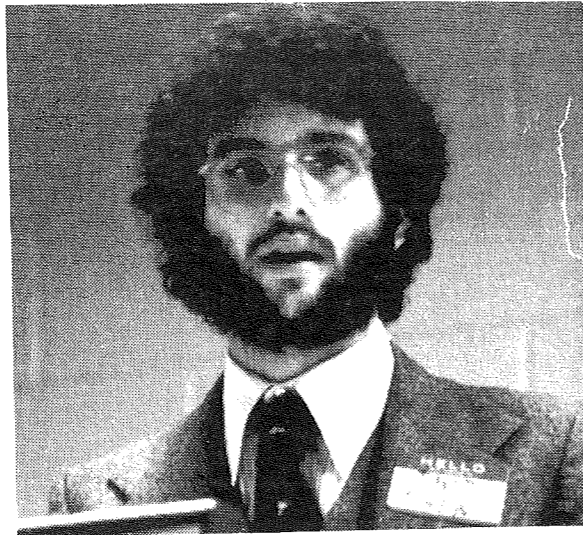
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on-going effort, close to breaking even on its own, and even becoming a profit-making venture for the private hauler. The study also points out the need for continued adaptability of cities in working out recycling programs.

Another case study was discussed by Jim Bosscher of Grand Rapids, Michigan's Recycle Unlimited project. Bosscher, one of the program's innovators, said that what started as a glass drive to raise money for a youth camp has turned into an expanded city-wide recycling effort.

The significant feature of Recycle Unlimited is its original equipment, designed and built by Bosscher's engineering students at Calvin College. That equipment, in its simplest form, uses chains and tires. All of the equipment was designed as low-cost, junk-component technology. With that technology, a desire to put inner-city kids to work, money from grants and foundations, and donations of materials needed, the project was born.

In its expanded state, Recycle Unlimited now operates a system of over 30 collection depots that collect newspaper, glass, cans and plastics. Handicapped people have been added as processors. An experimental trailer that processes materials en route has been designed for a curbside pick-up test project that has achieved 30%-50% participation rates



They are now planning to gradually go into industrial waste recycling. Bosscher and Recycle Unlimited are also glad to share their plans for any of their equipment with anyone who is interested. They can be contacted at 1241 Madison, S.E., Grand Rapids, Michigan 49507.

Ending Solid Wastefulness

Bruce Williamson

Where do we want to get to in solid waste management? What purposes do we want our waste management programs to achieve?

What is the context within which all of our decisions will have to take place?

What is your point of entry into the solid waste issue? What do you find valuable in solid waste?

These are just a few of the many provocative questions posed to the audience by Bruce Williamson, who heads his own consulting firm, Ideas at Work, in The Woodlands, Texas. Bruce is also the author of *Ending Solid Wastefulness*, the booklet which was largely responsible for setting the philosophical tone of the conference.

Focusing his presentation on the communication process, the audience was skillfully guided through the necessary steps involved in overcoming today's serious waste management problems. In order for any information to be acted upon, a person must pass through a series of stages in the communication process. These steps take a person from unawareness to awareness to comprehension to conviction and finally to action.

Take, for example, a community that wants to get its citizens to participate in a newspaper recycling program. Citizens first have to become aware that such a program exists. Next, they have to comprehend certain features about the program's operation. Next, they have to form some kind of conviction about the benefits of the program to themselves and their community, and then most importantly, they must take action by actually participating.

On paper these steps appear straight-forward; however in actuality they are subject to an array of countervailing forces. Great skill has to be exercised in putting together successful communications programs. This aspect of the solid waste problem has generally been totally overlooked.

But the benefits of successfully changing people's attitudes toward waste and their habits in dealing with waste are far reaching.

Solid waste problems, after all, grow out of a state of mind and attitude toward resource use. Their real solutions may best be found by influencing the behavior and beliefs that first caused the problem. Such a view is not now widely held by solid waste decision makers. Too often the problem is simply handed to technicians in hopes of an "easy" mechanical solution to what is actually a social problem. Recognizing that solid waste is primarily a problem of human behavior, it appears that programs to influence people's habits toward more responsible resource management will have to become a critical part of a community's waste management strategy.

According to Williamson, brand-new research is not needed to help us make great strides in solving our solid waste problems. Most of the information already exists, but it needs to be integrated and thought about in new ways. He suggested the following resources to help us think differently and more creatively about solid waste management:

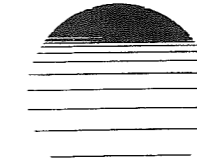
Lateral Thinking: Creativity Step by Step
Edward de Bono
Harper Colophon Books
1973 paperback \$2.95

Use Both Sides of Your Brain
Tony Buzan
E.P. Dutton & Co., Inc.
1976 paperback \$4.95

Intermediate Technology
556 Santa Cruz Avenue
Menlo Park, California 94025

Rain: Journal of Appropriate Technology
2270 N.W. Irving
Portland, Oregon 97210

Also, of course, Bruce's book, "Ending Solid Wastefulness", is an invaluable reference and is available from the Coalition.



Michigan Coalition for Better Waste Management

1324 Lake Drive, S.E. · Grand Rapids, Michigan 49506 · (616) 451-3051

WHAT IS THE MICHIGAN COALITION FOR BETTER WASTE MANAGEMENT?

The Michigan Coalition for Better Waste Management is People. People concerned about the way solid and hazardous wastes are being managed in the State of Michigan. People trying to understand the problems, and willing to do something to improve the situation. The Coalition was organized in the fall of 1976 by the West Michigan Environmental Action Council, a non-profit, non-governmental, environmental organization in Grand Rapids, Michigan.

WHY WAS THE COALITION FORMED?

It was recognized by many persons throughout Michigan that there were serious problems related to the state's solid and hazardous waste management program:

- *Legislation was outdated and there was no legislative leadership
- *Rules and regulations for land disposal of wastes were inadequate and did not reflect state-of-the-art technology
- *Administration of laws and requirements was inconsistent and haphazardly enforced
- *Budgets for staff and administration of the programs were grossly inadequate
- *Citizens and government officials were uninformed and confused about the solid and hazardous waste decisions making process
- *Expertise of regulatory personnel often did not match the needs for facility evaluation and enforcement
- *Regulatory personnel, facility designers and operators, in many cases, did not acknowledge the potential hazards of inadequate disposal operations
- *Large numbers of citizens and local officials were involved in local controversies, but their efforts were fragmented and unknowingly overlapping and uncoordinated
- *Adequate information on proper procedures and technology was not readily available to citizens and local officials
- *Time, energy, and money were being wasted at every level of decision making, and mismanagement of waste resulted

To some extent all of these problems still exist and will continue to exist for some time. However, positive changes in many of these problem areas are now occurring as a direct result of the activities of the Coalition. A trend toward vast improvement in our state Solid and Hazardous Waste program is now evident!!

HOW DOES THE COALITION HELP SOLVE THESE PROBLEMS?

- *By providing accurate information on laws, regulations, policies, technology, and procedures to a large body of concerned individuals
- *By watchdogging and reporting solid and hazardous waste management issues
- *By coordinating and focusing the participation of scattered and diverse interests into a united voice on issues of common concern
- *By identifying professional and technical resource people and matching them with those who need their services
- *By providing a common forum for people to share their experiences and acquire knowledge with others
- *By identifying problems and educating individuals and decision makers to those problems
- *By direct participation in solid and hazardous waste decision making

HOW DOES THE COALITION FUNCTION?

The Coalition does not function as an independent organization, but more as a clearing-house and communication linkage with its broadbased membership. For example, the Coalition does not take a stand on an issue on its own behalf or speak for its membership. Instead, it communicates timely information to members, who initiate their own action if they choose to.

Planning Solid Waste Management Systems

Speaking on behalf of the Resource Recovery Section of the Michigan Department of Natural Resources, Larry Holcomb's presentation focused on the need for a more systematic approach to solid waste management planning. Holcomb stressed the need to factor into our decision making process adequate evaluations of all alternatives and their net energy implications.

Concentrating on organic and municipal sludge as an example, Holcomb outlined the steps involved in formulating a cost effective management plan. He contends the same steps should be applied in developing other waste management plans including solid and hazardous waste.

In the United States nearly one ton of domestic wastes is generated per person each year. Food and fiber processing plants along with industrial and agricultural operations produce millions of tons of organic wastes which ultimately must be disposed of in some manner. Most often these wastes are being land-filled or haphazardly spread on the land where ground and surface water pollution may develop, or burned in incinerators where potential air pollution problems may result. Tough, new environmental protection laws are forcing consideration of new alternatives for managing these wastes.

Reapplication of these wastes back to the soil is an alternative method that is well worth considering.

Before starting to work with the Michigan DNR, Holcomb directed the Urban Waste Project in Nebraska. The program investigated prospects for several alternatives to conventional disposal of organic urban wastes. His examination of the problems associated with organic waste management technology identified the steps necessary to develop a comprehensive management plan. Holcomb suggests four major components that are necessary including: (1) Identification of constraints, (2) analysis of alternative methods, (3) Cost/benefit analyses (4) Selecting the best method. To better illustrate this process he detailed how these steps were applied to the Nebraska project.

1. Organic Recycling Constraints.

Three major considerations were identified: Spacial, environmental and social.

---Spacial Constraints determine how suitable the land is for waste application. How will soil types and ground water affect distribution rates? Is there enough good land available?

---Environmental Constraints involve identifying the chemical and biological characteristics of the waste. Are there unacceptable levels of heavy metals or pathogens?

---Social Constraints determine the cultural values of local residents and their effect on the project. Will there be laws or legal barriers to overcome? What are political attitudes?

2. Alternative Methods

---Liquid sludge (3%-5% solid) sprayed directly on land.

---Wet sludge (10%-15% solid) applied to land, then tilled under the same day.

---Liquid injection - inject liquid sludge into soil with specialized equipment.

---Compost municipal sludge with other organic materials, then spread on land.

---Use ash from incineration process as soil conditioner.

3. Cost/Benefit Analysis

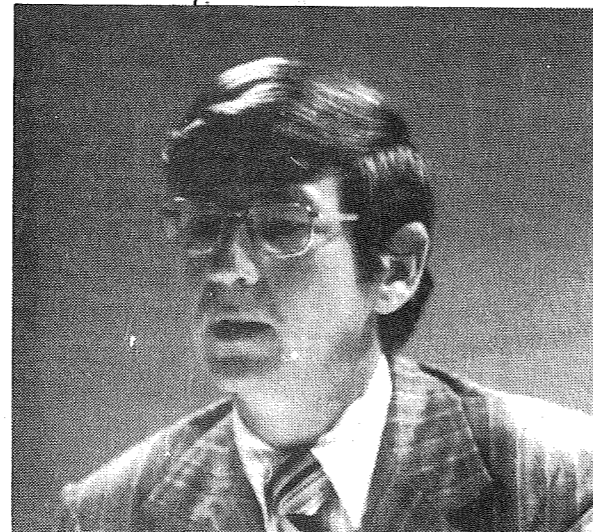
The cost/benefit analysis must be thorough and include all costs.

---Transportation costs

---Processing/treatment costs

---Disposal/recycling costs

---Pecuniary benefits - net energy savings, long term environmental improvements, reduced soil erosion, water retention benefits, etc.



4. Select Best Alternative

To determine which alternative is most suited, several factors need to be related to the various constraints and cost/benefit analysis.

---Assessment of total estimated volume of waste on a dry ton basis, under present conditions and projecting at least 20 years into the future.

---Quality of waste materials in terms of nutrient content and chemical characteristics.

---Current land use. Patterns and projected future changes.

A systematic approach to waste management will produce comprehensive results. During the past five decades croplands have been "mined" for maximum productivity. Energy intensive, chemical farming has, over a short period of time, robbed the soil of its natural ability to sustain life. At the same time potentially valuable waste materials that could inject life back into these lands have been, in many cases, needlessly discarded. The time has come to realize that these so-called "wastes" are a valuable resource whose benefits are long-term and often hidden. Thus any analysis of cost/benefit must include these long term values.

According to Holcomb, progress is being made in sludge management and he cited as an example a pilot project in Michigan that composts 30 tons of wood chips and Detroit sewage sludge a day. The project appears to be proving that land application can be safe and beneficial to society. He believes that a step-by-step investigation (as outlined), followed with constant monitoring, will yield comprehensive and environmentally safe alternatives to current waste disposal practices.

Reaction Panel Gives Thoughts

Throughout the conference, all of those attending had personal reactions, thoughts and feelings toward topics discussed. A panel of experts representing "interested" parties in solid waste management talked about their reactions. A few of their contributions are listed as follows:

Mr. Fred Kellow, Chief of Resource Recovery Division, DNR:

---a great deal of apathy still exists

---planning is essential, especially at the local level

---need cooperation. "We are all a part of the problem."

Dr. Vern Ehlers, County Commissioner, Kent County:

---Solid waste handling is a systems problem and needs a systems approach.

---Central agencies need flexibility and freedom to deal with the entire problem.

---Need financial incentives for our dollar oriented society to cooperate.

Mr. Bob Scott, Private Engineering Consultant:

---Solid waste is a public health problem that is social, political, and technical in nature.

---Solid waste is a major problem requiring major experimentation and the spending of great amounts of money.

Mr. George Schutte, Engineering, Oakland County DPN:

---Not convinced the source separation and separate collection is proper thing to do. Does not think it will work everywhere.

---Has concerns about the dollar situation of resource recovery.

---Thinks that people don't care about resource recovery, but want the easiest and cheapest way out, like dumping things in one can and letting it go.

Mr. Doug Fenske, Fenske Enterprises (private waste disposal operator)

---Believes private money can recycle.

---Thinks the private sector can handle recycling rather than the public sector.

---Thinks the real answer to success is in markets. ---Key issue to make recycling a reality is the cost of landfills.

---Need to maximize the marketing of materials to reduce wastes.

---Need to use energy recovery.

---"We are just coming out of the stone age."



Mr. Denny Forst, (private waste collector and disposal operator)

---Insurance problems are a part of cost problems, as well as equipment problems and state and federal legislation

---Factors that escalate costs for private haulers are endurance problems, equipment problems, and state and federal legislation.

---Concerned about market availability.

---Concerned about financing of equipment needed for recycling.

Solid Waste Management in China

Roger Blobaum, Creston, Iowa

One of the most delightfully entertaining and provocative presentations at the Conference was that of Roger Blobaum on "Solid Waste Management in China". Hailing from Creston, Iowa, where he is President of Blobaum & Associates, Roger has made several trips to China with agricultural research tour groups. He is also widely known and recognized for his innovative work on "The Small Farm Energy Project" sponsored by the National Science Foundation, and designed to test the implications of applying maximum energy independence and waste utilization concepts to several small farm operations in Iowa. In a smooth and relaxing information style that is only Blobaum he captivated the audience as he shared his experiences in an evening session that culminated an intensive day's agenda.

Little has been known in the U.S. about waste recycling in China. Blobaum explained that the Chinese do not even use the term recycling. It is a labor intensive country that uses all wastes available. There are no dumps, landfills, ocean dumping, or incineration of refuse. Waste products are reused. Reuse is not a result of governmental regulation; it is a part of the

Chinese philosophy and culture---a way of life.

Wastes from animals, humans, crops, garbage, silt, ashes, and bones are all utilized. Wastes are viewed as a resource rather than a disposal problem. Thus, the Chinese exhibit a different attitude toward wastes than the Occidental world.

Blobaum's presentation pointed up the fact that the Chinese's waste recycling can not be viewed in isolation but must be regarded as a total systems approach---life style, standard of living, energy use, transportation, agriculture, and recycling.

Waste in China is deposited on the land; it is not contained in a useless landfill. Instead, wastes become economically beneficial by being an integral part of food and livestock production. Food production is aided by composting hog, cattle and chicken manure and applying it to the land as fertilizer. Livestock production benefits because family and industrial wastes are used as animal food. Blobaum estimated that 70% of the food that hogs consume in China, Americans throw away.

Wastes and water systems are viewed quite differently also in China. (Continued on page 9)

Meetings are held periodically in Lansing (about every 6 weeks) where issues are discussed. However, it is not necessary to attend meetings to be an active member of the Coalition. Detailed meeting notes and information are mailed to all members. When action or response is necessary, special action alerts are mailed to members, explaining the issue and providing guidance on how and to whom to respond. This type of coordinated action has proven very effective.

Additionally, the Coalition will hold a statewide conference on solid and hazardous waste management and will prepare a citizen's guide to Michigan decision making. The Coalition maintains an expansive and up-to-date library of technical information, provides access to resource people, attends and reports on all significant meetings, can provide special consultation on individual problems, and publishes and distributes the Coalition Newsletter.

WHO PARTICIPATES IN THE COALITION?

Our thirty organizations and governmental units have officially endorsed the Coalition Position Statement. Detailed mailings and alerts are sent to over 100 persons, and the quarterly Newsletter is distributed to over 500 persons including key regulatory personnel and state legislators. Members consist of environmental organizations as well as township and county governments, industry, colleges and universities, and waste management interest groups.

WHAT ARE PEOPLE SAYING ABOUT THE COALITION?

"We have found the Coalition and WMEAC quite beneficial to us in our efforts to make some rational sense out of the solid waste confusion in our state."

Earl Borden, Supervisor
Avon Township, Oakland County

"The Commission realizes it is being monitored and expected to achieve its objectives."

Barbara Clark
Off the Beaten Pathfinders
Houghton, Michigan

"I believe that it is very informative."

Amos Bankston
United Auto Workers of Michigan

"The Coalition has provided efficient and insightful leadership for public action in the solid and hazardous waste issue."

Betsy McBride
Grand Rapids Area League of
Women Voters

WHAT DOES THE COALITION STAND FOR?

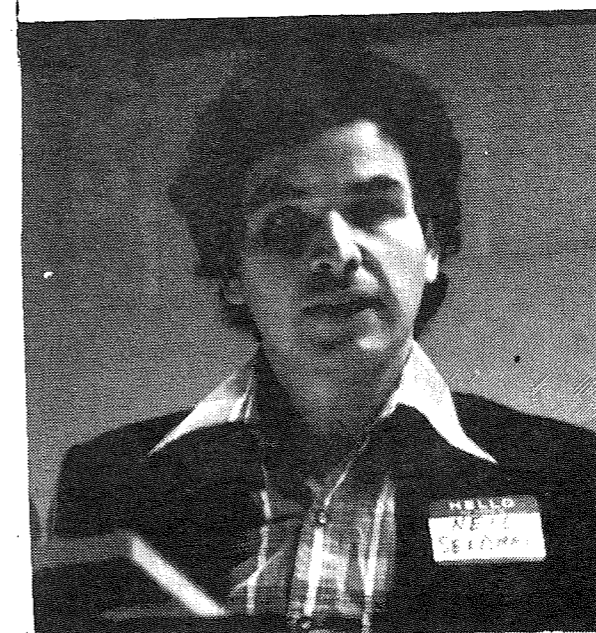
The Position Statement of the Coalition incorporates the following principles:

- *Support a comprehensive approach to solid waste management that recognizes the systematic administration of activities which provide for the collection, storage, transportation, transferring and processing, treatment and disposal of solid waste.
- *Support source reduction, source separation and reuse of solid waste.
- *Support implementation of resource and energy recovery systems to process solid waste materials
- *Support management practices, standards, and regulations for proper land disposal of solid wastes providing the highest practical level of protection to the public health and environment.
- *Support the implementation of comprehensive solid waste management planning by state and local government and expanded citizen participation in the development of such plans.
- *Support the establishment of a state solid waste management program that has the authority and funds to administer and enforce the effective management of solid and hazardous wastes.
- *Support improved coordination of administrative activities between federal state and local agencies.
- *Support programs to broaden public awareness of solid waste management problems to strengthen public commitment to their solutions.
- *Support research to identify and propose solutions to solid and hazardous waste management problems.

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Solid Waste Management in China
rivers which serve as the main transportation arteries as well as a source of food from fishing are too important to contaminate with wastes, just as wastes are too important to be squandered. Silt is scraped from the bottom of canals and ponds and applied to the land. In the warm period, the waters serve as a source of protein from fish and ducks, thus completing a necessary cycle of needs of nature and humans.

Recycling of wastes can be described in China as a way of life, not a project. In China, "everything has value." One has to wonder if the recent breakthrough in diplomatic relations with China will result in a breakdown of this philosophical attitude toward "waste/resources" utilization of the Chinese people. The Chinese leaders want to learn more about U. S. technology but the western societies could equally benefit from a better understanding of the simple, energy-conservative, technology and life styles of the Chinese people.



Recycling in America: A National Policy

Neil Seldman, Director of the Waste Utilization Project, for the Institute of Local Self Reliance, Washington, D.C., is recognized as the nation's leading advocate for area-wide comprehensive recycling systems. His presentation at the Gull Lake Conference, focused attention on the urgent need to incorporate a recycling ethic into local waste management planning. Seldman's first hand experiences with local efforts to establish recycling systems throughout the nation helped document his assessment of recent progress and illustrate his visions for future successes.

Ten years after Earth Day, through the struggles of many neighborhood associations and community organizations, the recycling movement today is at the take-off stage. This local grass roots movement has created scores of successful recycling projects and has introduced millions of Americans to recycling. The last decade has also witnessed the struggle of recyclers to improve their own technology against the overwhelming biases of federal policies, markets and apathetic public officials. Today, with the recycling movement at such a critical stage in its growth, investments must be made that will eliminate obstacles blocking development of a healthy and comprehensive recycling industry.

Seldman suggested several steps to developing a national recycling policy:

1. Develop a national recycling program that will identify waste utilization markets. Research methods that will help circulate recycled goods back into communities as raw material for new small business and job development.
2. Provide technical assistance with organized

interdisciplinary groups of local recyclers, government technicians, and other waste experts that will visit communities to evaluate and make recommendations for comprehensive local recycling programs.

3. Develop computerized information system networks that locate markets for local recycled products.
4. Media and Education Program. Vastly upgrade recycling education in schools and day care centers. Educate all citizens to the hows and whys of recycling.
5. Provide incentives for market development in the use of recycled materials, and especially for organic compost.

In the past ten years the federal government alone has invested over 500 million dollars for research and development of high technology energy recovery systems in the United States. These federal funds have been supplemented with millions of dollars of private and local government money.

As a result, private industry now claims that they can finance these systems independent of the federal dollars in the commercial market place. In spite of this fact, more federal dollars are being programmed for high technology, garbage-to-energy plants while at the same time recycling technology remains under-funded and neglected by antiquated federal funding policies. The development of a viable federal program promoting comprehensive recycling would have enormous benefits

Michigan Coalition for Better Waste Management

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 in waste reduction, energy conservation, economic development education, and environmental quality.

In contrast, high technology "burn plants" have proven to be a somewhat questionable investment. To avoid becoming a "white elephant" (which has been the case with many of these systems), these systems must be appropriately scaled and carefully integrated into a comprehensive

waste management program for a community that includes maximum implementation of waste reduction and source separation techniques as a first step. Otherwise, a community may find itself in the awkward dilemma of encouraging more wasteful habits to "feed" the machine and maintain its economic viability. Further compounding the problem is the fact that technological "bugs" (air pollution, boiler corrosion, maintenance) and political problems ("flow control") still plague the high technology approaches.

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