



RESOURCE RECOVERY REPORT

Vol. 8, No. 2

Summer 1989

TONNAGE FIGURES RELEASED

The State Office of Recycling recently released their tally for materials recycled in 1987. Over 95,000 tons of material were documented and verified through the State's review procedures as having been recycled by Morris County municipalities.

State Tonnage Grant Applications provide rebates to municipalities for a variety of materials recycled by residents and businesses. For the 1987 grants, a portion of the funds were given as Bonus Grants. These grants provide extra support through larger rebates for programs in which materials are collected at the municipalities' expense. In Morris County, almost 30% of the \$177,901 awarded were given out as Bonus Grants. Bonus grant dollars along with regular grants equaled payments of \$4.00 per ton for municipal programs, while regular grants alone equaled \$1.50 per ton.

County programs continue to grow and grants will be growing too. Last year \$2.8 million was raised through taxes on solid waste disposal for grant purposes. For 1988, \$4.6 million will be available for distribution. This new slant to the distribution of funds shows the strong support and recognition that's being given for recycling efforts.

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MCCRP Project Manager Linda Torres with crew members Rich Boyle and Bob Newkirk, Jr. prepare to start glass and aluminum collections

COUNTY SERVICES EXPANDED

The County Recycling Office is offering expanded curbside services to municipalities under the Morris County Curbside Recycling Program (MCCRP). New equipment and personnel are on board to handle glass and aluminum pick-ups, as an addition to the existing newspaper collection program.

To accommodate these new services a multi-compartmented Eager Beaver recycling vehicle has taken to the road as the workhorse of the program.

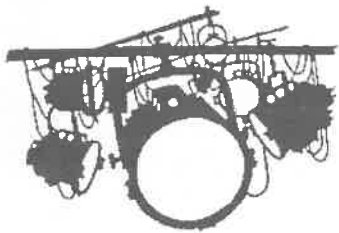
Under a contract arrangement, the MCCRP recycling crew will pick up glass and aluminum from residential routes in participating municipalities. The recyclable material is

unloaded in local recycling depots to be marketed by the municipalities. Towns then keep the proceeds from the sale of the recyclables.

The cost of the program is 60 cents per housing unit per month for once a month collection. This fee covers the County's costs for the program. MCCRP Project Manager and District Recycling Coordinator Linda Torres estimates that a municipality can recoup up to 70 % of the cost of the collection service through aggressive marketing. Boonton and Chatham Borough are the first towns to take advantage of this program, which provides a cost efficient, re-

continued on page 4

REMEMBER. . . for a better tomorrow . . . RECYCLE today!



SPOTLIGHT ON VOLUNTEERS AND RECYCLING

Volunteerism in recycling programs is alive and well in Morris County! Even though recycling has been mandatory for some time, volunteers continue to donate time and energy, reaping various kinds of dividends.

CHURCH GROUPS

In Montville Township, members of the Reformed Church and the United Methodist Church have waged a friendly competition since March 1988 to see who can collect the larger number of aluminum cans. Congregants of those churches have even brought cans back from such far-away places as Alaska and Hawaii!

Since the competition began, the churches have collected more than six tons of aluminum cans with proceeds from the sale of the cans distributed among several organizations whose goal is to fight hunger. Not only is the hunger problem being tackled, but as the Rev. Jane Bechle of the Methodist church says, "...the effort has drawn attention to ecological concerns."

"The recycling project has raised awareness of the enormity of the garbage issue," states the Rev. Lewis Kain, minister of the Reformed Church.

SCOUTS

No newcomers to recycling, Boy Scouts of Troop 159 in Roxbury Township have

been collecting newspapers since April 1975. As of August 1988, the troop had collected two million pounds (1,000 tons) of newspaper. Mayor Henry Crouse recently presented the scouts with a certificate of appreciation at a Township council meeting.

"Troop 159 is interested in helping with recycling and making a permanent impact on the Township," remarks Scoutmaster Stu Bauer. As his Eagle Scout project, Alec Bauer landscaped the area in front of the recycling center.

COMBINED EFFORTS

At least 12 different Morris Plains civic/social/religious groups have staffed the recycling center one Saturday each month for the past five years. All these volunteer organizations have provided the elbow grease and then later have shared in sale profits.

"I compare volunteering at the recycling center to participating in the barn-raising of yesteryear," says George Olson, who volunteered with the Boy Scouts.

Whatever the cause - to benefit hungry people, to help alleviate the solid waste disposal problem or simply to socialize with their fellow residents - volunteers make their mark in Morris County recycling programs.



Municipal Update

DENVILLE - A change has been made in Denville's trash collection arrangements that should impact recycling. The town's new hauling contract is based on a per ton fee, providing an incentive for minimizing solid waste. The more material recycled the lower the trash collection charges will be.

JEFFERSON TWP. - Hubert McQueen, Director of the Township's Department of Public Works, has been chosen to take over as Municipal Recycling Coordinator.

MINE HILL - Community recycling outreach is being accomplished with a quarterly recycling newsletter. Collection procedures and schedules, as well as program achievements, are highlighted for Borough residents.

MONTVILLE - Ed Pullan, formally associated with Lincoln Park, has moved to a position in the Township that includes the role of recycling coordinator.

MT. LAKES - The Borough joins the ranks of those municipalities who are collecting corrugated cardboard and, as of May 1, tires. Stickers for the tires must be purchased by residents for \$2 each. The fee covers the disposal costs for the tires, which will be taken in bulk to the County transfer stations.

VICTORY GARDENS - Showing their ingenuity when leaf collection equipment broke down this last fall, the Borough was able to pull together their resources by asking their young Clean Communities workers to take rake and shovel in hand to clear their roadways before the winter freeze.

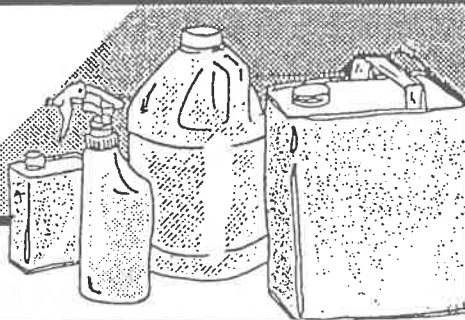
WASHINGTON TWP. - One of the Township's haulers (Sanico) is conducting a pilot curbside collection program that will serve over a fourth of the township's residents with once-a-month pick up of newspaper, glass and aluminum.



HOUSEHOLD HAZARDOUS WASTE DISPOSAL DAY

MORRIS COUNTY RESIDENTS
SATURDAY
JUNE 24, 1989
9AM - 2PM
Morris County Garage
Hanover Avenue, Hanover

FOR MORE INFORMATION CALL:
285-8390



**WASTE-TO-ENERGY
AS A COMPONENT OF
MORRIS COUNTY'S
SOLID WASTE MANAGEMENT PLAN**

The Morris County Solid Waste Management Plan is an environmentally sound approach to the management of our solid waste.

This comprehensive plan includes:

- a Mandatory Recycling program with a goal to recycle 25% of the solid waste generated by 1989;
- the construction of a Waste-to-Energy Facility capable of incinerating the waste that cannot be recycled; and,
- the construction of a Modern, Lined Landfill which will accept ash residue and non-burnable wastes.

This fact sheet focuses on the waste-to-energy component of the plan.

WASTE-TO-ENERGY: AN INTRODUCTION

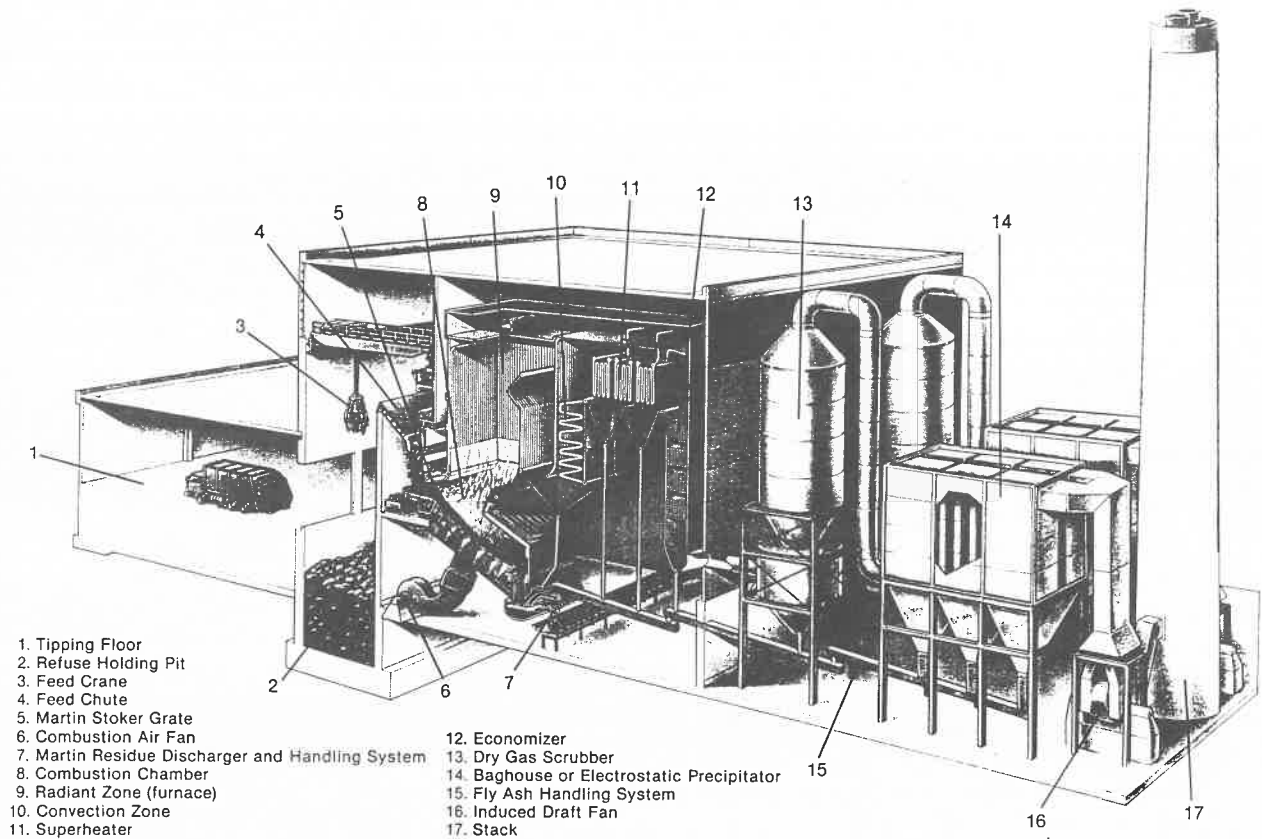
Under the terms of the county's Solid Waste Management Plan, the county will locate and construct a 1,300 ton-per-day waste-to-energy resource recovery facility that will safely burn the waste that can't be recycled. Recently, a site in Roxbury Township, off of Route 206 and Gold Mine Road, was proposed for the plant.

This facility—using a process often called “mass burn”—will incinerate solid waste at high temperatures as it's received at the facility with no pre-processing.

Mass-burn steam generating facilities have been in successful operation in Europe, Japan and the United States for many years, burning solid waste in a controlled manner and selling steam and/or electricity to end users like JCP&L. Mass-burn systems account for the majority of energy recovery systems in use today.



A TYPICAL RESOURCE RECOVERY-FACILITY



The picture above illustrates the basic garbage burning process. A more detailed explanation follows.

Solid waste is delivered to the facility by packer truck or transfer trailer and is discharged onto the tipping floor. Waste is fed by the feed crane into the feed hopper. The crane or loader operator inspects the loads to separate large, bulky, non-combustible objects such as bed springs and bicycles.

From the feed hopper, the waste flows onto the stoker grate by hydraulic ram feeder. The grate system agitates the waste and slowly moves it through the combustion chamber and toward the residue (ash) discharger and handling system, where the ash and non-combustible material is discharged.

The hot combustion gases are drawn through the convection zone and superheater and then through the dry gas scrubber and baghouse or electrostatic precipitator—extensive air pollution control equipment—before being discharged out the stack.

Steam generated by heat recovery will be used for the generation of electricity which will be sold to a utility.

The ash residue will be disposed of in a modern, lined landfill.

COMMONLY ASKED QUESTIONS & ANSWERS

1. Why have we relied on landfills for so long?

Because we're a land rich nation and costs for landfilling were low. As a country, we landfill 85% of our garbage, recycle 10% and incinerate 5%. Nations like Sweden, which are not land rich are incinerating 70% of their waste.

2. Why shouldn't Morris County just continue to truck our trash to Pennsylvania and bury it there?

There are three good reasons not to:

- 1) Long-haul trucking is extremely expensive;
- 2) It's unreliable—future regulations may prohibit such transport; and
- 3) The New Jersey Department of Environmental Protection has mandated that each county implement in-county solutions for its solid waste disposal requirements.

3. What is a waste-to-energy facility, and how does it differ from incinerators of the past?

The only similarity is that they both burn solid waste.

Modern waste-to-energy facilities, such as that planned for Morris County, use the latest in combustion technology coupled with advanced air pollution control systems to ensure that as they burn solid waste, they don't emit harmful levels of pollutants. These modern facilities also recover energy to power industrial processes, heat buildings or generate electricity.

Incinerators of the past have largely been abandoned because they were inefficient, and most important, emitted unacceptably high levels of air pollution. In addition, few of them recovered any energy.

4. Is incineration safe?

Yes. According to professional engineers and scientists, modern waste-to-energy facilities are safe because this tested technology has been used for over 50 years and because strict air pollution controls and constant monitoring are required.

5. Why not recycle 100% of our garbage?

First, there isn't one industrial country in the world which is recycling 100% of its garbage. Japan has done the best job. However, while the Japanese recycle 50% of their waste, they incinerate more than 50% of what remains. Additionally, total recycling isn't possible. It's imperative that we attempt to recycle as much of our garbage as is practical, but there will always be waste remaining which will need to be incinerated and landfilled.

6. How are the air pollutants controlled and monitored?

The high temperature furnace destroys organic pollutants; a scrubber uses lime and water to absorb acid gases and condenses metals and organics into particles; and a particle control device filters out any particles, which are then collected for safe disposal. Combustion efficiency and concentrations of key emissions are simultaneously monitored both at the plant and by the New Jersey Department of Environmental Protection. If emissions exceed the standard, even briefly, the problem will be corrected immediately, or the facility will not be allowed to operate.

7. Does it help reduce emissions if we remove the sources of pollutants from the garbage before burning?

To some degree, but what is equally important is having good combustion and efficient emission gas controls. Removal of pollutant sources, such as batteries, may have more effect on making the ash easier to landfill or use in other products.

8. What is the residual ash and does it pose a danger?

Ash is the non-combustible part of municipal solid waste. The volume is about 1/10 to 1/20 of the original trash, and about 1/4 the weight, so it takes up less space for ultimate disposal.

The residual ash doesn't pose a danger because it is kept moist so dust doesn't become airborne. Additionally, when ash is landfilled, it's required to be disposed of in modern, lined landfills. These facilities are complete with multiple liners and leachate collection systems to prevent run-off liquid from entering the groundwater.

In addition, a recent study by the engineering firm, Malcolm Pirnie, showed far greater risks from landfilling raw garbage than from ash. As the Pirnie study showed, the heavy metals in this decaying garbage are much more likely to be leached out by the biological processes, which produce a leachate liquid that is acidic and highly organic, than are those in the stable, inorganic ash which does not decompose and emit dangerous gases.

9. Do waste-to-energy facilities affect the quality of life in neighboring areas?

Studies have shown that where the facility is well designed, maintained and operated, and the truck traffic is controlled, there have been no adverse changes in the quality of life in neighboring communities. These facilities generally cause no nuisances and are safe—nearby residents report they are “good neighbors.” Property values in communities close to the plants rise as rapidly as properties elsewhere in the area. Payments to the host community and a long-term cap on solid waste disposal costs can help stabilize property taxes.



INFORMATION FORUMS HELD

Questions such as "Where does my garbage go?" and "How does recycling affect Morris County's trash management plans" are often posed to the Solid Waste Management staff. Many residents had an opportunity to ask these questions and more at one of three public information sessions entitled "Solid Waste Management: Morris County's Approach."

The forums were held in Madison, Montville and at the County College of Morris in Randolph during March.

They focused on the implementation of the County's comprehensive solid waste management plan. The plan emphasizes mandatory recycling, the siting and construction of both a waste-to-energy incineration facility and a modern, lined landfill for residual ash and non-burnable waste.

Residents learned that for the plan to be effective, all three aspects must work together.

Freeholder Solid Waste Liaison Jack O'Keeffe and Freeholder Carol Murphy explained that the sessions were intended to help residents understand the County's approach for managing our solid waste problem.

Lori Scozzafava, Morris County Recycling Coordinator, gave an update on the status of the County's mandatory recycling program. The highlight of her presentation was the announcement that Morris County's preliminary 1988 year-end recycling level

was well above the 15% objective. The County's District Recycling Plan calls for recycling at least 25% of our garbage by the end of 1989. Municipalities are well on their way to meeting this goal.

Glenn Schweizer, the County's Solid Waste Director, briefly described the proposed sites for the waste-to-energy facility that were being reviewed. He was followed by Chris Warren, Project Director for the siting consultant firm Richard A. Alaimo Associates, who then discussed the siting criteria.

Dr. Richard Magee, Executive Director of the Hazardous Substance Management Research Center at the New Jersey Institute of Technology, concluded the program by discussing the facts and fiction surrounding the environmental and health impacts of incinerators and ash landfills.

Residents were then able to question the panelists. Several people inquired about the particulars of the incinerator and landfill siting and siting. Others wondered how recycling activities would affect long range solid waste planning. The panelists explained how the county's goal of a 25% reduction in solid waste, as well as a contingency factor that encourages further recycling, were built into the plans for the incinerator and landfill. This ended the evenings' events with interesting exchanges of information and a better understanding of where the County is heading.

DID YOU KNOW?

* The theft of recyclables at curbside or depots continues to concern municipalities. As materials are lost, so are revenues, resulting in increased recycling program costs. Communities should consider "citizen alerts" to request assistance in notifying local officials when scavengers are spotted.

* Brochures are available from the State Office of Recycling that provide an overview of recycling whys and wherefores. Call 609-292-0331 for your copy.

* The Coalition for Recyclable Waste, Inc. successfully fought the use of plastic "look alikes" of aluminum soda cans that might have caused serious contamination problems for aluminum recyclers. Their current efforts focus on the use of "recycling" in trade names that **imply** product lines made from recycled materials. For more information call CRW at 609-641-2197.

ALTERNATIVES STUDIED

Camp, Dresser, & McKee, Inc., located in Edison, has been chosen as consultant to the Morris County Municipal Utilities Authority. They will study current County recycling practices, examine the potential for removing additional recyclable materials from the waste stream, and explore alternatives for consolidation and marketing of materials. They then will make recommendations on the most effective recycling alternatives. Preliminary work was reviewed at the end of March with a final report and recommendations to follow.

THE CHOICE IS YOURS

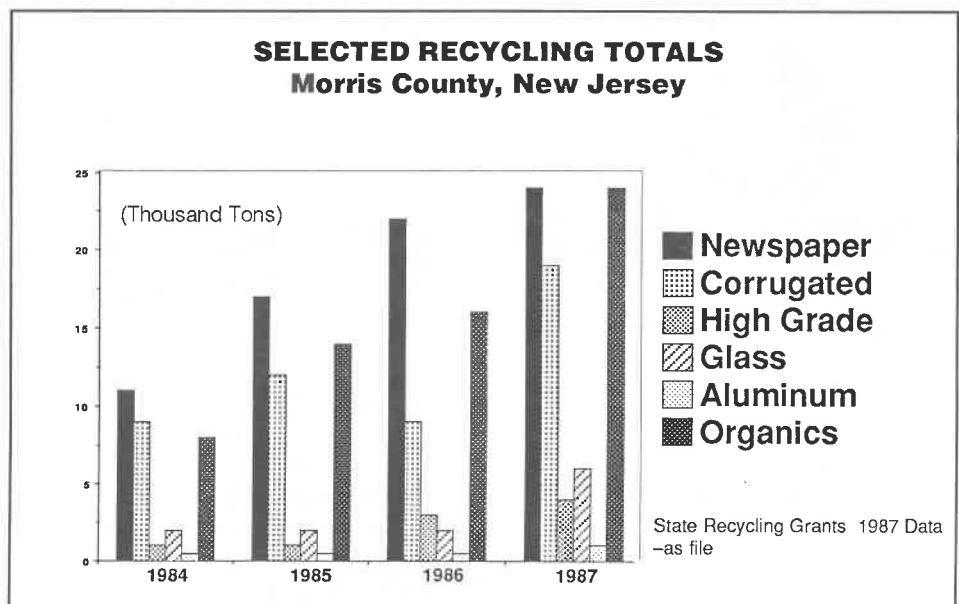
The newest addition to the State's solid waste management strategy is the concept of **source reduction**.

It is now the forth prong in the recycling, resource recovery and landfilling approach established for handling solid waste matters in New Jersey.

Generally speaking, source reduction means reducing the amount of trash that goes in to the waste stream.

This reduction can be accomplished at many levels including product development, manufacturing, marketing, and perhaps most importantly at the consumer level.

You can play an important part in reducing our solid waste with the day-to-day choices made as a consumer. Through market place choices, purchasing products with less or recyclable packaging, and participating in recycling, your support will make source reduction work.



Selected recyclable materials from past tonnage grants as filed with State Office of Recycling show just how far recycling programs have come.

MCMUA STAFFING

Several new staff members have joined the County recycling team and a reorganization has taken place.

Linda Torres has taken over as the County's new District Recycling Coordinator and will also act as supervisor of operations functions such as the expanded Morris County Curbside Recycling Program. A resident of Montville Township, Linda served as recycling coordinator for that municipality.

Linda brings administrative and public information experience to her new position, as well as a life-long interest in recycling and the environment. She holds a B.A. degree from the University of Delaware and is working on a Masters degree in Public Administration from Rutgers/Newark.

As Supervisor of Recycling Programs, B. Ellie Arnould will now serve as primary liaison to the municipalities for technical and program support services.

Also new on board are Bob Newkirk, Jr. and Rich Boyle. Both will be working on the curbside collection programs. Bob, who lives in Wharton, was a program analyst at Picatinny Arsenal before he retired. Rich is a resident of Mt. Tabor and is a former professional baseball player.

County Services... continued from Page 1

liable service. The glass and aluminum program complements a newspaper collection service already offered to municipalities by the MCMUA in conjunction with the Occupational Training Center.

Programs such as this are provided to help municipalities remove as much recyclable material from their garbage as possible. The services are flexible and can be tailored to meet local recycling needs and ordinances.

Municipalities interested in collection services can call Linda Torres at 285-8390 for more information.

Morris County Board of Chosen Freeholders

- Patricia J. Hyland**
Director
- Michael Dedio**
Deputy Director
- Anthony R. Bucco**
- Carol J. Murphy**
- John C. O'Keeffe**
- Michael P. Sawka, Jr.**
- John R. Sette**

Morris County Municipal Utilities Authority

- Alex A. Slavin**
Executive Director

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RESOURCE RECOVERY REPORT A WINNER

You are reading a real winner - according to Pro Bono, Inc., a group of advertising and marketing professionals who donate their time and talents to non-profit organizations. The group hosted its Second Annual Newsletter Competition Awards Ceremony on March 27. Freeholder Carol Murphy and Pro Bono, Inc. President Ann Raas presented second place honors from one of three operating budget categories to the Morris County Municipal Utilities Authority for the Morris County Resource Recovery Report.

We are proud that our attempts to effectively reach the public on solid waste and recycling issues has, in the estimation of professionals in the field, hit the mark.

MOVING?



MOVED? Please let us know.



MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY SOLID WASTE MANAGEMENT OFFICE

COURTHOUSE, MORRISTOWN, NEW JERSEY 07960 201-285-8390

BULK RATE
U.S. POSTAGE
PAID
PERMIT NO. 178
Sorted Mail

SOLID WASTE STAFF

- Glenn Schweizer**
Solid Waste Coordinator
- Linda Torres**
District Recycling Coordinator
- B. Ellie Arnould**
Supervisor of Recycling Programs
- Larry Gindoff**
Assistant Solid Waste Planner
- Maureen Seelinger**
Assistant Recycling Planner
- Penny Jones**
Recycling Education Specialist
- Glenn Clarke**
Sanitation Inspector



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