

vehicular traffic will exist only during standard working hours. The requirement for use of noise abatement devices will assure that sound levels at the plant boundaries remain below acceptable limits set by New Jersey noise control code standards.

Modern waste-to-energy facilities incorporate mechanical systems to virtually eliminate the potential for dust, litter and odor. Tipping areas must be located within a building structure to control litter and dust. These areas are also subjected to negative pressure so that potentially objectionable air streams are drawn into the combustion process instead of being emitted into the atmosphere.

New Jersey resource recovery facility applicants are required to address social and cultural resources of a proposed site, including aesthetics, as part of an Environmental Impact Statement submittal. In addition, they must prepare a landscaping plan delineating existing and new vegetation.

Ash Residues

Resource recovery plants' ash residue will be subject (as a minimum) to analysis for the full spectrum of parameters called for in federal Extraction Procedure (E.P.) Toxicity Testing. This material will be landfilled where appropriate or, if classified as a non-hazardous dry industrial waste, used as a product in road base construction and other industrial applications.

Other Issues

Resource recovery facilities are normally constructed with two or three separate processing lines to greatly reduce facility downtime.

The Department will require licensing of full time resource recovery plant operators to assure the proper management and operation of the plant by trained personnel with full knowledge of existing facility permit conditions. Applicable state and federal

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A resource recovery facility can have a beneficial effect upon the economy of a host municipality. It can serve as a valuable tax ratable and substantially reduce waste transportation and disposal costs. (Transportation can account for approximately 75% of the total collection/disposal cost).

What are the Alternatives?

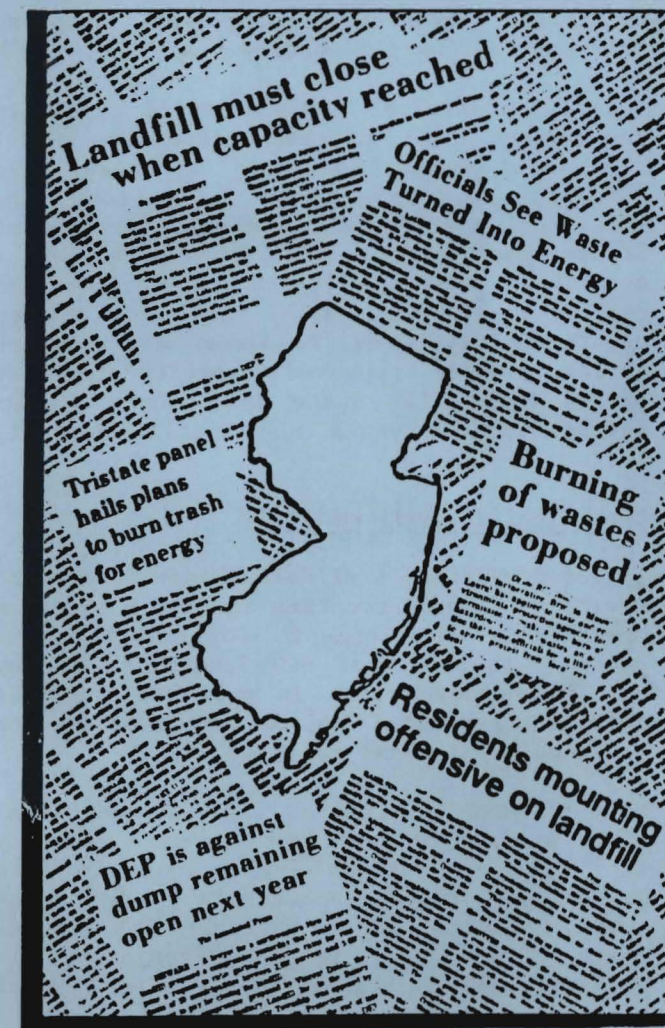
We cannot afford the luxury of a "no action" stance, since time and events are forcing solid waste decisions. The lead time in planning and constructing modern waste facilities is 4 to 5 years. We can no longer rely on landfills alone to do the job, nor can we rely on out-of-state facilities to continue to accept New Jersey's waste. Each of us contributes to the garbage problem and we must collectively cooperate in its solution. We must ACT NOW in order to avoid being inundated by our own wastes. The most viable solution to this problem is a strategy which emphasizes waste-to-energy incineration of solid waste in concert with greater reliance on the source separation and recovery of recyclables such as glass, metals and paper.

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Progress In Waste Management:

A Solution To New Jersey's Garbage Dilemma



N.J. Department of Environmental Protection
Division of Waste Management

The Mounting Problem

In 1984, New Jersey residents and workers will discard approximately 11.5 million tons of solid refuse. Most of it will go to landfills - disposal sites which are rapidly approaching extinction in New Jersey.

In 1977, New Jersey had over 300 operating landfills. Since that time, approximately 58% of these facilities have closed as a result of reaching approved design capacity or because of State enforcement actions. Only one new landfill has opened.

Today, approximately 128 landfills remain in New Jersey, and 13 of them accept over 90% of the solid waste generated annually. To compound this precarious situation, the remaining capacity is not evenly distributed across the state. The ten northern-most counties have virtually no remaining capacity, and of the remaining eleven counties, only Ocean, Middlesex and Monmouth currently have approved capacity to last beyond 1990. The State as a whole has an average of two years of landfill capacity left.

Can We Build New Landfills?

Ten of New Jersey's 22 Solid Waste Management Districts (the 21 counties and the Hackensack Meadowlands Development Commission) have proposed to construct new landfills but few have taken any action in spite of the fact that it takes more than two years to develop alternative disposal capacity.

Nine of these Districts, plus an additional nine, propose to construct resource recovery facilities or modular incinerators to burn garbage and produce recoverable energy in the form of electricity or steam. The biggest obstacle they face is local resistance to facility siting, primarily due to a lack of public information about the waste problem and waste-to-energy technologies. It is, however, now critical that each Solid Waste Management District implement previously defined planning objectives to avoid a crisis.

Recycling

° Recycling and resource recovery are compatible and work best when used together. Although recycling cannot deal with the entire waste stream, it will remove materials of economic value and result in a more favorable and consistent waste product for efficient combustion. The State Solid Waste Plan encourages the use of recycling, and state goals include 25% recycling of the total waste stream. Even with statewide mandatory recycling and a high degree of compliance, however, there will still be at least 55-60% of the total waste stream remaining for alternative means of disposal. Taken together, recycling, resource recovery and landfilling of residuals comprise the most comprehensive and environmentally sound waste management program.

Issues Concerning Resource Recovery Facilities

There are several issues surrounding resource recovery (or waste-to-energy) facilities. They include air pollution, land use and nuisance impacts and disposal of ash residues. In order to address them, the New Jersey Department of Environmental Protection has prepared the following information.

Air Emissions

° The United States Environmental Protection Agency (EPA), after conducting extensive monitoring of five operational refuse incineration plants in the U.S., concluded that the emission levels of dioxin did not present a public health hazard for residents, even those who might be exposed to maximum ground level concentration.

° As a result of technical advances in resource recovery combustion design, new resource recovery facilities constructed in New Jersey will achieve greater than 99.5% combustion efficiency ensuring that units are capable of continuously achieving low organic (including dioxin and furan) emission rates.

° The New Jersey Department of Environmental

Protection (DEP) has formulated air pollution control guidelines for resource recovery facilities which supplement nine administrative regulations and will ensure that facilities in our state will have to install the best available control technology. State-of-the-Art requirements include:

- Installation of electrostatic precipitators (or baghouses) to assure greater than 99% removal of total particulates and approximately 90% removal of lead.

- Installation of scrubbers to reduce hydrochloric acid emissions by over 90% and sulfur dioxide emissions by over 70%. With these requirements, less acid gas will be emitted from resource recovery plants than from equivalent sized boilers burning number 6 oil.

- Maximum allowable emission rates for heavy metals, including lead, dioxin (2,3,7,8 TCDD) and other parameters, which will also be incorporated as enforceable facility permit conditions.

- Continuous monitoring and recording of emission rates for inspection by DEP and local air pollution control officials to ensure compliance with established allowable emission rates.

- A public hearing for each major municipal incinerator air pollution permit.

Land Use and Nuisance Impacts

° The Department's requirement of a detailed Environmental Impact Statement (EIS) for all resource recovery applications will ensure that local concerns about traffic safety, noise and aesthetics are satisfactorily addressed.

° Proper facility siting and planning, taking into account local traffic patterns, can greatly minimize the potential for congestion and safety hazards. Facility