

# • Tompkins County Solid Waste Management Plan

## EXECUTIVE SUMMARY

Tompkins County has prepared this comprehensive Solid Waste Management Plan to address the County's needs for the period 1992 through 2012, in accordance with the requirements of the Solid Waste Management Act of 1988 and to meet the requirements of the New York State Department of Environmental Conservation (DEC).

The Tompkins County Solid Waste Management Plan describes past and current waste-handling practices; describes alternative technology options available for managing waste; describes and assesses associated economic and environmental impacts; describes various institutional and financial arrangements for implementing solid waste technologies; and presents program recommendations for comprehensive integrated solid waste management. The major thrust of the Solid Waste Management Plan is to divert waste from disposal through waste reduction, reuse, and recycling.

### **I. Tompkins County Solid Waste Mission and Goals**

Prior to 1970 each town and village in Tompkins County was responsible for the disposal of its own solid waste. In 1970 the County assumed responsibility for the disposal of all solid waste generated within its borders. In 1986 the Board of Representatives formed a Solid Waste Committee to investigate options for disposal and reduction of waste. Their recommendations were accepted in a 1987 resolution (#334) which identified the DR-7 site in Dryden as the preferred site for a sanitary landfill in Tompkins County and also authorized the County to proceed with siting and permitting of a centrally located baling, recycling, and transfer facility.

In 1988 the Tompkins County Solid Waste Management Division was created within the Department of Public Works. The mission statement reads:

To manage the Solid Waste in Tompkins County in a manner that is environmentally sound, cost-effective, socially responsible, and safe. This will be accomplished through coordinated administrative, operational, and educational programs in reduction, reuse, recycling, composting, and disposal.

Tompkins County has identified four major goals in its integrated solid waste management plan:

- To meet its share of the statewide goal of 50% reduction by 1997 (set forth in the March 1987 State Solid Waste Management Plan) by developing a program that will maximize reduction and recycling in Tompkins County.  
(Chapter 3, Section A1; Chapter 5, Section C1)
- To extend the life of products and materials through maximizing opportunities for reuse in Tompkins County  
(Chapter 3, Section B2; Chapter 5, Section C2)
- To encourage maximum recycling through user-friendly systems, an increased disposal tipping fee (including trash tags) and helping development of markets for recycled materials  
(Chapter 3, Sections C2, D2, and G2; Chapter 5, Sections C3, C4, C5, and C6)
- To provide an environmentally sound, cost-effective disposal strategy for all non-recoverable waste over the 20-year planning period (1992 - 2012)  
(Chapter 3, Section I2; Chapter 5, Section C7).

In May 1992 Tompkins County submitted its draft Solid Waste Management Plan (SWMP) to NYSDEC. While it was under review by DEC the County recognized changing conditions and reassessed its disposal options. On March 30, 1993, the Board of Representatives decided not to pursue the development of the DR-7 landfill and opted for out-of-county disposal. This change necessitated a major revision of the draft SWMP, although the county's mission statement and goals remain the same.

## **II. Integrated Waste Management System**

Tompkins County is operating its solid waste programs in accordance with the integrated solid waste management hierarchy set forth in the Solid Waste Management Act of 1988, which details that waste be handled in the following descending order of preference:

- waste reduction
- recycling and reuse
- waste-to-energy
- landfilling

Plan includes the 491 total square miles of Tompkins County and the 94,097 residents living within its boundaries. By adopting this Solid Waste Management Plan, Tompkins County accepts responsibility for managing most solid waste generated within the County. The Plan describes how the County plans to handle the following types of wastes:

- municipal solid waste (MSW)
- non-hazardous industrial waste
- construction and demolition debris (C & D)
- sewage sludge
- household hazardous waste (HHW)

Methods by which Tompkins County has already begun to meet its goals include, but are not limited to, the following efforts:

- Construction and operation by the County of an interim transfer station for disposal and of an interim composting facility (for sewage sludge and yard waste), and the temporary use of a recyclables transfer facility by contract with the private sector.
- Plans are in progress for the permitting, construction, and operation of several new waste management facilities, including a permanent residual waste transfer facility combined with a recyclables-processing and transfer center; a household hazardous waste collection facility; and a full-scale composting facility.
- Creation of a Solid Waste Advisory Committee of citizens from throughout the County to advise the Board of Representatives on any and all solid waste matters, and creation of separate Neighborhood Advisory Committees for each major sited facility.
- Curbside collection of recyclables -- glass, newsprint, metal food containers, and some plastics -- was implemented on a county-wide basis in August, 1991. In 1991 approximately 5,000 tons of recyclables were collected by the County, and in 1992, approximately 8,200 tons were collected. Other recyclable materials have been collected by various entities within Tompkins County, including local scrap dealers, industries, and institutions.
- Nine recycling drop-off centers have been established throughout the County; they accept the same recyclables as the curbside program plus high-grade paper, corrugated cardboard, and mixed paper.

The methods selected for implementation by Tompkins County follow this hierarchy and will maximize the County's share of the 1997 State-mandated reduction through recycling (40 - 42%) and through waste reduction (8 - 10%). The coverage of the Solid Waste Management Plan includes the 491 total square miles of Tompkins County and the 94,097 residents living within its boundaries. By adopting this Solid Waste Management Plan, Tompkins County accepts responsibility for managing most solid waste generated within the County. The Plan describes how the County plans to handle the following types of wastes:

- municipal solid waste (MSW)
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- construction and demolition debris (C & D)
- sewage sludge
- household hazardous waste (HHW)

Methods by which Tompkins County has already begun to meet its goals include, but are not limited to, the following efforts:

- Construction and operation by the County of an interim transfer station for waste exportation of residential waste and of an interim composting facility (for sewage sludge and yard waste), and the temporary use of a recyclables transfer facility by contract with the private sector.
- Plans are in progress for the permitting, construction, and operation of several new waste management facilities, including a permanent residual waste transfer facility for waste exportation combined with a recyclables-processing and transfer center; a household hazardous waste collection facility; and a full-scale composting facility.
- Creation of a Solid Waste Advisory Committee of citizens from throughout the county to advise the Board of Representatives on any and all solid waste matters, and creation of separate Neighborhood Advisory Committees for each major sited facility.
- Curbside collection of recyclables -- glass, newsprint, metal food containers, and some plastics -- was implemented on a county-wide basis in August, 1991. In 1991

approximately 5,000 tons of recyclables were collected by the County, and in 1992, approximately 8,200 tons were collected. Other recyclable materials have been collected by various entities within Tompkins County, including local scrap dealers, industries, and institutions.

- Nine recycling drop-off centers have been established throughout the County; they accept the same recyclables as the curbside program plus high-grade paper, corrugated cardboard, and mixed paper.
- A mandatory recycling law was adopted on August 11, 1992 and became effective September 1, 1992
- A Household Hazardous Waste Collection Day was conducted in October, 1991, during which 808 participants safely disposed of a total of 8380 gallons of hazardous materials. In addition, 53 lead-acid batteries were recycled and 285 gallons of good quality latex paint were collected and given to interested end-users as part of an associated pilot paint exchange. A Household Hazardous Waste Management Telephone Advice Guidance Manual and training program are being developed in collaboration with Cornell Cooperative Extension of Tompkins County.
- A Commercial/Industrial Waste Assessment project was begun in January, 1992, through a grant with NYSERDA to assist County businesses to explore waste reduction and recycling opportunities.
- In 1992, the County began operation of its full-scale interim composting facility at the Hillview Road Landfill, which is now composting sewage sludge from all the municipal wastewater treatment facilities in Tompkins County.
- The County is pursuing programs to compost food waste, leaf and yard waste, as well as sewage sludge.
- A waste reduction marketing campaign called "Trash Lite" was initiated in early 1992, and will expand to include point-of-purchase educational program on packaging and toxicity in the fall of 1993.

- The closure and capping of the Hillview Road landfill was begun in May, 1992, and leachate collection and monitoring systems are in place for it and the other closed county landfill on Caswell Road in the Town of Dryden.
- Out-of-County disposal of residual solid waste began on May 4, 1992, under an 18-month extendible contract. In May, 1994 Tompkins County procured a long-term waste exportation contract with Waste Management, Inc.

### III. Quantities and Characteristics of the Waste Stream

Tompkins County generated an estimated 77,536 tons of residential, commercial, and institutional waste in 1991, including 49,028 tons of garbage/bulky waste, and 1,484 tons of yard waste. In 1992, Tompkins County generated an estimated 37,946 tons of residential, commercial, and institutional waste, including 33,115 tons of garbage/bulky waste including 4,831 tons of sludge and 1,450 tons of yard waste. Garbage/bulky waste tonnages were reduced in 1992 because of waste exportation by private haulers.

#### Solid Waste Components

##### *Municipal Solid Waste (MSW)*

Tompkins County's MSW is comprised of waste generated by:

- 94,097 residents living in 33,338 households (1990 census data)
- 2,012 commercial businesses such as professional offices, retail outlets, supermarkets, restaurants and bars
- institutions including the local schools, three major post-secondary academic institutions, and one hospital

Outside of the City of Ithaca and the Village of Cayuga Heights, which provide their own publicly operated municipal solid waste collection, the collection of residential solid waste is primarily conducted by private haulers (in some cases under contract to a municipality).

While approximately 75% of the commercial waste generated in Tompkins County is handled by two collection companies, several other hauling companies also provide this service. The haulers deliver the MSW to the current interim transfer station now and to the RSWC once it begins operation, where the MSW is transferred to long haul trailers for waste exportation.

### *Non-hazardous Industrial Waste*

Tompkins County has several industries that generate non-hazardous wastes including companies in the manufacturing, construction, public utilities, and materials-processing sectors.

### *Construction and Demolition Debris (C&D)*

Tompkins County's construction and demolition-related waste is a combination of discarded material from the construction, remodeling, repair, and demolition of structures and roads, and uncontaminated solid waste consisting of vegetation from land-clearing operations, utility line maintenance, and seasonal or storm-related clean-up. In 1991, C & D materials disposed of at the Hillview Road Landfill totaled 11,061 tons. In 1992, C & D a total of 3,161 tons of materials were disposed of. Again, C & D tonnage was less than expected because of exportation by private haulers.

### *Sludge*

Tompkins County receives sludge from wastewater treatment facilities in the City of Ithaca, and in the Villages of Cayuga Heights, Dryden, Trumansburg, Groton, and Freeville. A total of 5,443 tons of sludge was delivered to the Hillview Road landfill in 1991. An interim compost facility opened in the spring of 1992 and is composting all of the sludge generated in the County.

### *Unacceptable Wastes*

Medical waste, industrial sludges, and radioactive waste (including any designated as "BRC", below regulatory concern) are all unacceptable at solid waste management facilities owned or operated by the County. Private haulers and specially permitted solid waste management facilities will continue to be responsible for managing unacceptable waste throughout the planning period.

## **IV. Tompkins County Solid Waste Management Facilities**

### **Existing Solid Waste Management Facilities**

#### *Tompkins County Landfills*

There are no longer any landfills in operation in Tompkins County. Previously used sites -- Caswell (in Dryden) and Hillview Road (in Danby, Tompkins County; and, Spencer, Tioga County) were closed in 1985 and 1992 respectively. Post closure environmental monitoring

and maintenance continues at both Hillview and Caswell sites. This includes:

- Quarterly sampling and analysis of monitoring well network for water quality
- Quarterly on-site inspection of the facilities
- Maintenance of leachate collection system and landfill caps
- Monitoring, collection, and treatment of leachate

#### *Interim Waste Disposal Transfer Station*

An interim transfer station for receipt of waste was built by Tompkins County adjacent to the closed Hillview Road landfill site. Waste received is transferred onto long haul trailers to be trucked out of the County for disposal.

#### *Recycling Drop-Off Centers*

There are nine of these centers located throughout the County. These collection sites will continue to operate at least until the proposed Recycling and Solid Waste Center is fully operational, and may continue to operate on an "as needed" basis thereafter.

#### *Temporary Recycling Transfer Location (TRTL)*

This facility, located in the Town of Covert and established March 1991, is privately operated through a contract with Tompkins County and will be operating until the planned Recycling and Solid Waste Center opens in early 1995.

#### *Interim Composting Facility*

This facility located at the Hillview Road Landfill site, is capable of composting all of the sewage sludge processed in the County. It began operating in April, 1992, and will continue to be used until a permanent facility is sited and built by late 1996.

#### **Planned Solid Waste Management Facilities:**

##### *Recycling and Solid Waste Center*

The County has received a NYSDEC permit to construct and operate this facility on Commercial Avenue in the City of Ithaca. This facility is designed for two distinct functions: (1) sorting, processing, storing, and transporting of recyclables to market, and (2) accepting, sorting, and transferring of refuse for waste exportation. The sorting of waste and the proximity of the two functions affords the opportunity for the easy recovery of additional



recyclables. Once constructed, the maximum plant capacity will be approximately 70,000 tons of material per year. The anticipated lifespan of this facility is greater than 20 years. Materials that will be processed at this facility include, but are not limited to: municipal solid waste, small quantities of construction and demolition debris and durables, small quantities of yard waste and leaves, and recyclable materials. The County has executed a 5-year contract with New England CRInc., of Massachusetts to design, construct and operate the facility.

#### *Household Hazardous Waste (HHW) Collection Facility*

This facility will be sited at the same location as the Recycling and Solid Waste Center, with an anticipated opening in late 1996.

#### *Permanent Composting Facility*

This facility, which is planned for operation in late 1996, will be capable of processing sewage sludge, yard waste, food waste, and some kitchen paper waste.

## **V. Technology Assessment**

### **Technology Assessment Criteria**

In the Tompkins County Solid Waste Management Plan, nine methods of dealing with waste for the twenty-year planning period are assessed for appropriateness using a detailed analysis of the following criteria:

- applicability and capacity to serve the County's needs;
- track record, based on experiences of other communities;
- cost implications;
- technological impacts;
- environmental impacts;
- economic impacts;
- social impacts;
- unavoidable adverse impacts;
- irretrievable commitments of resources;
- growth-inducing aspects;
- use and conservation of energy; and
- mitigation measures

## ***Technologies Evaluated***

The technologies that are evaluated in the Solid Waste Management Plan include:

- waste reduction
- reuse
- recycling collection and processing
- composting
- waste baling (volume reduction)
- options for special materials (such as tires, construction and demolition waste and batteries)
- household hazardous waste management
- incineration (including waste-to-energy options)
- landburial and other disposal options including waste exportation

With the exception of incineration, all of these technologies are incorporated into the County's waste management plans.

## **VI. Implementation Alternatives**

### **1. Public Versus Private**

In order for Tompkins County to implement the various aspects of its solid waste plan, the full range of institutional relationships between the public and private sectors that may be appropriate needed to be evaluated. For each major facility or program component it was necessary to investigate the major issues, such as selection of ownership, procurement of facilities and services, financing options, operations, and other responsibilities.

County involvement will ensure that the facilities and programs needed for County residents and businesses are continuously available at a reasonable cost, that all facilities and programs are operated safely and legally and that the programs meet the state-mandated reduction and recycling goals. The degree of County participation in the development of programs and facilities will vary based on: program characteristics, the private sector's availability and willingness to play a role, analysis of the public interest, and cost. For facilities there are specific choices about each of the following:

- Location and Siting
- Design
- Construction and Equipment Procurement
- Operation
- Marketing (of reuseables, recyclables, and compost)

For non-facility services there are specific choices about:

- performance standards
- cost
- control
- flexibility

If Tompkins County decides to procure private-sector services it goes through either a bidding process or a request-for-proposals (RFP) procedure. If Tompkins County decides to operate facilities or services itself, it will use its own staff.

For facilities, three general approaches that may be used by local government in New York State in procuring solid waste management systems and services are: conventional or A/E (architectural/engineering services), turnkey, or full service.

- **Conventional or Architectural and Engineering (A&E) Services** - a professional architectural and engineering firm is retained by the sponsoring agency to participate in the planning and design of a project. The major advantage of the A & E procurement method is the degree of control the County has over the project in the development of drawings, specifications, and costs of the facility. However, as the project developer in this approach, the County assumes the highest risk.
- **Turnkey** - Under the turnkey approach, the private contractor assumes responsibility for the design, construction, equipment procurement, start-up, and acceptance testing of the facility, thus relieving the County of this initial risk. Once the acceptance testing of the facility is completed, the contractor has fulfilled his/her responsibilities and the operation becomes the responsibility of the County unless the operation is contracted through a private party.

- **Full Service** - A full-service procurement allows a municipality to procure virtually all steps of development from a single private entity. The full-service procurement method makes it possible for the municipality to benefit from the use of privately owned solid waste management facilities without having to be responsible for the daily operation and maintenance of the facility. A full-service procurement approach can be implemented with the municipality maintaining ownership of the facility, giving it more control over operating issues, regulatory matters, and financial issues.

## 2. **Financing Options and Funding Mechanisms**

The goal of financing the solid waste system in Tompkins County is to enable the development, maintenance, and sustainability of an integrated solid waste management system that facilitates recycling, composting, waste reduction and other diversion activities to the greatest extent possible. Where possible, the financing system is also designed to create incentives for diversion of materials from disposal.

This commitment is embodied in a basic financing system that relies on full-cost pricing for disposal services and user fees for recycling functions. Tompkins County has chosen to use a combination of fee-for-service (pay as you go), set aside funds (pay in advance for some future costs), and/or bonding (pay as the facility is constructed).

In 1990, with the creation of the Trash Tag program, the County shifted the financing for its solid waste system from a completely tax-based to a fee-based system. Residents pay for disposal based on the amount of waste they produce and benefit through their efforts at waste reduction and recycling. The Tompkins County trash tag program requires all residents to pay for waste disposal by weight. Residents and small businesses who place their waste at the curb purchase trash tags from their haulers who then pay the tipping fee at the landfill. Larger businesses, institutions, and those with their own dumpsters pay the waste disposal fee by volume as a part of their hauler's bill. Until the end of 1992 all ongoing solid waste operations, programs, and administration were paid for by users of the system. However, in 1992 some private haulers chose to take advantage of cheaper rates at unregulated neighboring landfills rather than the County's own landfill or transfer station. There was also anecdotal evidence of an increase in illegal dumping and backyard burning in Tompkins County with the inception of the higher fee. To assure adequate revenue for 1993 the County opted for multiple revenue streams to support its solid waste program, with 90% being covered by two sources: (1) a

transfer station tipping fee reflected in trash tags, and (2) an annual user fee per household, and hauler licenses, grant moneys, revenues from sale of recyclable materials, and sewage composting fees cover the rest. The County is re-examining its revenue options for 1994. Once the Recycling and Solid Waste Center becomes operational, a recycling charge will be investigated and the entire mix of revenue streams will be revisited.

### 3. Local Laws and Regulations

#### *Illegal Dumping*

On July 10, 1990, Tompkins County adopted Local Law Number 5 entitled "A Local Law Regulating the Disposal of Solid Waste in Tompkins County" and on September 3, 1991, Tompkins County amended this local law, prohibiting the disposal of solid waste at any location other than sites and facilities authorized by the State of New York, Tompkins County, or its subdivisions. The law is intended to be an effective deterrent to indiscriminate dumping of solid waste.

#### *Flow Control and Hauler Licensing*

In 1992 Tompkins County requested and received State enabling legislation and thereafter, on April 7, 1992, adopted Local Law Number 3 of 1992, entitled "A Local Law Concerning Flow

*Control of Solid Waste and Hauler's Licensing Law"*, a flow-control law, which became effective immediately. Flow control was adopted (1) to advance the implementation of the county's plan to manage solid waste within the county, and (2) to carry out the State's purposes of fostering and encouraging the safe, efficient, economical, and environmentally sound collection, treatment, management, and disposal of solid waste. By requiring the delivery of all acceptable solid waste to a designated facility or facilities the county can accurately determine the quantity of solid waste generated in the county in order to plan, to accurately meet State reporting requirements, and to collect fees from the producers of solid waste, thereby encouraging the reduction of solid waste and producing revenues for the provision of county solid waste services and facilities.

Pursuant to the above local law, Tompkins County promulgated rules and regulations, adopting them on May 5, 1992 with Resolution 158, and amended them July 14, 1992 with

Resolution 229, to facilitate the implementation of the law; to establish fees for disposal, licenses, and permits; to identify categories of acceptable waste; to establish standards for waste delivery; and to establish requirements and procedures for licenses and permits (all effective May 11, 1992).

### *Mandatory Recycling and Source Separation*

In order to remove certain materials from the solid waste stream and to meet the mandates of the New York State Solid Waste Management Act of 1988, Tompkins County adopted a source-separation mandatory recycling law and promulgated rules and regulations to facilitate its implementation on August 11, 1992, both to be effective September 1, 1992. Active enforcement of this law will decrease the flow of residual waste to landfills and reduce the required capacity and hence the use of solid waste disposal facilities and transportation thereto; aid in the conservation of natural resources; and contribute long-term to the preservation of public health, economic productivity, and environmental quality. (Mandatory Recycling ... -- Local Law number 8 of 1992; adopted August 11, 1992, Resolution 257; effective September 1, 1992.) (Rules and Regulations -- adopted August 11, 1992. Resolution 258; effective September 1, 1992.)

## *VII Technologies Chosen*

### *Waste Reduction*

Tompkins County supports the passage of Federal, State, and local waste legislation that will effectively achieve waste reduction, and expects to implement local waste reduction programs using financial incentives, regulations and public education. Programs targeted to reduce the volume and the toxicity of the waste stream include point-of-purchase and advertising campaigns, quantity-based pricing for trash, source reduction assistance for residential and commercial generators, enhanced procurement policies, and individual (on-site) composting.

### *Reuse*

There are two types of reuse: direct reuse, for which processing is not required in order for an object to be reused; and repaired reuse, in which some goods or materials may need repair or refurbishing to render them suitable for reuse. The County plans to encourage both types of reuse of materials by educating the public about existing opportunities for reuse and by

facilitating passive exchange programs. Opportunities already exist in Tompkins County for reuse, such as stores that buy and sell second-hand items. Public and private social service agencies accept donations, and local efforts to reuse architectural and building materials are diverting a wide range of items from disposal. Other materials targeted for diversion could be medical equipment and supplies, unsold usable merchandise from retail stores, paint and furniture. The County will evaluate options for establishing a reuse center.

### *Recycling*

Recycling means separating or extracting materials from the waste stream and using them to manufacture new products. There are three basic components to the recycling process: collection, processing, and marketing.

Tompkins County's recycling program includes both residential and small-scale commercial curbside collection and drop-off center collection. Once collected, certain recyclable materials need to be processed to enhance their marketability; the County plans to build a recycling processing and transfer station for the program. Other program components will include waste assessments for businesses and assistance with purchasing recycled products. A mandatory source-separation recycling ordinance became effective on September 1, 1992.

As of March 30, 1993, recyclables accepted by the County in the curbside collection programs and at the Drop-Off Centers include: clear, green, and brown glass containers, metal food cans and aluminum, newspaper, corrugated cardboard, #1 and #2 plastics, high-grade paper, and mixed paper. In addition, lead-acid batteries, tires, and appliances are accepted at the transfer station for recycling. There are other local options for recycling used motor oil, antifreeze, scrap metal, and low-density polyethylene plastic film.

### *Composting (Biowastes)*

Composting accelerates the natural process of decay of organic matter to produce a stable humus that can be used as a beneficial mulch or soil conditioner. Tompkins County is investigating composting as the principle method for handling the organic portion of the waste stream. Efforts will include increasing the amount of food and yard waste being composted by individuals as well as developing interim and long-term facilities for composting sewage sludge, compostable paper, leaves, and yard, food, agricultural, and food-processing wastes. Technologies chosen as appropriate for handling various organic components of the waste stream include: backyard (individual) composting and large-scale composting methods via

either an aerated windrow or an agitated bed system. Marketing of compost is essential to the program's success. A pilot project was conducted in cooperation with Cornell University and the NYS Energy Research and Development Authority from 1988 to 1991 to investigate the feasibility of co-composting sludge and yard waste. The results demonstrated that composting sludge was economically feasible as compared to disposal. Based on this experience, a full-scale interim composting facility was constructed and is currently composting all the municipal sewage treatment plant sludge in the County. Another pilot project, designed to assess the feasibility of curbside collection of residential and commercial organic wastes, may begin in 1994.

### **Options for Special Materials**

#### ***Construction & Demolition (C & D)***

Components of C&D debris (such as clean wood, gypsum) may be separated and then marketed. The County plans to include C&D processing (only for small quantities) in its recycling and solid waste center. The County will encourage the reuse, exchange, and recycling of C&D debris by the firms generating those wastes.

#### ***Tires***

The County prefers to manage tires through reuse and recycling, ideally at the local level, followed by industrial recycling when the first two options are unavailable, with landfilling as a last resort. Due to the current high cost of processing tires for recycling, the County is presently landfilling tires, but will recycle tires, by shipping them to New York State Electric and Gas to be chipped and incinerated, whenever it is economically feasible.

#### ***Batteries***

Lead acid batteries are collected at the Hillview Road Transfer Station. They are removed for recycling by a local scrap dealer.

The County will evaluate the collection and recycling of household batteries through curbside collection, drop-off center collection and/or collection by local retail businesses.

#### ***Bulky Items***

The County accepts metal bulky items at the Hillview Road Transfer Station and will continue



to do so at the Recycling and Solid Waste Center. A certified local vendor removes all items containing CFC's and HCFC's for recycling. All other bulky scrap metal items are recycled by another local vendor.

#### *Waste Oil*

All service stations and retail establishments selling over 1,000 gallons of oil annually are required by New York State law to accept waste oil for recycling. In addition the County will accept waste oil at the Recycling and Solid Waste Center.

#### *Paint*

The County is evaluating, as an interim measure until a permanent program is implemented, collection of residential waste paints through a Paint Exchange program that would provide for the reuse and recycling of paint.

#### *Household Hazardous Wastes*

Tompkins County has developed a practical HHW management program to provide alternative options that are safer than landfill disposal. The County encourages residents and businesses to reduce the volume and toxicity of hazardous materials by changing purchase and use habits, reducing amounts used and disposed of , and recycling or other proper treatment of wastes. Possible options for managing the wastes include mobile drop-off satellites and permanent waste exchanges. In addition, Tompkins County will construct a household hazardous waste collection facility, planned to open in late 1996 at the Recycling and Solid Waste Center location.

#### *Medical, Radioactive, Industrial Sludge, or Hazardous Materials Wastes*

Tompkins County does not now accept or oversee disposal of medical waste, radioactive waste (including any defined as BRC), industrial sludges, or hazardous waste; they are all unacceptable at any Tompkins County solid waste facility).

#### *Incineration*

The third level of priority in the state solid waste management policy is energy recovery from waste that cannot feasibly be reduced, reused or recycled. The six large-scale waste-to-energy technologies discussed in this report - mass burn, modular, refuse derived fuel, fluidized bed combustion, biogasification, and pyrolysis - have had varying degrees of success at full-scale operation. A detailed review of past studies and an assessment of existing waste-to-energy facilities indicated that incineration is not cost-effective for Tompkins County at this time. Regional waste-to-energy opportunities will continue to be explored.

### ***Landburial***

Even with aggressive reuse, reduction, and recycling programs, there will still be residue requiring disposal. The County expects that these materials will continue to require land disposal in dedicated landfills. Tompkins County has selected waste exportation to managing residential waste that requires land burial.

## **VIII Future Considerations**

Although the major components of Tompkins County's solid waste management program have been chosen, with specific facilities already sited or identified for development, the county recognizes that conditions do not remain static. The County plans to take an "adaptive management" approach, with flexibility to refine operations and to respond to changes in economic, technological, environmental, or social circumstances. Major revisions to the SWMP will be submitted to DEC for review and approval. This plan will be updated by Tompkins County every two-years during the time period that the County exports its waste, as directed by the NYSDEC.