

## *II. Description of Action*

### *A. Background*

The action under consideration is adoption of a county solid waste management plan as presented in Chapter VI. This chapter outlines the baseline or background conditions on which the plan was developed, including a brief overview of past solid waste management practices and planning effects. A summary of current management practices along with the statement of planning objectives used in the plan formulation and their relationship with the state policies, is also included in this section.

Chemung County became involved in solid waste disposal and management in the late 1960s. Prior to 1969, solid waste disposal was primarily handled by the municipalities, with a few private, commercial collection and/or disposal firms. Disposal practices ranged from totally inadequate open dumps with burning to barely adequate landfill operations. Many of the public and private disposal sites contributed to public nuisance problems (insects and rodents), potential public health hazards (air and water pollution) and experienced operational difficulties in properly handling the volumes of wastes delivered for disposal.

The county, recognizing that waste disposal methods were inadequate and that waste volumes would be increasing, initiated a series of county-wide solid waste disposal studies. The purpose of these studies, performed by O'Brien and Gere, was to develop a coordinated long-range plan for the proper disposal of solid waste in the county through the year 2020. The plan's scope included developing projections of solid waste quantities, identifying suitable disposal techniques, recommending long-range disposal facilities and determining annual operation and maintenance costs for the various proposals studied. The plans' final recommendation was that the county establish a county-wide solid waste disposal district whose function would be to properly dispose of all solid waste generated within the county. The studies concluded that a centralized county operated landfill was the most cost-effective solution. The plan also called for a central milling station to be constructed to prolong the site life and ensure the operation of an environmentally superior landfill disposal facility.

The county proceeded with the recommendations of this 1969 study and developed district formation reports and engineering design documents. The Chemung County Solid Waste Disposal District (CCSWDD) was established in 1971 in accordance with Article 5-A of the county law.

The CCSWDD milling station and sanitary landfill began operation in December 1973. The original landfill site encompassed 139 acres located in the Town of Chemung just north of State Route 17. Engineering plans for the site indicated an approximate 20 year life expectancy in five "work areas".

An explosion at the milling station in 1979 put that facility out of operation for approximately three years. During this time, unmilled wastes were disposed of at the landfill significantly shortening the originally estimated 20 year site life. In 1983, when the New York State Department of Environmental Conservation (DEC) operating permit for the county operation expired, landfill operations had been closed in Areas 1 and 3. Active filling was being in Area 5. Area 2 had been converted to a construction and demolition disposal site and Area 4 was as yet undeveloped; still in its natural state.

## B. Recent Solid Waste Management Practices and Planning Efforts

In July 1984 the CCSWDD, recognizing the limited life of the existing landfill site, entered into a contract with Clark Engineers to screen/evaluate potential new landfill sites in the county. After evaluating 48 potential sites, this study indicated the most feasible site to be those lands immediately adjacent to the existing operation. The CCSWDD engaged Empire Soils/Thomsen Associates to begin preliminary soil testing and subsurface investigations on county-owned lands north of the existing working landfill and adjacent privately-owned lands (with a purchase option executed by the county) to the east and west.

During the time that these additional studies/evaluations were initiated, the CCSWDD proceeded to file an application for a new 6NYCRR Part 360 permit to continue and expand the existing operations within the county owned lands at the Chemung site. This application remained pending under interim DEC guidelines for solid waste disposal facilities until June, 1986 when CCSWDD entered into a Consent Order with NYSDEC regarding the operation of the existing sanitary landfill facility. This order required the District to conduct detailed hydrogeologic investigations for the proposed expansion areas. The purpose of these investigations was to determine if the expansion areas were over a primary or principal aquifer and thus by NYSDEC policy not suitable for use as a landfill. Based on results of the investigations, the CCSWDD would decide whether to continue or permanently close the landfill operation.

The hydrogeologic investigations conducted by Geotechnical Systems of Binghamton, New York, provided conclusive evidence that the proposed landfill expansion area was not over an aquifer and was therefore suitable for future landfill operations. NYSDEC concurred with these findings in February 1987, and the District initiated detailed

engineering plans and additional hydrogeologic investigations as required for submittal of 6NYCRR Part 360 operating and construction permit applications. In July 1987, the original Consent Order was modified to allow the District to prepare these plans with a revised compliance schedule.

The Consent Order included provisions for completion of a dual-lined interim landfill trench, while the remainder of the expansion site was designed and reviewed in accordance with the formal Part 360 permitting process. Approval to construct this interim trench was granted by DEC in August 1987. Construction of this first cell was completed in January 1988, and approval of the construction certification report was issued by DEC in March 1988. Waste filling operations commenced in this first cell in May 1988.

During the time of the interim first cell construction, the CCSWDD Administrative Board was designated lead agency for this permit application pursuant to New York State Environmental Quality Review (SEQR) regulations. Subsequent to this designation, the District filed a positive declaration under SEQR; so indicating that the expansion of the landfill operation could result in potential adverse impacts to the environment. Further, the District required that a Draft Environmental Impact Statement (DEIS) be prepared in accordance with SEQR regulations including a detailed scope of issues. A DEIS was accepted by the Administrative Board on February 24, 1988 and a public hearing was scheduled for April 11, 1988. Verbal and written comments were provided from three sources. A final environmental impact statement (FEIS) was prepared in response to these comments. The FEIS was accepted by the Board on May 26, 1988. Following adoption of a statement of findings on June 13, 1988, the Board completed the SEQR process and coordinated with NYSDEC during their permit review process which concluded in October 1988, with NYSDEC issuing the Part 360 landfill construction permit for Cell 2.

Excavation for Cell 2 was completed in April 1989, at which time work commenced on the construction of the dual-lined landfill cell. The dual liner system was completed in October 1989, at which time a construction certification report was submitted to NYSDEC. NYSDEC subsequently approved this report and issued an operating permit in February 1990. Filling operations commenced in Cell 2 during the spring of 1990.

The DEIS for the landfill expansion and the public participation brochure developed in conjunction with this document (see Appendix A) both note that as early as 1988, the county was contemplating a comprehensive solid waste management plan. This plan, as spelled out by the preface to the county landfill expansion engineering report of January 1988, states:

*"...Recognizing that drastically reducing the amount of waste generated is an ultimate goal, but also recognizing the delays of state and national legislative needs to accomplish this task, the District accepted responsibility to meet current and near future needs of Chemung County. Therefore the solid waste management plan of Chemung County in sequence is:*

- 1. Expand the existing landfill to meet projected needs for the next 25 years. This decision was not made until detailed technical studies were completed to insure the expansion site was safe and would not adversely impact the Chemung Valley aquifer or nearby private water wells.*
- 2. Evaluate and implement waste reduction and recycling programs. Currently the county is participating in a six county regional study with Alfred University evaluating the markets for solid waste recycling projects. Successful implementation of future waste reduction/recycling plans will require much cooperation from the general public including sorting wastes at home and work into recyclable (paper, glass, aluminum etc.) and nonrecyclable components.*
- 3. Evaluate and coordinate with nearby counties regarding the feasibility (siting, environmental/technical, economic, regional/political) of constructing a solid waste resource recovery plant.*

*Although this report focuses on the landfill expansion plan, Chemung County's Solid Waste Management plan is multi-faceted to insure environmentally sound and cost-effective measures are implemented to meet the future solid waste needs of the county..."*

Consistent with these policy statements, the county enacted a solid waste management law in 1989. This law established as county policy that:

*"The well-ordered management of solid waste at the county level of government provides the most safe, sanitary, environmentally sound and feasible manner of responding to the solid waste needs of all the citizens of the county. The County Legislature further recognizes that a need exists within the County of Chemung for the county to assume this larger and expanding role in the solid waste problems of the city, towns and villages located within this county in that such city, towns and villages are now less able to effectively solve their solid waste problems due to the growing volumes of the solid waste generated, the rising costs of solid waste disposal and the increasing environmental and regulatory controls thereof."*

The law also establishes a recycling division within the CCSWDD. The purpose, powers and administrative responsibilities of this division being defined as follows:

1. To create and establish a recycling division, in order to conserve energy and natural resources and to comply with the Solid Waste Management Plan and Policy of the State of New York and the County of Chemung.
2. To implement, pursue, adopt and promulgate such standards, procedures, rules and regulations, pursuant to Article 5A of the County Law, and as ratified by the Chemung County Legislature for a Recycling Program for the County of Chemung consistent with the Solid Waste Management Act of 1988, and any rules and regulations duly adopted thereunder and as now in effect or as may hereafter be adopted.
3. To appoint a Recycling Manager to carry out the functions and duties as delegated by the Administrative Board and who shall be under the administrative control of the General Manager.
4. To contract with other counties, municipalities, public corporations and improvement districts on recycling of solid waste consistent with the objective and policy under said Solid Waste Management Law.
5. To apply for any Federal or State grants or assistance for recycling of solid waste.
6. To contract and sell the recyclable material to such persons as defined herein upon written bid submitted to the Recycling Manager and as authorized by the Administrative Board.
7. To perform with other and related acts consistent with this Local Law and the Solid Waste Management Law.

The county filled the recycling manager position in February 1989. The recycling manager immediately initiated activities to meet the State Solid Waste Management Act of 1988's mandate that local governments adopt local laws or ordinances requiring source separation of recyclable components of the waste stream (defined as components for which economic markets exist) by September 1, 1992. In order to meet this mandate, the county completed and submitted to NYSDEC in June, 1989 a Comprehensive Recycling Analysis {CRA}. This CRA was conducted in accordance with the requirements of 6NYCRR Part 360. It concluded that the most cost-effective, efficient and environmentally sound approach to recycling in the county was the construction and operation of a materials recycling facility (MRF) adjoining the site of the county milling station. This plan and its recommendations were finalized in December of 1989 and approved by NYSDEC, one of the first such plans to receive state approval.

About this same time and in support of the comprehensive solid waste management approach the CCSWDD requested that the legislature change the name to the Chemung County Solid Waste Management District. The resolution requesting the name change states that "the district desires to change the name (of said district) to more adequately reflect its functions and purposes".

The Chemung County Solid Waste Management District (CCSWMD) retained Fagan Engineers to complete engineering plans and reports in support of a Part 360 permit application to construct the Materials Recycling Facility (MRF). This report presents a detailed description of the proposed facilities, types of waste to be recycled, types of separation equipment, facility siting considerations, operational descriptions and an analysis of avoided landfill costs. Also addressed were the phasing of other related recycling activities such as yard waste composting, C & D wood recycling, etc.

This engineering report was submitted as a partial requirement for a complete Part 360 permit application for construction of the Chemung County MRF project. This report, along with the accompanying permit application form, was completed in accordance with the rules and regulations for solid waste management facilities (6NYCRR Part 360). The report and plans were designed to meet in part, the county's goal of 40% recycling by 1997. As such, the project was in compliance with the State's Solid Waste Management Plan.

- In addition to the engineering report and permit application form, the complete Part 360 application to New York State DEC included:
- Engineering Plans (Sheets 1 - 11) dated December, 1989, prepared by Fagan Engineers.
- Compliance with SEQR including a negative declaration by the Lead Agency (CCSWMD).

In addition to these State permitting requirements, an "Increase In Facilities" engineering report had to be completed in support of bond financing for the required MRF facility and equipment. This document included description of proposed improvements, economic impacts including capital, operating and avoided landfill costs; budget considerations; alternative solid waste management options; and conclusions and recommendations for future action. A public hearing was also required to be held prior to the NYS Department of Audit and Control's approval for facility financing. This hearing was held on March 3, 1990 and elicited no opposition to the project. NYSDEC approved the MRF construction permit on April 30, 1990. The project was successfully bid and groundbreaking occurred August 8, 1990. The facility is scheduled to be fully operational by mid 1991, well within the state's mandated time frame.

## C. Current Solid Waste Management Practices

The following text summarizes existing solid waste management practices in Chemung County. A more detailed discussion of each of these practices is provided in Chapter 3.

1. Collection. Solid waste collection in the county is currently handled by one municipality (the city of Elmira), and numerous private haulers, individuals and area businesses. Curbside collection of residential wastes is standard throughout the county. The county does not participate in collection with the exception of transferring materials from the four (4) satellite transfer stations to the central milling station and from there to the landfill.
2. Processing. The majority of all solid wastes in the county are processed at the central milling station located on Lake Street in Elmira. Wastes are either delivered directly to this facility by haulers or transferred there from the satellite transfer stations. Wastes entering the facility are weighed, dumped on the tipping floor and inspected, shredded and loaded into CCSWMD trailers to be transferred to the landfill site for disposal. The only wastes that are not processed at this facility include certain special permitted non-hazardous industrial wastes, municipal treatment plant sludge and C & D materials. Each of these items is delivered directly to the landfill by the generator.
3. Disposal. As noted above, with the exception of C & D wastes, sewage sludge and certain non-hazardous industrial waste materials, all solid waste in the county is transported via transfer trailers from the milling station to the Chemung landfill site. The landfill is currently operating in a new 28-acre expansion area approved by NYSDEC in 1988. The expansion provides a dual lined facility that incorporates primary and secondary leachate collection pipes and a dual lined leachate collection pond with a truck loading dock facility for transfer of the landfill leachate to the county's Milton Street sewage treatment plant for treatment and disposal.
4. Recycling. The CCSWMD's Comprehensive Recycling Analysis estimated that commercial establishments in the county recycled nearly 11,000 tons of materials in 1988. In addition to these private recycling efforts, the CCSWMD has initiated voluntary recycling programs including office paper, waste oil, scrap aluminum, white goods and auto batteries. Over the past two years, the office paper recycling program has grown dramatically with over 6,500 office personnel currently participating. Progress on the CCSWMD's MRF is well underway. Construction of the 21,500+ square foot structure is complete while processing equipment is currently being installed and should be operational by June of 1991.

The CCSWMD has also devoted extensive staff and financial resources to educational and outreach efforts aimed at recycling. In 1990, efforts included radio and television public service announcements and paid commercials; newspaper advertisements; presentations to civic, school, church and service groups; plus the provision of recycling curriculum materials to county schools. These efforts are projected to quadruple in 1991, with the onset of the county-wide household source-separation recycling program.

5. **Household Hazardous Wastes.** To date there has been no program for the collection/disposal of household hazardous wastes in the county. Certain materials such as waste oil and automobile batteries are accepted at the milling station for recycling. Other household hazardous wastes (i.e. paint thinners, herbicides, pesticides etc.) are not accepted by the CCSWMD. Persons seeking disposal of these materials are referred to the NYSDEC guidelines which essentially suggest the full use of the product for the purpose for which it was intended.
6. **Yard Wastes/Composting.** Yard wastes are currently accepted at the milling station and transfer stations mixed with other solid wastes. There is currently no requirement that this material be source separated nor is it excluded from the landfill. Most communities in the county also provide a leaf pick-up program. These leaves are "stored" at sites within their respective communities. They are not disposed at the landfill. A yard waste collection system utilizing roll-off containers is currently under construction at the milling station site. Hence, separate collection of yard wastes will be available later in 1991 in conjunction with the startup of the MRF.
7. **Infectious Wastes.** No infectious, "red bag" medical wastes or sharps are accepted at the county facilities. At this time the disposal of these materials is handled by incinerators operated at each of the two area hospitals (Arnot-Ogden and St. Joseph's). Arnot-Ogden hospital also accepts these wastes for disposal from area physicians.
8. **Agricultural Wastes.** In 1987, 327 farms were located in Chemung County encompassing some 64,159 acres. A 1987 livestock and poultry inventory included nearly 10,000 head of cattle and calves, 1,100 hogs and pigs, 600 sheep and lambs, and some 9,300 chickens. Virtually no agricultural wastes are received by the CCSWMD. The majority of such wastes are managed on-site at the point of generation.



9. Septage Wastes And Treatment Plant Sludge. Septage wastes are typically hauled to farm landspreading sites for use as a nitrogen fertilizer substitute. During the winter when landspreading cannot be practiced, septage is generally hauled to the Chemung County Elmira Sewer District's Milton Street sewage treatment plant for processing. Dewatered sewage treatment plant sludge from the county's two municipal plants is hauled directly to the landfill for disposal. In the past, such sludge has been used as a topsoil replacement for final covering operations at the landfill. However, current heavy metal concentrations in the sludge exceed state landspreading guidelines. Hence, such materials are currently being landfilled within the dual lined cells.
10. Non-Hazardous Industrial Wastes. The county currently accepts non-hazardous industrial wastes from six county industries and the NYS Department of Transportation. Each of these generators maintains an approved Part 364 permit with the CCSWMD. All wastes are tested to ensure compliance with 6NYCRR, Parts 360 and 370.
11. Hazardous Wastes. Hazardous wastes are not accepted at the county processing or disposal facilities. Those hazardous wastes generated in the county are transferred by a permitted hauler to a NYSDEC approved secure landfill in accordance with 6NYCRR, Part 370.
12. Construction & Demolition Debris (C & D). Separated construction and demolition debris (C & D) material is accepted at the Chemung County landfill site where the county operates a separate C & D landfill. In order to preserve space in the dual lined solid waste landfill, no C & D waste is allowed to "contaminate" the solid waste. Current plans call for the existing C & D landfill to be closed in 1991, with the opening of a new C & D landfill on top of Area 3 in conjunction with a landfill remediation plan for Area 3.

#### D. Objectives of this Study

As indicated in the earlier background discussion, Chemung County has been working within an informal framework of a comprehensive solid waste management plan for a number of years. In preparing this plan, the county is formalizing its management strategies into an integrated plan through the thorough evaluation of technology, institutional and financial solid waste management options.

All of the county's previous planning and management efforts have been conducted in full conformance with the state's solid waste management policy. The county's future efforts will continue to parallel state policy.

Principal efforts will be aimed at maximizing the removal of materials from the waste stream that can effectively be reused or recycled. The plan outlines the means by which this will be achieved including the following:

- Identification of materials for which recycling markets exist
- Provision of cost-effective strategies for collection, processing and marketing these materials
- Investigation of emerging technologies, markets and collection methods whereby new materials may be added to the recycling stream
- Utilization and composting of yard wastes and/or municipal solid wastes
- Continuation of strong public education efforts thereby increasing public participation in both recycling and waste minimization programs
- Annual evaluation of on-going program efforts to determine effectiveness of current methods or approaches

This study also fully analyzes the potential waste volume reduction techniques and waste-to-energy technologies. In terms of waste reduction, the county recognizes that significant waste reduction programs and policies are generally beyond local controls. Programs to effectively implement waste reduction will require state and federal initiatives such as legislation implementing an excess packaging tax or tax credits for reusing "waste" materials. The CCSWMD is a strong proponent of such initiatives. At the local level, the county will continue to provide educational/outreach and promotional efforts to support waste reduction including support for backyard yard waste composting facilities.

Chemung County has actively pursued the investigation of resource recovery since the start-up of the solid waste milling station facility in 1973. Early investigations indicated that it would be potentially feasible to market energy recovered from the burning of solid waste. Subsequent analysis and studies concluded that a low-level processed, solid waste fuel to energy system could be utilized to produce steam for the Great Atlantic and Pacific Tea Company (A & P) facility in Horseheads. A State EQBA grant application of \$2,000,000 was approved for a waste to energy plant to be constructed at the A & P site. However, negotiations for such a facility were not completed since A & P closed its plant. With no purchaser for the energy, the county did not pursue the proposal. The county will further evaluate the feasibility of waste-to-energy technology within the comprehensive management framework of this plan.

The county will also address the land burial/landfill solid waste management technique. A landfill will always be required for those components of the waste stream that cannot be recycled, composted or incinerated including the residuals or by-products of these processes. The county will continue to effectively manage its existing permitted facility and use the techniques outlined above to prolong its useful site life.

The CCSWMD has played the key role in solid waste management in the county for the past eighteen (18) years. In this time, the District has developed extensive expertise in the field of solid waste management and has acquired a thorough knowledge of the community's priorities, concerns and issues. This knowledge and expertise will ensure that a cost-effective and environmentally sound plan is developed that addresses the community's ongoing future needs. As in the past, any solid waste management facilities, proposed to be developed in conjunction with this plan, will comply with all pertinent state regulations. The county will continue to plan and design facilities that will meet the county's and the states' mandate by managing solid waste in a cost-effective, environmentally sound manner.

In addition to its longstanding record in county-wide solid waste management, the county is also committed to providing a regional approach to solid waste management. In 1987-88, the county participated in a six-county study to evaluate the potential for recycling in the Southern Tier. Later, in 1990, with the approval of the MRF construction permit, the county approached four adjoining counties to ascertain their interest in participating in a regional MRF. In April of 1990, a special presentation was given to representatives from these four counties (Steuben, Tioga, Schuyler and Tompkins Counties). Chemung County Solid Waste Management District Officials explained that the MRF was designed to accommodate a regional volume of recyclable materials. As a follow-up to this meeting, formal invitations were sent to each of the four County Chief-Elected Officials to consider using the Chemung MRF in their recycling efforts. Chemung County is currently waiting for responses from these communities as to their interest in the MRF and is ready to proceed with contract negotiations. Additional interest in a regional MRF operation has recently been expressed by Delaware and Ontario Counties.

One unique aspect of the Chemung County Solid Waste Management District and its operations to date, is that all users of the facilities pay their fair share. The facilities were, and continue to be, financed by a combination of advalorem taxes (to retire the construction debt) and tipping fees (to cover operation and management costs). This financial strategy will continue to be used by the District in the development of a comprehensive and integrated management program.

Finally, the county recognizes that the plan must be a dynamic document that is capable of responding to changes in recycling markets/technologies, other solid waste management technologies, legislation, and public concerns. As such it will need to be periodically updated/evaluated. To meet this need, the county will institute a procedure whereby its effectiveness in solid waste management will be evaluated annually. This evaluation will take the form of a waste composition study of all materials entering the milling station. This composition study will be aimed at identifying the "recyclable" fraction of materials found and deficiencies in current management methods or approaches. This data will then be further analyzed in accordance with the county and state plans to determine appropriate measures to improve the effectiveness of solid waste management.