

Attachment No. 3

Comprehensive Recycling Analysis

Attachment No. 3

Response to Comments

Comment – 3.0 Comprehensive Recycling Analysis – Regulations stipulate that CRA must be submitted unless it has been previously submitted and approved by the department. The CRA was submitted and approved in 1993. Compliance reports have been utilized to update the plan in intervening years. The result has been a document that is large and not readily understandable by the reviewers or the public. Please include in the submission relevant sections of the document for Department and public review.

Response – The Comprehensive Recycling Analysis (CRA) was submitted and approved by the NYSDEC in 1993 at which time the County established a plan for the management of waste through 2015 through the Integrated Solid Waste Management Plan. The attached CRA Background and Summary provides the anticipated CRA program goals at the time of the CRA development which identified potential (but not necessarily feasible) goals for the recovery of recyclables.

Since 1993, the County has prepared updates to the Solid Waste Management Plan on a two year basis in accordance with the requirements of 6 NYCRR Part 360-15, Comprehensive Solid Waste Management Planning. A copy of the most recent Compliance Report Update is included herein for reference.

A summarized within the 2001-2003 Compliance Report Update, overall recycling goals as described in the CRA have not been achieved. Issues that have affected the the Counties inability to achieve these goals include:

- **Lower than anticipated waste disposal rates has reduced the Counties overall revenue and delayed and/or prevented the implementation of some recycling programs.**
- **Additional property has been acquired by the County for future expansion of the Phase II landfill area.**
- **Landfill gas regulatory and odor issues has necessitated the need to implement new landfill gas control measures not originally assumed to be required as part of the facility operations and maintenance costs.**
- **The market for recyclable materials has not developed to the extent originally anticipated in the CRA. The resulting low value for recyclable has in some cases resulted in an excess cost for implementing and maintaining the recycling program.**
- **The County has and will continue to enforce the Mandatory Recycling Ordinance within the County's Planning Unit.**
- **The County will continue to import waste only from locations containing an approved CRA for the respective Planning Unit**

SULLIVAN COUNTY, NEW YORK



COMPREHENSIVE RECYCLING ANALYSIS

FOR THE
SULLIVAN COUNTY LANDFILL EXPANSION

PREPARED FOR:
SULLIVAN COUNTY DEPARTMENT OF PUBLIC WORKS
MONTICELLO, NEW YORK

PREPARED BY:
 **WILLIAM F. COSULICH ASSOCIATES, P.C.**
ENVIRONMENTAL ENGINEERS, SCIENTISTS AND PLANNERS
330 CROSSWAYS PARK DRIVE
WOODBURY, NEW YORK

FEBRUARY 1991

Section 1



1.0 BACKGROUND AND SUMMARY

1.1 Background

This document has been prepared pursuant to the requirements established in Title 6NYCRR Part 360-1.9(f) for the preparation of a Comprehensive Recycling Analysis (CRA) to accompany permit applications for solid waste management facilities. This CRA supports the application for a permit to expand the Sullivan County landfill in the Village of Monticello.

Guidance for the development of this CRA was provided by the Sullivan County Citizens Solid Waste Advisory Board, the Sullivan County Board of Supervisor's Solid Waste Management Committee and the Sullivan County Department of Public Works. These parties will continue to guide the development of the Integrated Solid Waste Management Plan and Draft Generic Environmental Impact Statement which will be completed in April 1991. This document will provide an evaluation of the alternatives for managing the nonrecyclable components of the waste stream and identify the County's projected plan for managing these wastes through the year 2015. Appendix I contains the minutes from the Citizens Solid Waste Advisory Board meetings.

The baseline data in this report may differ slightly from the waste quantification estimates utilized for the purposes of landfill sizing in the Engineering report prepared by Charles R. Velzy Associates, Inc. However, these differences are very slight. The County also understands that through the development of this Comprehensive Recycling Analysis, it will be possible to exceed the 40% recovery rates utilized by Velzy Associates, Inc. in its preliminary design. The implications of these higher recycling rates are that the planned landfill expansion will exceed its projected lifetime. It is fortunate that landfills are more flexible in relation to sizing than other facilities such as waste-to-energy, composting and recycling facilities where over sizing or under sizing can have serious economic and environmental implications.

This CRA contains an analysis of waste reduction and recycling practices which has been performed for Sullivan County and has been used to formulate an overall strategy to maximize reduction, toxics removal, recycling, and composting in the County. The purpose of this document is to provide a plan of action through which the County can

effectively reduce the volume of solid waste requiring disposal, extend the life of the planned County Landfill expansion and to minimize the impact of more expensive processing and disposal options.

This CRA addresses geographic and demographic characteristics, existing solid waste and recycling practices, material markets analyses, materials collection options, storage and processing alternatives, system recommendations, implementation schedules, public information and education programs, and recommended legal and institutional policies that will establish the infrastructure for the program to be developed. This CRA provides immediate, intermediate and long-range recycling strategies and estimates of financial obligations for implementation, the reduction and materials recovery levels projected to result from the program are presented as well. This CRA has been prepared in accordance with the requirements of the New York State Solid Waste Management Act of 1988 and Title 6NYCRR Part 360.

1.2 Program Summary

The County's recycling program will be developed in three phases - Immediate, Intermediate and Long Term. The schedule contained in Subsection 6.6 lists the actions to be taken to achieve the recovery rates in each phase of the program.

The County is committed to achieving, at a minimum, a 40% recycling rate (and exceeding these goals where feasible) in compliance with New York State directives. According to the County's material marketing records, the 1990 recovery rates are estimated at 3 percent.

These recovery rates are projected to increase to 6 percent in 1991. This increase is expected as increasing public education efforts, advertising and financial incentives help bring the countywide participation rates (PR) on materials currently being recycled up to 30 percent.

In 1992, the adoption of a mandatory recycling ordinance; the development of a Materials Recovery Facility (MRF) to receive plastic containers, three colors of glass, newspaper, tin cans, aluminum cans and corrugated and the development of a yard waste composting facility for grass, leaves, brush and small tonnages of food waste from resorts will enable the County to achieve a 21 percent recovery rate. The achievement of this rate will be bolstered by a rapid increase in participation rates resulting from the

the provision of countywide curbside collection services for materials deliverable to the MRF. It is expected that the level of participation rates (PR) for these materials will reach 70 percent in 1992. These participation rates and expanded programs will enable the County to maintain a 23 percent recovery rate through 1993.

The next major escalation in recovery rates is projected to occur in 1994 when the County expands the range of items it will recover at their materials recovery facility and develops wood and rubble processing. The expanded MRF will allow the County to increase its recovery efforts to difficult to recover materials such as aluminum foils, rigid plastics and film plastics in addition to large glass containers. Through the development of the two C&D facilities and the expansion of the MRF, the County is expected to achieve a 43 percent recovery rate.

In 1995 and 1996, the County will continue to operate the facilities developed through 1994. However, increased participation rates for many materials will allow the County to achieve a 48% recovery rate during these years.

In 1997, the County will develop a source separation based composting facility which will enable it to recover additional organic materials. These will include commercial food wastes and low-grade paper products from the remaining hotels, restaurants and resorts. Residential and institutional food and paper waste will also be directed to this facility. Curbside collection programs will also need to be modified once this facility is developed. The development of this facility will allow the County to obtain a 56% recovery rate in 1997.

By 1999, the County will have either secured access to a mixed bulky waste recovery facility or it will have developed one. The preferred approach for this facility is to cooperate for its development on a regional basis, since such a facility for Sullivan County alone would be costly on a per ton basis. However, if such processing capacity is attained, the County's recovery rates will reach 58%. This assumes an 80 - 90 percent participation rate by residents, businesses and institutions for most materials.

Table 1-1 and Figure 1-1 illustrate how Sullivan County's program will achieve increasing recovery rates on a year by year basis from 1990 through 2000. The figure also illustrates the effect of waste reduction and identifies the specific components of the proposed program and their relative contributions to the recovery effort.

Appendix D provides details on the recovery rate calculations and assumptions. It should be noted that these recovery rate projections assume that reduction activities have already been effective in lowering waste quantity. The purpose of the remaining subsections of this section will be to provide a detailed discussion on the implementation of these components.

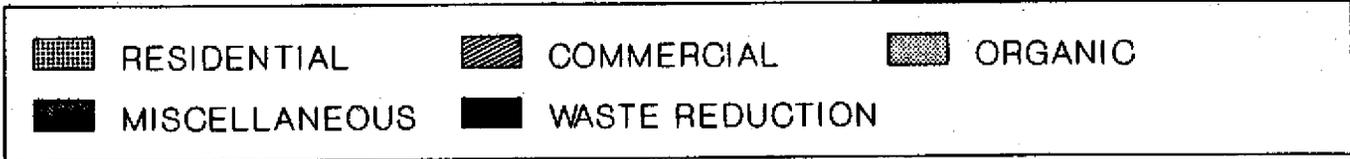
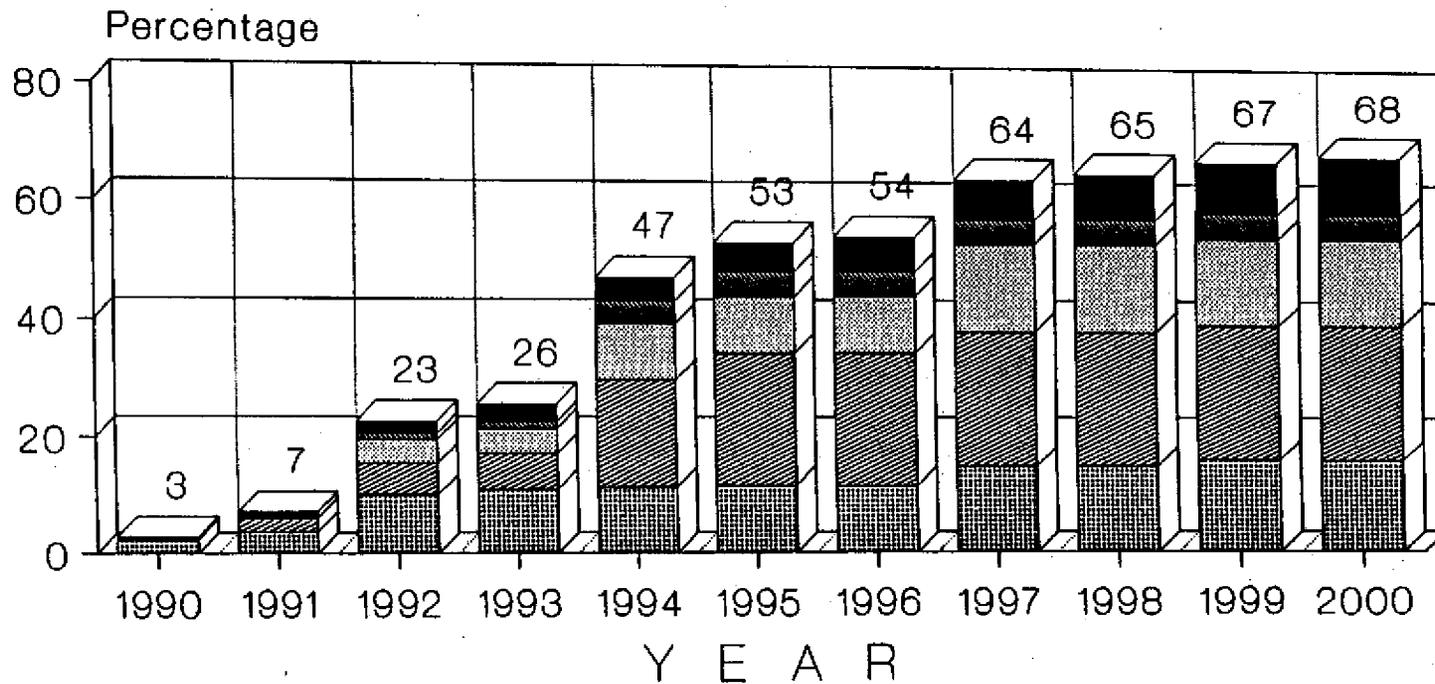
TABLE 1-1

SULLIVAN COUNTY COMPREHENSIVE RECYCLING ANALYSIS

RECOVERY RATES SUMMARY

YEAR	MATERIALS RECOVERED TPD,	LBCAP/DAY	WASTE STREAM PERCENT	NOTES
1990	8	0.22	3%	—
1991	17	0.48	6%	Across the board participation increases. Procurement actions.
1992	58	1.65	21%	Yard waste composting, MRF and pilot food waste composting developed.
1993	65	1.81	23%	Participation increases. Procurement actions.
1994	125	3.48	43%	Wood and rubble processing developed, MRF expansions.
1995	141	3.91	48%	Participation increases.
1996	143	3.94	48%	No major changes. Procurement actions.
1997	172	4.70	56%	Source separation based composting developed.
1998	174	4.75	56%	No major changes. Procurement actions.
1999	180	4.88	58%	Mixed bulky waste recovery developed.
2000	182	4.91	58%	Recycling program fully developed.

**FIGURE 1-1
SULLIVAN COUNTY COMPREHENSIVE RECYCLING ANALYSIS
MATERIALS RECOVERY AND WASTE REDUCTION PROJECTIONS**



TELEPHONE NUMBER
(845) 794-4466



File Copy [Year
2002
Compliance
Report]

FAX NUMBER
(845) 791-8340

**SULLIVAN COUNTY
DIVISION OF SOLID WASTE**
91 LANDFILL DRIVE
MONTICELLO, NY 12701-3835

March 26, 2003

Mr. Richard Baldwin, Regional Solid & Hazardous Materials Engineer
New York State Department of Environmental Conservation
Region 3 Office
21 South Putt Corners Road
New Paltz, NY 12561-1696

**Subject: Sullivan County Sanitary Landfill
Permit Number 3-4846-00079/00003**

**Enclosure: 2002 Solid Waste Management Plan Compliance Report Update, including
incorporated 2002 Annual Recycling Report and Local Law #1 of 1992.**

Dear Mr. Baldwin:

Enclosed please find the 2003 Solid Waste Management Plan Compliance Report Update for Sullivan County, including the incorporated 2002 Annual Recycling Report section and Local Law #1 of 1992, pursuant to certain reporting provisions of 6NYCRR Part 360-15.12, Plan Compliance Reports.

If you have any questions or desire additional information, please feel free to contact this office at 845-794-4466. With best regards I remain,

Very truly yours,

A handwritten signature in cursive script that reads "John Kehlenbeck".

John Kehlenbeck
Director of Solid Waste

Solid Waste Management Plan Compliance Report Update for:

Report Period 2001-2003

SULLIVAN COUNTY, NEW YORK



**FINAL
GENERIC ENVIRONMENTAL IMPACT
STATEMENT / INTEGRATED SOLID
WASTE MANAGEMENT PLAN AND
COMPREHENSIVE RECYCLING
ANALYSIS**

Original Plan Prepared by:

William F. Cosulich Associates, P.C.
Environmental Engineers, Scientists and Planners
330 Crossways Park Drive
Woodbury, New York

2003 Solid Waste Management Plan Compliance Report Update Prepared by:

Sullivan County Division of Solid Waste Management
91 Landfill Drive
Monticello, New York 12701-3835

Original Approval by NYSDEC 03/31/93
Update Submitted 03/24/03

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6. **Executive Summary**

1. Implementation (Project) Schedule

A. Status

The original Project Schedule identified in Sullivan County's 1993-Approved LSWMP had targeted 68% of the County's waste stream to be reduced or recycled by 1999. This goal has not been met due to a variety of complex issues affecting solid waste disposal and recycling Statewide. These issues are addressed in Section 3, part b below.

1) Milestones

The milestones to achieve solid waste management goals for waste reduction, recycling and recovery have changed to some degree. Sludge composting no longer appears to be a County responsibility. The inability to site and build a regional sludge management facility has made that very evident. There is now sufficient sludge de-watering/composting capacity in the private sector (Lang Industries, All-County Resource Management). The County can direct municipal treatment plant sludges away from the landfill to the private sector through pricing. The proposed source-separation based composting facility for commercial food waste and sludge is no longer feasible, given the status of sludge disposal and the MSW export market. Should facilities such as the proposed Masada Ethanol Plant in Orange County come to fruition, the commercial biodegradable waste stream could be exported there.

2) Obstacles to Implementation Schedule

The County has prepared specifications and bid the construction and operation of a permanent materials recovery facility (MRF) on two separate occasions since the adoption of the Solid Waste Management Plan in 1993. On both occasions the County found the per ton cost to be excessive (\$48/Ton). Until recently with the passage of the Environmental Bond Act, the County did not have the funding for MRF construction due to costs for landfill cell construction, pretreatment plant construction and landfill closure. Sullivan County has completed installation of its first permanent Recycling Center (MRF) facility in 2002, located in Monticello.

Depressed prices for waste disposal, coupled with depressed market prices for recyclables, created deficit spending within the Division of Solid Waste Management. This resulted in the County's policy to import waste, at reduced prices, to eliminate the budgetary deficit within the Division and County as a whole. When market conditions for recyclables do improve, the private sector siphons off material flow from the County's small existing (interim) MRF. This inability to direct flow to County disposal and recycling facilities was not accounted for in the original Solid Waste Management Plan concept.

As a community which has a disposal facility and imports waste from within the Mid-Hudson region, economic emphasis has shifted somewhat away from waste reduction and recycling. This contrasts with the majority of communities which export waste and have a greater economic incentive to reduce waste generation and subsequent transport and disposal costs.

3) Schedule Deviations

Due to the obstacles presented in the previous section, the County has deviated from the original Solid Waste Management Plan Implementation Schedule. The County has made a decision to embark on a ten (10) year solid waste management program (with 6 years remaining on the original time line), at the conclusion of which, the County Landfill will have achieved maximum capacity. Over this period of time, the County will generate sufficient revenues to cover the cost of facility debt, closure and long term monitoring. Prior to the County becoming an export community, the decision to construct a waste recovery/recycling infrastructure or export certain recyclables to the private sector, as other communities have, will be made.

B. Revised Implementation Schedule

* Solid Waste Management Plan / SEQRA actions - as per original schedule.

* Landfilling - as per original schedule; closure 2009.

* Legislation and Regulation - as per schedule with the exception of flow control, which has been deemed unconstitutional.

* Publicity and education program - as per schedule with the exception of waste stream evaluation updates. Development of new instructional materials and programs is ongoing.

* HHW receiving stations, motor oil, auto and household batteries, asbestos and oil soaked debris -



Figure 1. Sullivan County's "old" MRF as it appeared in early 2002...

- Sullivan County conducted Household Hazardous Waste Collection Events every year since 2001. Participants contributed thousands of pounds of residential (household) hazardous materials during the period. Due to the support and success of these events, additional collection days are planned for 2003 and beyond.
 - The used motor oil program is as per original schedule. Auto battery recycling addressed by NYS legislation, auto batteries are not accepted at County solid waste facilities. Antifreeze has been added to the list of acceptable recyclables at the Landfill convenience station in Monticello.
 - Household batteries - no program scheduled. Consumer Nickel-Cadmium cells have been collected during Household Hazardous Waste collection events, however. Future HHW efforts will place greater collection emphasis on this potentially harmful waste stream component.
 - Asbestos accepted for landfill disposal - EPA regulations.
 - Oil soaked debris accepted for landfill disposal - current landfill pricing (\$75.00 per ton) directs material to an alternate disposal site - the Ira Conklin soil incinerator in Newburgh, NY.
- * Yard waste composting facility -
 - Yard waste prohibited from landfill disposal by NYSDEC.
 - The County now has no plans for a proposed compost facility at the Landfill in 2003-5. Backyard composting is emphasized instead. An instructional pamphlet is planned.
 - * Wood and rubble processing -
 - Proposed for design/construction at Landfill location - 2005.
 - * Materials Recovery Facility -
 - Completed in 2002.
 - * Source separation based composting -
 - No longer proposed. A semi-commingled stream has proved advantageous to the County instead.
 - * Sludge/septage management - as per original plan; decision made to utilize private sector operations.
 - * Medical waste management - as per original plan.
 - * Mixed refuse processing - no decision at this time.

Project Schedule and Milestones

(Plus Attached Projections)

FIGURE 6.6-1 (1 OF 4)
SULLIVAN COUNTY INTEGRATED SOLID WASTE MANAGEMENT PLAN

Project Schedule

Activity	Immediate Phase		Intermediate Phase			Long Term Phase					
	1988 (88)	1989 (89)	1992 (92)	1993 (93)	1994 (94)	1995 (95)	1996 (96)	1997 (97)	1998 (98)	1999 (99)	2000 (00)
SOLID WASTE MANAGEMENT PLANS/DEQA ACTIONS											
<ul style="list-style-type: none"> • ORD/WM/PCRA released • Public review and hearings • Comment evaluation and FOM/Plan preparation • Adopt findings • Submit Plan to NYDEC • NYDEC approves Plan • Plan update 		●									
LANDFILLING											
<ul style="list-style-type: none"> • NYDEC issuance of permits to construct • Advertisement for bids to construct landfill and leachate pretreatment facility • Bid awards for landfill and leachate pretreatment facility • Preparation of landfill closure plan for current operation • Begin construction of landfill and leachate pretreatment facility • Excavation and grading • Liner systems • Leachate treatment facilities • Phase I of landfill expansion begins operation (optional testing) • Evaluate landfill mining 		●									
LEGISLATION AND REGULATION											
<ul style="list-style-type: none"> • Appoint recycling coordinator • Enact mandatory recycling ordinance • Phase in hauler licensing provisions • Haulers notify County of intent to use county or private facilities • Develop material separation requirements • Ordinance enforcement • Develop disposal bans • Local government procurement actions • Adopt and enact volume based pricing • Increase enforcement of illegal dumping regulations • Adopt and enact flow control 	●		●								
PUBLICITY AND EDUCATION PROGRAMS											
<ul style="list-style-type: none"> • Public information program for waste reduction and recycling • Develop and introduce school programs for waste reduction and recycling 											

FIGURE 6.6-1 (2 OF 4)
SULLIVAN COUNTY INTEGRATED SOLID WASTE MANAGEMENT PLAN

Project Schedule

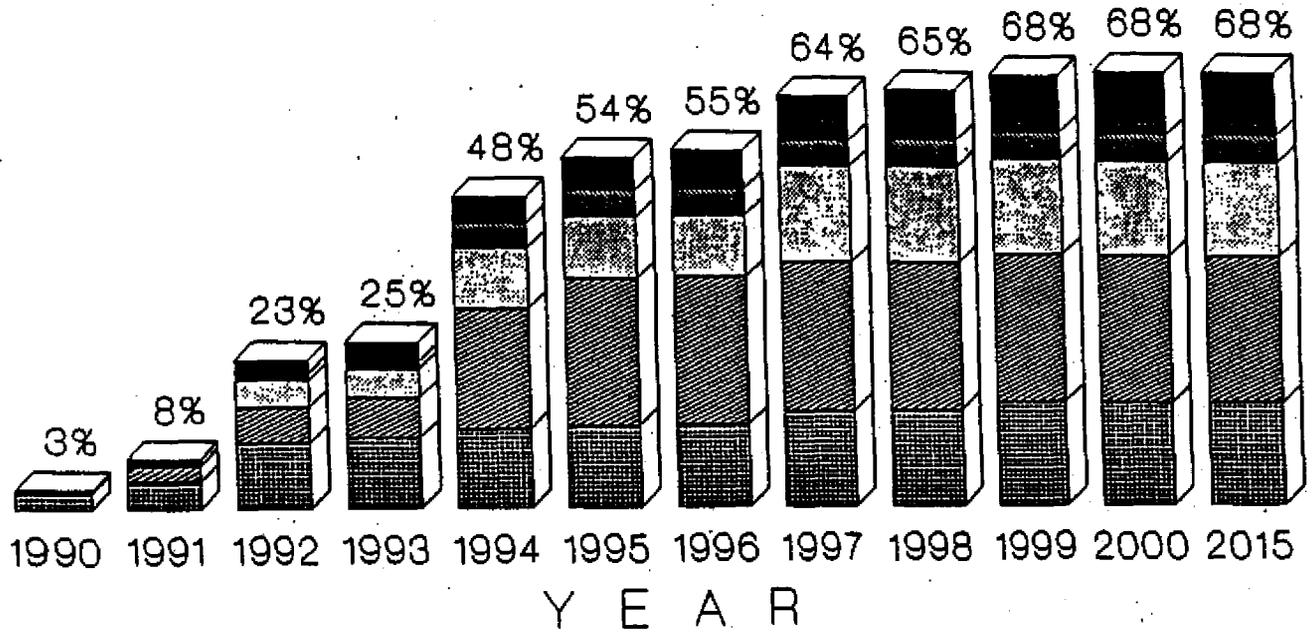
Activities	Feasibility Phase		Intermediate Phase			Long Term Phase					
	1998 (2)	1999 (8)	1999 (12)	2000 (2)	2000 (6)	2000 (12)	2001 (6)	2001 (12)	2002 (6)	2002 (12)	
PUBLICITY AND EDUCATION PROGRAMS (CONT'D)											
• Information program for household hazardous waste											
WASTE STREAM EVALUATIONS											
MSW RECEIVING STATIONS, MOTOR OIL, AUTO AND HOUSEHOLD BATTERIES, ASBESTOS AND OIL SOAKED DEBRIS											
• Recommend sites		■									
• Draft procurement documents		■									
• Select sites		■									
• SEQRA action		●									
• Issue draft procurement documents for MSW packing and removal service		●									
• Permitting		■									
• Select contractor		●									
• Complete site preparation and install station			■								
• Begin operation			●								
• Landfill asbestos and oil soaked debris											
YARD WASTE COMPOSTING AT COUNTY LANDFILL (PILOT FOOD WASTE)											
• Prepare design		■									
• Permitting		■									
• Site preparation			■								
• Begin operation			●								
WOOD AND RUBBLE PROCESSING											
• Select sites				●							
• Release RFP/bid				●							
• Permitting				■							
• Select processing contractor				●							
• Site preparation				■							
• Start processing				●							
• Demolition Permit Regulations				●							
WASTE TIRE REMOVAL AND PROCESSING											
MATERIALS RECOVERY FACILITY (MRF) COUNTY LANDFILL											
<i>Building Development</i>											
• SEQRA negative declaration		●									
• Permitting		■	■								
• Prepare design		■									
• Release bid solicitations/RFP		■									
• Select contractors			●								
• Complete building			●								
<i>Processing and Marketing</i>											
• Release draft bid/RFP		●									
• Final bid/RFP		●									

FIGURE 6.6-1 (3 OF 4)
SULLIVAN COUNTY INTEGRATED SOLID WASTE MANAGEMENT PLAN

Project Schedule

Activity	Preliminary Phase		Intermediate Phase			Long Term Phase						
	1998 (2000)	1999 (2001)	2000 (2002)	2001 (2003)	2002 (2004)	2003 (2005)	2004 (2006)	2005 (2007)	2006 (2008)	2007 (2009)	2008 (2010)	2009 (2011)
MATERIALS RECOVERY FACILITY (MRF) COUNTY LANDFILL (CONT'D)												
<i>Processing and Marketing (cont'd)</i>												
• Receive proposals		●										
• Select suppliers/contractors		●	■									
• Install equipment			■									
• Begin service			●									
BULKY METALS PROCESSING												
• Continue to operate drop-offs at transfer stations	■	■	■	■	■	■	■	■	■	■	■	■
SOURCE SEPARATION BASED COMPOSTING												
• SEQRA positive declaration					●							
• Draft EIS					■							
• Final EIS					■							
• Draft RFP					■							
• Site acquisition					■							
• Final RFP					●							
• Contract					●							
• Permit applications					■							
• Permits issued					■							
• Financing						●						
• Construction						■	■	■	■	■	■	■
• Operation												●
MIXED BULKY WASTE PROCESSING												
• Pursue Regionalization	■	■	■	■	■	■	■	■	■	■	■	■
• SEQRA positive declaration												●
• Draft EIS												■
• Final EIS												■
• Draft RFP												■
• Site acquisition												■
• Final RFP												●
• Contract												●
• Permit applications												■
• Permits issued												●
• Financing												●
• Construction												■
• Operation												●
SUDGE/SEPTAGE MANAGEMENT												
• Sludge landfilling	■	■	■	■	■	■	■	■	■	■	■	■
• Monitoring of Kubota process	■	■	■	■	■	■	■	■	■	■	■	■
• Participation in Hudson Valley Regional Council efforts	■	■	■	■	■	■	■	■	■	■	■	■
• Monitoring of private septage treatment facilities development												■

FIGURE 6.1-1
SULLIVAN COUNTY INTEGRATED SOLID WASTE MANAGEMENT PLAN
MATERIALS RECOVERY AND WASTE REDUCTION PROJECTIONS



2. Description of Resources

A. Funding and staffing

Current Division of Solid Waste staffing is adequate for landfill and transfer station operations. Staff are assigned to MRF operations on an as-needed basis. The MRF relies on County employees, ARC workers and NYS Dept. of Corrections inmate labor to sustain production.

B. Challenges to funding and staffing levels/management structure

Should the County adhere to the proposed implementation schedule, it is envisioned that MRF staffing would be enabled by County workers and an organization such as the ARC (Community Resource Center in Sullivan County). Two additional ARC workers have been added to the existing work crew to separate nickel-deposit containers, a successful revenue enhancement measure added in 2003.

The County has considered the possibility of constructing a wood/rubble recovery facility or alternate daily cover processing over the past 2-3 years. One option was utilizing the services of a private firm to separate out C & D materials at the landfill and ship it to the private firm's facility. Another option being explored is the expansion of the new Recycling Center (MRF) to accommodate C & D processing. However, the current economic climate is not conducive to such capital expenditures.

The wood/rubble recovery facility would be staffed by additional County employees or contracted out to the private sector. A compost facility is no longer planned.

3. Accomplishments/New Issues

A. Exceptional/Unique Solid Waste Management Programs

- The County continues to explore cost-effective waste disposal options with neighboring counties and corporations. The proposed Masada Plant in Middletown, NY is one example under consideration, though no decisions have been made regarding long term disposal contracts.

- Landfill gas, presently flared off as an odor control measure, may be used to heat the County's new Recycling Center in 2004. Additional uses for waste methane, such as electricity generation, are being explored as well. It is noted that Federal, and possibly State, alternative energy funding programs may be available to the County in 2003-2005.

B. New Solid Waste Management Issues During Reporting Period

- Additional disposal capacity has become available to regional generators during the past decade, resulting in competitive disposal rates and lower revenues to disposal facility operators, like Sullivan County.

- Landfill odors are noted around the landfill site, necessitating new odor control measures.

- Tipping fees for landfill-bound solid waste have diminished greatly during the last decade. Funds once anticipated for waste reduction and recycling programs have not been available for implementation of those activities. Because available funds are instead used to manage disposal facilities, other recovery operations lag. As available capacity in the region diminishes, it is anticipated that disposal rates (and revenues) may increase in the future.

- Additional property has been acquired by Sullivan County for expansion of the Sanitary Landfill.

- The market value of recyclables has stabilized over the period, resulting in more predictable revenues through sale of recyclable materials.

- Markets for some recyclable commodities have opened up. Bristol Paper Company and Weinert Scrap Metal, for example, have initiated operations or expanded in the region during this reporting period. Market expansion enables Sullivan County to evaluate the addition of new items to its recycling program; plus, the generation of higher revenue enables the County to expand its other waste reduction and recycling initiatives. Of note, however, remains the apparent reduction in vendors processing used vehicle tires. Only one viable tire market (Don Stevens Tire, Southington, CT) has been located within 200 miles of Sullivan County, a concern should this sole outlet close.

- Revenue from the sale of recyclables are incorporated into the Division of Solid Waste budget. Cost benefits to recycling through this diversion of funds must compete with other landfill and transfer station operations. Funds still remain somewhat limited in the current economic climate.

- While the County continues to accept recyclables at no charge, local haulers facing competition from outside the County have, to some degree, discontinued collection of recyclables. Others only accept those items which are economical or perform services in communities where public pressure forces them to.

- Sullivan County has placed a greater emphasis on enforcement of its Mandatory Recycling Ordinance during the period - including the collection of fines and issuance of consent orders to violators. Recycling compliance has improved, as evidenced by the ever-growing quantities of recyclables collected by the County during the last decade.

4. Annual Recycling Report Form (Solid Waste & Recyclables Inventories)

See Attachment.

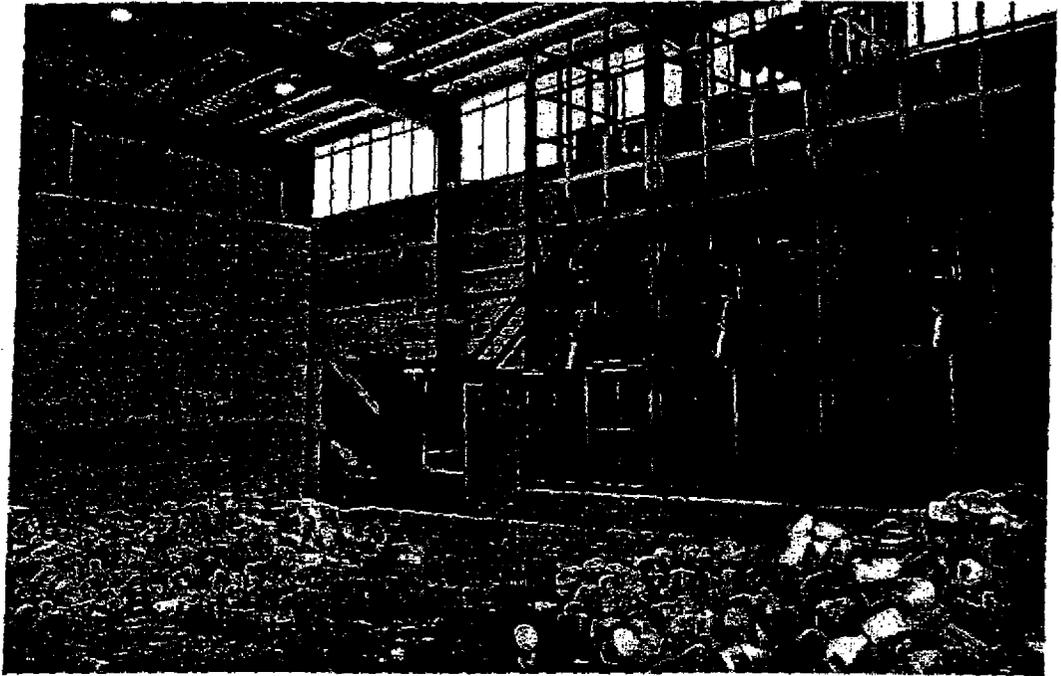


Figure 2. With the help of NYSDEC matching grants, a New Sullivan County Recycling Center takes shape in mid-2002!

Annual Recycling Report, 2002

(Attachment)

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS**

ANNUAL RECYCLING REPORT (2002 Data)

1. Calendar year: <u>2002</u>	2. Solid Waste Management planning Unit or Reporting Municipality: <u>Sullivan County</u>
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3. Legal Form of Entity (i.e., Authority, Department, Agency etc...): Division of Solid Waste

4. Address: <u>91 Landfill Drive Monticello, NY 12701-3835</u>	Phone: <u>(845) 794-4466</u>	Fax: <u>(845) 791-6340</u>
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5. Counties or Towns (names) that comprise planning unit: <u>Sullivan County</u>	6. Population: <u>73,966</u>
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7. Number of Towns: <u>15</u>	8. Number of Villages: <u>6</u>
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9. Cities (names): 0

10. Program Contact Person & Title: <u>Bill Cutler II, Recycling Coordinator</u>	Department Head & Title: <u>John Kehlenbeck, Director of Solid Waste</u>
--	--

11. For responses 12, 13, 14, & 15, please state if data is actual measurements (i.e., scale data), estimates (i.e., from SWMP) for other source (explain): scale data

12. Solid waste generated in the planning unit prior to waste reduction, reuse and recycling (tons):
MSW: scale data C&D: scale data NHIW: — Sewage Sludge: scale data Total: scale data

13. Solid waste generated in the planning unit (including recycling) and handled by the planning unit as part of their solid waste stream (tons): MSW: 83,065 tons C&D: 21,279 tons NHIW: — Sewage Sludge: 2,599 tons Recycling: 6,704 tons
Total: 106,943 tons

14. Waste disposed (tons) by planning unit (PU) as part of their solid waste system:

	Landfilled		Waste-to-Energy		Other or Unaccounted for (describe w/tonnage)	
	(Within PU)	(Out of PU)	(Within PU)	(Out of PU)		
MSW	83,065 tons	102,342 tons				
C&D	21,279 tons	—				
NHIW	—	—				
Sewage Sludge	2,599 tons	—				
Total:	106,943 tons	102,342 tons				

Grand Total: 209,285 tons

15. Material received for recycling from outside of planning unit or reporting municipality. (For information purposes only. This is not calculated as part of recycling rate.)
Outside entities (municipality or private source) None Tons: 0
Grand Total: 0

16. Describe any program requirement for mandatory curbside collection of recyclables (i.e., local laws):

Sullivan County Solid Waste Management Local Law #1 of 1992 requires source separation and collection of recyclables by haulers providing refuse collection services.

17. Describe any drop-off center programs for recyclables (i.e., voluntary/mandatory, limited use, widespread, etc.): *The County operates five regional solid waste recycling transfer stations and a Landfill at which drop-off facilities are available. A Materials Recovery Facility (MRF) is operated at the Landfill for commercial and municipal curbside collection programs.*

Is the drop-off ownership and operation public or private? *Public*

18. Describe any program mandate requiring institutional/commercial/industrial generators to source separate/recycle: *Sullivan County Solid Waste Management Local Law #1 of 1992 applies to all residential, institutional, commercial and industrial generators.*

19. Describe any exceptions allowed to the program recycling mandates: *None*

20. Describe any registered, exempt compost facilities, type of materials composted, estimated annual quantity and distribution of finished materials: *None*

21. Describe any program which educates, quantifies, mandates or otherwise addresses recycling in the commercial, industrial and institutional entities in the planning unit: *The Sullivan County Recycling Coordinator provides no-cost educational seminars, facility tours, technical support and literature to all entities upon request. Program development is ongoing.*

22. Please append copies of any local laws governing recycling, MSW and enforcement of solid waste/source separation/recycling laws.

Copy(s) appended:

FORM A

RECYCLING REPORT FOR THE CALENDAR YEAR 2002

Material Categories	(1) Material	(2) Planning Unit/System Solid Waste Program Recycling tons Mandatory (M) or Voluntary (V)	(3) Non-program/ Private mandated recycling in tons	(4) Non- program/ private non- mandated recycling in tons	(5) Total Tons
PAPER	Newspaper	606 (M)			606
	#6 Mix				
	#8 Mix				
	Mixed Paper	234 (M)			234
	Mixed Paper (animal bedding only)				
	Magazines				
	Corrugated Cardboard	1,614 (M)			1,614
	Kraft Paper				
	Gable top/ Drink Boxes				
	Paperboard Chipboard/ Boxboard				
	Hardcover Books				
	Softcover Books				
	Office Paper				
	"Junk Mail"				
	Telephone Directories				
Commingled Paper (specify)					
Other Paper (specify)					
	PAPER TOTAL	2,454			2,454

FORM A (Continued)

Material Categories	(1) Material	(2) Planning Unit/System Solid Waste Program Recycling tons Mandatory (M) or Voluntary (V)	(3) Non-program/ Private mandated recycling in tons	(4) Non-program/ private non- mandated recycling in tons	(5) Total Tons
PLASTIC	PET#1	64 (M)			64
	HDPE #2	95 (M)			95
	LHDPE #2				
	PVC #3				
	LDPE #4				
	LLDPE #4				
	PP #5				
	PS #6				
	Other Plastic (specify)				
	PLASTIC TOTAL	159			159
ORGANICS (Yard waste listed separately below)	Food Waste				
	MSW Compost				
	Other Organic				
	ORGANICS TOTAL				
METAL Ferrous	Ferrous and Bi- metal Food Containers (inc. Aerosol cans)	152 (M)			152
	Enmeled Metal Appliances (white goods)	2,688 (M)			2,688
	White Autos and Parts				
	Other Ferrous				
	FERROUS TOTAL	2,840			2,840
Non-Ferrous	Aluminum Cans/Foil	7 (M)			7
	Other Aluminum				
	Other Non-Ferrous				
	NON-FERROUS TOTAL	7			7

FORM A (Continued)

Material Categories	(1) Material	(2) Planning Unit/System Solid Waste Program Recycling tons Mandatory (M) or Voluntary (V)	(3) Non-program/ Private mandated recycling in tons	(4) Non-program/ private non- mandated recycling in tons	(5) Total Tons
GLASS	Glass - Clear				
	Glass - Green				
	Glass - Brown				
	Glass - Mixed	260 (M)			260
	Glass - Plate				
	Other Glass				
	GLASS TOTAL	260			260
COMMINGLED	Glass, metal, plastic containers, other (specify)				
Rubber	Rubber, tires	568 (M)			568 (M)
	Other rubber				
TEXTILES	Textiles/leather	150 (V)			150
WOOD	Wood Pallets				
	Wood Lumber				
	Other wood (including C&D wood)				
	WOOD TOTAL	0			0
CONSTRUCTION & DEMOLITION DEBRIS (C&D)/ INERT	Asphalt				
	Concrete/Brick/ Rock/Fines				
	Contaminated Soil				
	Other C&D/Inert				
	C&D/INERT TOTAL	0			0

FORM B

Waste Reduction and Reuse

See Appendix E for Source Reduction Strategies

Please include methods even if tonnages are unknown.

(Examples: Report pallet reconditioning and textiles reused here.)

MATERIALS	METHOD OF REDUCTION	TONS
Textiles	Salvation Army - Reuse	150
GRAND TOTAL: 150		

FORM C

Recycling and Waste Reduction/Reuse Rates

FORMULA FOR DETERMINING RECYCLING RATE:

Total tons recycled (Grand Total from Column 5, Form A) = A = 6,505 tons
Total tons solid waste generated (Item 12, cover sheet) = C = 106,943 tons

RECYCLING RATE = A / C X 100% = 6.1 %

FORMULA FOR DETERMINING WASTE REDUCTION/REUSE RATE:

Total tons from waste reduction and reuse (Grand Total from Form B) = B = 150
Total tons solid waste generated = C = 106,943

WASTE REDUCTION/REUSE RATE = B/C X 100% = .1 %

TOTAL COMBINED RECYCLING/WASTE REDUCTION/REUSE RATE = 6.2 %



SULLIVAN COUNTY MANDATORY RECYCLING PROGRAM

DETAILED RECYCLING INSTRUCTIONS - 2003a

PLEASE NOTE: THESE INSTRUCTIONS ARE INTENDED AS A GUIDE; PLEASE CONSULT A SULLIVAN COUNTY TRANSFER STATION OPERATOR, PRIVATE HAULER OR THE SULLIVAN COUNTY DIVISION OF SOLID WASTE (TEL. 845-794-4466) FOR MORE SPECIFIC INSTRUCTIONS. IMPROPERLY PREPARED RECYCLABLES MAY COST MORE TO TIP, OR BE RETURNED TO YOU FOR ADDITIONAL CLEANING OR SORTING. FOLLOW THESE INSTRUCTIONS CAREFULLY TO AVOID THE UNPLEASANT TASK OF REPROCESSING YOUR ITEMS!

ITEM	ACCEPTABLE	PREPARATION INSTRUCTIONS	UNACCEPTABLE
MIXED OFFICE PAPER	MAGAZINES, "JUNK" MAIL, TELEPHONE BOOKS, ENVELOPES, BOOKS WITH HARD COVERS REMOVED, SCHOOL & OFFICE PAPER	SAVE MIXED OFFICE PAPERS IN BOXES, BINS OR PLASTIC BAGS (PREFERABLY CLEAR) FOR EASY COLLECTION DELIVER BULK QUANTITIES OF MIXED PAPER TO THE MAMAKATING TRANSFER STATION FOR RECYCLING (SEE REVERSE SIDE FOR STATION LOCATION & HOURS OF OPERATION)	NO: NEWSPAPER OR CORRUGATED CARDBOARD (RECYCLE SEPARATELY) NO: SHOE/CEREAL BOXES, WAXED PAPER, BLUEPRINTS, CARBONS NO: GARBAGE!
NEWSPAPER	ALL REGULAR NEWS & GLOSSY INSERTS	HANDLE AND STACK NEWSPAPER LOOSELY; DO NOT TIE INTO BUNDLES	NO: PHONE BOOKS, MAGAZINES OR JUNK MAIL (RECYCLE THESE WITH MIXED OFFICE PAPER); NO BUNDLED OR SOILED NEWS
CORRUGATED CARDBOARD / KRAFT PAPER	SHIPPING BOXES & CARTONS, KRAFT PAPER BAGS (BROWN PAPER SHOPPING BAGS)	MUST BE CLEAN & MOSTLY DRY; FREE OF WAX OR PLASTIC COATINGS; REMOVE TAPE IF PRESENT; FLATTEN BOXES & TIE FOR EASY STORAGE	NO: CEREAL OR SHOE BOXES; VERY WET, SOILED OR LAMINATED MATERIALS
GLASS	GLASS BOTTLES (ALL COLORS), CONTAINERS, JARS AND PLATE GLASS	RINSE CONTAINERS CLEAN & REMOVE METAL PARTS; PLACE METAL LIDS WITH MIXED CONTAINERS (BELOW); THROW AWAY PLASTIC CAPS & PARTS *LABELS MAY BE LEFT ON*	NO: LIGHT BULBS, AUTO GLASS, CERAMICS OR MIRRORS NO: SOILED OR NON-GLASS ITEMS NO: TV OR COMPUTER SCREENS
MIXED CONTAINERS: #1 & #2 PLASTIC BOTTLES ONLY, STEEL CANS and ALUMINUM BEVERAGE CANS	COMMINGLE THE FOLLOWING ITEMS: #1 & #2 PLASTIC BOTTLES ONLY; i.e. SODA BOTTLES, JUICE BOTTLES, SOME MOUTHWASH PRODUCTS; BLEACH, DETERGENT, MILK & CLEAN ANTIFREEZE JUGS ALUMINUM BEVERAGE CANS IRON, STEEL, TIN AND BI-METAL CANS & CONTAINERS; i.e. SOUP, PET FOOD & VEGETABLE CANS	RINSE MIXED CONTAINERS CLEAN; THROW AWAY PLASTIC CAPS & PARTS <i>TIP: PLASTIC BOTTLES HAVE A NECK OR HANDLE; CHECK BOTTOM OF PLASTIC BOTTLES FOR THE #1 OR #2 RECYCLING TRIANGLE</i> ALUMINUM BEVERAGE CANS MUST BE CLEAN & EMPTY STEEL CANS MUST BE CLEAN & EMPTY RINSE FOOD RESIDUES OUT WELL *LABELS MAY BE LEFT ON*	NO: PLASTIC BAGS, STYROFOAM, OR PLASTICS (SUCH AS #3 (VINYL)) OF ANY RESIN VARIETY OTHER THAN #1 OR #2 BOTTLES NO: MOTOR OIL JUGS, SOILED BOTTLES, MARGARINE TUBS, 5 gal. PAILS OR COTTAGE CHEESE CONTAINERS NO: GLASS (RECYCLE GLASS SEPARATELY!) NO: PIE TINS, FOIL OR SCRAP ALUMINUM ITEMS; RECYCLE THESE ITEMS WITH SCRAP METAL (SEE BELOW) NO: SOILED CANS
TIRES (\$ FEE \$)	RUBBER VEHICLE TIRES	REMOVE RIMS IF POSSIBLE; REMOVE SOIL IF PRESENT; DRAIN WATER IF PRESENT	NO: TIRES CONTAINING SOIL OR WATER; RECYCLE RIMS SEPARATELY IF POSSIBLE
USED MOTOR OIL	NON-COMMERCIAL AMOUNTS OF USED MOTOR OIL AND TRANSMISSION FLUID	TAKE USED MOTOR OIL TO RECYCLING STATION IN A CONTAINER YOU CAN REUSE - PLEASE THROW AWAY ANY CONTAINER YOU DO NOT REUSE	NO: VEGETABLE OIL, GREASE OR FAT NO: INDUSTRIAL SOLVENTS, TRANSFORMER OILS OR "UNKNOWN" FLUIDS
ANTIFREEZE (LANDFILL SITE ONLY)	NON-COMMERCIAL AMOUNTS OF USED ANTIFREEZE	TAKE ANTIFREEZE TO THE LANDFILL RECYCLING STATION IN A CONTAINER YOU CAN REUSE	NO: OIL OR GREASE, INDUSTRIAL SOLVENTS, TRANSFORMER OILS OR "UNKNOWN" FLUIDS
SCRAP METAL (NOTE: \$ FEE \$ FOR CFC-CONTAINING APPLIANCES)	METAL APPLIANCES AND SCRAP IRON, ALUMINUM, COPPER, BRASS AND TIN CLEAN PIE TINS, ALUMINUM FOIL, METAL CONTAINERS	KEEP SOIL, WOOD, DEBRIS AND OTHER CONTAMINANTS OUT OF SCRAP METAL AND ITS CONTAINER; REMOVE DOORS FROM APPLIANCES, AND STORE CFC-CONTAINING UNITS APART FROM OTHER SCRAP METAL ITEMS	NO: NON-METAL ITEMS SUCH AS PLASTIC, WOOD, ROCKS & SOIL NO: APPLIANCES WITH DOORS STILL INTACT NO: SOILED OR CONTAMINATED MATERIALS, "METAL ONLY"

5. Reduction, Reuse and Recycling

A. Description of Waste Reduction and Recyclables Recovery Program

Sullivan County operates five recycling and transfer stations, plus a central landfill and new recycling center, which are located throughout the County and in the Village of Monticello, respectively. The Landfill serves residential and commercial customers in all 15 towns and 6 villages in Sullivan County. Recyclables are accepted at the recycling and transfer stations in partially source-separated fashion. Glass containers are kept separate from other containers. Haulers are required to deliver their recyclables to the Recycling Center in Monticello prepared as well.

Education about waste reduction and recycling is made available to the public through instructional recycling handouts, and through recycling seminars which are provided on request at no charge to all schools and civic organizations in the County. Pre-cycling as a means of waste avoidance is encouraged through these groups. Environmental tours of the Landfill and Recycling Center are available upon request.

- 1) A change has been made to the County's practice in accepting only source separated recyclables. Metal cans and plastic bottles are now combined to save space on collection vehicles. High quality control of source-separated materials will be maintained as a means of successful materials marketing. Vastly commingled materials would require additional staff for preparation. In order to maintain costs, most source-separation will continue. Glass, however, is collected as a separate stream now that the new Recycling Center has become operational. Glass fines, a contaminant to other materials, are thus minimized.
- 2) The relocation of the County's winter maintenance operation has freed up a former salt storage building for storage of market-ready recyclables. Recycling program promotional literature is attached.

B. Differences between Approved LSWMP and CRA

The Approved LSWMP for Sullivan County contains the CRA; no differences are noted.

C. Solid Waste Stream / Other Potential Recyclable Materials Evaluation

1) Present and Potential Markets

Current recyclables are marketed through several outlets, including:

Newsprint, Baled Corrugated Cardboard, Mixed Paper, Aluminum Cans, Plastic Bottles, and Tin Cans are marketed through Fox Run Recycling. Mixed Paper, Loose Newsprint and Loose Corrugated Cardboard are recycled through Fox Run Recycling at Hudson Baylor, Inc. Glass (all colors) is consumed as drainage material at the Sullivan County Landfill. Aluminum Cans are also sold to Fox Run or Liberty Scrap. Tires are transported out-of-state by Don Stevens Tire Co., Inc. Ferrous Scrap Metal is purchased by Weinert's. CFC-Containing Appliances are decommissioned (per EPA regulations) by Dankelmann & Associates. Textiles are accepted by the Salvation Army in collection boxes placed at the Landfill Scalehouse. Used Motor Oil and Antifreeze are recycled by A-1 Environmental.



Figure 3. New glass processing equipment is being evaluated by Sullivan County to produce value-added recyclable materials.

Potential recycling markets hinge upon demand for additional items not readily recycled in this geographic area at the present time: Chipboard, Processed Wood and Rubble, Mixed/Broken Glass and Compostable Materials all are potential targets for recovery, provided demand for these materials develops.

2) **Technical Feasibility**

In evaluating materials for inclusion in the recycling program, consideration must be given to the material's applicability to all County waste facilities (landfill/transfer stations), with regard to collection, transport to MRF, and available infrastructure (equipment) to process material for shipment to markets. An example has been the County's mixed paper program.

3) **Implementation Schedule (see Executive Summary)**

-
- D. Discussion of Progress - addition of Antifreeze, continuation of Mixed Office Paper.
 - E. Local Law #1 of 1992 and embedded SWM Rules & Regulations (attached)

**Local Law #1 of 1992, including
Solid Waste Management
Rules & Regulations**

(Attachment)

6. Executive Summary

As in a growing number of communities in the state and nation, Sullivan County's plan for waste recovery and recycling has collided with a "bottom line" finance-driven economy. Waste recovery/recycling programs must be justified, when competing with other community programs, needs and mandates. Sullivan County's fragile economy, unlike its more affluent neighbors in the region, necessitates cautious, deliberate and cost effective planning in the evolution of its waste recovery and recycling program. Waste recovery and recycling is and will continue to be a component of waste management in Sullivan County.

DISTRIBUTION LIST

2003 SWMP Compliance Report Update and Annual Recycling Report Copies:

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