

**Solid Waste Management Plan Amendment:
Response to the Task Force Report**

Morris County, New Jersey

February 1993

**Prepared for:
Morris County Board of Chosen Freeholders**

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INTRODUCTION:

In accordance with the requirements of the New Jersey Solid Waste Management Act (N.J.S.A. 13: 1E-1 et seq.), Morris County has been designated as a solid waste management district, along with each of the remaining New Jersey Counties and the Hackensack Meadowlands Development Commission. Each solid waste management district has been charged with the responsibility of developing a long-range solid waste management plan. The Morris County Municipal Utilities Authority (MCMUA) has been designated by the Morris County Board of Chosen Freeholders as the agency responsible to implement the Morris County Solid Waste Management Plan (MCSWMP or Plan).

On August 19, 1985, the New Jersey Department of Environmental Protection (NJDEP) approved the MCSWMP Update which was prepared in May, 1985. This Plan included a multi-faceted solid waste management strategy incorporating resource recovery in the form of maximum recycling and development of a waste-to-energy facility, as well as sanitary landfilling of the process residue and non-processible waste.

In an effort to implement the waste-to-energy facility, on September 14, 1989 the Morris County Board of Chosen Freeholders (Board) signed a Service Agreement with Foster Wheeler Morris County, Inc. to permit, design, construct, operate, and maintain a 1,340 TPD mass burn waste-to-energy facility for the processible waste generated in the County. On December 27, 1989 the Board forwarded a Plan Amendment to the NJDEP which, among other things, proposed to include Site 15 in Roxbury Township as the waste-to-energy facility site. On April 6, 1990, Governor Florio signed Executive Order Number Eight, which among other things, placed a 120 day moratorium on the final approval of any solid waste management plan that sites, increases the capacity of, or approves financing for waste-to-energy resource recovery facilities.

On July 2, 1990 NJDEP Commissioner Yaskin remanded the portions of the December 27, 1989 Amendment, which pertained to the proposed waste-to-energy facility, back to Morris County for modifications to be consistent with those recommendations in the Emergency Solid Waste Assessment Task Force (Task Force) Report, which were accepted by the Governor.

On August 6, 1990 the Task Force submitted "The Emergency Solid Waste Assessment Task Force: Final Report" (Task Force Report) to Governor Florio in response to his April 6, 1990 Executive Order #8 which mandated a Task Force reassessment of New Jersey's solid waste management strategy. In short, the Task Force Report recommends the establishment of the following goals:

- aggressive implementation of source reduction strategies;
- a 60% overall recycling rate, and;
- achievement of greater regionalization of recycling and disposal facilities.

In an April 19, 1991 New Jersey Department of Environmental Protection and Energy (NJDEPE) Certification of October 24, 1990 and November 28, 1990 Plan Amendments, which included small scale incinerators proposed by Dover General Hospital and Sandoz Pharmaceutical Corporation respectively, NJDEPE Commissioner Weiner directed Morris County to submit to the NJDEPE a Plan Amendment which addresses the following issues:

- how the County intends to achieve the 60% recycling rate by December 31, 1995;
- how the County intends to achieve the source reduction goals called for in the Task Force Report;
- additional in-County facility siting;
- technology selection;
- duration of dependence upon out-of-state disposal capacity, and;
- plans for in-State regionalization.

This proposed Plan Amendment deletes waste-to-energy as the preferred resource recovery technology from the Morris County Solid Waste Management Plan. The selection of waste-to-energy as the preferred technology was originally included in the August 19, 1985 Plan Update. In addition, this Plan Amendment deletes the proposed 1,340 tons per day (TPD) waste-to-energy facility which was to be developed in accordance to the December 27, 1989 Plan Amendment which reflected the Service Agreement entered into between Foster Wheeler Morris County, Inc. and the Board of Chosen Freeholders.

This proposed Plan Amendment (Amendment) modifies the MCSWMP to address the issues identified above and to incorporate the recommendations contained in the Task Force Report. This Amendment shall also serve as a guidance document for Morris County in achieving the general goals stated in the Task Force Report. The document will be used as a guide by the County in its efforts toward implementing more specific solid waste management objectives in the future. Finally, this Amendment will make minor formal changes to the MCSWMP to incorporate the current status of solid waste management in Morris County.

BACKGROUND:

In 1991, Morris County initiated a re-evaluation of its solid waste management strategy in an attempt to formulate a Plan which is technically feasible, cost effective, environmentally sound and in conformance with the goals stated in the Task Force Report. The Board of Chosen Freeholders established a Blue Ribbon Panel to investigate the County's solid waste strategy with respect to the Task Force Report and to make recommendations to the County. This effort resulted in a report entitled *Alternative Solid Waste Management Report* dated July 1991.

Concurrently, the Morris County Municipal Utilities Authority (MCMUA), the agency designated by the Board of Chosen Freeholders to implement the MCSWMP, worked with staff and consultants in analyzing potential solid waste management alternative systems as presented in a report entitled *Review and Assessment of Solid Waste Management System Alternatives* dated November 1991. Much of the solid waste data foundation for this report as well as future

planning and implementation efforts is provided primarily from two reports prepared for the MCMUA: *Morris County Solid Waste Composition Study* dated April 1991 and *Morris County Waste Quantity Projections* dated April 1991. The solid waste management data presented in these reports was utilized for planning purposes in this Amendment. In addition, updated data and analysis subsequent to these 1991 reports are available and have been incorporated into the projections and goals presented in this Plan Amendment.

In addition to these reports which concentrate on County-wide solid waste management, the MCMUA conducted a survey in the Fall of 1992 of the solid waste management and recycling practices being utilized by each of the County's 39 municipalities. This information provides much of the information used in the Amendment regarding municipal programs. A copy of the survey is presented in the Appendix. Most of the information collected on each municipality is entered into and maintained in a computerized recycling inventory database. The data entered in this system includes but is not limited to:

- materials collected;
- material accepted at a depot;
- materials mandated to be source separated (by sector);
- recycling markets used for each material;
- how each material is stored and/or consolidated;
- recycling equipment utilized;
- recycling services utilized;
- recycling infrastructure established;
- estimated costs for the program;
- enforcement policy, and;
- education program.

The Morris County Board of Chosen Freeholders, the MCMUA in conjunction with its staff and the Morris County Solid Waste Advisory Council (SWAC) have considered all of the information provided in these previously mentioned reports, including the update of municipal recycling programs, and have developed a long range solid waste management plan. This long range plan conforms with the Task Force goals as well as with the County goals of establishing a solid waste management plan which is technically feasible, cost effective and environmentally sound. A schematic flow diagram which illustrates the County's proposed Plan projected to 1995 is provided in Figure 1. The individual components of the Plan and Figure 1 will be discussed individually in subsequent sections of this Plan Amendment. The County's long term Plan and assumed waste quantity projections are predicated on the achievement of source reduction goals contained in the Task Force Report. Below is a discussion of the County's Source Reduction Strategy to achieve these goals.

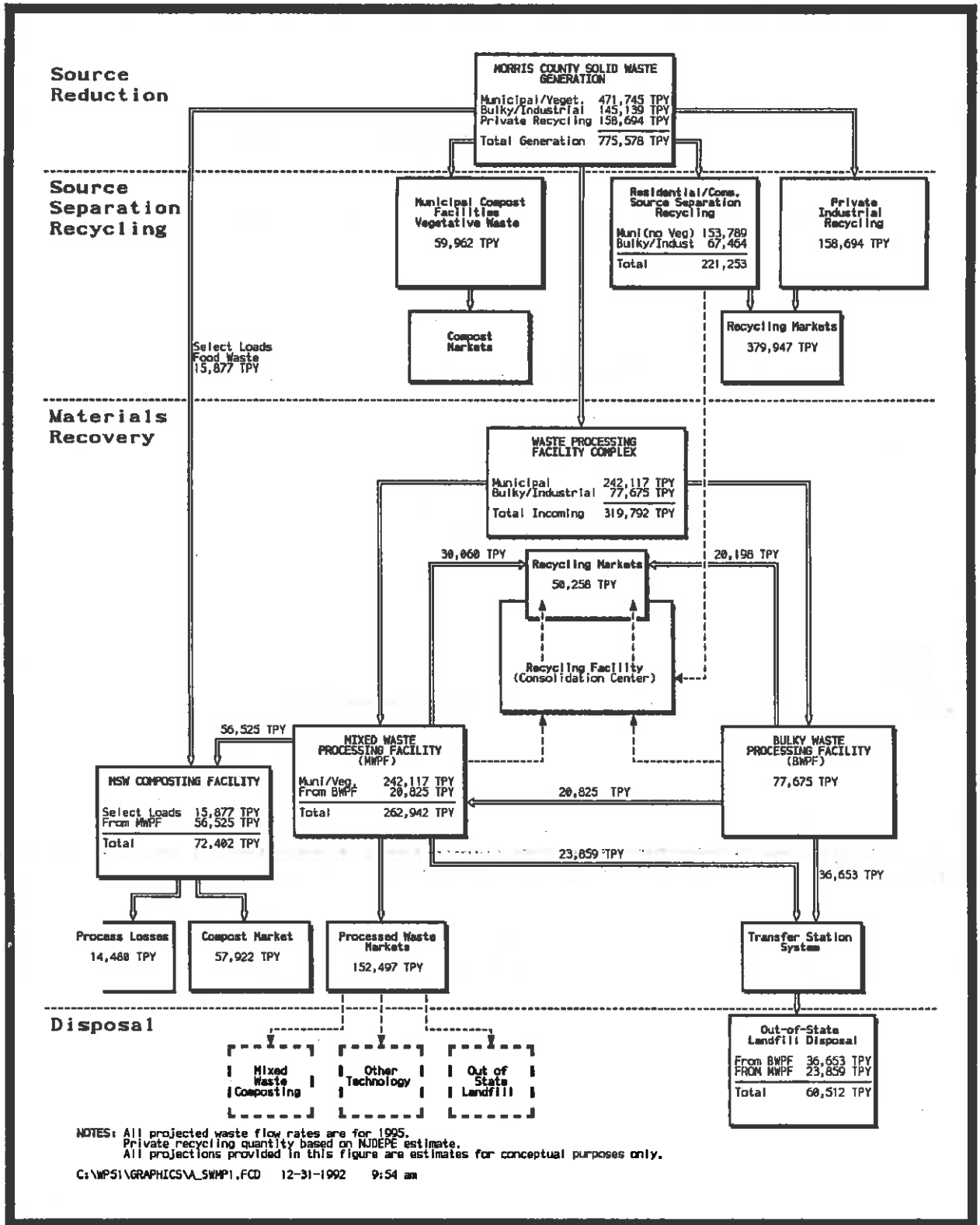


Figure 1 - 1995 Morris County Proposed Solid Waste Management System

SOURCE REDUCTION:

County Source Reduction Goals:

Morris County accepts and incorporates into its Plan the following source reduction goals:

- declining increases in per capita waste generation growth to 1995;
- no per capita change from 1995 to 2000;
- a per capita decrease from 2000 to 2005, and;
- a stable per capita generation rate thereafter.

These goals are in conformance with the Task Force Report's objectives.

Table 1 presents the Morris County solid waste generation projection based upon achievement of these per capita source reduction goals. Figure 2 graphically illustrates the projected per capita waste generation rate from 1990 to 2010. It shows per capita generation will increase at a declining rate from 1.77 tons/person in 1990 to a projected high of 1.81 tons/person in 1995 through 2000. It is anticipated that per capita generation rate will remain stable for this five year period. From 1.81 tons/person in 2000, generation will fall to 1.77 tons/person in 2005. It is assumed per capita generation will stabilize at 1.77 tons/person from 2005 and thereafter. Figure 3 illustrates total waste generation projections based on the these per capita generation assumptions. One should note that while per capita generation rate are expected to stabilize and decline, County-wide generation tonnages may increase due to projected increases in population. Current solid waste planning efforts contained in this Plan Amendment are based on attainment of these source reduction goals.

Municipal Source Reduction Goals:

Source Reduction goals for the 39 individual municipalities located in Morris County are based on the goals utilized by the County. Generation projections have been calculated County-wide and are included in Table 1. The individual municipal generation projections, based on the achievement of the reduction goals, have been included in Table 2 (1990), Table 3 (1995), Table 4 (2000), Table 5 (2005) and Table 6 (2010). The reduction goals listed in these tables are meant to be minimum goals and the County will continue to refine its Plan and programs to achieve even higher reduction rates.

The source reduction implementation strategy discussed in the following section is the County's plan to insure these reduction goals are achieved. It is imperative these goals are achieved for two primary reasons. First and most important, source reduction is the most effective and the highest order of sound solid waste management practice. Second, the source separation recycling projections and the projected facility processing capacities are based on the attainment of these reduction goals.

**Table 1
Solid Waste Generation Projections
Morris County, New Jersey**

Year	County Population Projection Persons	Muni/Veg Waste Generation Tons/Year	Muni/Veg Generation Rate Tons/Person/Yr	Bulky/Ind Waste Generation Tons/Year	Bulky/Ind Generation Rate Tons/Person/Yr	Private Recycling Projection Tons/Year	Private Recycling Rate Tons/Person/Yr	Total Waste Generation Tons/Year	Total Generation Rate Tons/Person/Yr
1990	421,353	450,418	1.0690	138,578	0.3289	155,727	0.3696	744,723	1.7675
1991	422,959	456,319	1.0789	140,393	0.3319	156,320	0.3696	753,033	1.7804
1992	424,565	461,412	1.0868	141,960	0.3344	156,914	0.3696	760,286	1.7907
1993	426,170	465,686	1.0927	143,275	0.3362	157,507	0.3696	766,469	1.7985
1994	427,776	469,134	1.0967	144,336	0.3374	158,101	0.3696	771,571	1.8037
1995	429,382	471,745	1.0987	145,139	0.3380	158,694	0.3696	775,578	1.8063
1996	430,988	473,508	1.0987	145,682	0.3380	159,288	0.3696	778,478	1.8063
1997	432,594	475,272	1.0987	146,225	0.3380	159,881	0.3696	781,378	1.8063
1998	434,199	477,036	1.0987	146,768	0.3380	160,475	0.3696	784,279	1.8063
1999	435,805	478,801	1.0987	147,310	0.3380	161,068	0.3696	787,179	1.8063
2000	437,411	480,566	1.0987	147,853	0.3380	161,662	0.3696	790,081	1.8063
2001	438,301	480,676	1.0967	147,887	0.3374	161,991	0.3696	790,554	1.8037
2002	439,191	479,915	1.0927	147,653	0.3362	162,320	0.3696	789,887	1.7985
2003	440,081	478,275	1.0868	147,148	0.3344	162,649	0.3696	788,072	1.7907
2004	440,971	475,753	1.0789	146,372	0.3319	162,978	0.3696	785,102	1.7804
2005	441,861	472,342	1.0690	145,323	0.3289	163,307	0.3696	780,971	1.7675
2006	442,751	473,293	1.0690	145,616	0.3289	163,635	0.3696	782,544	1.7675
2007	443,641	474,244	1.0690	145,908	0.3289	163,964	0.3696	784,117	1.7675
2008	444,531	475,196	1.0690	146,201	0.3289	164,293	0.3696	785,690	1.7675
2009	445,421	476,147	1.0690	146,494	0.3289	164,622	0.3696	787,263	1.7675
2010	446,311	477,099	1.0690	146,786	0.3289	164,951	0.3696	788,836	1.7675

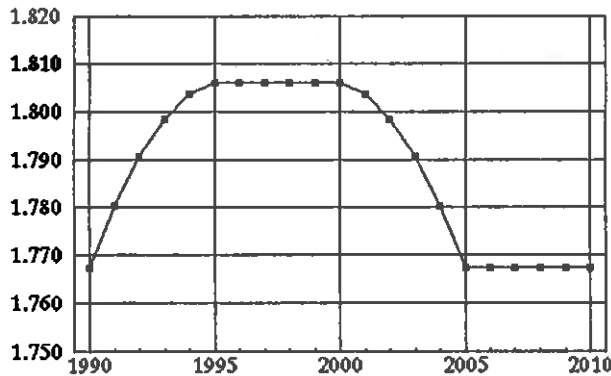
Notes:

1. Private Recycling refers to recycling which is unaccounted for by existing reporting procedures.
2. Population projection is based on the 1990 Census and Morris County Planning Board Update dated October 13, 1992.
3. Documented (Municipal/Vegetative & Bulky/Ind) Waste Generation projections are based on the following assumptions:
 - a. The per capita generation rate for documented solid waste will increase at a declining rate to 1995; remain constant from 1995 to 2000; declining from 2000-2005; and remain constant thereafter;
 - b. Private recycling levels remain constant at the rate estimated by the Task Force (0.36959 tons/person/year)

Figure 2

Per Capita Total Waste Stream Generation Projection

Tons/Person/Year

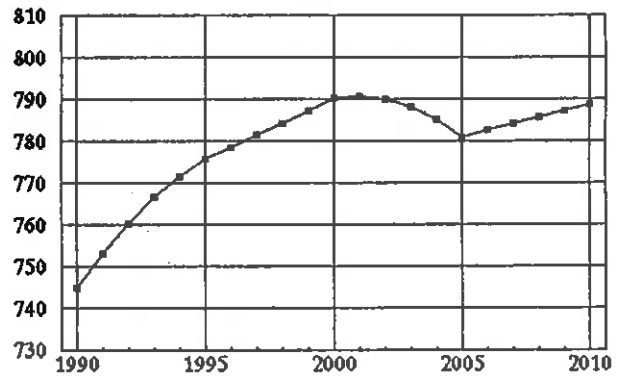


Note: Graph does not begin at zero.

Figure 3

Total Waste Stream Generation Projection

Tons Per Year (x1000)



Note: Graph does not begin at zero.

**Table 2
1990 – Solid Waste Generation by Municipality
Morris County, New Jersey**

Municipality	Population Persons	Muni/Veg	Muni/Veg	Bulky/Ind	Bulky/Ind	Private	Private	Total	Total
		Waste Generation Tons/Year	Generation Rate TPY/Person	Waste Generation Tons/Year	Generation Rate TPY/Person	Recycling Projection Tons/Year	Recycling Projection TPY/Person	Waste Generation Tons/Year	Waste Generation TPY/Person
Boonton	8,343	5,469	0.6556	1,612	0.1932	3,083	0.3696	10,164	1.2183
Boonton Twp.	3,566	2,161	0.6060	714	0.2003	1,318	0.3696	4,193	1.1758
Butler	7,392	7,790	1.0538	1,659	0.2244	2,732	0.3696	12,181	1.6478
Chatham Boro.	8,007	10,527	1.3147	3,202	0.3999	2,959	0.3696	16,688	2.0842
Chatham Twp.	9,361	6,325	0.6757	1,229	0.1313	3,460	0.3696	11,014	1.1766
Chester Boro.	1,214	2,445	2.0142	1,130	0.9308	449	0.3696	4,024	3.3146
Chester Twp.	5,958	5,992	1.0057	653	0.1096	2,202	0.3696	8,847	1.4849
Denville	13,812	19,350	1.4010	4,111	0.2976	5,105	0.3696	28,566	2.0682
Dover	15,115	17,417	1.1523	10,017	0.6627	5,586	0.3696	33,021	2.1846
East Hanover	9,926	15,429	1.5544	6,672	0.6722	3,669	0.3696	25,770	2.5962
Florham Park	8,521	12,434	1.4592	4,640	0.5445	3,149	0.3696	20,223	2.3733
Hanover	11,538	15,808	1.3701	5,702	0.4942	4,264	0.3696	25,774	2.2338
Harding	3,640	2,642	0.7258	498	0.1368	1,345	0.3696	4,485	1.2322
Jefferson	17,825	13,522	0.7586	3,806	0.2135	6,588	0.3696	23,916	1.3417
Kinnelon	8,470	8,262	0.9754	929	0.1096	3,130	0.3696	12,321	1.4547
Lincoln Park	10,978	13,643	1.2428	5,349	0.4873	4,057	0.3696	23,050	2.0997
Long Hill Twp.	7,826	6,319	0.8075	473	0.0604	2,892	0.3696	9,685	1.2375
Madison	15,850	17,214	1.0861	4,040	0.2549	5,858	0.3696	27,112	1.7105
Mendham Boro.	4,890	4,122	0.8430	849	0.1736	1,807	0.3696	6,778	1.3862
Mendham Twp.	4,537	3,264	0.7194	754	0.1663	1,677	0.3696	5,695	1.2553
Mine Hill	3,333	2,331	0.6993	99	0.0296	1,232	0.3696	3,661	1.0985
Montville	15,600	12,342	0.7911	12,370	0.7930	5,766	0.3696	30,477	1.9537
Morris Twp.	19,952	21,205	1.0628	3,402	0.1705	7,374	0.3696	31,982	1.6029
Morris Plains	5,219	9,004	1.7253	2,606	0.4993	1,929	0.3696	13,539	2.5941
Morristown	16,189	34,165	2.1104	8,542	0.5276	5,983	0.3696	48,690	3.0076
Mountain Lakes	3,847	3,697	0.9611	1,170	0.3041	1,422	0.3696	6,289	1.6348
Mt. Arlington	3,630	894	0.2463	1,631	0.4492	1,342	0.3696	3,866	1.0651
Mt. Olive	21,282	15,622	0.7341	4,465	0.2098	7,866	0.3696	27,953	1.3134
Netcong	3,311	4,133	1.2484	1,070	0.3232	1,224	0.3696	6,427	1.9412
Parsippany	48,478	68,834	1.4199	20,295	0.4186	17,917	0.3696	107,046	2.2081
Pequannock	12,844	13,885	1.0811	1,196	0.0931	4,747	0.3696	19,828	1.5438
Randolph	19,974	17,974	0.8999	3,816	0.1911	7,382	0.3696	29,173	1.4605
Riverdale	2,370	2,735	1.1538	1,207	0.5094	876	0.3696	4,818	2.0328
Rockaway Boro.	6,243	6,774	1.0850	2,243	0.3592	2,307	0.3696	11,324	1.8138
Rockaway Twp.	19,572	16,127	0.8240	7,136	0.3646	7,234	0.3696	30,497	1.5582
Roxbury	20,429	17,689	0.8659	5,112	0.2502	7,550	0.3696	30,351	1.4857
Victory Gardens	1,314	485	0.3690	18	0.0135	486	0.3696	988	0.7521
Washington	15,592	8,422	0.5401	3,287	0.2108	5,763	0.3696	17,471	1.1205
Wharton	5,405	3,963	0.7331	877	0.1623	1,998	0.3696	6,838	1.2650
TOTALS	421,353	450,418	1.0690	138,578	0.3289	155,727	0.3696	744,723	1.7675

NOTES: Muni/Veg. Waste includes all but Type 13 Bulky and Type 27 Industrial.

All disposal figures are based on MCTS reports. Towns sharing the same name have been adjusted due to disposal reporting errors.

Tons recycled is based on NJDEPE audited data. Generation includes recycling and disposal.

Private recycling is unaccounted for by existing reporting procedures and is estimated at Task Force Levels. Population is from the 1990 Census.

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Table 3
1995 – Solid Waste Generation Projection by Municipality
Morris County, New Jersey

Municipality	Population	Muni/Veg	Muni/Veg	Bulky/Ind	Bulky/Ind	Private	Private	Total	Total
	Projection	Waste	Generation	Waste	Generation	Recycling	Recycling	Waste	Waste
	Persons	Generation	Rate	Generation	Rate	Projection	Projection	Generation	Generation
		Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person
Boonton	8,363	5,728	0.6850	1,688	0.2018	3,091	0.3696	10,507	1.2564
Boonton Twp.	3,592	2,263	0.6302	748	0.2083	1,327	0.3696	4,339	1.2080
Butler	7,338	8,159	1.1118	1,737	0.2368	2,712	0.3696	12,608	1.7182
Chatham Boro.	7,898	11,025	1.3961	3,354	0.4247	2,919	0.3696	17,298	2.1903
Chatham Twp.	9,477	6,625	0.6990	1,287	0.1358	3,503	0.3696	11,414	1.2044
Chester Boro.	1,237	2,561	2.0695	1,184	0.9564	457	0.3696	4,202	3.3955
Chester Twp.	6,344	6,276	0.9893	684	0.1078	2,344	0.3696	9,304	1.4667
Denville	13,824	20,267	1.4660	4,305	0.3114	5,109	0.3696	29,681	2.1471
Dover	15,035	18,242	1.2133	10,491	0.6978	5,557	0.3696	34,290	2.2807
East Hanover	10,368	16,159	1.5587	6,988	0.6740	3,832	0.3696	26,979	2.6023
Florham Park	8,522	13,023	1.5281	4,859	0.5702	3,150	0.3696	21,031	2.4679
Hanover	11,677	16,556	1.4179	5,972	0.5114	4,316	0.3696	26,844	2.2989
Harding	3,759	2,767	0.7362	522	0.1388	1,389	0.3696	4,678	1.2446
Jefferson	18,392	14,162	0.7700	3,986	0.2167	6,797	0.3696	24,946	1.3564
Kinnelon	8,844	8,653	0.9784	972	0.1100	3,269	0.3696	12,894	1.4580
Lincoln Park	11,353	14,289	1.2587	5,603	0.4935	4,196	0.3696	24,088	2.1218
Long Hill Twp.	7,782	6,618	0.8504	495	0.0637	2,876	0.3696	9,990	1.2837
Madison	15,818	18,029	1.1398	4,231	0.2675	5,846	0.3696	28,106	1.7769
Mendham Boro.	4,878	4,317	0.8851	889	0.1823	1,803	0.3696	7,009	1.4370
Mendham Twp.	4,756	3,419	0.7188	790	0.1661	1,758	0.3696	5,966	1.2545
Mine Hill	3,354	2,441	0.7279	103	0.0308	1,240	0.3696	3,784	1.1283
Montville	16,934	12,926	0.7633	12,956	0.7651	6,259	0.3696	32,140	1.8980
Morris Twp.	20,035	22,209	1.1086	3,563	0.1779	7,405	0.3696	33,177	1.6560
Morris Plains	5,194	9,431	1.8158	2,729	0.5255	1,919	0.3696	14,079	2.7109
Morristown	15,996	35,783	2.2370	8,946	0.5593	5,912	0.3696	50,641	3.1659
Mountain Lakes	3,830	3,872	1.0111	1,225	0.3199	1,416	0.3696	6,513	1.7006
Mt. Arlington	4,346	936	0.2154	1,708	0.3930	1,606	0.3696	4,250	0.9780
Mt. Olive	21,521	16,362	0.7603	4,676	0.2173	7,954	0.3696	28,992	1.3471
Netcong	3,260	4,329	1.3279	1,121	0.3438	1,205	0.3696	6,655	2.0413
Parsippany	48,324	72,093	1.4919	21,256	0.4399	17,860	0.3696	111,209	2.3014
Pequannock	13,494	14,543	1.0777	1,253	0.0928	4,987	0.3696	20,783	1.5401
Randolph	21,135	18,825	0.8907	3,997	0.1891	7,811	0.3696	30,634	1.4494
Riverdale	2,349	2,864	1.2195	1,265	0.5385	868	0.3696	4,997	2.1275
Rockaway Boro.	6,278	7,094	1.1301	2,349	0.3742	2,320	0.3696	11,763	1.8739
Rockaway Twp.	20,025	16,891	0.8435	7,473	0.3732	7,401	0.3696	31,765	1.5863
Roxbury	20,607	18,526	0.8990	5,354	0.2598	7,616	0.3696	31,496	1.5284
Victory Gardens	1,294	508	0.3926	19	0.0143	478	0.3696	1,004	0.7765
Washington	16,789	8,820	0.5254	3,442	0.2050	6,205	0.3696	18,468	1.1000
Wharton	5,366	4,150	0.7734	919	0.1712	1,983	0.3696	7,052	1.3143
TOTALS	429,382	471,745	1.0987	145,139	0.3380	158,694	0.3696	775,578	1.8063

Notes: Population Projection based on update by Morris County Planning Board dated October 13, 1992.

Muni/Veg and Bulky/Ind per capita generation based on decreasing growth from 1990 base year to 1995, and no growth from 1995 to 2000, declining generation from 2000 to 2005, and no growth thereafter.

Private Recycling refers to solid waste unaccounted for by existing reporting procedures and is estimated at Task Force Levels

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**Table 4
2000 – Solid Waste Generation Projection by Municipality
Morris County, New Jersey**

Municipality	Population Projection	Muni/Veg Waste Generation	Muni/Veg Generation Rate	Bulky/Ind Waste Generation	Bulky/Ind Generation Rate	Private Recycling Projection	Private Recycling Projection	Total Waste Generation	Total Waste Generation
	Persons	Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person
Boonton	8,383	5,835	0.6961	1,719	0.2051	3,098	0.3696	10,653	1.2708
Boonton Twp.	3,617	2,306	0.6374	762	0.2107	1,337	0.3696	4,404	1.2177
Butler	7,284	8,311	1.1410	1,770	0.2430	2,692	0.3696	12,773	1.7536
Chatham Boro.	7,788	11,232	1.4422	3,416	0.4387	2,878	0.3696	17,526	2.2504
Chatham Twp.	9,593	6,748	0.7035	1,311	0.1367	3,545	0.3696	11,605	1.2097
Chester Boro.	1,261	2,609	2.0689	1,206	0.9561	466	0.3696	4,281	3.3946
Chester Twp.	6,729	6,393	0.9500	697	0.1035	2,487	0.3696	9,576	1.4232
Denville	13,836	20,646	1.4922	4,386	0.3170	5,114	0.3696	30,145	2.1787
Dover	14,955	18,583	1.2426	10,687	0.7146	5,527	0.3696	34,798	2.3268
East Hanover	10,809	16,462	1.5230	7,119	0.6586	3,995	0.3696	27,575	2.5511
Florham Park	8,523	13,266	1.5565	4,950	0.5808	3,150	0.3696	21,366	2.5069
Hanover	11,816	16,866	1.4274	6,083	0.5148	4,367	0.3696	27,316	2.3118
Harding	3,877	2,819	0.7271	531	0.1370	1,433	0.3696	4,783	1.2337
Jefferson	18,958	14,427	0.7610	4,061	0.2142	7,007	0.3696	25,494	1.3448
Kinnelon	9,218	8,815	0.9563	991	0.1075	3,407	0.3696	13,213	1.4333
Lincoln Park	11,727	14,557	1.2413	5,707	0.4867	4,334	0.3696	24,598	2.0976
Long Hill Twp.	7,739	6,742	0.8712	505	0.0652	2,860	0.3696	10,107	1.3060
Madison	15,785	18,366	1.1635	4,310	0.2730	5,834	0.3696	28,510	1.8062
Mendham Boro.	4,865	4,398	0.9040	906	0.1862	1,798	0.3696	7,102	1.4598
Mendham Twp.	4,975	3,482	0.7000	805	0.1618	1,839	0.3696	6,126	1.2314
Mine Hill	3,375	2,487	0.7369	105	0.0312	1,247	0.3696	3,840	1.1376
Montville	18,268	13,168	0.7208	13,198	0.7225	6,752	0.3696	33,117	1.8129
Morris Twp.	20,117	22,625	1.1247	3,630	0.1804	7,435	0.3696	33,690	1.6747
Morris Plains	5,168	9,607	1.8589	2,780	0.5379	1,910	0.3696	14,297	2.7664
Morristown	15,803	36,452	2.3067	9,114	0.5767	5,841	0.3696	51,406	3.2529
Mountain Lakes	3,813	3,945	1.0346	1,248	0.3273	1,409	0.3696	6,602	1.7315
Mt. Arlington	5,062	954	0.1884	1,740	0.3437	1,871	0.3696	4,565	0.9017
Mt. Olive	21,760	16,668	0.7660	4,763	0.2189	8,042	0.3696	29,474	1.3545
Netcong	3,209	4,410	1.3742	1,142	0.3558	1,186	0.3696	6,738	2.0996
Parsippany	48,169	73,442	1.5247	21,654	0.4495	17,803	0.3696	112,898	2.3438
Pequannock	14,145	14,815	1.0473	1,276	0.0902	5,228	0.3696	21,318	1.5071
Randolph	22,296	19,177	0.8601	4,072	0.1826	8,240	0.3696	31,489	1.4123
Riverdale	2,327	2,918	1.2538	1,288	0.5536	860	0.3696	5,066	2.1770
Rockaway Boro.	6,312	7,227	1.1450	2,393	0.3791	2,333	0.3696	11,953	1.8936
Rockaway Twp.	20,478	17,207	0.8403	7,613	0.3718	7,568	0.3696	32,389	1.5816
Roxbury	20,785	18,873	0.9080	5,454	0.2624	7,682	0.3696	32,009	1.5400
Victory Gardens	1,273	517	0.4064	19	0.0148	470	0.3696	1,007	0.7908
Washington	17,986	8,985	0.4996	3,507	0.1950	6,647	0.3696	19,139	1.0641
Wharton	5,327	4,228	0.7937	936	0.1757	1,969	0.3696	7,133	1.3390
TOTALS	437,411	480,566	1.0987	147,853	0.3380	161,662	0.3696	790,081	1.8063

Notes: Population Projection based on update by Morris County Planning Board dated October 13, 1992.

Muni/Veg and Bulky/Ind per capita generation based on decreasing growth from 1990 base year to 1995, and no growth from 1995 to 2000, declining generation from 2000 to 2005, and no growth thereafter.

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Table 5
2005 – Solid Waste Generation Projection by Municipality
Morris County, New Jersey

Municipality	Population	Muni/Veg	Muni/Veg	Bulky/Ind	Bulky/Ind	Private	Private	Total	Total
	Projection	Waste	Generation	Waste	Generation	Recycling	Recycling	Waste	Waste
	Persons	Generation	Rate	Generation	Rate	Projection	Projection	Generation	Generation
		Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person
Boonton	8,258	5,736	0.6946	1,690	0.2047	3,052	0.3696	10,478	1.2688
Boonton Twp.	3,637	2,266	0.6231	749	0.2059	1,344	0.3696	4,359	1.1986
Butler	7,220	8,169	1.1313	1,740	0.2409	2,669	0.3696	12,577	1.7419
Chatham Boro.	7,677	11,039	1.4381	3,358	0.4374	2,837	0.3696	17,234	2.2451
Chatham Twp.	9,481	6,633	0.6996	1,289	0.1359	3,504	0.3696	11,426	1.2051
Chester Boro.	1,279	2,564	2.0041	1,185	0.9262	473	0.3696	4,222	3.2999
Chester Twp.	7,154	6,283	0.8783	685	0.0957	2,644	0.3696	9,612	1.3436
Denville	13,848	20,292	1.4654	4,311	0.3113	5,118	0.3696	29,721	2.1463
Dover	14,865	18,265	1.2287	10,505	0.7066	5,494	0.3696	34,264	2.3049
East Hanover	11,183	16,180	1.4468	6,997	0.6257	4,133	0.3696	27,310	2.4421
Florham Park	8,467	13,039	1.5400	4,865	0.5746	3,129	0.3696	21,034	2.4842
Hanover	11,935	16,577	1.3890	5,979	0.5010	4,411	0.3696	26,967	2.2596
Harding	4,005	2,771	0.6918	522	0.1304	1,480	0.3696	4,773	1.1918
Jefferson	19,606	14,180	0.7232	3,991	0.2036	7,246	0.3696	25,418	1.2964
Kinnelon	9,611	8,664	0.9015	974	0.1013	3,552	0.3696	13,190	1.3724
Lincoln Park	11,907	14,307	1.2015	5,610	0.4711	4,401	0.3696	24,318	2.0422
Long Hill Twp.	7,679	6,627	0.8630	496	0.0646	2,838	0.3696	9,961	1.2972
Madison	15,674	18,052	1.1517	4,236	0.2703	5,793	0.3696	28,081	1.7916
Mendham Boro.	4,840	4,323	0.8932	890	0.1839	1,789	0.3696	7,002	1.4468
Mendham Twp.	5,199	3,423	0.6584	791	0.1522	1,921	0.3696	6,135	1.1801
Mine Hill	3,402	2,444	0.7185	103	0.0304	1,257	0.3696	3,805	1.1185
Montville	18,574	12,942	0.6968	12,972	0.6984	6,865	0.3696	32,779	1.7648
Morris Twp.	20,148	22,238	1.1037	3,568	0.1771	7,446	0.3696	33,252	1.6504
Morris Plains	5,141	9,442	1.8367	2,732	0.5315	1,900	0.3696	14,075	2.7378
Morristown	15,612	35,828	2.2949	8,958	0.5738	5,770	0.3696	50,556	3.2383
Mountain Lakes	3,794	3,877	1.0221	1,227	0.3234	1,402	0.3696	6,506	1.7151
Mt. Arlington	5,043	937	0.1859	1,710	0.3391	1,864	0.3696	4,511	0.8946
Mt. Olive	22,060	16,383	0.7426	4,682	0.2122	8,153	0.3696	29,218	1.3245
Netcong	3,163	4,334	1.3702	1,122	0.3547	1,169	0.3696	6,626	2.0945
Parsippany	47,835	72,185	1.5091	21,283	0.4449	17,679	0.3696	111,147	2.3236
Pequanock	14,037	14,561	1.0373	1,254	0.0893	5,188	0.3696	21,003	1.4963
Randolph	23,188	18,849	0.8129	4,002	0.1726	8,570	0.3696	31,421	1.3551
Rivertdale	2,301	2,868	1.2462	1,266	0.5503	850	0.3696	4,984	2.1661
Rockaway Boro.	6,333	7,103	1.1217	2,352	0.3714	2,340	0.3696	11,796	1.8627
Rockaway Twp.	20,909	16,912	0.8089	7,483	0.3579	7,728	0.3696	32,123	1.5363
Roxbury	20,936	18,550	0.8861	5,361	0.2560	7,738	0.3696	31,648	1.5117
Victory Gardens	1,254	508	0.4055	19	0.0148	463	0.3696	991	0.7899
Washington	19,328	8,832	0.4569	3,447	0.1783	7,143	0.3696	19,422	1.0048
Wharton	5,281	4,155	0.7869	920	0.1742	1,952	0.3696	7,027	1.3307
TOTALS	441,861	472,342	1.0690	145,323	0.3289	163,307	0.3696	780,971	1.7675

Notes: Population Projection based on update by Morris County Planning Board dated October 13, 1992.

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Table 6
2010 – Solid Waste Generation Projection by Municipality
Morris County, New Jersey

Municipality	Population Projection	Muni/Veg Waste Generation	Muni/Veg Generation Rate	Bulky/Ind Waste Generation	Bulky/Ind Generation Rate	Private Recycling Projection	Private Recycling Projection	Total Waste Generation	Total Waste Generation
	Persons	Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person	Tons/Year	TPY/Person
Boonton	8,133	5,793	0.7123	1,707	0.2099	3,006	0.3696	10,506	1.2918
Boonton Twp.	3,657	2,289	0.6259	756	0.2068	1,352	0.3696	4,397	1.2024
Butler	7,157	8,251	1.1529	1,757	0.2455	2,645	0.3696	12,653	1.7680
Chatham Boro.	7,565	11,151	1.4740	3,392	0.4484	2,796	0.3696	17,338	2.2919
Chatham Twp.	9,369	6,700	0.7151	1,302	0.1389	3,463	0.3696	11,464	1.2236
Chester Boro.	1,298	2,590	1.9955	1,197	0.9221	480	0.3696	4,267	3.2872
Chester Twp.	7,579	6,347	0.8374	692	0.0913	2,801	0.3696	9,839	1.2983
Denville	13,859	20,497	1.4789	4,354	0.3142	5,122	0.3696	29,973	2.1627
Dover	14,776	18,449	1.2486	10,610	0.7181	5,461	0.3696	34,521	2.3363
East Hanover	11,557	16,343	1.4141	7,067	0.6115	4,271	0.3696	27,681	2.3952
Florham Park	8,411	13,170	1.5658	4,914	0.5843	3,109	0.3696	21,193	2.5197
Hanover	12,053	16,744	1.3892	6,040	0.5011	4,455	0.3696	27,238	2.2599
Harding	4,133	2,799	0.6771	527	0.1276	1,528	0.3696	4,854	1.1743
Jefferson	20,255	14,323	0.7071	4,031	0.1990	7,486	0.3696	25,840	1.2757
Kinnelon	10,003	8,751	0.8749	983	0.0983	3,697	0.3696	13,432	1.3428
Lincoln Park	12,088	14,452	1.1955	5,666	0.4687	4,468	0.3696	24,585	2.0339
Long Hill Twp.	7,618	6,693	0.8786	501	0.0658	2,816	0.3696	10,010	1.3140
Madison	15,563	18,234	1.1716	4,279	0.2749	5,752	0.3696	28,265	1.8161
Mendham Boro.	4,814	4,366	0.9070	899	0.1868	1,779	0.3696	7,045	1.4634
Mendham Twp.	5,423	3,457	0.6375	799	0.1474	2,004	0.3696	6,261	1.1545
Mine Hill	3,429	2,469	0.7200	104	0.0305	1,267	0.3696	3,841	1.1201
Montville	18,880	13,073	0.6924	13,103	0.6940	6,978	0.3696	33,153	1.7560
Morris Twp.	20,179	22,462	1.1131	3,604	0.1786	7,458	0.3696	33,523	1.6613
Morris Plains	5,114	9,538	1.8650	2,760	0.5397	1,890	0.3696	14,188	2.7743
Morristown	15,421	36,189	2.3467	9,048	0.5867	5,699	0.3696	50,936	3.3030
Mountain Lakes	3,774	3,916	1.0377	1,239	0.3283	1,395	0.3696	6,550	1.7357
Mt. Arlington	5,023	947	0.1885	1,727	0.3439	1,856	0.3696	4,531	0.9020
Mt. Olive	22,360	16,548	0.7401	4,729	0.2115	8,264	0.3696	29,541	1.3211
Netcong	3,118	4,378	1.4042	1,134	0.3635	1,152	0.3696	6,664	2.1373
Parsippany	47,500	72,912	1.5350	21,497	0.4526	17,555	0.3696	111,964	2.3571
Pequannock	13,929	14,708	1.0559	1,267	0.0909	5,148	0.3696	21,122	1.5164
Randolph	24,079	19,039	0.7907	4,042	0.1679	8,899	0.3696	31,981	1.3282
Riverdale	2,275	2,896	1.2732	1,279	0.5622	841	0.3696	5,016	2.2049
Rockaway Boro.	6,353	7,175	1.1294	2,376	0.3739	2,348	0.3696	11,898	1.8729
Rockaway Twp.	21,340	17,083	0.8005	7,558	0.3542	7,887	0.3696	32,528	1.5243
Roxbury	21,086	18,737	0.8886	5,414	0.2568	7,793	0.3696	31,944	1.5150
Victory Gardens	1,235	514	0.4159	19	0.0152	456	0.3696	989	0.8006
Washington	20,670	8,920	0.4316	3,481	0.1684	7,639	0.3696	20,041	0.9696
Wharton	5,235	4,197	0.8018	929	0.1775	1,935	0.3696	7,061	1.3489
TOTALS	446,311	477,099	1.0690	146,786	0.3289	164,951	0.3696	788,836	1.7675

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Source Reduction Implementation Strategies:

Waste Audits: Morris County intends to develop a business waste audit program as a tool to analyze business waste generation as well as a means to recommend improvements to business waste management practices. Over the past five years the MCMUA staff has conducted informal waste audits at all County buildings. In addition, informal audits have been performed at businesses which have either been identified as non-compliant during the transfer station inspection program or have requested help in establishing recycling programs. Although these waste audits have been informal and not based on any existing audit format, they have been very successful. It is anticipated that this program will become even more successful when conducted in accordance with a formal audit protocol.

Shortly after the release of the State's recommended Waste Audit Protocol, Morris County will develop its own waste audit protocol combining the experience gained over the last five years with the NJDEPE's recommendations. It is intended that the protocol will also be based on experience gained from formal pilot audits to be conducted at several of the County's businesses, both large and small. In addition, the County Solid Waste Management Staff will host training seminars for those in the commercial/institutional sector who will perform the waste audits.

The established protocol will be utilized in subsequent waste audits. The County will work with municipal recycling coordinators to make sure the follow audit schedule is adhered to:

- businesses with more than 500 employees by the end of 1993;
- businesses with more than 250 employees by the end of 1994, and;
- businesses with more than 100 employees by the end of 1995.

The waste audit protocol will include a schedule for follow-up audits as a means to provide program feedback. Within six months of the release of the State's audit guidelines, the County will submit a Plan Amendment including the County's protocol.

Pay-Per-Bag/Container Waste Collection System: Morris County accepts that pay-per-container or pay-per-bag collection systems have the potential to encourage waste reduction practices and will, therefore, evaluate existing pay-per-container collection systems to determine how this practice can be best incorporated in Morris County's solid waste collection. Currently, five municipalities have implemented pay-per-bag disposal programs and each program is discussed below.

- **Chatham Borough** - The Borough's pay-per-container system began operating in November 1992. Prior to implementing their pay-per-bag program, residents contracted with a private hauler (primarily Forgione Disposal) at a rate of \$360.00 per year as calculated by the BPU.

In the new pay-per-bag system, residents purchase 13 gallon and 30 gallon bags directly from the hauler for \$1.00 and \$2.00 respectively. In addition, residents are charged a flat fee for the garbage and recycling costs. This fee is treated as a utility as opposed to a tax, therefore, the fee is not based on the value of the homeowners property. In calculating the flat fee, Chatham Borough deducts any revenue generated from recycling such as the sale of recyclables or tonnage grants.

At the time the Borough implemented the pay-per-bag program, it expanded its curbside recycling collection to twice a month. Residents also have the option of taking materials to the municipal depot. The per-container program is not offered to apartment or condominium complexes.

- **Chester Township** - The municipality's per-container program commenced in June 1990. Prior to that, the garbage hauler (J. Filiberto Sanitation, Inc.) contracted with the individual homeowners and rates were regulated by the Board of Public Utilities (BPU). At this time, there was no residential curbside recycling program. Recyclables were dropped off by the individual at the municipal recycling depot.

Chester Township was the first Morris County municipality to implement a pay-per-container disposal program. The program requires residents to purchase stickers at \$2.00 a piece directly from the current solid waste hauler, Waste Management of North Jersey. The \$2.00 sticker buys the disposal of one 30 gallon container of solid waste. Waste Management now also provides curbside recycling once-a-week. As a result of these changes in their solid waste and recycling programs, Chester Township decided to eliminate their municipal recycling depot.

Only the disposal costs are incorporated into the sticker fee. The costs of solid waste collection, bulky waste collection and disposal, and recycling collection are all incorporated into the municipal budget.

- **Dover** - Dover has a modified pay-per-container program which started in May 1991. Residents are allowed to put out up to two containers, maximum of 30 pounds each, per collection day without any stickers. There are two collection days per week. If residents need to dispose of more than the allotted two containers per pickup, then they may purchase stickers from the Town for \$2.50 each. This sticker must then be affixed to the additional containers which enable additional containers to be picked up by the collector.

The current solid waste hauler (West Milford) charges Dover \$36.00 per ton for the collection costs and the transfer station invoices Dover directly for the tipping fees. The municipality also sends an inspector out on the collection routes to monitor compliance and to enforce recycling and solid waste rules. Dover has recently contracted with the Morris County Curbside Recycling Program (MCCRAP) to provide curbside recycling services to residents twice-a-month. Nearly all of the

recyclables collected are delivered to and marketed through the Morris County Recycling Consolidation Center which is located in Dover. Dover decided to close its depot, except for the collection of leaves and tires.

- **Mendham Township** - The Township's optional pay-per-bag program was started in April 1992. For this system, residents have an option of either continuing to pay a flat fee directly to a private hauler (Waste Management of North Jersey) for solid waste disposal with twice-a-week pickup or selecting the municipal pay-per-container system.

For those residents which select the pay-per-container system, the Township has contracted with a different hauler (Morris County Sanitation) for once-a-week solid waste collection. Residents must purchase the stickers directly from the hauler. Stickers cost \$1.00 for the 15 gallon bag and \$2.00 for the 30 gallon bag. The sticker fees cover the cost of disposing of solid waste through the Morris County transfer station system. The collection costs associated with contracting with the pay-per-container hauler, as well as the collection costs for Township's curbside recycling collection service, are incorporated into the municipal budget. In this optional pay-per-container program, homeowners who choose to stay with the flat fee private hauler are also paying for the collection costs of the per-container program through their municipal taxes. Mendham Township has no municipal recycling depot.

- **Mount Arlington** - The pay-per-bag program started in March 1991. Prior to the adoption of the pay-per-container policy, Mount Arlington utilized municipal employees to collect and dispose solid waste at its own municipal landfill. In accordance with NJDEPE directives, the Mount Arlington Municipal Landfill ceased operations in December 1990. This prompted the municipality to re-examine its solid waste management practices.

As a result of this evaluation, Mount Arlington implemented a pay-per-container disposal program. For \$109.20 residents receive 52 disposal stickers. One sticker buys one container's worth of disposal with a maximum of 25 pounds per container. Additional stickers may be purchased at the municipal building for \$2.10 each. Solid waste and recycling collection is provided once-a-week. While the municipality decided to contract with West Milford Hauling to perform its solid waste collection, municipal crews are responsible for curbside collection of recyclables. Mount Arlington still operates a municipal recycling depot which is open six days a week. The costs of solid waste and curbside recycling collection is incorporated into the municipal budget.

In addition to these five programs already implemented, many Morris County municipalities are examining this collection alternative as a means for reducing their solid waste generation rates, increasing their recycling rates and decreasing their overall solid waste management costs. According to the Fall 1992 municipal survey, Boonton Town, Chester

Borough, Florham Park, Mendham Borough, Montville Township, Randolph Township and Victory Gardens are all considering implementing a pay-per-bag program.

The County intends to track these programs as well as any new pay-per-bag systems which are implemented in the future in order to understand their effectiveness on both source reduction and source separation practices. When enough information is compiled on the benefits of this type of disposal program, the County will issue an evaluation report on pay-per-bag systems which summarizes the impact of these programs. The report will also contain recommendations with respect to the implementation of these programs. The results of this study will be incorporated into a future MCSWMP amendment.

Yard Waste Management: Morris County will continue to educate residents and businesses on the benefits of yard waste generation reduction through backyard composting as well as a "cut and let lie" grass policy. The County currently has information available to both municipalities and residents on how to compost yard waste in their backyard. In conjunction with this information, the expertise of the recycling staff and the County Shade Tree Commission their is available to those who want to compost in their backyard. The Shade Tree Commission currently operates the County's regional yard waste composting program. Likewise, the County has and will continue to promote yard waste source reduction through publicity efforts provided by the MCMUA. This includes newsletters, flyers, how to manuals, scheduled municipal recycling coordinator meetings and special seminars on the subject. Specific information on source reduction of yard waste includes:

- *Using Leaf Compost* by Rutgers Cooperative Extension
- *Backyard Leaf Composting* by Rutgers Cooperative Extension
- *Sample Compost Bin*
- *Grass - Cut it and Leave it (Introduction)* by NJDEPE/Division of Solid Waste Management
- *Grass - Cut it and Leave it (in-depth look)* by NJDEPE/Division of Solid Waste Management
- *Minimizing Waste Disposal: Grass Clippings* by Rutgers Cooperative Extension, 1989.
- *Don't Bag It - Lawn Care Plan* by Texas Agricultural Extension Service
- *Grass - Cut it and Leave it* by Passaic County, N.J., April 1991
- *Recycle Naturally Grass, Cut it and Leave it* by Burlington County, N.J.

Based on responses to the Fall 1992 survey, 19 of the responding municipalities acknowledged that they currently promote "cut it and leave it" grass management. Morris County is committed to this effective source reduction practice and will continue to encourage it as the primary grass management strategy.

Household Hazardous Waste: Morris County was one of the early pioneers in the development of household hazardous waste (HHW) disposal programs to detoxify its waste stream as well as to prevent non-point source pollution resulting from improper disposal practices. With the help of Federal and State grants, Morris County conducted one of the first pesticide disposal days in

1985 which had 77 participants. Since that time, the County expanded the program to include other hazardous materials than pesticides, and expanded the program to two days per year which have resulted in greater participation and larger quantities of this hazardous waste diverted from the waste stream. The most recent programs (June 13, 1992 and October 3, 1992) experienced a total of 1,226 participants which represents a 1,592% increase over the original program. During the 1992 programs, 166,700 pounds (gross weight) of hazardous material were disposed of or processed at hazardous waste facilities as compared to the 3,665 pounds managed at the original May 1985 program. These figures demonstrate both the need for this type of program as well as for further education to inform the public on how not to produce and manage hazardous waste. At a minimum, the County intends to continue conducting two or more household hazardous waste disposal programs per year.

Morris County is currently seeking the establishment of a 90 Day-Temporary Hazardous Waste Storage Facility, or potentially a mobile collection system, to work in conjunction with the operation of the solid waste facility complex being developed by the County. The County is awaiting the release of the NJDEPE guidance document with respect to the development and implementation of household hazardous waste facilities. The enhanced household hazardous waste program will provide more frequently disposal options to residents, small quantity generators and municipal depots where appropriate. When additional implementation steps for the County's enhanced hazardous waste disposal program are accomplished, such as siting, operations and regional cooperation, a future Plan Amendment will be adopted.

Procurement Strategies: The MCMUA will be involved in analyzing and recommending to County and municipal purchasing agents ways to procure materials in a way which reduces waste generation. In the past, the Solid Waste Advisory Council (SWAC) has been a leader in recommending the County change its procurement policies. Recommendations from the SWAC have included: County notices should only be published in newspapers which use recycled content newsprint rather than virgin paper (July 18, 1990); encouraging the use of both sides of a piece of paper whenever practical (September 12, 1990); and, the use of recycled products including but not limited to Freeholder Stationary, court notices and election materials and these materials should contain a recycling designation (May 20, 1992). Through the foresight and recommendations of the SWAC, as well as the MCMUA and its solid waste staff, the County has modified its procurement patterns to take into account source reduction and recycling issues. These recommendations have also been forwarded to many other governmental agencies at the municipal, county and state level as part of the County's outreach program.

As part of the County's current and future outreach program to various levels of government, the County recommends a requirement for the County and local governments to adhere to current and future State procurement goals. Toward this end, the County will utilize *The Guide to Public Procurement of Recycled Products*, prepared by both the NJDEPE and the New Jersey Department of the Treasury and released in Fall 1992, to facilitate the distribution of information on recycled products to Morris County, municipal and private sector purchasing agents. The County is also eager to participate in regional round tables to address questions and concerns with respect to procurement practices.

Morris County also intends to distribute sample bid specifications to governments and businesses. Other recommendations include ideas like purchasing copying machines that can copy on both sides of the paper, the provision of reusable coffee mugs instead of disposable cups, cafeterias using more bulk items instead of individual portions, the purchase of products with a high recyclable content, and the use of recycled materials for road and other construction activities, etc. As the County formalizes these recommendations and presents new procurement recommendations, they will be incorporated into future MCSWMP amendments.

Waste Exchange Infrastructure: As an outgrowth of the proposed waste audit program, the County may realize that one business' waste may be useful to another business. As a means to connect these two organizations, Morris County will establish a waste exchange infrastructure to track generated waste which may be useful to some other business or organization. As part of this waste exchange, the County would like to link its waste exchange to others developed by other Counties and/or by other States. Currently, the County subscribes to the Northeast Industrial Waste Exchange, Inc. which is a not-for-profit information clearinghouse for waste with reuse value. On many occasions this information has been distributed to industrial waste generators either wanting to locate a specific material or seeking an alternative to disposing of a specific material.

Educational Strategies: In addition to the other source reduction strategies presented in this section which are inherently educational, Morris County will continue and expand its source reduction educational program. Currently the program consists of the "Glinda Garbaj" Program which teaches fourth graders the value of the "Three R's" (reduce, reuse & recycle) and the Environmental Shopping program which teaches participants environmentally sound shopping practices. In addition, MCMUA staff is involved in promoting source reduction in the community whenever possible. Past and presents efforts include: participation in County-wide planning organizations (Morris 2000), presentations to Rotary Clubs, the Chamber of Commerce, commuters on the train, scouting groups, environmental organizations, etc. In addition, Morris County will continue with mass media promotion of source reduction practices. This source reduction education strategy, as well the recycling education strategy discussed in the following section, is a comprehensive and multi-faceted program designed to reach all sectors in the County, including individuals, commercial establishments, industry and community groups.

Schedule of Implementation

- **Waste audits - The County will host training seminars for those persons in the commercial/institutional sector who will perform waste audits. The schedule of seminars follows:**
 1. June 1993 - a seminar for those who will perform waste audits for businesses/institutions with 500 or more employees.
 2. January 1994 - a seminar for those who will perform waste audits for businesses/institutions with 250 or more employees.
 3. January 1995 - a seminar for those who will perform waste audits for businesses/institutions with 100 or more employees.
- **Pay-per-bag/container solid waste collection system - The County will track existing per-container programs and will highlight those programs which appear to be most successful in its printed publications and on radio or cable television programs. This will occur at least annually through the year 2000 and on an as-needs basis after that.**
- **Yard waste management - The County will create a master composter program similar to that developed jointly by the Seattle Solid Waste Utility and the Seattle Tilth Association which involves training master composters who in turn train other community members in composting techniques. This program will commence in 1994 and will continue indefinitely.**
- **Household hazardous waste - The County will continue to promote its household hazardous waste disposal program in all of its printed publications (advertising supplements, newsletters, brochures, press releases) and will offer a speaker who will provide a "show and tell" program for community organizations in order to enable their members first to reduce the generation of hazardous waste and then to properly dispose of any hazardous waste which they continue to generate.**
- **Procurement strategies and waste exchange infrastructure - As part of the waste audit seminars, "how-to" outlines regarding both procurement and the exchange of reusable waste material will be distributed. A Morris County Waste Exchange will be created via a computer database, and the County will track the exchange of materials. This waste exchange is to be created at the conclusion of the initial waste audit program or by the end of 1995. This portion of the education program will co-exist at a minimum with the waste audit seminar program; however, procurement information will be available on an on-going basis, and the waste exchange program will be in operation indefinitely thereafter.**

RECYCLING:

Recycling Goals:

Morris County accepts and incorporates into its Plan the Task Force Report's recycling goal of at least a 60% recycling rate to be achieved by 1995. Table 8 presents the 1990-2010 projected waste reduction breakdowns for Morris County assuming the 60% overall recycling goal is achieved. The Table projects the County will generate 775,578 tons of solid waste in 1995 and will need to recycle 465,347 tons in that year to reach the 60% goal. Through the use of enhanced source separation recycling programs, the County intends on achieving much higher source separation recycling rates than it currently achieves. A description of the enhanced recycling implementation strategies is discussed in the following section.

Through the expansion of the existing source separation recycling activities, Morris County intends on source separating and recycling at "maximum feasible source separation recycling rates". "Maximum feasible source separation recycling rates" have been determined based upon past planning efforts and analysis conducted by environmental and consulting engineers and MCMUA staff. The rate for a particular material is the product of the assumed "maximum feasible participation rate" and the "maximum feasible recovery rate" in a marketable form. For example, it may be assumed 90% of the generators will source separate glass for recycling and that 90% of that material will be ultimately marketable. This results in an 81% maximum feasible recycling rate for glass. Table 7 presents the "maximum feasible source separation recycling rate" for the various categories of materials.

According to projections based upon these "maximum feasible source separation rates," a 58.77% source separation recycling rate is expected to be reached in 1995. As such, the expansion of source separation recycling alone may not likely achieve the 60% recycling goal. To minimally insure the achievement of the 60% recycling goal, and to optimize the County's recycling abilities, Morris County is proposing the development of material processing/recovery facilities which include: bulky waste processing, municipal solid waste processing and municipal solid waste composting. These proposed facilities are discussed in more detail in the Materials Recovery section of this document.

The County also accepts the more recent State policy directive of achieving of at least a 50% recycling rate of municipal solid waste (MSW) by 1995. Table 8 presents the 1990-2010 projected municipal solid waste reduction breakdowns for Morris County assuming the 50% MSW recycling goal is met. The Table projects the County will generate 471,745 tons of municipal solid waste in 1995 and, thereby, will need to recycle 235,872 tons of municipal solid waste in 1995 to achieve this goal. Since 1990 serves as the base year for the solid waste and recycling projections, Tables A1, A2 and A3 in the Appendix present the documented material break down by town for 1990 recycling and disposal data. These tables document what was assumed to be considered municipal waste versus bulky/industrial waste for the base year 1990.

Table 7
Maximum Feasible Source Separation Recycling Rates
Morris County, New Jersey

Category	Material	Muni/Veg. Waste Maximum Feasible Recycling Rate	Bulky/Ind. Waste Maximum Feasible Recycling Rate	Task Force Recycling Goals
		%	%	%
Paper	Newspaper	81.00%	81.00%	85.00%
	Corrugated	67.50%	67.50%	85.00%
	Office	81.00%	81.00%	85.00%
	Other	12.33%	12.33%	20.00%
Plastic	Containers	64.00%	64.00%	60.00%
	Film/Packaging	0.00%	0.00%	25.00%
	Scrap	0.00%	0.00%	10.00%
Glass	Containers	81.00%	81.00%	90.00%
	Other	0.00%	0.00%	0.00%
Non-Ferrous Metal	Aluminum Cans	85.50%	85.50%	90.00%
	Aluminum Foils	0.00%	0.00%	0.00%
	Aluminum Scrap	80.00%	80.00%	80.00%
	Non-Ferr. Scrap	82.50%	82.50%	95.00%
Ferrous Metal	Ferrous Containers	68.00%	68.00%	85.00%
	Ferrous Scrap	90.00%	90.00%	90.00%
Yard Waste	Leaves, grass, brush	82.50%	82.50%	90.00%
Food Waste	Food waste	5.00%	5.00%	10.00%
Other MSW	Other Combustibles	10.00%	0.00%	10.00%
	Scrap Wood	0.00%	0.00%	10.00%
Construction/Demo	Wood Waste/Scrap Lumber	0.00%	45.00%	75.00%
	Concrete/Asphalt	0.00%	90.00%	90.00%
	Other Bulky/C&D	0.00%	10.00%	10.00%
Miscellaneous	Tires	0.00%	90.00%	30.00%
	Vehicular Batteries	0.00%	95.00%	95.00%
	Dirt/Fines	0.00%	0.00%	0.00%

Notes:

Maximum Feasible Recycling Rates are for the source separation component of the Plan only.

These rates are the product of maximum feasible participation and maximum feasible recovery rates.

Task Force Recycling Goals are from the Preliminary Task Force Report (July 1990).

Table 8
County Solid Waste Projections and Recycling Goals
Morris County, New Jersey

Year	County Population Projection	Municipal Recycling		Municipal Waste		Municipal Disposal		Bulk/Influent Recycling		Bulk/Influent Waste		Bulk/Influent Disposal		Private Recycling Projection		Private Waste Generation		Total Recycling Rate		Total Waste Generation		Total Waste Disposed	
		Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%	Tons/Year	%
1990	401,353	430,418	36.64%	365,040	285,360	1,06898	138,274	35.38%	49,834	88,724	9,32889	355,272	0.36959	744,223	370,692	374,892	49.27%	744,223	370,692	374,892	51.81%	390,178	362,855
1991	422,959	456,320	39.51%	179,401	276,918	1,07887	140,393	38.79%	54,456	85,937	0.33193	156,320	0.36959	753,084	390,178	362,855	51.81%	753,084	390,178	362,855	51.81%	390,178	362,855
1992	424,565	461,412	41.99%	195,729	267,683	1,08679	141,960	41.46%	58,852	83,108	0.33437	156,914	0.36959	760,286	409,495	350,791	53.86%	760,286	409,495	350,791	53.86%	350,791	1,79074
1993	426,170	465,687	44.66%	207,964	257,723	1,09272	143,275	44.00%	63,040	80,236	0.33619	157,507	0.36959	766,470	428,511	337,959	55.91%	766,470	428,511	337,959	55.91%	337,959	1,79050
1994	427,776	469,134	47.33%	222,035	247,099	1,09668	144,336	46.43%	67,017	77,319	0.33741	158,101	0.36959	771,571	447,153	324,418	57.95%	771,571	447,153	324,418	57.95%	324,418	1,80668
1995	429,382	471,745	50.00%	235,872	235,872	1,09866	145,339	48.77%	70,780	74,359	0.33802	158,694	0.36959	775,578	465,347	310,231	60.00%	775,578	465,347	310,231	60.00%	310,231	1,80627
1996	430,988	473,509	50.00%	236,754	236,754	1,09866	145,682	48.77%	71,045	74,637	0.33802	159,288	0.36959	778,479	467,087	311,392	60.00%	778,479	467,087	311,392	60.00%	311,392	1,80627
1997	432,594	475,273	50.00%	237,637	237,637	1,09866	146,225	48.77%	71,310	74,915	0.33802	159,881	0.36959	781,379	468,828	312,552	60.00%	781,379	468,828	312,552	60.00%	312,552	1,80627
1998	434,199	477,037	50.00%	238,519	238,519	1,09866	146,768	48.77%	71,574	75,193	0.33802	160,475	0.36959	784,280	470,568	313,712	60.00%	784,280	470,568	313,712	60.00%	313,712	1,80627
1999	435,805	478,802	50.00%	239,401	239,401	1,09866	147,310	48.77%	71,839	75,471	0.33802	161,068	0.36959	787,180	472,308	314,872	60.00%	787,180	472,308	314,872	60.00%	314,872	1,80627
2000	437,411	480,566	50.00%	240,283	240,283	1,09866	147,853	48.77%	72,104	75,749	0.33802	161,662	0.36959	790,081	474,048	316,032	60.00%	790,081	474,048	316,032	60.00%	316,032	1,80627
2001	438,301	480,676	50.00%	240,338	240,338	1,09668	147,887	48.69%	72,004	75,884	0.33741	161,991	0.36959	790,554	474,333	316,222	60.00%	790,554	474,333	316,222	60.00%	316,222	1,80668
2002	439,191	479,915	50.00%	239,957	239,957	1,09272	147,653	48.53%	71,655	75,998	0.33619	162,320	0.36959	789,887	473,952	315,955	60.00%	789,887	473,952	315,955	60.00%	315,955	1,79850
2003	440,081	478,275	50.00%	239,138	239,138	1,08679	147,148	48.29%	71,057	76,091	0.33437	162,649	0.36959	788,072	472,843	315,229	60.00%	788,072	472,843	315,229	60.00%	315,229	1,79074
2004	440,971	475,753	50.00%	237,876	237,876	1,07887	146,372	47.97%	70,208	76,165	0.33193	162,978	0.36959	785,102	471,061	314,041	60.00%	785,102	471,061	314,041	60.00%	314,041	1,78039
2005	441,861	472,542	50.00%	236,173	236,173	1,06898	145,323	47.55%	69,103	76,218	0.32889	163,307	0.36959	782,371	468,583	312,348	60.00%	782,371	468,583	312,348	60.00%	312,348	1,76746
2006	442,751	473,293	50.00%	236,647	236,647	1,06898	145,616	47.55%	69,244	76,371	0.32889	163,635	0.36959	782,544	469,526	313,018	60.00%	782,544	469,526	313,018	60.00%	313,018	1,76746
2007	443,641	474,244	50.00%	237,122	237,122	1,06898	145,908	47.55%	69,384	76,525	0.32889	163,964	0.36959	784,117	470,470	313,647	60.00%	784,117	470,470	313,647	60.00%	313,647	1,76746
2008	444,531	475,196	50.00%	237,598	237,598	1,06898	146,201	47.55%	69,523	76,678	0.32889	164,293	0.36959	785,690	471,414	314,276	60.00%	785,690	471,414	314,276	60.00%	314,276	1,76746
2009	445,421	476,147	50.00%	238,074	238,074	1,06898	146,494	47.55%	69,662	76,832	0.32889	164,622	0.36959	787,263	472,358	314,905	60.00%	787,263	472,358	314,905	60.00%	314,905	1,76746
2010	446,311	477,099	50.00%	238,549	238,549	1,06898	146,786	47.55%	69,801	76,985	0.32889	164,951	0.36959	788,836	473,302	315,534	60.00%	788,836	473,302	315,534	60.00%	315,534	1,76746

Notes:
 1. Private Recycling refers to recycling which is unaccounted for by existing reporting procedures.
 2. Population projection is based on the 1990 Census and Morris County Planning Board Update dated October 13, 1992.
 3. Documented (Municipal/Vegetative & Bulk) Waste Generation projections are based on the following assumptions:
 a. The per capita generation rate for documented solid waste will increase at a declining rate to 1995; remain constant from 1995 to 2000; decline from 2000-2005; and remain constant thereafter;
 b. Privaterecycling levels remain constant at the rate estimated by the Task Force (0.3659 tons/person/year)
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Similar to the 60% overall goal, the 50% municipal goal is expected to be achieved in 1995 through the implementation of an enhanced source separation program in conjunction with the development of the material recovery facilities being proposed in this Plan. According to projections based on "maximum feasible source separation recycling rates", Morris County will achieve a 48.68% source separation recycling rate in 1995 with respect to the 50% municipal recycling goal. Again, dependence on source separation recycling alone may not achieve the desired goal.

Tables 9 through 13 present the projected recycling tonnages needed for each Morris County municipality to meet the 50% and 60% recycling goals. The projections established in this Plan Amendment will be used to assess municipal compliance with the State and County recycling goals. It should be noted that the goals utilized in this document should be viewed as minimum targets and Morris County will continue to refine its Plan and programs to achieve even higher rates than those reflected in the minimum goals currently being accepted by the County.

In addition to the tables presented in this Plan Amendment, more complete descriptions of projections and assumptions being used can be found in the following MCMUA planning reports: *Review and Assessment of Solid Waste Management System Alternatives* dated November 1991, *Morris County Solid Waste Composition Study* dated April 1991 and *Morris County Waste Quantity Projections* dated April 1991.

Recycling Implementation Strategies:

Source Separation Program:

The County believes that "source separation" should be the primary method of separating the recyclable waste stream from the solid waste stream for the following reasons:

- Source separation is mandated by law under the New Jersey Source Separation and Recycling Act (N.J.S.A. 13:1E-99 *et. seq.*). In support of this law the MCMUA favors a consistent source separation policy throughout the residential, commercial and institutional sectors.
- Source separation promotes the removal of all designated recyclable materials from the waste stream and, therefore, helps in achieving high reduction rates.
- Source Separation promotes clean, marketable materials by limiting levels of contamination. Contamination undermines long-term marketability of recyclable materials.
- Source Separation enables the recycler at the source to receive the economic benefits of cost avoidance by not disposing of recyclable materials as solid waste as well as enabling the recycler to receive revenue by the sale of the recyclable material.

Table 9
1990 - Solid Waste Generation and Recycling Rates by Municipality
Morris County, New Jersey

Municipality	Population	Muni/Veg			Bulk/Ind			Private			Total		
		Generation Tons/Year	Recycling Tons/Year	Rate %	Generation Tons/Year	Recycling Tons/Year	Rate %	Projection Tons/Year	Generation Tons/Year	Recycling Tons/Year	Rate %	Generation Tons/Year	Recycling Tons/Year
Boonton	8,343	5,469	1,326	24.24%	1,612	426	26.43%	3,083	10,164	47.57%	4,835	5,330	52.00%
Boonton Twp.	3,566	2,161	374	17.51%	714	29	4.03%	1,318	4,193	41.04%	1,721	2,472	58.80%
Butler	7,392	7,900	3,573	45.86%	1,659	357	21.52%	2,732	12,181	54.69%	6,662	5,519	45.33%
Chatham Boro.	8,007	10,527	7,410	70.39%	3,202	2,393	74.74%	2,959	16,688	76.47%	12,762	3,926	34.65%
Chatham Twp.	9,361	6,325	2,374	37.54%	1,229	914	74.37%	3,460	11,014	61.27%	6,748	4,266	38.50%
Chester Boro.	1,214	2,445	1,149	46.98%	1,130	619	54.76%	449	4,024	55.08%	2,216	1,808	42.64%
Chester Twp.	5,958	5,992	939	15.67%	653	197	30.17%	2,202	8,847	37.73%	3,338	5,509	62.17%
Denville	13,812	19,350	6,329	32.71%	4,111	610	14.85%	5,105	28,566	42.16%	12,044	16,522	57.90%
Dover	15,115	17,417	3,835	22.02%	10,017	5,234	52.25%	5,586	33,021	44.38%	14,655	18,366	51.54%
East Hanover	9,926	15,429	4,516	29.27%	6,672	1,352	20.27%	3,669	25,770	37.01%	9,537	16,233	59.18%
Flerham Park	8,521	12,434	7,052	56.72%	4,640	958	20.65%	3,149	20,223	55.19%	11,160	9,063	39.81%
Hanover	11,538	15,808	6,640	42.01%	5,702	1,245	21.84%	4,264	25,774	47.14%	12,150	13,664	51.00%
Harding	3,640	2,642	813	30.76%	498	73	14.58%	1,345	4,485	49.73%	2,230	2,255	100.00%
Jefferson	17,825	13,522	2,186	16.16%	3,806	2,420	63.59%	6,588	23,916	46.80%	11,194	12,722	51.25%
Kinnelon	8,470	8,262	3,938	47.67%	929	156	16.80%	3,130	12,321	58.64%	7,225	5,096	39.73%
Lincoln Park	13,643	13,643	8,727	63.97%	5,349	2,886	53.95%	4,057	23,050	67.99%	15,671	7,379	31.13%
Long Hill Twp.	7,826	6,319	4,567	72.43%	4,040	2,085	51.62%	2,892	9,685	63.89%	6,188	3,497	32.40%
Madison	15,850	17,214	4,890	28.41%	849	284	33.46%	1,807	27,112	46.15%	12,511	14,601	53.50%
Mendham Boro.	4,890	4,122	998	24.21%	3,124	565	18.08%	1,807	6,778	45.58%	3,089	3,689	53.08%
Mendham Twp.	4,537	3,264	539	16.52%	754	590	78.17%	1,677	5,695	49.26%	2,806	2,890	100.00%
Mine Hill	3,333	2,331	0	0.00%	99	0	0.00%	1,232	3,661	33.64%	1,232	2,430	66.38%
Montville	15,600	12,342	3,428	27.78%	12,370	7,931	64.12%	4,439	30,477	56.19%	17,125	13,352	41.13%
Morris Twp.	19,952	21,205	13,427	63.32%	3,402	1,147	33.71%	7,374	31,982	68.63%	21,948	10,094	28.45%
Morris Plains	5,219	9,004	5,075	56.36%	2,606	459	17.60%	1,929	13,539	55.12%	7,462	6,077	44.84%
Morrisville	16,189	34,165	5,277	15.44%	8,542	1,887	22.09%	5,983	48,690	27.00%	13,147	35,543	72.80%
Mountain Lakes	3,847	3,697	1,237	33.45%	1,170	106	9.09%	1,422	6,289	43.97%	2,765	3,524	56.84%
Mt. Arlington	3,630	894	392	43.83%	1,631	308	18.87%	1,342	3,866	52.79%	2,041	1,825	40.50%
Mt. Olive	21,282	15,622	4,034	25.82%	4,465	496	11.11%	7,866	27,953	44.34%	12,396	15,557	55.68%
Netcong	3,311	4,133	1,124	27.20%	1,070	84	7.84%	1,224	6,427	37.84%	2,432	3,995	58.30%
Pasippany	48,478	68,834	28,014	40.70%	20,295	5,772	28.44%	17,917	107,046	48.30%	51,702	55,344	51.60%
Pequannock	12,844	13,885	8,930	64.31%	1,196	246	20.59%	4,747	19,828	70.22%	13,923	5,905	42.99%
Randolph	19,974	17,974	8,751	48.69%	3,816	994	26.05%	7,382	29,173	58.71%	17,128	2,602	15.30%
Riverdale	2,735	2,370	589	24.81%	1,207	457	37.85%	876	4,818	45.98%	2,215	2,602	54.23%
Rockaway Boro.	6,243	6,774	2,726	40.25%	2,243	773	34.47%	2,307	11,324	51.28%	5,807	5,517	49.47%
Rockaway Twp.	19,572	16,127	4,640	28.77%	7,136	3,145	44.07%	7,234	30,497	49.25%	15,019	15,478	51.55%
Roxbury	20,429	17,689	3,314	18.74%	5,112	1,229	24.04%	7,550	30,351	39.84%	12,093	18,258	57.00%
Victory Gardens	1,314	485	110	22.68%	18	0	100.00%	486	988	62.06%	613	375	37.50%
Washington	15,592	8,422	2,088	24.79%	3,287	1,257	38.23%	5,763	17,471	52.13%	9,107	8,364	31.27%
Wharton	5,405	3,963	1,425	35.95%	877	313	35.68%	1,998	6,838	54.63%	3,735	3,102	46.23%
TOTALS	421,353	450,418	165,049	36.64%	138,578	49,856	35.98%	155,721	744,723	49.77%	370,632	374,092	50.12%

NOTES: Muni/Veg. Waste includes all but Type 13 Bulky and Type 27 Industrial. Private Recycling is unaccounted for by existing reporting procedures. All disposal figures are based on MCTS reports except Town vs Borough Municipality's disposal which is adjusted according to ratios established in the 1983 Morris County Composition Report. Tons recycled is based on NJDEPE audited data. Population is from the 1990 Census. C:\LOTUS\SWMPC\COUNTYGE.WK3

Table 10
1995 - Solid Waste Generation Projections and Recycling Goals by Municipality
Morris County, New Jersey

Municipality	Population Projection Persons	Muni/Veg Waste			Muni/Veg Recycling			Bully/Vad Waste			Bully/Vad Recycling			Private Recycling			Total Waste			Total Recycling			Total Waste Disposed				
		Generation Tons/Year	Rate %	Recycling Tons/Year	Rate %	Recycling Tons/Year	Rate %	Generation Tons/Year	Rate %	Recycling Tons/Year	Rate %	Generation Tons/Year	Rate %	Recycling Tons/Year	Rate %	Generation Tons/Year	Rate %	Recycling Tons/Year	Rate %	Generation Tons/Year	Rate %	Recycling Tons/Year	Rate %	Generation Tons/Year	Rate %	Recycling Tons/Year	Rate %
Boonton	8,363	5,728	50.00%	2,864	2,864	1,688	20.69%	349	1,339	3,091	10,507	60.00%	6,304	60.00%	10,507	60.00%	6,304	60.00%	10,507	60.00%	6,304	60.00%	4,203	60.00%	6,304	60.00%	4,203
Boonton Twp.	3,592	2,263	50.00%	1,132	1,132	748	19.27%	144	604	1,327	4,339	60.00%	2,603	60.00%	4,339	60.00%	2,603	60.00%	4,339	60.00%	2,603	60.00%	1,735	60.00%	2,603	60.00%	1,735
Butler	7,338	11,025	50.00%	5,513	4,079	1,737	44.52%	773	964	2,712	12,608	60.00%	7,565	60.00%	12,608	60.00%	7,565	60.00%	12,608	60.00%	7,565	60.00%	5,043	60.00%	7,565	60.00%	5,043
Chatham Boro.	7,898	6,025	50.00%	3,312	3,312	1,287	66.18%	783	400	3,503	17,298	60.00%	10,379	60.00%	17,298	60.00%	10,379	60.00%	17,298	60.00%	10,379	60.00%	6,919	60.00%	10,379	60.00%	6,919
Chatham Twp.	9,477	2,561	50.00%	1,281	1,281	1,184	66.18%	783	400	3,503	11,414	60.00%	6,849	60.00%	11,414	60.00%	6,849	60.00%	11,414	60.00%	6,849	60.00%	4,566	60.00%	6,849	60.00%	4,566
Chester Boro.	1,237	6,276	50.00%	3,138	3,138	684	14.63%	100	584	2,344	4,202	60.00%	5,582	60.00%	4,202	60.00%	5,582	60.00%	4,202	60.00%	5,582	60.00%	1,681	60.00%	5,582	60.00%	1,681
Chester Twp.	6,344	20,267	50.00%	10,133	10,133	4,305	59.60%	2,566	1,739	5,109	9,304	60.00%	5,582	60.00%	9,304	60.00%	5,582	60.00%	9,304	60.00%	5,582	60.00%	3,722	60.00%	5,582	60.00%	3,722
Denville	13,824	18,242	50.00%	9,121	9,121	10,491	56.20%	5,896	4,595	5,557	29,681	60.00%	17,809	60.00%	29,681	60.00%	17,809	60.00%	29,681	60.00%	17,809	60.00%	11,872	60.00%	17,809	60.00%	11,872
Dover	15,035	16,159	50.00%	8,080	8,080	6,988	61.19%	4,276	2,712	3,832	34,290	60.00%	20,574	60.00%	34,290	60.00%	20,574	60.00%	34,290	60.00%	20,574	60.00%	13,716	60.00%	20,574	60.00%	13,716
East Hanover	10,368	13,023	50.00%	6,511	6,511	4,859	60.87%	2,958	1,901	3,150	21,031	60.00%	12,619	60.00%	21,031	60.00%	12,619	60.00%	21,031	60.00%	12,619	60.00%	8,413	60.00%	12,619	60.00%	8,413
Florham Park	8,522	16,556	50.00%	8,278	8,278	5,972	58.82%	3,512	2,459	4,316	26,844	60.00%	16,106	60.00%	26,844	60.00%	16,106	60.00%	26,844	60.00%	16,106	60.00%	10,738	60.00%	16,106	60.00%	10,738
Hanover	11,677	2,767	50.00%	1,384	1,384	522	6.52%	34	488	1,389	4,678	60.00%	2,807	60.00%	4,678	60.00%	2,807	60.00%	4,678	60.00%	2,807	60.00%	1,871	60.00%	2,807	60.00%	1,871
Harding	3,759	14,162	50.00%	7,081	7,081	3,986	27.32%	1,089	2,897	6,797	24,946	60.00%	14,967	60.00%	24,946	60.00%	14,967	60.00%	24,946	60.00%	14,967	60.00%	9,978	60.00%	14,967	60.00%	9,978
Jefferson	18,392	8,653	50.00%	4,327	4,327	972	14.53%	141	831	3,269	12,894	60.00%	7,737	60.00%	12,894	60.00%	7,737	60.00%	12,894	60.00%	7,737	60.00%	5,158	60.00%	7,737	60.00%	5,158
Kinnelon	8,844	14,289	50.00%	7,145	7,145	5,603	55.55%	3,112	2,490	4,196	24,088	60.00%	14,453	60.00%	24,088	60.00%	14,453	60.00%	24,088	60.00%	14,453	60.00%	9,635	60.00%	14,453	60.00%	9,635
Lincoln Park	11,353	6,618	50.00%	3,309	3,309	495	-38.63%	(191)	687	2,876	9,990	60.00%	5,994	60.00%	9,990	60.00%	5,994	60.00%	9,990	60.00%	5,994	60.00%	3,996	60.00%	5,994	60.00%	3,996
Long Hill Twp.	7,782	18,029	50.00%	9,015	9,015	4,231	47.34%	2,003	2,228	5,846	28,106	60.00%	16,864	60.00%	28,106	60.00%	16,864	60.00%	28,106	60.00%	16,864	60.00%	11,242	60.00%	16,864	60.00%	11,242
Madison	15,818	4,317	50.00%	2,159	2,159	889	27.46%	244	645	1,803	7,009	60.00%	4,205	60.00%	7,009	60.00%	4,205	60.00%	7,009	60.00%	4,205	60.00%	2,804	60.00%	4,205	60.00%	2,804
Mendham Boro.	4,878	4,756	50.00%	1,709	1,709	790	14.28%	113	677	1,758	5,966	60.00%	3,580	60.00%	5,966	60.00%	3,580	60.00%	5,966	60.00%	3,580	60.00%	2,387	60.00%	3,580	60.00%	2,387
Mendham Twp.	4,756	3,419	50.00%	1,709	1,709	790	14.28%	113	677	1,758	5,966	60.00%	3,580	60.00%	5,966	60.00%	3,580	60.00%	5,966	60.00%	3,580	60.00%	2,387	60.00%	3,580	60.00%	2,387
Mine Hill	3,354	2,441	50.00%	1,221	1,221	103	-183.67%	(190)	293	1,240	3,784	60.00%	2,271	60.00%	3,784	60.00%	2,271	60.00%	3,784	60.00%	2,271	60.00%	1,514	60.00%	2,271	60.00%	1,514
Montville	16,994	12,926	50.00%	6,463	6,463	12,956	50.65%	6,563	6,393	6,259	32,140	60.00%	19,284	60.00%	32,140	60.00%	19,284	60.00%	32,140	60.00%	19,284	60.00%	12,856	60.00%	19,284	60.00%	12,856
Morris Twp.	20,035	22,209	50.00%	11,105	11,105	3,563	39.21%	1,397	2,166	7,405	33,177	60.00%	19,906	60.00%	33,177	60.00%	19,906	60.00%	33,177	60.00%	19,906	60.00%	13,271	60.00%	19,906	60.00%	13,271
Morris Plains	5,194	9,431	50.00%	4,715	4,715	2,729	66.42%	1,813	916	1,919	14,079	60.00%	8,447	60.00%	14,079	60.00%	8,447	60.00%	14,079	60.00%	8,447	60.00%	5,632	60.00%	8,447	60.00%	5,632
Morrisstown	15,996	35,783	50.00%	17,891	17,891	8,946	73.56%	6,581	2,365	5,912	50,641	60.00%	30,385	60.00%	50,641	60.00%	30,385	60.00%	50,641	60.00%	30,385	60.00%	20,256	60.00%	30,385	60.00%	20,256
Mountain Lakes	3,830	3,872	50.00%	1,936	1,936	1,225	45.39%	556	669	1,416	6,513	60.00%	3,908	60.00%	6,513	60.00%	3,908	60.00%	6,513	60.00%	3,908	60.00%	2,605	60.00%	3,908	60.00%	2,605
Mt. Arlington	4,346	936	50.00%	468	468	1,708	27.86%	476	1,232	1,606	4,250	60.00%	2,550	60.00%	4,250	60.00%	2,550	60.00%	4,250	60.00%	2,550	60.00%	1,700	60.00%	2,550	60.00%	1,700
Mt. Olive	21,521	16,362	50.00%	8,181	8,181	4,676	26.95%	1,260	3,416	7,954	28,992	60.00%	17,395	60.00%	28,992	60.00%	17,395	60.00%	28,992	60.00%	17,395	60.00%	11,597	60.00%	17,395	60.00%	11,597
Netcong	3,260	4,329	50.00%	2,165	2,165	1,121	55.62%	623	497	1,205	6,655	60.00%	3,993	60.00%	6,655	60.00%	3,993	60.00%	6,655	60.00%	3,993	60.00%	2,662	60.00%	3,993	60.00%	2,662
Passaic	48,324	72,093	50.00%	36,047	36,047	21,256	60.31%	12,819	8,437	17,860	111,209	60.00%	66,726	60.00%	111,209	60.00%	66,726	60.00%	111,209	60.00%	66,726	60.00%	44,484	60.00%	66,726	60.00%	44,484
Pequanock	13,494	14,543	50.00%	7,271	7,271	1,253	16.83%	211	1,042	4,987	20,783	60.00%	12,470	60.00%	20,783	60.00%	12,470	60.00%	20,783	60.00%	12,470	60.00%	8,313	60.00%	12,470	60.00%	8,313
Randolph	21,135	18,825	50.00%	9,413	9,413	3,997	28.93%	1,156	2,841	7,811	30,634	60.00%	18,380	60.00%	30,634	60.00%	18,380	60.00%	30,634	60.00%	18,380	60.00%	12,253	60.00%	18,380	60.00%	12,253
Riverdale	2,349	2,864	50.00%	1,432	1,432	1,265	55.19%	698	567	868	4,997	60.00%	2,998	60.00%	4,997	60.00%	2,998	60.00%	4,997	60.00%	2,998	60.00%	1,999	60.00%	2,998	60.00%	1,999
Rockaway Boro.	6,278	7,094	50.00%	3,547	3,547	2,349	50.69%	1,191	1,158	2,320	11,763	60.00%	7,058	60.00%	11,763	60.00%	7,058	60.00%	11,763	60.00%	7,058	60.00%	4,705	60.00%	7,058	60.00%	4,705
Rockaway Twp.	20,025	16,891	50.00%	8,446	8,446	7,473	42.99%	3,213	4,261	7,401	31,765	60.00%	19,059	60.00%	31,765	60.00%	19,059	60.00%	31,765	60.00%	19,059	60.00%	12,705	60.00%	19,059	60.00%	12,705
Roxbury	20,607	18,526	50.00%	9,263	9,263	5,354	37.70%	2,018	3,335	7,616	31,496	60.00%	18,898	60.00%	31,496	60.00%	18,898	60.00%	31,496	60.00%	18,898	60.00%	12,599	60.00%	18,898	60.00%	12,599
Victory Gardens	1,294	508	50.00%	254	254	19	-697.59%	(129)	148	478	1,004	60.00%	603	60.00%	1,004	60.00%	603	60.00%	1,004	60.00%	603	60.00%	402	60.00%	603	60.00%	402
Washington	16,789	8,820	50.00%	4,410	4,410	3,442	13.52%	465	2,977	6,205	18,468	60.00%	11,081	60.00%	18,468	60.00%	11,081	60.00%	18,468	60.00%	11,081	60.00%	7,387	60.00%	11,081	60.00%	7,387
Wharton	5,366	4,150	50.00%	2,075	2,075	919	18.83%	173	745	1,983	7,052	60.00%	4,231	60.00%	7,052	60.00%	4,231	60.00%	7,052	60.00%	4,231	60.00%	2,821	60.00%	4,231	60.00%	2,821
TOTALS	429,382	471,745	50.00%	235,872	235,872	145,139	48.77%	70,780	74,359	158,694	775,578	60.00%	465,347	60.00%	775,578	60.00%	465,347	60.00%	775,578	60.00%	465,347	60.00%	310,231	60.00%	465,347	60.00%	310,231

Notes: Population Projections based on update by Morris County Planning Board dated October 13, 1992.
Muni/Veg and Bulky/Vad generation based on decreasing growth from 1990 to 1995, no growth from 1995 to 2000, declining generation from 2000 to 2005 and no growth thereafter.
Private Recycling refers to solid waste unaccounted for by existing reporting procedures and is generated at an estimated 0.36959 tons/person/year.

Table 11
2000 – Solid Waste Generation Projections and Recycling Goals by Municipality
Morris County, New Jersey

Municipality	Population Projection		Muni/Veg		Muni/Veg		Muni/Veg		Bulky/Vad		Bulky/Vad		Private		Total		Total	
	Persons	Tons/Year	Recycling Rate %	Waste Generation	Recycling Tons/Year	Waste Disposal Tons/Year	Recycling Rate %	Waste Generation	Recycling Tons/Year	Waste Disposal Tons/Year	Recycling Rate %	Waste Generation	Recycling Tons/Year	Waste Disposal Tons/Year	Recycling %	Waste Generation	Recycling Tons/Year	Waste Disposal Tons/Year
Boonton	8,383	5,835	50.00%	2,918	2,918	2,918	21.86%	1,719	376	1,344	3,098	10,653	6,392	60.00%	10,653	6,392	4,261	
Boonton Twp.	3,617	2,306	50.00%	1,153	1,153	1,153	20.08%	762	153	609	1,337	4,404	2,643	60.00%	4,404	2,643	1,762	
Butler	7,284	8,311	50.00%	4,156	4,156	4,156	46.12%	1,770	816	954	2,692	12,773	7,664	60.00%	12,773	7,664	5,109	
Chatham Boro.	7,788	11,232	50.00%	5,616	5,616	5,616	59.18%	3,416	2,022	1,395	2,878	17,526	10,516	60.00%	17,526	10,516	7,011	
Chatham Twp.	9,593	6,748	50.00%	3,374	3,374	3,374	3.31%	1,311	43	1,268	3,545	11,605	6,963	60.00%	11,605	6,963	4,642	
Chester Boro.	1,261	2,609	50.00%	1,304	1,304	1,304	66.18%	1,206	798	408	466	4,281	2,568	60.00%	4,281	2,568	1,712	
Chester Twp.	6,729	6,393	50.00%	3,196	3,196	3,196	8.97%	697	62	634	2,487	9,576	5,746	60.00%	9,576	5,746	3,831	
Denville	13,836	20,646	50.00%	10,323	10,323	10,323	60.44%	4,386	2,651	1,735	5,114	30,145	18,087	60.00%	30,145	18,087	12,058	
Dover	14,955	18,583	50.00%	9,292	9,292	9,292	56.70%	10,687	6,060	4,628	5,527	34,798	20,879	60.00%	34,798	20,879	13,919	
East Hanover	10,809	16,462	50.00%	8,231	8,231	8,231	60.68%	7,119	4,319	2,799	3,995	27,575	16,545	60.00%	27,575	16,545	11,030	
Florham Park	8,523	13,266	50.00%	6,633	6,633	6,633	61.35%	4,950	3,037	1,913	3,150	21,366	12,820	60.00%	21,366	12,820	8,546	
Hanover	11,816	16,866	50.00%	8,433	8,433	8,433	59.01%	6,083	3,590	2,494	4,367	27,316	16,390	60.00%	27,316	16,390	10,927	
Harding	3,877	2,819	50.00%	1,409	1,409	1,409	5.18%	531	28	504	1,433	4,783	2,870	60.00%	4,783	2,870	1,913	
Jefferson	18,958	14,427	50.00%	7,213	7,213	7,213	26.51%	4,061	1,076	2,984	7,007	25,494	15,297	60.00%	25,494	15,297	10,198	
Kinnelon	9,218	8,815	50.00%	4,408	4,408	4,408	11.42%	991	113	878	3,407	13,213	7,928	60.00%	13,213	7,928	5,285	
Lincoln Park	11,727	14,557	50.00%	7,278	7,278	7,278	55.13%	5,707	3,146	2,561	4,334	24,598	14,759	60.00%	24,598	14,759	9,839	
Long Hill Twp.	7,739	6,742	50.00%	3,371	3,371	3,371	-33.10%	505	(167)	672	2,860	10,107	6,064	60.00%	10,107	6,064	4,043	
Madison	15,785	18,366	50.00%	9,183	9,183	9,183	48.47%	4,310	2,089	2,221	5,834	28,510	17,106	60.00%	28,510	17,106	11,404	
Mendham Boro.	4,865	4,398	50.00%	2,199	2,199	2,199	29.15%	906	264	642	1,798	7,102	4,261	60.00%	7,102	4,261	2,841	
Mendham Twp.	4,975	3,482	50.00%	1,741	1,741	1,741	11.89%	805	96	709	1,839	6,126	3,676	60.00%	6,126	3,676	2,450	
Mine Hill	3,375	2,487	50.00%	1,243	1,243	1,243	-17.81%	105	(187)	292	1,247	3,840	2,304	60.00%	3,840	2,304	1,536	
Montville	18,268	13,168	50.00%	6,584	6,584	6,584	49.51%	13,198	6,535	6,663	6,752	33,117	19,870	60.00%	33,117	19,870	13,247	
Morris Twp.	20,117	22,625	50.00%	11,312	11,312	11,312	40.40%	3,630	1,466	2,164	7,435	33,690	20,214	60.00%	33,690	20,214	13,476	
Morris Plains	5,168	9,607	50.00%	4,803	4,803	4,803	67.07%	2,780	1,865	915	1,910	14,297	8,578	60.00%	14,297	8,578	5,719	
Morristown	15,803	36,452	50.00%	18,226	18,226	18,226	74.36%	9,114	6,777	2,336	5,841	51,406	30,844	60.00%	51,406	30,844	20,562	
Mountain Lakes	3,813	3,945	50.00%	1,972	1,972	1,972	46.44%	1,248	580	668	1,409	6,602	3,961	60.00%	6,602	3,961	2,641	
Mt. Arlington	5,062	954	50.00%	477	477	477	22.47%	1,740	391	1,349	1,871	4,565	2,739	60.00%	4,565	2,739	1,826	
Mt. Olive	21,760	16,668	50.00%	8,334	8,334	8,334	27.46%	4,763	1,308	3,455	8,042	29,474	17,684	60.00%	29,474	17,684	11,789	
Netcong	3,209	4,410	50.00%	2,205	2,205	2,205	57.07%	1,142	652	490	1,186	6,738	4,043	60.00%	6,738	4,043	2,695	
Parippany	48,169	73,442	50.00%	36,721	36,721	36,721	61.03%	21,654	13,215	8,438	17,803	112,898	67,739	60.00%	112,898	67,739	45,159	
Pequanock	14,145	14,815	50.00%	7,407	7,407	7,407	12.22%	1,276	156	1,120	5,228	21,318	12,791	60.00%	21,318	12,791	8,527	
Randolph	22,296	19,177	50.00%	9,589	9,589	9,589	26.15%	4,072	1,065	3,007	8,240	31,489	18,894	60.00%	31,489	18,894	12,596	
Riverdale	2,327	2,918	50.00%	1,459	1,459	1,459	55.94%	1,288	721	568	860	5,066	3,039	60.00%	5,066	3,039	2,026	
Rockaway Boro.	6,312	7,227	50.00%	3,613	3,613	3,613	51.21%	2,393	1,225	1,168	2,333	11,953	7,172	60.00%	11,953	7,172	4,781	
Rockaway Twp.	20,478	17,207	50.00%	8,603	8,603	8,603	42.84%	7,613	3,261	4,352	7,568	32,389	19,433	60.00%	32,389	19,433	12,955	
Roxbury	20,785	18,873	50.00%	9,436	9,436	9,436	38.26%	5,454	2,087	3,367	7,682	32,009	19,205	60.00%	32,009	19,205	12,803	
Victory Gardens	1,273	517	50.00%	259	259	259	-662.61%	19	(125)	144	470	1,007	604	60.00%	1,007	604	403	
Washington	17,986	8,985	50.00%	4,493	4,493	4,493	9.80%	3,507	344	3,163	6,647	19,139	11,484	60.00%	19,139	11,484	7,656	
Wharton	5,327	4,228	50.00%	2,114	2,114	2,114	21.03%	936	197	739	1,969	7,133	4,280	60.00%	7,133	4,280	2,853	
TOTALS	437,411	480,566	50.00%	240,283	240,283	240,283	48.77%	147,853	72,104	75,749	161,662	790,081	474,048	60.00%	790,081	474,048	316,032	

Notes: Population Projections based on update by Morris County Planning Board dated October 13, 1992.

Muni/Veg and Bulky/Vad generation based on decreasing growth from 1990 to 1995, no growth from 1995 to 2000, declining generation from 2000 to 2005 and no growth thereafter.

Private Recycling refers to solid waste unaccounted for by existing reporting procedures and is generated at an estimated 0.36959 tons/person/year.

Table 12
 2005 - Solid Waste Generation Projections and Recycling Goals by Municipality
 Morris County, New Jersey

Municipality	Population Persons	Muni/Veg			Bully/Ind			Bully/Ind			Bully/Ind			Private			Total		
		Waste Generation Tons/Year	Recycling Rate %	Waste Disposal Tons/Year	Waste Generation Tons/Year	Recycling Rate %	Waste Disposal Tons/Year	Waste Generation Tons/Year	Recycling Rate %	Waste Disposal Tons/Year	Waste Generation Tons/Year	Recycling Rate %	Waste Disposal Tons/Year	Waste Generation Tons/Year	Recycling Rate %	Waste Disposal Tons/Year	Waste Generation Tons/Year	Recycling Rate %	Waste Disposal Tons/Year
Boonton	8,258	5,736	50.00%	2,868	1,690	21.70%	367	1,323	3,052	10,478	60.00%	6,287	4,191						
Boonton Twp.	3,637	2,266	50.00%	1,133	749	18.46%	138	611	1,344	4,359	60.00%	2,616	1,744						
Butler	7,220	8,169	50.00%	4,084	1,740	45.60%	793	946	2,669	12,577	60.00%	7,546	5,031						
Chatham Boro.	7,677	11,039	50.00%	5,520	3,358	59.08%	1,984	1,374	2,837	17,234	60.00%	10,341	6,894						
Chatham Twp.	9,481	6,633	50.00%	3,317	1,289	2.71%	35	1,254	3,504	11,426	60.00%	6,855	4,570						
Chester Boro.	1,279	2,564	50.00%	1,282	1,185	65.68%	778	407	473	4,222	60.00%	2,533	1,689						
Chester Twp.	7,154	6,283	50.00%	3,142	685	-2.69%	(18)	703	2,644	9,612	60.00%	5,767	3,845						
Denville	13,848	20,292	50.00%	10,146	4,311	59.58%	2,569	1,742	5,118	29,721	60.00%	17,833	11,888						
Dover	14,865	18,265	50.00%	9,133	10,505	56.47%	5,932	4,573	5,494	34,264	60.00%	20,558	13,706						
East Hanover	11,183	16,180	50.00%	8,090	6,997	59.50%	4,163	2,834	4,133	27,310	60.00%	16,386	10,924						
Florence Park	8,467	13,039	50.00%	6,520	4,865	61.07%	2,971	1,894	3,129	21,034	60.00%	12,620	8,413						
Hanover	11,935	16,577	50.00%	8,289	5,979	58.22%	3,481	2,498	4,411	26,967	60.00%	16,180	10,787						
Harding	4,005	2,771	50.00%	1,385	522	-0.32%	(2)	524	1,480	4,773	60.00%	2,864	1,909						
Jefferson	19,606	14,180	50.00%	7,090	3,991	22.91%	914	3,077	7,246	25,418	60.00%	15,251	10,167						
Kinnelon	9,611	8,664	50.00%	4,332	974	3.07%	30	944	3,552	13,190	60.00%	7,914	5,276						
Lincoln Park	11,907	14,307	50.00%	7,154	5,610	54.12%	3,036	2,573	4,401	24,518	60.00%	14,591	9,727						
Long Hill Twp.	7,679	6,627	50.00%	3,313	496	-35.24%	(175)	671	2,838	9,961	60.00%	5,976	3,984						
Madison	15,674	18,052	50.00%	9,026	4,236	47.91%	2,030	2,206	5,793	28,081	60.00%	16,849	11,232						
Mendham Boro.	4,840	4,323	50.00%	2,161	890	28.19%	251	639	1,789	7,002	60.00%	4,201	2,801						
Mendham Twp.	5,199	3,423	50.00%	1,711	791	6.12%	48	743	1,921	6,000	60.00%	3,681	2,454						
Mine Hill	3,402	2,444	50.00%	1,222	103	-189.93%	(196)	300	1,257	3,805	60.00%	2,283	1,522						
Montville	18,574	12,942	50.00%	6,471	12,972	48.81%	6,332	6,640	6,865	32,779	60.00%	19,668	13,112						
Morris Twp.	20,148	22,238	50.00%	11,119	3,568	38.84%	1,386	2,182	7,446	33,252	60.00%	19,951	13,301						
Morris Plains	5,141	9,442	50.00%	4,721	2,732	66.74%	1,824	909	1,900	14,075	60.00%	8,445	5,630						
MorrisTown	15,612	35,828	50.00%	17,914	8,958	74.23%	6,649	2,308	5,770	50,556	60.00%	30,333	20,222						
Mountain Lakes	3,794	3,877	50.00%	1,939	1,227	45.89%	563	664	1,402	6,506	60.00%	3,904	2,602						
Mt. Arlington	5,043	937	50.00%	469	1,710	21.89%	374	1,336	1,864	4,511	60.00%	2,707	1,804						
Mt. Olive	22,060	16,383	50.00%	8,191	4,682	25.34%	1,186	3,496	8,153	29,218	60.00%	17,531	11,687						
Netcong	3,163	4,334	50.00%	2,167	1,122	56.95%	639	483	1,169	6,626	60.00%	3,976	2,650						
Passippany	47,835	72,185	50.00%	36,092	21,283	60.69%	12,917	8,366	17,679	111,147	60.00%	66,688	44,459						
Pegannock	14,057	14,561	50.00%	7,281	1,254	10.64%	133	1,121	5,188	21,003	60.00%	12,602	8,401						
Randolph	23,188	18,849	50.00%	9,425	4,002	21.45%	858	3,144	8,570	31,421	60.00%	18,853	12,568						
Riverdale	2,301	2,868	50.00%	1,434	1,266	55.78%	706	560	850	4,984	60.00%	2,991	1,994						
Rockaway Boro.	6,333	7,103	50.00%	3,552	2,352	50.40%	1,185	1,167	2,340	11,796	60.00%	7,077	4,718						
Rockaway Twp.	20,909	16,912	50.00%	8,456	7,483	41.29%	3,090	4,393	7,728	32,123	60.00%	19,274	12,849						
Roxbury	20,936	18,550	50.00%	9,275	5,361	56.87%	1,976	3,384	7,738	31,648	60.00%	18,989	12,659						
Victory Gardens	1,254	508	50.00%	254	19	-664.82%	(123)	142	463	991	60.00%	594	396						
Washington	19,328	8,832	50.00%	4,416	3,447	2.72%	94	3,353	7,143	19,422	60.00%	11,653	7,769						
Wharton	5,281	4,155	50.00%	2,078	920	20.31%	187	733	1,952	7,027	60.00%	4,216	2,811						
TOTALS	441,861	472,342	50.00%	236,171	145,323	47.55%	69,105	76,218	163,307	780,971	60.00%	468,583	312,388						

Notes: Population Projections based on update by Morris County Planning Board dated October 13, 1992.
 Muni/Veg and Bully/Ind generation based on decreasing growth from 1990 to 1995, no growth from 1995 to 2000, declining generation from 2000 to 2005 and no growth thereafter.
 Private Recycling refers to solid waste unaccounted for by existing reporting procedures and is generated at an estimated 0.36959 tons/person/year.

Table 13
2010 – Solid Waste Generation Projections and Recycling Goals by Municipality
Morris County, New Jersey

Municipality	Population Persons	Muni/Veg Waste			Bulky/nd Waste			Private Recycling			Total		
		Generation Tons/Year	Recycling Rate %	Disposal Tons/Year	Generation Tons/Year	Recycling Rate %	Disposal Tons/Year	Projection Tons/Year	Rate %	Waste Tons/Year	Recycling Tons/Year	Waste Tons/Year	Disposal Tons/Year
Boonton	8,133	5,793	50.00%	2,897	1,707	23.50%	401	1,306	3,006	10,506	60.00%	6,304	4,203
Boonton Twp.	3,657	2,289	50.00%	1,144	756	18.79%	142	614	1,352	4,397	60.00%	2,638	1,759
Builer	7,565	8,251	50.00%	4,126	1,757	46.74%	821	936	2,645	12,653	60.00%	7,592	5,061
Chatham Boro.	9,369	11,151	50.00%	5,575	3,392	59.90%	2,032	1,360	2,796	17,338	60.00%	10,403	6,935
Chatham Twp.	1,298	6,700	50.00%	3,350	1,302	5.06%	66	1,236	3,463	11,464	60.00%	6,878	4,586
Chester Boro.	7,579	2,590	50.00%	1,295	1,197	65.61%	785	412	480	4,267	60.00%	2,560	1,707
Chester Twp.	13,859	6,347	50.00%	3,173	692	-10.24%	(71)	762	2,801	9,839	60.00%	5,904	3,936
Denville	14,776	18,449	50.00%	10,248	4,354	60.02%	2,613	1,741	5,122	29,973	60.00%	17,984	11,989
East Hanover	11,557	16,343	50.00%	8,171	10,610	56.80%	6,027	4,584	5,461	34,521	60.00%	20,712	13,808
Floham Park	13,170	13,170	50.00%	6,585	7,067	58.95%	4,166	2,901	4,271	27,681	60.00%	16,609	11,073
Hanover	12,053	16,744	50.00%	8,372	6,040	61.50%	3,022	1,892	3,109	21,193	60.00%	12,716	8,477
Harding	4,133	2,799	50.00%	1,399	527	58.22%	3,516	2,523	4,455	27,238	60.00%	16,343	10,895
Jefferson	20,255	14,323	50.00%	7,161	4,031	-2.78%	(15)	542	1,528	4,854	60.00%	2,912	1,941
Kinnelon	10,003	8,751	50.00%	4,376	983	21.25%	857	3,175	7,486	25,840	60.00%	15,504	10,336
Lincoln Park	12,088	14,452	50.00%	7,226	5,666	-1.38%	(14)	997	3,697	13,432	60.00%	8,059	5,373
Long Hill Twp.	7,618	6,693	50.00%	3,347	501	53.97%	3,058	2,608	4,468	24,585	60.00%	14,751	9,834
Madison	15,563	18,234	50.00%	9,117	4,279	-31.18%	(156)	657	2,816	10,010	60.00%	6,006	4,004
Mendham Boro.	4,814	4,366	50.00%	2,183	899	48.84%	2,090	1,189	5,752	28,265	60.00%	16,959	11,306
Mendham Twp.	5,423	3,457	50.00%	1,729	799	29.41%	264	635	1,779	7,045	60.00%	4,227	2,818
Mine Hill	3,429	2,469	50.00%	1,234	1,04	2.94%	24	776	2,004	6,261	60.00%	3,756	2,504
Montville	18,880	13,073	50.00%	6,536	104	-188.90%	(197)	302	1,267	6,261	60.00%	2,304	1,536
Morris Twp.	20,179	22,462	50.00%	11,231	13,103	48.68%	6,378	6,725	6,978	33,153	60.00%	19,892	13,261
Morris Plains	5,114	9,538	50.00%	4,769	3,604	39.55%	1,425	2,179	7,458	33,523	60.00%	20,114	13,409
Morristown	15,421	36,189	50.00%	18,095	2,760	67.16%	1,854	906	1,890	14,188	60.00%	8,513	5,675
Mountain Lakes	3,774	3,916	50.00%	1,958	9,048	74.80%	6,768	2,280	5,699	50,936	60.00%	30,562	20,374
Mt. Arlington	5,023	947	50.00%	473	1,239	46.58%	577	662	1,395	6,550	60.00%	3,930	2,620
Mt. Olive	22,360	16,548	50.00%	8,274	1,727	22.49%	389	1,339	1,856	4,531	60.00%	2,718	1,812
Netcong	3,118	4,378	50.00%	2,189	4,729	25.09%	1,187	3,542	8,264	29,541	60.00%	17,724	11,816
Parsippany	47,500	72,912	50.00%	36,456	21,497	61.25%	13,167	8,330	17,555	111,964	60.00%	67,179	44,786
Pequanock	13,929	14,708	50.00%	7,354	1,267	13.55%	172	1,095	5,148	21,122	60.00%	12,673	8,449
Randolph	24,079	19,039	50.00%	9,519	4,042	19.04%	770	3,273	8,899	31,981	60.00%	19,188	12,792
Riverdale	2,275	2,275	50.00%	1,448	1,279	56.35%	721	558	841	5,016	60.00%	3,010	2,006
Rockaway Boro.	6,353	7,175	50.00%	3,587	2,376	50.67%	1,204	1,172	2,348	11,898	60.00%	7,139	4,759
Rockaway Twp.	21,340	17,083	50.00%	8,541	7,558	40.86%	3,088	4,470	7,887	32,528	60.00%	19,517	13,011
Roxbury	21,086	18,757	50.00%	9,368	5,414	37.03%	2,005	3,409	7,793	31,944	60.00%	19,167	12,778
Victory Gardens	1,235	514	50.00%	257	19	-639.88%	(120)	139	456	989	60.00%	593	396
Washington	20,670	8,920	50.00%	4,460	3,481	-2.15%	(75)	3,556	7,639	20,041	60.00%	12,025	8,016
Wharton	5,235	4,197	50.00%	2,099	929	21.89%	203	726	1,935	7,061	60.00%	4,237	2,825
TOTALS	446,311	477,099	50.00%	238,549	146,786	47.55%	69,801	76,985	164,951	788,836	60.00%	473,302	315,534

Notes: Population Projections based on update by Morris County Planning Board dated October 13, 1992.
Muni/Veg and Bulky/nd generation based on decreasing growth from 1990 to 1995, no growth from 1995 to 2000, declining generation from 2000 to 2005 and no growth thereafter.
Private Recycling refers to solid waste unaccounted for by existing reporting procedures and is generated at an estimated 0.36959 tons/person/year.

- Source separation fosters a free market, independent of the solid waste collection and disposal system. This reduces the need for burdensome regulations and costly enforcement.
- Proper documentation is difficult, if not impossible, when recyclables are mixed with solid waste.
- Source separation fosters competition among recycling companies, thereby keeping costs low and quality of services high.
- Source separation encourages a thought process among each individual recycler that solid waste disposal is every person's responsibility. This can foster further source reduction and recycling activities at work, home and school.

The recycling goals and facility sizing projections were compiled with the assumption that the County will implement a multi-faceted recycling program based primarily on source separation and further enhanced by material recovery operations. The source separation component of the recycling projections is based on the achievement of material specific maximum feasible source separation recycling rates accepted by the County. A review of these material specific source separation rates can be found in Table 7.

The County must improve and expand its current source separation programs in order to achieve such ambitious source separation recycling rates. This will be accomplished by a variety of steps which include: the mandating of additional materials; improved collection; use of market enhancement through the use of a consolidation center; efficient use of existing recycling infrastructure (depots and equipment); establishment of municipal responsibilities; improved education; enhanced enforcement; provision of technical assistance; and documentation. These individual programs are described below.

- **Mandated Materials:** Additional materials, other than those traditionally recycled by the household, will have to be recycled in order to achieve the ambitious recycling rates accepted by the County. Towards this effort, Morris County is designating certain materials as mandated to be source separated and recycled. These mandated materials will be banned from the County's disposal system which currently includes the transfer station facilities and out-of-State landfills.

The County will only mandate materials if recycling markets are available. Several materials are designated as mandated, however, implementation will be phased in as markets are developed. Most of the additional designated materials currently have markets available and, therefore, are being mandated effective immediately. If market demand disappears for any of these materials, the County may elect to delete that material from the mandated list. Likewise, additional materials may be added as recycling markets develop and expand.

Table 14 identifies the list of mandated materials and the dates the designations take effect. In the past, Morris County had mandated different materials for different sectors (i.e. residential, commercial and institutional). The County's updated mandated materials listing applies to all sectors, except for food waste which will only be mandated for specific commercial and institutional generators. Specific generators may include restaurants, taverns, supermarkets, grocers, cafeterias, (schools, hospitals, offices), food processing plants and other generators of relatively large quantities of food waste. In the case of a multi-generator building, (i.e. apartment, office complex, hotels, etc.), the generator as well as the building management shall be responsible for compliance with County and municipally mandated material source separation recycling requirements.

For materials not previously mandated in the County Plan, enforcement will be phased in with the development of the County enforcement program.

The list of County mandated materials represents the minimum requirements for residents, business and institutions in Morris County. Individual municipalities may mandate additional materials. Table 15 lists the materials currently mandated in each Morris County municipality for the residential sector. Table 16 lists the mandated materials for the commercial/institutional sectors. The materials mandated in the County Plan, prior to the enactment of this Amendment, included glass and aluminum in all sectors, newspaper and yard waste (leaves and brush) in the residential sector and, corrugated and office paper (hi-grade) in the commercial and institutional sectors.

Table 14
Materials Mandated to be Recycled
Morris County, New Jersey

<u>Material</u>	<u>Effective Date</u>	<u>Remarks</u>
†Newspaper	Immediately	
‡Corrugated	Immediately	
Mixed Paper (recoverable)	Immediately	‡hi-grade, magazines, junkmail, scrap paper, etc.
*Aluminum Containers	Immediately	
Plastic Containers	Immediately	Type 1 (PETE) and Type 2 (HDPE) only
*Glass Containers	Immediately	
Ferrous Containers	Immediately	tin and steel cans
†Yard Waste	Immediately	leaves, grass and brush
Tires	Immediately	
Vehicular Batteries	Immediately	
White Goods	Immediately	CFCs must be recovered where applicable
Motor Oil	Immediately	
Oil Contaminated Soil	Immediately	non-hazardous, Type 27
Stumps	Immediately	logs, branches, natural wood waste
Asphalt Roofing Shingles	Immediately	
Food Waste	When Compost facil. opens	initially includes specific commercial/institutions
Construction & Demo.	When Bulky facil. open	County bulky facility will be a market
Household Batteries	6 months after State Plan	State is implementing market based collection program.

Notes: * = previously mandated for all sectors

† = previously mandated for the residential sector

‡ = previously mandated for the commercial and institutional sectors

- **Collection of Materials:** Morris County has a wide variety of curbside recycling collection programs. They range from municipalities which provide almost no curbside collection to municipalities which collect and recycle a large portion of the generated solid waste stream. Table 17 lists the materials currently collected at the curbside by Morris County municipalities.

All but two municipalities provide some type of curbside collection program. According to the Fall 1992 survey, 12 municipalities use their own employees to provide the collection, ten contract with private haulers to provide the service, seven contract with the County's curbside program and nine municipalities use different combinations of the above. Once collected, 12 municipalities have the materials consolidated at their recycling depots, 12 municipalities utilize the County consolidation center, two municipalities allow the hauler keep the recyclables and 11 have combinations of the above. It should be noted that in many cases municipalities collect and market traditional materials (glass, aluminum, newspaper, etc.) differently than non-traditional materials (oil, batteries, bulky waste, etc.). Likewise, when asked about the frequency of curbside pickup, most municipalities provided frequent pickup for traditional materials and a variety of pickup schedules for non-traditional materials. For traditional materials, nine municipalities provided weekly pickup, 16 municipalities provided bi-weekly or twice a month pickup and 12 municipalities provided monthly pickup. Recycling containers are

**Table 15
Mandated Materials for the Residential Sector to Source Separate and Recycled
Morris County, New Jersey**

Municipality	Mandated Materials													
	Alum	Glass	News paper	Corru-gated	Hi-Grade Paper	JMail/Magazines	Plastic	Tin/Steel Cans	Motor Oil	Batteries	Bulky Items	Yard Waste	Tires	Other
Boonton	x	x	x											G
Boonton Twp.	x	x	x	x			x							
Butler	x	x	x	x		x	1	x			A	LBG	x	
Chatham Boro.	x	x	x											
Chatham Twp.	x	x	x											LBG
Chester Boro.	x	x	x	x			x							LB
Chester Twp.	x	x	x	x										
Denville	x	x	x											LB
Dover	x	x	x	x		x	12	x	x		A	LBG	x	
East Hanover	x	x	x	x			1	x	x	V				LB
Florham Park	x	x	x	x		x	123	x						LBG
Hanover	x	x	x	x		x								LB
Harding	x	x	x	x										LBG
Jefferson	x	x	x	x										LBG
Kinnelon	x	x	x	x		x	x				A			LB
Lincoln Park	x	x	x	x		x	123+	x	x	V	AW	LBG	x	
Long Hill Twp.	x	x	x	x		x	x	x	x	V	A			x
Madison	x	x	x				12	x						LBG
Mendham Boro.	x	x	x			x	x	x						LBG
Mendham Twp.	x	x	x	x		x	x	x			x			
Mine Hill	x	x	x								A			LBG
Montville	x	x	x											LB
Morris Twp.	x	x	x	x	x	x		x	x					LB
Morris Plains	x	x	x			x	x	x						LB
Morristown	x	x	x	x		x	x	x		V	A	LBG	x	
Mountain Lakes	x	x	x	x										LBG
Mt. Arlington	x	x	x	x	x	x	x	x	x	V	A	LBG	x	
Mt. Olive	x	x	x	x	x	x	12	x		V	x	LBG		
Netcong	x	x	x	x		x	x	x						LBG
Parsippany	x	x	x			x	x	x	x	V	A	LBG	x	
Pequannock	x	x	x											LBG
Randolph	x	x	x				x	x						LBG
Riverdale	x	x	x				x	x						LB
Rockaway Boro.	x	x	x	x			123	x						LBG
Rockaway Twp.	x	x	x											LB
Roxbury	x	x	x	x		x	123		x	V	x	LBG	x	
Victory Gardens	x	x	x	x		x	2				A	LB	x	
Washington	x	x	x		x	x	123	x		V		L	x	
Wharton	x	x	x	x		x	12	x	x	V	A	LBG	x	

Notes:
 C=Commingled with other materials designated with a "C".
 Yard Waste (L=Leaves, B=Brush, G=Grass), Scrap Metal included with Appliances, Hi-Grade often accepted in JMail/Mag Mix.
 Plastic Types Accepted (1=PETE, 2=HDPE, 3=PVC, +=Other Types) Bulky Items: W=Wood Wasre, A=Appliances.
 Other Materials: P=Phonebooks, F=Antifreeze, P=Phone Books. Batteries:V=Vehicle, H=Household.

**Table 16
Mandated Materials for the Commercial/Institutional Sectors to Source Separate and Recycle
Morris County, New Jersey**

Municipality	Mandated Materials													
	Alum	Glass	Newspaper	Corrugated	Hi-Grade Paper	JMail/Magazines	Plastic	Tin/Steel Cans	Motor Oil	Batteries	Bulky Items	Yard Waste	Tires	Other
Boonton	x	x	x	x										
Boonton Twp.	x	x	x	x	x									
Butler	x	x	x	x	x	x	1	x						
Chatham Boro.	x		x	x	x									
Chatham Twp.	x	x	x	x	x									
Chester Boro.	x	x	x		x									
Chester Twp.														
Denville	x	x		x	x									
Dover	x	x	x	x	x	x	12	x						
East Hanover	x	x	x	x			1	x						
Florham Park	x	x	x	x	x	x	123	x						
Hanover	x	x		x	x									
Harding	x	x		x	x									
Jefferson	x	x	x	x	x									
Kinnelon	x	x	x	x	x									
Lincoln Park	x	x	x	x		x	123+	x	x	V	AW	LBG	x	
Long Hill Twp.	x	x	x	x	x		1	x						
Madison	x	x	x	x	x		12	x						
Mendham Boro.	x	x	x	x	x	x	12	x						
Mendham Twp.	x	x	x	x	x	x	12	x						
Mine Hill	x	x	x	x	x		123	x						
Montville	x	x	x	x	x									
Morris Twp.	x	x	x	x	x	x		x					x	
Morris Plains	x	x		x	x									
Morristown	x	x	x	x	x	x	123	x						
Mountain Lakes			x	x	x									
Mt. Arlington	x	x	x	x	x	x	x	x						
Mt. Olive	x	x	x	x	x	x	12	x		V	x	LBG		
Netcong	x	x	x	x	x	x	x	x						
Parsippany	x	x	x	x	x	x	x	x						
Pequannock	x	x	x	x	x									
Randolph	x	x	x	x	x									
Riverdale	x	x		x	x		123	x						
Rockaway Boro.	x	x	x	x	x	x	123	x						
Rockaway Twp.	x	x	x	x	x								x	
Roxbury	x	x	x	x	x	x	123		x	V	x	LBG	x	
Victory Gardens	x	x	x	x	x		2							
Washington	x	x	x		x		123	x						
Wharton	x	x	x	x	x	x	12	x						

Notes:

C=Commingled with other materials designated with a "C".
 Yard Waste (L=Leaves, B=Brush, G=Grass), Scrap Metal included with Appliances, Hi-Grade often accepted in JMail/Mag Mix.
 Plastic Types Accepted (1=PETE, 2=HDPE, 3=PVC, +=Other Types) Bulky Items: W=Wood Waste, A=Appliances.
 Other Materials: P=Phonebooks, F=Antifreeze, P=Phone Books. Batteries: V=Vehicle, H=Household.

**Table 17
Municipal Curbside Recyclable Collection Programs
Morris County, New Jersey**

Municipality	Hi-Grade		JMail/Mag		Tin/Steel		Motor Oil	Batteries	Bulky Items	Yard Waste	Tires	Other
	Alum	Glass	Newspaper	Corrugated Paper	Plastic	Cans						
Boonton	x	x	x	x	x	12	x					
Boonton Twp.	x	x	x	x	x	123						
Butler	C	C	x	x	x	C12	C				LBG	
Chatham Boro.	x	x	x	x	x	12					L	
Chatham Twp.	x	x	x	x	x	123						
Chester Boro.	No Curbside Program									A	LBG	
Chester Twp.	C	xC	x	x	x	1	C			A		
Denville	C	C	x			C12	C	x	V	xA	LB	F
Dover	x	x	x	x	x	123	x			A	LBG	
East Hanover	C	C	x	x		C1	C			A	LB	
Florham Park	x	x	x	x	x	123	x			xA	LBG	
Hanover	C	C	x		x	C12	C			A	LBG	
Harding			x		x					A		
Jefferson	x	x	x	x	x	x	x					
Kinnelon	C	C	x			C12						
Lincoln Park	x	x	x	x	x	123	x			A	LBG	
Long Hill Twp.	x	x	x	x	x	1	x			A		
Madison	C	C	C		C	C12	C				LBG	
Mendham Boro.	C	C	x	x	x	C12	C					
Mendham Twp.	C	C	x	x	x	12	C			A	B	
Mine Hill	C	C	x	x						A		
Montville	C	C	x		x		C			A	L	
Morris Twp.	C	C	x	x	x	C1	C			xA	LBG	
Morris Plains	x	x	x	x	x	123	x			A	LBG	
Morristown	C	C	x	x	x	C123	C		V	A	LBG	x
Mountain Lakes	No Curbside Program											
Mt. Arlington	x	x	x	x	x	x	x	x	x	x	x	x
Mt. Olive	x	x	x	x	x	2	x	x	x	A	LBG	
Netcong	x	x	x	x	x	x	x					
Parsippany	C	C	x	x	x	C1	C			A	LBG	
Pequannock	C	C	x			C123	C				L	
Randolph	C	x	x	x	x	123	C		V	A	L	x
Riverdale	C	C	x		x	C123	C			A	LB	M
Rockaway Boro.	x	x	x		x					A	LBG	
Rockaway Twp.	x	x	x		x					A	LB	M
Roxbury	x	x	x	x	x	123	x			A		
Victory Gardens	x	x	x	x	x	2			x	A	LB	x
Washington	C	x	x		x		C					
Wharton	C	C	x	x	x	C12	C			AW	LBG	x

Notes:

C=Commingled with other materials designated with a "C".
 Yard Waste (L=Leaves, B=Brush, G=Grass), Scrap Metal included with Appliances, Hi-Grade often accepted in JMail/Mag Mix.
 Plastic Types Accepted (1=PETE, 2=HDPE, 3=PVC, +=Other Types) Bulky Items: W=Wood Waste, A=Appliances.
 Other Materials: P=Phonebooks, F=Antifreeze, P=Phone Books. Batteries:V=Vehicle, H=Household.

provided by only eight of municipalities which provided curbside pickup. Condominium and multi-family buildings are included in the municipal curbside program in 25 of the municipalities.

In addition to the municipal collection programs, the County has established its own curbside collection service for contracting municipalities. The Morris County Curbside Recycling Program (MCCRAP) was initially established in 1985, in conjunction with Occupational Training Center, to collect newspaper for two municipalities. Currently, MCCRAP services 11 municipalities and has greatly expanded the services and materials collected. Up to ten different materials are collected at curbside including: white glass, green glass, amber glass, tin cans, aluminum cans, plastic containers, corrugated cardboard, newspaper, magazines/junkmail, and office paper.

Another service provided for contracting municipalities participating in MCCRAP is the direct hauling of materials from curbside to the County Recycling Consolidation Center. This eliminates the need for municipalities to market and transport materials thus providing a stable outlet for their recyclables.

An additional offspring of MCCRAP has been the development of a commercial collection program for small businesses. The commercial program started in 1990 and currently includes participating small businesses in three municipalities. The intent of this program is to expand service as personnel and equipment is made available. The quantities of materials collected from the businesses are credited to the generating municipality.

- **Market Enhancement Through the Use of a Recycling Consolidation Center:** In March and April 1990, the MCMUA Solid Waste Committee held several meetings which identified Morris County's long-term recycling goals and developed recommendations to achieve these goals. Consensus was reached at these meetings that the County should continue to strongly adhere to its primary reliance on source separation recycling, in all sectors. The MCMUA and Board of Chosen Freeholders have concurred with this policy. There was also consensus that, for some recyclable materials, there was weak demand in the markets and that the supply of materials will increase at a greater rate than the demand for these materials resulting in a market based disincentive to recycle.

Realizing that recycling rates may be negatively impacted in the future due to increased materials glutting the market as New Jersey and the Northeast United States dramatically increased their recycling efforts, Morris County decided to provide a guaranteed market for its generators through the development of a Recycling Consolidation Center (Center). The Center would accept source separated materials from residential, commercial and institutional generators then clean, glean and consolidate the materials in order to supply the highest quality product to an increasingly sensitive recycling market. The economies of scale achieved by the Center place Morris County generators in a much stronger marketing position than would be achieved if each generator individually marketed its own materials.

The implementation of the Consolidation Center was initially designed to process "hard to market" materials such as plastics, corrugated, junk mail, magazines as well as a variety of office paper. The facility was established as a pilot project to assess the County's ability to entice additional recycling of the above referenced large supply but low demand materials. The knowledge gained through the use of the Consolidation Center would be incorporated into the planning and implementation (if appropriate) of a long-term, large-scale consolidation facility in the future.

The County investigated several sites for the recommended Center and decided to lease 40,500 square feet of warehouse space in the Dover Industrial Park in the Town of Dover. The County submitted a Plan Amendment on May 8, 1991 to the NJDEPE for inclusion of the Center into the MCSWMP. On October 17, 1991 NJDEPE Commissioner Weiner certified the Plan Amendment.

The Center commenced operations in August 1991 receiving and processing 159 tons or 7.23 tons per day in its first month. Since then, the Center has expanded its processing rate and has increased its throughput to an average of approximately 700 tons per month for the last three months of 1992. This equals approximately 30 tons per day. Table 18 summarizes the throughput tonnage for the Center since its opening in August 1991.

In March 1992, eight months after the commencement of operations, the MCMUA contracted with its engineering consultant (Alaimo Engineering) to prepare a process and design evaluation of the Center. This evaluation resulted in the release of a report entitled *Design and Process Evaluation of the Morris County Recycling Consolidation Center* dated April 1992. Processing projections for the Center were formulated in this report through July 1994. The projections were based on the Center's first eight months of operations which establishes a base per day operation rate of 17.26 tons per day. The projections assume a 3% per month increase in the processing rate of the Center which results in a projected daily processing rate of 40.68 tons per day in July 1994. The existing lease for the Dover site terminates in July 1994. The County may opt to extend the lease based upon future considerations.

The original May 8, 1991 Plan Amendment for the Center included an anticipated capacity of 30 TPD. It is being proposed that capacity of the Center be increased to 50 TPD based on the following:

1. The Engineer's Evaluation Report of the Center projects a processing rate of 40 TPD by the second half of 1994;
2. Since the release of the Engineer's Report, the Center has attracted increasing tonnage and, thereby, has consistently exceeded the projected processing rates;
3. In conjunction with the recommendations presented in the Engineer's Report, the County procured additional equipment including a 2-ram baler system with a picking station and conveyor. This system enables the Center to produce high density, exportable bales of high quality material in a very efficient manner. Since the installation of this baling system, the Center has produced a significantly more marketable product. Other equipment procured since the

Table 18
Morris County Recycling Consolidation Center
Monthly Summary Report

Material	Total	January	February	March	April	May	June	July	August	September	October	November	December
All Materials	1,079.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	159.07	196.22	210.09	232.07	281.57
Aluminum	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.39
Corrugated	435.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.40	79.25	97.35	84.35	104.89
Junk Mail/Mag	403.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.22	88.19	66.05	84.52	105.44
Newspapers	39.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.94	12.48	6.70	18.71
Office Paper	46.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73	8.41	5.14	13.07	14.75
Plastics	154.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.29	19.43	29.08	42.85	37.39
Tin/SteelCans	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TelephoneBooks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<u>1991</u>													
All Materials	6,244.04	307.66	298.75	330.07	523.08	463.63	588.64	563.31	516.64	540.67	769.52	623.51	718.56
Aluminum	37.82	0.69	0.91	0.36	2.50	0.85	1.20	1.79	4.71	2.56	7.54	8.40	6.33
Corrugated	1,940.43	114.38	100.04	106.92	126.12	126.61	210.92	189.09	155.26	199.08	213.10	180.83	218.09
Junk Mail/Mag	1,909.37	116.86	114.75	122.36	190.33	142.87	155.64	154.20	153.57	118.72	230.35	189.62	220.09
Newspapers	1,468.22	13.79	30.46	46.63	138.53	135.52	151.02	130.59	112.86	123.04	233.06	172.33	180.39
Office Paper	174.12	11.38	10.61	13.83	11.31	12.01	15.88	22.01	22.63	15.92	18.89	11.87	7.79
Plastics	644.28	50.58	41.99	39.96	54.28	45.78	53.98	65.42	56.32	58.84	57.20	50.44	69.51
Tin/SteelCans	37.49	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.29	1.52	9.07	10.02	16.38
TelephoneBooks	32.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.99	21.00	0.31	0.00	0.00
<u>1992</u>													

Notes: The Consolidation Center opened in August 1991.
 Totals for 1991 are for August through December.
 All figures are in Tons.

release of the Engineer's Report include: a can flattening system which can magnetically separate tin/steel from aluminum cans, a four wheel drive front end loader to feed the baling systems, as well as a fork lift and additional ventilation equipment in order to keep a neat and safe working environment.

The Consolidation Center was originally intended to be a "pilot" facility to help define what type of permanent, long-term recycling facility should be implemented in Morris County. This is the reason the site was leased for only three years. While the Center has not been operating long enough to formulate long term recommendations, it will be closely monitored over the initial three year time period to assess its impact on the County's recycling market and source separation recycling rate. In addition, the County will monitor consolidation activities occurring at municipal depots in order to most efficiently use the already extensive recycling infrastructure.

- **Enforcement:** Morris County's solid waste management strategy, which includes solid waste and recycling projections, and the designation of proposed facilities and facility capacities, is based on achieving the accepted recycling goals. Failure to achieve these goals will result in an inefficient and ineffective solid waste management system. As such, the County needs to take aggressive steps to establish a strong enforcement program to insure strict compliance with the County's solid waste management and recycling plan. The implementation of such an enforcement program will require significant effort and cost.

Morris County intends to take the necessary aggressive steps to implement a source separation recycling enforcement program which is more aggressive than the program presently in place. Currently, the County has a limited inspection program which includes the use of an inspector who examines the waste being processed at the transfer stations on Monday through Friday in order to identify waste generators which are not conforming to the County's source separation recycling requirements. The inspections are targeted primarily at the commercial sector to identify companies which are flagrantly non-compliant with respect to the County's recycling rules and regulations. When a non-complying generator is identified, the event is entered into a database and the generator is contacted by the County to attempt to alter the practice and/or to offer assistance in establishing a recycling program at that business. In addition, the MCMUA has often conducted informal waste audits at non-compliant establishments as a result of this inspection program. To date, this program has been very successful in insuring commercial compliance with the County recycling requirements.

The County is currently in the process of applying for the solid waste franchise and intends on establishing tariffs applicable to the processing and disposal of solid waste through its proposed solid waste management complex. As part of the tipping fee structure, the County is considering the assessment of differential rates based upon the attainment of established recycling goals by the municipalities. As the County progresses in both obtaining the franchise and implementing the various parts of the solid waste management complex, it will include these issues, as well as this fee-based recycling incentive program, into future Plan amendments.

Another aspect of an effective recycling enforcement system is the establishment of a County-wide enforcement agency. The County intends to investigate its options with respect to the designation of the appropriate agency which would be responsible for enforcement. This agency will be responsible for periodic inspections at the curbside as well as at the disposal/processing facilities. The enforcement agency will also be responsible for assessing penalties and for maintaining pressure on recycling violators to assure compliance. The enforcement agency will be responsible for forwarding its findings to the County recycling staff so it can coordinate its education efforts. Prior to the implementation of enforcement efforts by the selected agency, an enforcement protocol will be developed to insure the enforcement efforts are comprehensive and well coordinated. The protocol will include specific dates and frequencies of individual components of the enforcement program, such as inspections, and it will also delegate individual responsibilities for the implementation of the program. Finally, this agency will be the County representative responsible for the enforcement of solid waste flow rules established in the Plan. The results of the investigation, the selection of an enforcement agency, the establishment of an enforcement protocol, and projections of manpower requirements and costs will be contained in a future Plan Amendment.

- **Municipal Responsibilities:** In order to insure the achievement of the stated recycling goals in each of the County's municipalities, several mandated municipal responsibilities are identified below:
 - **Recycling Coordinator:** Each town shall designate a recycling coordinator to oversee the recycling activities of the municipality, maintain and compile recycling information for submittal to the State and County, and act as an informational base for municipal residents, businesses and officials. If a town fails to designate a municipal recycling coordinator, the County shall assume the municipal administrator or manager will be the acting coordinator until one is designated. Presently, each municipality has designated a recycling coordinator (see Table 19).
 - **Recycling Ordinance:** By December 31, 1993, each municipality must update their recycling ordinance to accept the source reduction and recycling goals stipulated in this Plan Amendment. Likewise, the ordinance update must minimally include municipal acceptance of the County's mandated materials list for all sectors. The update shall also include a description of how the municipality plans on achieving the recycling goals in both the residential and commercial sector. The municipal ordinances shall include enforcement policies which include inspection of garbage set out for disposal and a minimum fine of \$25.00 per offense for recycling violators. Finally, the municipality must provide the County Recycling Coordinator with a certified copy of the municipal recycling ordinance whenever it is amended.
 - **Documentation:** The municipality must provide documentation in accordance with the County Plan and State documentation system as presented in a report prepared by the NJDEPE entitled, *1993 Recycling Tonnage Reporting Manual* dated December 1992. In the past, recycling tonnages were to be provided for all sectors to the County Recycling Coordinator on a quarterly basis. This responsibility shall remain in place until the formally implementation of the State's proposed system. In

accordance with that manual, municipalities will be responsible to report tonnage information (and submit weight slips) to the NJDEPE on a semi-annual basis for specified materials depending on how the material is collected and processed. After compilation, the State shall distribute documentation data back to the County.

Finally, the municipality must present a detailed description of the recycling programs established at all municipal buildings to the County Recycling Coordinator annually.

- **Notification:** At least once every six months each municipality must notify all persons occupying residential, commercial or institutional premises in that municipality of the provisions of the municipal recycling program and how each sector may recycle its mandated materials. This notification shall be provided to the County Recycling Coordinator. At least one notification a year shall be a direct mailing to each individual unit. This can be sent exclusively or accompany other official notifications such as tax or water bills.

Table 19
Municipal Recycling Coordinators
Morris County, New Jersey

<u>MUNICIPALITY</u>	<u>COORDINATOR'S NAME</u>	<u>ADDRESS, TOWN</u>	<u>PHONE #</u>
BOONTON TOWN	RON RUBINO	100 WASHINGTON ST, BOONTON 07005	299-7724
BOONTON TWP.	SANDY SINDLINGER	RD 5, BOX 201, BOONTON, 07005	402-4007
BUTLER BORO	KAREN BECKER	ONE ACE RD., BUTLER 07405	838-7200
CHATHAM BORO	HENRY UNDERHILL	54 FAIRMOUNT AVE., CHATHAM 07928	635-0674
CHATHAM TWP.	JIM ROBERTSON	405 SOUTHERN BLVD, CHATHAM 07928	377-5114
CHESTER BORO	JANET CILLO	PO BOX 487, 300 MAIN ST, CHESTER 07930	(908)879-5361
CHESTER TWP.	SARAH JANE NOLL	PO BOX 428, CHESTER 07930	(908)879-5113
DENVILLE TWP.	JOE LOWELL	DEPT. OF P.W. 140 MORRIS AVE, DENVILLE 07834	625-8334
DOVER TOWN	WILLIAM ISSELIN	37 N. SUSSEX ST. DOVER 07801	361-9294
E. HANOVER	NICK MARCANTONIO	411 RIDGEDALE AVE. E. HANOVER 07936	428-3063
FLORHAM PARK	DOUG COULL	111 RIDGEDALE AVE. FLORHAM PK. 07932	377-2250
cc:	CARL GANGER	111 RIDGEDALE AVE. FLORHAM PK. 07932	377-2250
HANOVER TWP.		1000 RT.10, PO BOX 250, WHIPPANY 07981	428-2482
HARDING TWP.	RICHARD WIEDMANN	PO BOX 666, BLUE MILL RD, NEW VERNON 07976	267-8000
JEFFERSON TWP	JIM PETERS	1033 WELDON RD, LK. HOPATCONG 07849	697-1500
KINNELON BORO	ROBERT SAUTTER	KINNELON RD., KINNELON 07405	838-5401
LINCOLN PARK	RICHARD LOVALLO	34 CHAPEL HILL RD, LINCOLN PK. 07035	694-6100
cc:	PAUL SARAMES	34 CHAPEL HILL RD, LINCOLN PK. 07035	694-6100
LONG HILL TWP.	GENE FUCCI	1223 VALLEY RD, STIRLING 07980	(908)647-0789
cc:	JERRY TESTA	1223 VALLEY RD, STIRLING 07980	(908)647-0789
MADISON BORO	DOUG SMITH	KINGS RD, HARTLEY DODGE MEM, MADISON 07940	593-3097
MENDHAM BORO	DAVE CROTSLEY	2 W. MAIN ST., MENDHAM NJ 07945	543-7152
MENDHAM TWP.	PENNY NEWELL	PO BOX 520, BROOKSIDE, 07926	543-4555
MINE HILL TWP	JOE BREITWEISER	10 BAKER ST, MINE HILL, DOVER 07801	(H)361-4389
cc:	JOHN PALMIERI	10 BAKER ST, MINE HILL, DOVER 07801	366-0093
MONTVILLE TWP	ED PULLAN	132 CHANGEBRIDGE RD, MONTVILLE 07045	334-1015
MORRIS PLAINS	VINCE NOVAK	PO BOX 305, MORRIS PLAINS 07950	538-2224
MORRIS TWP.	DICK WALTER	CN 7603, CONVENT STATION, 07961	326-7398
cc:	JOE GIORDANO	CN 7603, CONVENT STATION, 07961	326-7377
MORRISTOWN	JIM CUTLER	PO BOX 709, MORRISTOWN 07960	292-6672
cc:	ANITA SEIDEL	38 DUMONT PL, MORRISTOWN 07963	292-6714
MT. ARLINGTON	AL FAVINO	526 ALTERNBRAND AVE, MT ARLINGTON 07856	398-4100
MT. OLIVE TWP.	HERB BERMAN	HEALTH DEPT, BOX A, BUDD LAKE 07828	691-0900
MTN. LAKES BORO	SARITA EISENBERG	400 BLVD., MTN. LAKES 07046	(H)299-9509
NETCONG BORO	LYNN TAYLOR	77 ALLEN ST., NETCONG 07857	691-8933
PARSIPPANY TWP.	JOE LINFANTE	1001 PARSIPPANY BLVD, PARSIPPANY 07054	263-7273
PEQUANNOCK TWP.	PETER CORREALE	530 TURNPIKE, POMPTON PLAINS 07444	835-5700
RANDOLPH TWP.	CLEM FERDINANDO	502 MILLBROOK AVE, RANDOLPH 07869	989-7050
RIVERDALE BORO	WALTER MAHON	PO BOX 6, RIVERDALE 07457	835-6077
ROCKAWAY BORO	SYLVIA BANBOR	1 E. MAIN ST., ROCKAWAY 07866	625-0577
cc:	TRUDY GIORDANO	1 E. MAIN ST., ROCKAWAY 07866	539-4141 x338
ROCKAWAY TWP.	SUSAN RUIZ	65 MT. HOPE RD., ROCKAWAY 07866	983-2842
ROXBURY TWP.	DEBRA RADEMACHER	72 EYLAND AVE, SUCCASUNNA 07876	927-2053
VICTORY GARDENS	CHARLES POINDEXTER	337 S. SALEM ST. DOVER 07801	361-8121
cc:	DEBRA EVANS	337 S. SALEM ST. DOVER 07801	361-8121
WASHINGTON TWP.	CLAIRE ROBERTSON	PO BOX 216, LONG VALLEY 07853	(908)876-4369
WHARTON BORO	JAMES BOYER	10 ROBERT ST. WHARTON 07885	366-3595
cc:	PAT ORIOLO	10 ROBERT ST. WHARTON 07885	361-8444

- **Education:** Morris County will expand its recycling education effort to meet the challenges of its ambitious recycling goals. These efforts will include promoting the County's recycling program through various mediums including: fact sheets, newsletters, seminars and conferences, awards dinners, media advertisements, etc.

The education program will also promote the benefits of proper waste management as well as environmentally conscious living through various programs including: "Glinda Garbaj" which teaches fourth graders these benefits; the environmental shopping program; the provision of promotion materials (comic books, bumper stickers, posters, magnets, etc.); and, the maintenance of a solid waste and recycling library (books, movies, videos, articles, games, etc.).

Finally, the County's education program will teach people and businesses techniques of recycling. This will be accomplished by: waste audits of businesses and institutions; the provision of "How To" booklets (office recycling, backyard composting, etc.); the provision of yard waste composting expertise through the County's Shade Tree Commission; and, an expert County recycling staff which will educate people, businesses, institutions as well as municipal officials on how to recycle and how to expand and improve existing recycling programs.

Morris County will enhance its existing recycling education program and will pursue some new concepts in order to meet the challenges of its ambitious recycling goals. Specific activities include:

- The creation of a multi-media education campaign by the County Solid Waste Management/Recycling Staff targeting various sectors of the population, using the following means:
 - The publication of an advertising supplement in a daily newspaper serving Morris County. This supplement shall be published at least once a year.
 - The publication of **Resource Recovery Report**, the County's solid waste/recycling newsletter. This shall be published at least twice a year.
 - The publication of two different brochures on the following topics which shall be published as program changes dictate:
 - Recycling in Morris County (background, questions and answers).
 - Source reduction tips.
 - The creation of both programs and PSA's to be aired as frequently as possible on radio and cable television stations.
 - The establishment of a recycling telephone hotline and computer bulletin board service by the end of 1994.

- The creation of "Recycling on the Go," by posting placards inside public transportation vehicles as well as large recycling messages on the outside of such vehicles. Some placards are to be in place by the end of 1994.
- Continued use and distribution of promotional materials featuring Nova the Pterrodactyl (the Morris County recycling mascot who was introduced in the comic book entitled **Challenge of the Garbage Gargoyle**):
 - A Nova costume to be used for presentations to schools and community groups.
 - Magnets.
 - Bookmarks.
 - Posters.
- The purchase of a portable pop-up display unit (with graphics) to be located in areas accessible to the public and/or to be used when presentations are made to community groups. This display unit shall be purchased by the end of 1993.
- Expansion of the "Glinda Goes Green Grocery Shopping" program (an environmental shopping program which consists either of a tour in an actual supermarket or an "armchair" tour in which color slides, live commentary and sample groceries are used. This program is coordinated by the Morris County education specialist.
- In 1994, a one-time purchase and distribution of recycling reminder calendar stickers for all Morris County municipalities (who will in turn distribute them to their residents).
- The indefinite continuation of the annual Morris County Recycling Awards Dinner at which the recycling achievements of Morris County municipalities, groups and individuals have been highlighted since 1985. The County will attempt to garner increasing media coverage of this event as part of its recycling promotion strategy.
- Continued expansion of the in-house recycling library, as well as cooperation with the Morris County Library and the County Audio Visual Aids Commission to insure that the appropriate recycling-related books, periodicals, videos, etc., are available to the public.
- The sponsoring of seminars/programs (please see the "Educational Strategies" section under "Source Reduction Implementation Strategies").
- Education of the commercial/institutional sectors via the following methods:
 - The purchase of copies of the **Small Business Guide to Recycling** to be distributed at programs targeted for the small business community. These guides shall be purchased by the end of 1993.

- The publication of a brochure touting the virtues of the Morris County Consolidation Center. This brochure shall be published by the end of 1993 and new versions shall be published thereafter as program changes dictate.
- Development of a program which targets the landlord/manager/tenant segment of the population (office buildings, apartment buildings, condominiums, etc.) with accompanying educational materials. This program will also include an outreach program for motels and hotels in Morris County to make sure they and their guests are aware of the County recycling rules. This program is to be developed by the Morris County Solid Waste Management Staff by the end of 1994.

In addition to individual help provided by County's Recycling Staff when asked for help in establishing recycling programs in multi-family dwellings, the County has several documents available to provide managers as well as tenants information on their recycling responsibilities. These documents include:

- *Strength in Numbers: A Manual for Recycling in Multifamily Housing* by ANJEC
 - *A Guide to Establishing Recycling in Multifamily Complexes* by the Burlington County Office of Waste Management
 - *A Recycling Guide for Landlords and Managers of Multi-Family Buildings* by NJDEPE
 - *A Recycling Guide for Superintendents and Tenant Councils* by NJDEPE
- **Equipment and Depots:** With the increasing participation and recycling rates being experienced by most municipalities in the County, municipalities have had to keep up with the increasing quantity and variety of materials being handled at local recycling depots. A great deal of information was gathered regarding the municipal recycling infrastructure in Morris County as a result of the Fall 1992 municipal survey. Table 20 presents a list of the materials accepted at each of the municipal recycling depots in Morris County. Listed below is additional information gathered in the survey about each municipality's recycling depot including hours of operation, site issues and equipment used. It is the intention of the County to track the infrastructure through a database and to act as a clearing house to facilitate municipal sharing of under-utilized equipment and depot capacity. Finally, a comprehensive understanding of the County recycling collection and depot system will facilitate the appropriate use of any present or future County consolidation activities.
 - **Boonton:** The depot is located on Plane Street at the Department of Public Works (DPW) garage. It is open from 11:00-3:00 Monday-Friday, and 8:00-12:00 on Saturday. It uses vendor owned roll-offs to consolidate glass, by color, aluminum, newspapers and construction debris. Boonton owns a trailer for plastics and a front-end loader to handle the material. The depot has room to expand and Boonton is planning on doing so in the near future.

**Table 20
Materials Accepted at Municipal Recycling Depots
Morris County, New Jersey**

Municipality	Materials Accepted													Other
	Alum	Glass	News paper	Corru- gated Paper	Hi- grade Paper	JMail/ Maga- zines	Plastic	Tin/ Steel Cans	Motor Oil	Batte- ries	Bulky Items	Yard Waste	Tires	
Boonton	x	x	x				12	x	x	V	A	LBG	x	Antifreeze
Boonton Twp.	x	x	x	x		x	123		x	x	x		x	
Butler	No Depot											LBG		
Chatham Boro.	x	x	x	x		x	12					LBG		
Chatham Twp.	x	x	x	x		x	123					LBG	x	Clothing
Chester Boro.	x	x	x	x			123						x	
Chester Twp.	No Depot													
Denville	C	C	x	x		x	C123	C	x	x		LBG	x	F,P,BrnBag
Dover									x			L	x	
East Hanover	C	C	x	x			C1	C	x			LBG	x	
Florham Park	x	x	x	x		x	123					L		PhoneBook
Hanover	C	C	x	x		x	C12	C				LBG		
Harding	x	x	x	x		x	123							
Jefferson	x	x	x	x		x	x	x	x	x		x		
Kinnelon	x	x	x	x		x	123	x	x	x	x	L	x	
Lincoln Park	x	x	x	x		x	123+	x	x	x	AW	LBG	x	
Long Hill Twp.	x	x	x	x		x	1	x	x	x	x	LG	x	
Madison	C	C	x	x		x	C12	C	x			LBG		
Mendham Boro.	No Depot											x		
Mendham Twp.	No Depot													
Mine Hill	x	x	x	x		x	123	x	x	x	x	LBG		
Montville	x	x	x			x	12	x	x	x	x	LBG	x	
Morris Twp.	C	C	x	x		x	C1	C	x					
Morris Plains	x	x	x	x		x	123	x						BrownBag
Morristown	C	C	x	x		x	C123	C		H	x	LBG	x	
Mountain Lakes	x	x	x	x		x	x	x	x	x	x	x	x	
Mt. Arlington	x	x	x	x		x	x	x	x	x	x	x		
Mt. Olive	x	x	x	x		x	12	x	x	x				
Netcong	x	x	x	x		x	x	x	x		x			
Parsippany	C	C	x	x		x	C	C	x	x	xA	LBG	x	
Pequannock						x			x	x		LBG	x	
Randolph	C	x	x	x		x	12	x	C	x	V	LBG	x	AntiFreeze
Riverdale	x	x		x			123	x					x	
Rockaway Boro.	x	x	x	x		x	123						x	
Rockaway Twp.	x	x	x			x	12					LBG	x	
Roxbury	x	x	x	x		x	123		x	x		GL	x	
Victory Gardens	No Depot													
Washington	C	x	x	x		x	123	C	x	V	xA	LB	x	Clothing
Wharton	No Depot											DPW		

Notes:
 C=Commingled with other materials designated with a "C".
 Yard Waste (L=Leaves, B=Brush, G=Grass), Scrap Metal included with Appliances, Hi-Grade often accepted in JMail/Mag Mix.
 Plastic Types Accepted (1=PETE, 2=HDPE, 3=PVC, +=Other Types) Bulky Items: W=Wood Wasre, A=Appliances.
 Other Materials: P=Phonebooks, F=Antifreeze, P=Phone Books. Batteries:V=Vehicle, H=Household.

- Boonton Township: The depot is located at the municipal building on Powerville Road. It is open each Saturday from 9:00-12:00 and on the 3rd Tuesday of the month from 9:00-10:00. The depot uses both municipal and vendor owned roll-offs for consolidation of materials. The municipality also owns a 275 gallon used-motor oil tank. The depot is 200' x 150' and has no room for expansion.
- Butler: The Borough has no recycling depot.
- Chatham Borough: The depot is located on Summit Ave. and is open Wednesday from 9:00-12:00 and Saturday from 9:00-1:00. It uses both municipal and vendor owned roll-offs to consolidate the materials. The Borough also owns a compactor for plastic and uses a vendor owned aluminum crusher. The site area of the depot is two acres and has room for expansion.
- Chatham Township: The Township's depot is located on Tanglewood Lane and is open Tuesday from 8:30-11:30 and on the 2nd and 4th Saturdays from 8:00-12:00. It uses both municipal and vendor owned roll-offs to consolidate the materials. The depot is 0.9 acres in size and can be expanded to accept additional materials. It uses a vendor owned aluminum crusher.
- Chester Borough: The depot is located on Collins Lane at the municipal building. It is open on Tuesday and Wednesday from 7:00-3:00 and on Saturdays from 8:00-12:00. The borough owns a glass crusher. The depot is 30' x 50' and has no room for expansion.
- Chester Township: Does not have a depot.
- Denville: The depot is located on Morris Ave. and is open Monday-Friday from 7:00-3:30 and Saturday from 8:00-2:00. It uses both municipal and vendor owned roll-offs to consolidate the materials. Denville also leases a compactor for corrugated.
- Dover: The Depot is located on North Sussex Street and is open from 7:00-3:00 on Monday-Friday and is open on Saturdays from October-December for leaf composting. Dover also owns a 250 gallon oil tank and leases a front-end loader.
- East Hanover: The depot is located on Melanie Lane and is open from 8:00-3:30 on Wednesdays and from 8:00-4:00 on Saturdays. It uses vendor owned roll-offs for consolidation of materials and it owns a front-end loader, dump truck and a compactor for vegetative waste. The depot has no room for expansion.
- Florham Park: The depot is located on Columbia Turnpike and is open on Saturdays from 9:00 to 3:00. It primarily uses vendor owned roll-offs for consolidation of materials. The depot is located on a five acre site and has room for expansion.

- Hanover Township: The depot is located at Stony Brook Road, off of Jefferson Road, and is open on Monday-Saturday from 7:00-3:00. It uses both municipal and vendor owned roll-offs to consolidate the materials. The facility has limited room for expansion.
- Harding Township: The depot is located at Millbrook Road and is open on Wednesday from 9:00-12:00 and on specified Saturdays. It uses municipal owned wooden bins to consolidate material and also a baler for plastics, a can crusher, a glass crusher and a front-end loader. The depot is 75' x 75' and has no room for expansion.
- Jefferson Township: The depot is located on Weldon Road and is open from 9:00-3:00 on Monday-Friday and from 9:00-1:00 on Saturday. It uses both municipal and vendor owned roll-offs to consolidate the materials and the Township owns a front-end loader used at the depot. The depot is 75' x 10' and has room for expansion.
- Kinnelon Borough: The depot is located at 188 Kinnelon Road and is open from 8:00-6:00 on Saturday-Tuesday. It uses both municipal and vendor owned roll-offs and barrels to consolidate the materials. Kinnelon also owns and uses a back-hoe, fork lift, rack/dump truck and a 40 c.y. roll-off truck. The depot has no room for expansion.
- Lincoln Park: The depot is located on East Main Street and is open from 7:30-3:15 on Monday-Friday and from 8:30-5:00 on Saturday. It uses municipally owned roll-off containers to consolidate materials. The depot also contains two 500 gallon tanks for used oil. Lincoln Park uses its own aluminum separator, plastic compactor and bucket loader. The depot is located on 1.5 acre site and has a limited amount of room for expansion.
- Long Hill Township: The depot is located on Valley Road and is open from 9:00-12:00 on Saturdays. The depot uses only vendor owned roll-off containers for the consolidation of materials. The depot also utilizes its own wood chipper. The facility has no room for expansion.
- Madison: The depot is located on John Avenue at the municipal building and is open from 7:30-3:30 on Monday-Friday. It uses both municipal and vendor owned roll-offs and barrels to consolidate the materials. The facility has room for expansion.
- Mendham Borough: The Borough has no depot.
- Mendham Township: The Township has no depot.
- Mine Hill: The depot is located on Baker Street and is open from 8:00-4:00 seven days a week. It uses municipally owned wooden bins to consolidate material. The depot is 50' x 100' and has room for expansion.

- **Montville:** The depot is located on River Road at the Municipal Garage. It is open from 8:00-8:00 on Monday, from 8:30-4:15 on Tuesday-Friday and from 8:30-3:30 on Saturday. It uses both municipal own and vendor owned roll-offs and barrels to consolidate the materials. The depot has no room to expand.
- **Morris Township:** The depot is located on Jane Way and is open from 6:00-3:00 on Monday-Friday and from 8:00-4:00 on Saturday. The depot uses municipally owned 40 cubic yard roll-off containers for the consolidation of materials. In addition, the Township owns a 550 gallon tank for used motor oil. The depot is 100' x 40' and has no room for expansion.
- **Morris Plains:** The depot is located on Granniss Avenue and is open on Saturdays from 8:30-12:00. It uses both municipal and vendor owned roll-offs and barrels to consolidate the materials. The depot is 200' x 400' and has no room for expansion.
- **Morristown:** The depot is located on Lake Road and is open from 7:00-3:30 on Monday-Friday (open until 7:30 on Wednesday) and from 8:00-3:30 on Saturdays. The depot uses vendor owned roll-offs to consolidate materials and the depot can be expanded to accept additional materials.
- **Mountain Lakes:** The depot is located on Pocono Road at the DPW building. It is open from 7:00-5:00 on Monday-Friday and is also open the second and fourth Fridays of the month. The depot uses vendor owned roll-offs to consolidate the material. The site is 50' x 50 and has room for expansion.
- **Mt. Arlington:** The depot is located on Alterbrand Ave at the DPW building. It is open on Monday-Friday from 7:00-3:30 and on Saturday from 8:00-4:30. The depot utilizes municipally owned roll-offs for the consolidation of corrugated and commingled materials and municipally owned trucks for paper. In addition, two municipally owned 75 gallon drums are utilized for used motor oil. The depot is 70' x 50' and has limited room for expansion.
- **Mt. Olive:** The depot is located on Wolfe Road and is open from 8:00-12:00 on Tuesday, Thursday, Friday and Saturday. The depot uses vendor owned roll-offs for glass but the municipality owns a bobcat utilized for loading operations. The depot is located on a one acre site and has room for expansion.
- **Netcong:** The depot is located on Flanders Road and is open 24 hours a day, seven days a week. The depot used municipally owned roll-off, partitions, tractor trailers and barrels for the consolidation of the material. The site is 80' x 100' and has room for expansion.
- **Parsippany-Troy Hills:** The depot is located on Pumphouse Road and is open from 10:00-2:00 on Monday-Friday and from 8:00-12:00 on Saturdays. The depot uses municipally owned roll-off containers for the consolidation of some materials. The depot is located on a two acre site and has room for expansion.

- Pequannock: The depot is located on Alexander Ave. at the DPW Garage. It is open from 4:00-7:00 on Wednesdays and from 12:00-4:00 on Saturdays and Sundays. The depot is primarily a compost facility although it is used for the consolidation of certain materials. The facility uses municipally owned dump trucks, back-hoes and front-end loaders to process the materials. The site has no physical space for expansion but can be expanded to accept additional materials in the future.
- Randolph: The depot is located on Sussex Turnpike and is open from 7:30-3:30 on Monday-Friday, from 8:30-3:45 on Saturday and from 9:00-2:45 on Sundays. The depot uses primarily municipally owned roll-offs for the consolidation of materials. The municipality owns a shredder and wood chipper for the composting operations occurring on site. The site is 15 acres and has room for expansion.
- Riverdale: The depot is located at the Borough Hall and is open 24 hours a day, seven days a week. The depot used vendor owned roll-offs for the consolidation of corrugated and commingled containers. It is 600 square feet in size and has no room for expansion.
- Rockaway Borough: The depot is located on Union Street at the DPW Garage. It is open from 9:00-2:30 on Tuesdays, Thursdays and Saturdays. It uses both municipally and vendor owned roll-offs to consolidate the materials as well as municipally owned garbage cans. The Borough uses its own dump trucks, pick-up trucks and front-end loader to load and haul the material. The depot is 50' x 20' and has no physical room for expansion but can accept additional materials.
- Rockaway Township: The Township has two separate depots, one at the Township Garage on Green Pond Road and the McVeigh Depot located on Mt. Hope Road. The Township Garage depot is open from 7:00-3:30 on Monday-Friday and on Saturdays from 9:00-1:00. McVeigh is open from 7:00-5:00 on Monday-Friday and from 8:00-1:00 on Saturdays. Both sites use municipally owned roll-offs and 55 gallon drums as well as vendor supplied box trailers for the consolidation of materials. The Township also owns a plastic baler and a wood chipper and it leases an aluminum baler.
- Roxbury Township: The depot is located on Eyland Avenue and is open from 7:00-7:00 on Monday-Friday, from 8:00-4:00 on Saturdays and from 9:00-3:00 on Sunday. Roxbury uses vendor owned roll-offs, trailers and containers for the consolidation of materials. It also owns a 500 gallon oil tank and is anticipating using a vendor owned corrugated compactor in the near future. The depot can accept additional materials but cannot expand in size.
- Victory Gardens: This municipality has no depot.
- Washington Township: The depot is located on Rock Road and is open from 8:00-4:00 from Wednesday-Saturday. It uses vendor owned roll-offs for the consolidation of materials. The Township owns, but rarely uses, both a can and a glass crusher. The Township also owns a 500 gallon used motor oil tank. The site is one acre and

has room for expansion. The use of the depot is expected to be scaled back soon as the materials collected curbside will not be deposited at the depot.

- Wharton: The Borough has no depot.
- **Technical Assistance**: The County recycling staff continues to provide technical recycling assistance to individuals, businesses and municipalities in Morris County. Additionally, County assistance includes the expertise of the Morris County Shade Tree Commission with respect to yard waste composting. Toward this end, the County intends to create a master composter program similar to that developed jointly by the Seattle Solid Waste Utility and the Seattle Tilth Association. The program involves training master composters who in turn train other community members in composting techniques. It is anticipated that this program will commence in 1994.

The County recycling staff will continue to provide municipal recycling officials with assistance in formulating an expanded municipal program, implementing the program, designing and/or upgrading a municipal recycling ordinance, and developing education and enforcement strategies. County assistance occurs on an on-going basis as well as at the regularly scheduled municipal recycling coordinators meetings held throughout the year. The County also sponsors topic specific information exchanges and working groups. Likewise, the County maintains an extensive resource library of recycling information which is available to interested municipal recycling coordinators, clubs, organizations and others wanting to improve their recycling practices.

- **Documentation**: The County believes documentation is an important part of evaluating the effectiveness of any solid waste management system so appropriate actions can be taken with respect to enforcement, education and future planning. Toward this end, the County is shall implement the documentation process being proposed by the NJDEPE where the municipalities and recycling markets shall report tonnage information directly to the State. The documentation system proposed by the State is presented in a report prepared by the NJDEPE entitled, *1993 Recycling Tonnage Reporting Manual* dated December 1992. The State will then disseminate tonnage data to both the County and municipalities. The current system of municipal reporting of recycling documentation to the County on a quarterly basis will remain in place until the State's formal implementation of its proposed documentation program.
- **Priority List Amendment**: Included in the Amended Morris County District Recycling Plan (DRP), dated October 1988 and Certified by the NJDEPE on March 8, 1989, is a list of businesses that collected, accepted and processed recyclables prior to January 1, 1986. According to the DRP, vendors on the list will be given individual notification if the County goes out to bid or seeks an agreement for recycling markets. The list was also forwarded to municipal recycling coordinators and kept on file at the County Solid Waste Management office.

Pursuant to an order of the Court entered on September 15, 1990 in a matter entitled J. Filiberto Sanitation, Inc. (JFS) vs. Morris County Board of Chosen Freeholders, the County was required to review proofs that JFS had been engaged in the recycling

business from January 1, 1986 until December 21, 1988. The purpose of this review was to determine if JFS was entitled to be included in the DRP on the priority list as a business entitled to priority consideration for future recycling activities.

A review of the evidence submitted by JFS indicated that the company met the Court's requirements to be included on the priority list in the County's DRP. On November 28, 1990 the Board of Chosen Freeholders adopted a Resolution entitled "Resolution Providing for an Amendment to the Morris County District Recycling Plan to Include J. Filiberto Sanitation, Inc. on its list of Businesses Engaged in Recycling Entitled to Priority Consideration for Future Recycling Services." As a result, the priority list has been amended to include JFS. Subsequently, Waste Management of North Jersey purchased the rights to JFS and, therefore, replaces JFS on the priority list.

It should be noted that the Board of Chosen Freeholders adopted another Resolution on November 28, 1990 entitled, "Resolution Denying a Proposal Made by J. Filiberto Sanitation, Inc. to Provide for a Materials Recovery Facility on its Property Located on Parker Road, Chester Township," which specifically rejected any proposed amendment to the DRP or Solid Waste Management Plan to include a material recovery facility at the Parker Road property in Chester Township.

In 1991, the Court rejected a bid by Waste Management of North Jersey, Inc. to continue the litigation started by JFS. The Court indicated that there was no reason to change its prior ruling dismissing the JFS suit, and noted that Waste Management can submit its own proposals to the County. To date, no formal submission for a recycling facility has been made by Waste Management.

The priority list established in the DRP, and as amended in this Plan Amendment, is intended to be a listing of potential recycling services to be utilized in formulating recycling programs and activities. The priority list shall not be considered an inventory of solid waste facilities included in the Plan. That inventory is provided in a subsequent section of this Amendment. The priority list is considered a list of businesses that provide certain types of recycling services. If any business on that list desires to have a facility formally included in the Plan, then that business needs to petition the County for Plan inclusion. Unless specifically listed in the Inventory of Facilities, facilities included in the priority list shall not be considered included in the Morris County Solid Waste Management Plan.

- **Exemptions from Source Separation Requirements:** In accordance with State Law (N.J.S.A. 13:1E-99.16d) the County Plan is required to provide guidelines to municipalities to assess the granting of exemptions for commercial and institutional establishments from the source separation requirements of the Plan, if such establishments can otherwise provide for the recycling of designated mandated materials. On November 28, 1990 the Board of Chosen Freeholders approved a resolution providing for an Amendment to the Plan which included these guidelines.

In considering applications for exemptions, municipalities should recognize that source separation is the general rule and preferred means to separate recyclable materials

from the solid waste stream as set forth by the State Recycling Act and the County's Plan. Consideration for granting exemptions should be based upon specific situations where a generator demonstrates special reasons or situations which support difficulty or inability to source separate. The municipality should prepare an application which must be executed by the applicant.

At a minimum, the municipality should include the following data requests in its application:

1. Explain why your particular operation, circumstance or facility make adhering to the source separation requirements of the recycling plan impractical.
2. List all the reasons you seek an exemption to source separation.
3. What is the location, name and NJDEPE facility number of the materials recovery facility you will be using to do the recycling of the designated materials?
4. Give the name and address of you solid waste collector.
5. What are the estimated monthly and yearly tonnages of solid waste and designated recyclables expected to be generated by your facility?
6. What materials will the materials recovery facility be recycling for you?
7. How have you disposed of your solid waste and recyclables up to the date of the application?
8. Have you been cited for any violation with reference to the solid waste or recyclables generated from your facility?
9. If the answer to the previous question is affirmative, list all such citations and the dispositions thereof.
10. With reference to the NJDEPE facility you will be using if the exemption is granted, describe in detail your prior experience with the operator of said facility and indicate the reliability of said operation, insofar as your past experience with the operator.
11. The application shall also include a provision of any exemption granted that the applicant and the operator shall provide the municipality and County the following: a) quarterly recycling tonnages as well as the tonnages and proofs that the residual solid waste is being disposed of through the Morris County Solid Waste Management System; b) the application and all correspondence relating thereto shall be filed with the municipality and the County including, but not by way of limitation, correspondence and reports from the generator, the operator and the municipality.

12. Any exemption granted by the municipality shall be granted for a limited period of one year and thereafter, the generator should reapply each year to the municipality for the exemption. The reapplication should indicate the continuing need for the exemption, a statement that there have been no violations. If there are violations, address each violation specifically setting forth what remedial action has been taken to avoid future violations.

13. The application shall be certified or under oath so that in the event there is a deliberate misstatement penalties may be assessed against the applicant.

The application, in addition to any other information sought by the municipality, should also include the name and address of the applicant, and should describe its facility and the nature of the waste generated. If the commercial establishment or institution has more than one location, it should list all other locations, describe the waste generated there, and set forth its program for meeting the recycling requirements at its other facilities. The generator shall indicate the location for which it seeks the exemption.

Materials Recovery

Morris County is maintaining its commitment to source separation recycling as the primary means to recover materials generated within the geographical boundaries of the County. Morris County intends to expand and implement its source separation recycling program to insure that all sectors, at a minimum, source separate the mandated materials at the "maximum feasible rate" previously accepted by the County.

Achieving "maximum feasible recycling rates" through source separation efforts will take a significant effort by all parties. It is possible that even if these maximum feasible rates are achieved, that the County would not reach or exceed the accepted 60% overall recycling rate or the 50% municipal recycling rate. It has been estimated that source separating at the "maximum feasible rates" will result in recycling rates of 58.77% and 48.68% with respect to the 60% and 50% goals respectively (See Table 21).

Based on the possibility that source separation recycling will come very close to, but may not achieve the ambitious recycling goals, Morris County intends to develop additional waste processing/materials recovery facilities to supplement its source separation activities. The County intends to develop a solid waste management system which includes: bulky waste processing facility; a mixed waste processing facility; a solid waste composting facility and possibly a recycling facility.

The development of the above referenced system and its components is intended to enable the County to reach and surpass the State of New Jersey's goal of achieving 60% recycling by 1995. The County will select the combination and size of system components that in total converts or recovers, as a resource, as much of the waste stream as practical in an effort to reduce the amount of waste required to be landfilled or processed by other disposal alternatives. It is the intent of the County to consider successful and reliable advances that have occurred as a result of the latest technological developments in solid waste processing and disposal. This will enable the County to select a long-term solution that is environmentally sound, cost effective and reliable.

Table 21
1995 – Projected Solid Waste Management Flows
Generation, Recycling, Recovery and Disposal
Morris County, New Jersey

	Municipal/Vegetative Waste		Bulky/Industrial Waste		All Waste Types	
	Tons/Year	% of Generated	Tons/Year	% of Generated	Tons/Year	% of Generated
Waste Generation						
Municipal/Vegetative Waste	471,745	100.00%	0	0.00%	471,745	60.82%
Bulky/Industrial Waste	0	0.00%	303,833	100.00%	303,833	39.18%
All Waste Types Generated	471,745	100.00%	303,833	100.00%	775,578	100.00%
Recycling & Material Recovery						
Source Separation recycling						
Non – Vegetative Recycling	153,790	32.60%	67,464	22.20%	221,253	28.53%
Vegetative Waste Composting	59,962	12.71%	0	0.00%	59,962	7.73%
Select Load MSW Composting	15,877	3.37%	0	0.00%	15,877	2.05%
Private Industrial Recycling	0	0.00%	158,694	52.23%	158,694	20.46%
Source Separation Subtotal	229,628	48.68%	226,158	74.43%	455,786	58.77%
Materials Recovery						
Non – Vegetative Recovery	30,060	6.37%	20,198	6.65%	50,258	6.48%
MSW Composting	56,525	11.98%	0	0.00%	56,525	7.29%
Materials Recovery Subtotal	86,585	18.35%	20,198	6.65%	106,783	13.77%
Recycling & Recovery Total	316,213	67.03%	246,355	81.08%	562,568	72.54%
Directed from BWPF to MWPF	(20,825)	-4.41%	20,825	6.85%	0	0.00%
Disposal						
Processed Waste	152,497	32.33%	0	0.00%	152,497	19.66%
Landfill Disposal	23,859	5.06%	36,653	12.06%	60,512	7.80%
Disposal Total	176,357	37.38%	36,653	12.06%	213,010	27.46%

Notes:
Municipal/Vegetative Waste refers to that waste stream with a 50% recycling goal.
All Waste Types refers to that waste stream with a 60% recycling goal.
BWPF = Bulky Waste Processing Facility
MWPF = Mixed Waste processing Facility

The County anticipates that specific waste types will be directed to and processed at each of the different waste system components as indicated below or to a common facility with separated receiving areas:

<u>Facility Type</u>	<u>Waste Types</u>
● Bulky Waste Processing Facility	Types 11, 13 & 27
● Mixed Waste Processing Facility	Types 10, 23 & 25
● Solid Waste Composting Facility	Organic and other putrescible portions of the waste stream either transported directly to the Solid Waste Compost Facility (select loads of organic waste) or separated out at the Mixed Waste Processing Facility.
● Recycling Facility	Source separated recyclable materials including, but not limited to: newspaper, glass, aluminum, mixed paper, plastics, corrugated, tin.

Successful implementation and operation of these facilities is projected to achieve recycling rates of 72.54% of total solid waste and 67.03% of municipal solid waste (See Table 21). These rates assume that the remaining waste categorized as "processed waste" cannot be recycled or marketed and has to be landfilled. Processed waste refers to that portion of the waste stream which remains at the Mixed Waste Processing Facility following the extraction of recyclables and feedstock for the composting facility. The County intends to evaluate whether this processed waste may be available for processing by newly developed technologies other than the system components identified above or to redirect this waste to an expanded Recycling Facility and/or Solid Waste Composting Facility for additional processing. If this part of the waste stream can be successfully marketed and recycled, reduction levels would even be greater. In addition to achieving the recycling goals, the utilization of these facilities will provide the County with additional flexibility and control needed to complement the selective use of additional processing and/or disposal facilities.

A description of each of the proposed waste processing/materials recovery facility components is provided below:

- **Mixed Waste Processing Facility** - refers to a facility to be procured by the MCMUA and which will be designed, permitted, constructed, operated and maintained by a selected vendor, pursuant to the terms of a Service Agreement with the MCMUA, for the purpose of accepting mixed solid waste (including I.D. Types 10, 23 and 25) generated within the geographic boundaries of the County (or from outside the boundaries of the County) and, through the processing of such mixed solid waste, converting such solid waste into marketable products, a feedstock for the Solid Waste Composting Facility and processed waste. Table 22 displays a

projected 11.43% recovery rate for this proposed facility which results in an additional 30,060 tons of MSW being recovered from the waste stream.

- **Bulky Waste Processing** - refers to a facility to be procured by the MCMUA and which will be designed, permitted, constructed, operated and maintained by a selected vendor, pursuant to the terms of a Service Agreement with the MCMUA, for the purpose of processing and recycling institutional, non-regulated medical waste (I.D. Type 11), construction and demolition waste and bulky waste (I.D. Type 13) and non-hazardous dry industrial waste (I.D. Type 27) generated within the geographic boundaries of the County (or from outside the boundaries of the County). Table 23 displays a projected recovery rate of 26.00% for this proposed facility which results in an additional 20,198 tons of bulky/industrial waste being recovered from the waste stream.
- **Solid Waste Composting** - refers to a facility to be procured by the MCMUA and which will be designed, permitted, constructed, operated and maintained by the selected vendor, pursuant to the terms of a Service Agreement with the MCMUA, for the purpose of processing a selective load feedstock, consisting primarily of organics and other putrescible portions of solid waste which are either transported directly to the Solid Waste Composting Facility or which are processed at and/or separated out at the Mixed Waste Processing Facility and, thereafter, transported to the Solid Waste Composting Facility. It is projected that 40% of select load source separated food (organic) waste in addition to 25% of the "other paper", 75% of the remaining food and yard waste and 50% of dirt and fines from MSW processing facility stream will be the majority of the compost feedstock. This represents 15.35% of the municipal waste stream or approximately 72,402 tons in 1995. (See Table 22).
- **Recycling Facility** - refers to a facility to be procured by the MCMUA and which will be designed; constructed, operated and maintained by a selected vendor, pursuant to the terms of a Service Agreement with the MCMUA, for the purpose of processing, consolidating and marketing previously separated recyclable materials generated within the geographic boundaries of the County (or from outside the boundaries of the County), including without limitation, newspaper, glass, aluminum, mixed paper, plastics, corrugated and tin.
- **Implementation Strategy:** As a means to implement the proposed solid waste management system, as outline above, a Project Team consisting of MCMUA staff, legal advisors, financial advisors, consulting engineers and scientists was formed in the Fall 1992. On January 8, 1993 Morris County issued a Request for Qualifications (RFQ) to solicit firms which have the technical, administrative and financial capabilities to implement Morris County's materials recovery program. Qualification statements are due on February 19, 1993. After evaluations of the RFQs, the County will issue a Request for Proposals (RFP) to those firms determined to be qualified by the Project Team. The RFP is presently scheduled to be issued on or about April 6, 1993. The

Table 22

1995 Municipal/Vegetative Waste Flow and Mixed Waste Processing Facility Flow

Morris County, New Jersey

Category	Material	Muni/Veg Waste Generated	Source Separation/Recycling Goal	Source Separation/Recycling	Source Separation/Recycling %	Source Separation/Recycling Tons	Select Load to Compost	Select Load to Compost %	Muni/Veg Waste to Process	Muni/Veg Waste to Process Tons	From HWPP to Process	Total Waste to Process	To Recycle at MWPF	To Recycle at MWPF %	Left Over at MWPF	To Compost from left over	To Compost from left over %	To Compost from left over Tons	To Pre-Mix from left over	To Pre-Mix from left over %	To Pre-Mix from left over Tons	To Landfill from left over	To Landfill from left over %	To Landfill from left over Tons	
Paper	Newspaper	52,062	81.00%	42,170	0.00%	0	0	0.00%	9,892	113	0	10,005	0	0.00%	10,005	0	0.00%	10,005	0	0.00%	10,005	0	0.00%	0	
	Corrugated	50,690	67.50%	34,216	0.00%	0	0	0.00%	16,474	929	0	17,403	9,398	54.00%	8,005	0	0.00%	8,005	0	0.00%	8,005	0	0.00%	0	
	Office	23,726	81.00%	19,218	0.00%	0	0	0.00%	4,508	636	0	5,144	1,029	20.00%	4,115	0	0.00%	4,115	0	0.00%	4,115	0	0.00%	0	
	Other	97,197	12.33%	11,986	0.00%	0	0	0.00%	85,211	10,688	0	95,899	9,590	10.00%	86,309	21,577	25.00%	64,732	0	0.00%	64,732	0	0.00%	0	
Plastic	Containers	8,084	64.00%	5,174	0.00%	0	0	0.00%	2,910	281	0	3,191	957	30.00%	2,234	0	0.00%	2,234	0	0.00%	2,234	0	0.00%	0	
	Film/Packaging	7,054	0.00%	0	0.00%	0	0	0.00%	7,054	1,970	0	9,024	2,256	25.00%	6,768	0	0.00%	6,768	0	0.00%	6,768	0	0.00%	0	
Glass	Scrap	21,161	0.00%	0	0.00%	0	0	0.00%	21,161	6,208	0	27,369	2,737	10.00%	24,632	0	0.00%	24,632	0	0.00%	24,632	0	0.00%	0	
	Containers	22,457	81.00%	18,190	0.00%	0	0	0.00%	4,267	0	0	4,267	0	0.00%	4,267	0	0.00%	4,267	0	0.00%	4,267	0	0.00%	0	
Non-Ferrous Metal	Aluminum Cans	1,016	0.00%	0	0.00%	0	0	0.00%	1,016	0	0	1,016	0	0.00%	1,016	0	0.00%	1,016	0	0.00%	1,016	0	0.00%	0	
	Foils/Closures	2,609	65.50%	2,231	0.00%	0	0	0.00%	378	0	0	378	246	65.00%	132	0	0.00%	132	0	0.00%	132	0	0.00%	0	
Ferrous Metal	Aluminum Scrap	635	0.00%	0	0.00%	0	0	0.00%	635	0	0	635	0	0.00%	635	0	0.00%	635	0	0.00%	635	0	0.00%	0	
	Non-Ferr. Scrap (Res)	1,905	80.00%	1,524	0.00%	0	0	0.00%	381	0	0	381	38	10.00%	343	0	0.00%	343	0	0.00%	343	0	0.00%	0	
Yard Waste	Ferrous Containers	7,463	68.00%	5,075	0.00%	0	0	0.00%	2,388	0	0	2,388	1,910	80.00%	478	0	0.00%	478	0	0.00%	478	0	0.00%	0	
	Ferrous Scrap (Res)	9,138	90.00%	8,224	0.00%	0	0	0.00%	914	0	0	914	731	80.00%	183	0	0.00%	183	0	0.00%	183	0	0.00%	0	
Food Waste	Leaves, grass, brush	72,681	82.50%	59,962	0.00%	0	0	0.00%	12,719	0	0	12,719	0	0.00%	12,719	0	0.00%	12,719	0	0.00%	12,719	0	0.00%	0	
	Food waste	41,781	5.00%	2,089	40.00%	15,877	0.00%	23,815	0	23,815	0	23,815	0	0.00%	23,815	0	0.00%	23,815	0	0.00%	23,815	0	0.00%	0	
Other MSW	Other Combustibles	25,132	10.00%	2,513	0.00%	0	0	0.00%	22,619	0	0	22,619	0	0.00%	22,619	0	0.00%	22,619	0	0.00%	22,619	0	0.00%	0	
	Scrap Wood	10,431	0.00%	0	0.00%	0	0	0.00%	10,431	0	0	10,431	1,043	10.00%	9,388	0	0.00%	9,388	0	0.00%	9,388	0	0.00%	0	
Construction/Debris	Wood Waste/Lumber	0	0.00%	0	0.00%	0	0	0.00%	0	0	0	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	
	Concrete/Asphalt	0	0.00%	0	0.00%	0	0	0.00%	0	0	0	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	
Miscellaneous	Other Bulky C&D	0	0.00%	0	0.00%	0	0	0.00%	0	0	0	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	
	Tires	0	0.00%	0	0.00%	0	0	0.00%	0	0	0	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	
TOTALS	Ve hicular Batteries	0	0.00%	0	0.00%	0	0	0.00%	0	0	0	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	0	0.00%	0	
	Dirt/Fines	15,094	0.00%	0	0.00%	0	0	0.00%	15,094	0	0	15,094	0	0.00%	15,094	0	0.00%	15,094	0	0.00%	15,094	0	0.00%	0	
TOTALS		471,745		213,751		15,877		242,117	20,825	262,941		262,941	30,060		232,881			56,525			152,497			23,859	
Percent of Muni/Veg Generation		100.00%		45.31%		3.37%		51.32%	7.97%	100.00%		100.00%	11.43%		88.57%			21.50%			58.00%			9.07%	
Percent of Capacity at Municipal Waste Processing Facility																									
Percent of the processible portion remaining at municipal waste processing facility after the recovery/recycling of materials																									

Notes:
 Material generation projections are based on applying 1990 generation percentages to the Total 1995 Municipal/Vegetative Waste generation projection.
 1995 Total Municipal/Vegetative Waste projection is based on a decreasing rate of growth from the base year (1990).
 Source Separation Recycling Goals are minimum feasible assumed by the County based on implementation of enhanced source separation recycling program.
 Projected Waste flow percentages are based on projected materials recovery technology.

Table 23
1995 Bulky/Industrial Waste Flows and Bulky Waste Processing Facility Flows
Morris County, New Jersey

Category	Material	Total Bulky Waste Generated		Source Separation Recycling Goal		Total Source Separation Recycling		Bulky Waste to be Processed		Recycled from Bulky Waste Process Fac		To Landfill from Bulky Waste Process Fac		To MWPF from Bulky Waste Process Fac		To MWPF from Bulky Waste Process Fac	
		Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Paper	Newspaper	595	81.00%	482	113	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	113	100.00%	0
	Corrugated	11,430	67.50%	7,715	3,715	75.00%	2,786	0.00%	0	0.00%	0	0.00%	0	25.00%	929	25.00%	0
	Office	3,345	81.00%	2,710	636	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	636	100.00%	0
	Other	12,192	12.33%	1,503	10,688	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	10,688	100.00%	0
Plastic	Containers	781	64.00%	500	281	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	281	100.00%	0
	Film/Packaging Scrap	1,970	0.00%	0	1,970	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	1,970	100.00%	0
Glass	Containers	6,208	0.00%	0	6,208	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	6,208	100.00%	0
	Other	558	81.00%	452	106	0.00%	0	0.00%	0	100.00%	106	100.00%	0	0.00%	0	0.00%	0
Non-Ferrous Metal	Aluminum Cans	558	0.00%	0	558	0.00%	0	0.00%	0	100.00%	558	100.00%	0	0.00%	0	0.00%	0
	Aluminum Foils	0	85.50%	0	0	50.00%	0	50.00%	0	50.00%	0	50.00%	0	0.00%	0	0.00%	0
	Aluminum Scrap	632	0.00%	0	0	50.00%	0	50.00%	0	50.00%	0	50.00%	0	0.00%	0	0.00%	0
	Non-Ferr. Scrap (Comm)	806	80.00%	506	126	50.00%	63	50.00%	63	50.00%	63	50.00%	63	0.00%	0	0.00%	0
Ferrous Metal	Ferrous Containers	147	82.50%	665	141	50.00%	71	50.00%	71	50.00%	71	50.00%	71	0.00%	0	0.00%	0
	Ferrous Scrap (Comm)	147	68.00%	100	47	80.00%	38	80.00%	38	20.00%	9	20.00%	9	0.00%	0	0.00%	0
Yard Waste	Ferrous Scrap (Comm)	13,225	90.00%	11,902	1,322	80.00%	1,058	80.00%	1,058	20.00%	264	20.00%	264	0.00%	0	0.00%	0
	Leaves, grass/brush	892	82.50%	736	156	0.00%	0	0.00%	0	100.00%	156	100.00%	156	0.00%	0	0.00%	0
Food Waste	Food waste	2,788	5.00%	139	2,648	0.00%	0	0.00%	0	100.00%	2,648	100.00%	2,648	0.00%	0	0.00%	0
	Other MSW	0	0.00%	0	0	0.00%	0	0.00%	0	100.00%	0	100.00%	0	0.00%	0	0.00%	0
Other MSW	Other Combustibles	0	0.00%	0	0	0.00%	0	0.00%	0	100.00%	0	100.00%	0	0.00%	0	0.00%	0
	Scrap Wood	0	0.00%	0	0	0.00%	0	0.00%	0	100.00%	0	100.00%	0	0.00%	0	0.00%	0
Construction/Demo	Wood Waste/Scrap Lumber	45,222	45.00%	20,350	24,872	50.00%	12,436	50.00%	12,436	50.00%	12,436	50.00%	12,436	0.00%	0	0.00%	0
	Concrete/Asphalt	16,543	90.00%	14,889	1,654	90.00%	1,489	90.00%	1,489	10.00%	165	10.00%	165	0.00%	0	0.00%	0
	Other Bulky/C&D	22,580	10.00%	2,258	20,322	10.00%	2,032	10.00%	2,032	90.00%	18,290	90.00%	18,290	0.00%	0	0.00%	0
Miscellaneous	Tires	2,255	90.00%	2,029	225	100.00%	225	100.00%	225	0.00%	0	0.00%	0	0.00%	0	0.00%	0
	Vehicular Batteries	557	95.00%	529	28	0.00%	0	0.00%	0	100.00%	28	100.00%	28	0.00%	0	0.00%	0
TOTALS	Dirt/Fines	1,858	0.00%	0	1,858	0.00%	0	0.00%	0	100.00%	1,858	100.00%	1,858	0.00%	0	0.00%	0
		145,139		67,464	77,675		20,198		20,198		36,653		36,653		20,825		20,825
Percent of Generated Bulky Waste Stream		100.00%		46.48%	53.52%		13.92%		53.52%		25.25%		25.25%		14.35%		14.35%
Percent of Bulky Waste Processing Facility				100.00%	100.00%		26.00%		100.00%		47.19%		47.19%		26.81%		26.81%

Notes:
 Material generation projections are based on applying 1990 generation percentages to the Total 1995 Bulky/Industrial generation projection.
 1995 Total Bulky/Ind. projection is based on a decreasing rate of growth from the base year (1990)
 Source Separation Recycling Goals are maximum feasible assumed by the County based on implementation of enhanced source separation recycling program.
 Projected Waste flow percentages are based on projected materials recovery technology.
 Ferrous Scrap (Comm) also includes all white good recycling. Concrete/Asphalt also includes asphalt roofing/shingle recycling.
 Wood Waste includes pallets, stumps, logs, wood chips, and wood construction debris.

project team will select the best proposal(s) and will contract with the selected firm(s) to design, permit, construct, operate and maintain the proposed facilities.

Once facility sites have been selected, Morris County will adopt the required Plan Amendment(s) for the proposed solid waste management system. It is acknowledged that facility permits will be required from NJDEPE and that the proposed Service Agreements will be subject to State regulatory review and approval.

Costs to Implement the 60% Recycling Strategy

It is very difficult to estimate the total costs of the recycling implementation strategy presented in the previous sections of this document because many municipal, private, industrial and commercial costs are not available to the County at this time. However, the County has projected costs of programs it is currently implementing such as the curbside collection program (MCCRAP) and the recycling consolidation center. In addition, *Morris County Review and Assessment of Solid Waste Management System Alternative* (November 1991) presents a detailed study of projected costs of the proposed material recovery facilities to be developed by the County.

Presented below in Table 24 are the projected annual cost for implementing the proposed recycling strategy.

Table 24
Recycling Implementation Strategy - Cost Projections
Morris County, New Jersey
(Page 1)

Morris County Curbside Recycling Program (1992)	
Total MCCRAP Costs	\$315,579
Anticipated Revenue	<u>(\$265,632)</u>
Net MCCRAP Costs	\$ 49,947

Source: *Morris County Curbside Recycling Program: 1992 Fee Proposal*

Morris County Recycling Consolidation Center (8/93-7/94 Cost Projections)	
Total Operating Costs	\$692,254
Total Revenues/Credits	<u>(\$220,745)</u>
Total Net Operating Costs	\$471,509

Source: *Design and Process Evaluation of the Morris County Recycling Consolidation Center* April 1992, Table B-3, year 3, case 2 (proposed capital improvements).

Recycling Facility (1995)	
Capital Cost	\$ 4,432,000

Source: *Six Year Capital Program Workshhet for Morris County Recycling Facility*

Continued on Next Page

Table 24
Recycling Implementation Strategy - Cost Projections
Morris County, New Jersey
 (Page 2)

Bulky Waste Processing Facility (1995)

Capital Costs	\$11,000,000
Annual Costs	
Net Debt	\$1,423,599
Operations and Maintenance	\$2,229,150
Other Costs	\$ 0
Revenue	(\$ 0)
Net Costs (1995)	\$3,652,749

Source: *Morris County Review and Assessment of Solid Waste Management System Alternatives* November 1991, Table 2-36.

Mixed Solid Waste Processing Facility (1995)

Capital Costs	\$27,500,000
Annual Costs	
Net Debt	\$ 3,531,140
Operations and Maintenance	\$ 5,376,000
Other Costs	\$ 0
Revenue	(\$ 332,680)
Net Costs (1995)	\$ 8,574,460

Source: *Morris County Review and Assessment of Solid Waste Management System Alternatives* November 1991, Table 2-36.

Solid Waste Composting Facility (1995)

Capital Costs	\$19,305,000
Annual Costs	
Net Debt	\$ 2,862,425
Operations and Maintenance	\$ 1,785,000
Other Costs	\$ 393,000
Revenue	(\$ 193,000)
Net Costs (1995)	\$ 4,847,425

Source: *Morris County Review and Assessment of Solid Waste Management System Alternatives* November 1991, Table 2-36.

REGIONALIZATION OF FACILITIES

In accordance with the recommendations of the Task Force Report, Morris County believes that regional cooperation for the management of solid waste should be explored and implemented when appropriate. The County presently has several facilities already included in the Plan which provide, or are approved to provide, regional service and disposal capacity. The facilities include:

- Morris County Shade Tree Compost Facility (Yard Waste);
- Rotundi Leaf Transfer Station (Yard Waste);
- Garden State Paper Recycling Facility (Newspaper);
- Morris County Recycling Consolidation Center (Designated Recyclable Materials);
- Mt. Hope Rock Products, Inc. - Class "B" Recycling Center (Type 27 - Contaminated Soil);
- Ox Contractors Stump Factory (Natural Wood Waste);
- Dover General Hospital Medical Waste Microwave Shredder (Medical Waste); and,
- Morristown Memorial Hospital Medical waste Incinerator (Medical Waste).

Further details regarding these facilities is provided in the section of this document entitled, "Inventory of Existing Facilities".

In conjunction with the directives by the NJDEPE stipulated in certain Morris County Plan Amendment Certifications and the Task Force Report's recommendations that several of the State's planned waste-to-energy projects should be reconsidered in favor of regional partnerships, Morris County explored several regional opportunities. In July 1990, the County contacted each of the State's solid waste management districts to explore the potential for inter-district agreements. Most responding counties expressed a lack of available capacity at their facilities, however, several counties expressed an interest in pursuing regional discussions.

As a result of these efforts, Morris County conducted serious discussions (and in some cases negotiations) with several counties with respect to regionalizing capacity at existing or planned waste-to-energy facilities. Those counties included: Essex, Hudson, Passaic, Sussex and Union. Discussions with these and other counties were also held regarding the regionalization of recycling and processing facilities and marketing efforts. To date, these discussions have not resulted in agreements for the regional management of a significant portion of the County's waste stream. Morris County shall continue its dialogue with other solid waste management districts to explore potential regional arrangements based on its newly formulated Plan.

Morris County's solid waste management strategy is based primarily on the source separation recycling of its waste stream. The planned material recovery, recycling and processing facilities are designed to complement the source separation strategy by providing a flexible response to changing recycling participation and markets. These facilities are being sized in accordance with the projected needs of Morris County. However, if waste generation patterns result in excess capacity at any of its facilities, and/or should a regional agreement result as a product of the continued dialogue with other districts, the County intends on providing the excess capacity to out-of-County generators. Prior to the permitting and construction of any County implemented solid waste or processing facility, Morris County will survey nearby Counties for regional opportunities. Finally, it should be noted that Morris County has made provisions in the Request for Qualifications for the material recovery and processing facilities to allow the County to implement potential regionalization strategies with other New Jersey counties.

DURATION OF DEPENDENCE ON OUT-OF-STATE LANDFILLS

Morris County has developed its solid waste management strategy with an aggressive utilization of source reduction techniques, source separation recycling, materials recovery and materials processing all with the goal of minimizing the County's dependence on landfill disposal capacity. The County, in implementing its Plan, is taking extraordinary steps to limit its risk associated with dependence on out-of State landfiling. Nevertheless, Morris County must provide for landfill disposal capacity as a component of its solid waste strategy.

The County prepared and issued a Request for Proposals (RFP) on October 19, 1992 for the Acquisition of an Undivided Interest in Real Property, Consisting of the Acquisition of Certain Easement Rights in One or More Out-of-County Landfills (Easement). Five firms responded to the RFP. Based on the results of the evaluation of the technical, cost and contractual proposals, Morris County decided to acquire the Easement from Waste Management of Pennsylvania, Inc. utilizing their Tullytown Landfill in Tullytown, Pa. The analysis of the five proposals is contained in a report entitled, *Evaluation of Responses to Request for Proposals for Acquisition of an Undivided Interest in Real Property, Consisting of the Acquisition of Certain Easement Rights in One or More Out-of-County Landfills* dated December 7, 1992. The County, through its implementing agency (MCMUA) executed the Easement Agreement with Waste Management on January 6, 1993.

The acquisition of landfill easement rights has been designed to complement the integrated and flexible Plan being implemented by the County. The Easement will be utilized by the County for the disposal of up to 4,500,000 tons of various categories of solid waste generated within the geographic boundaries of Morris County. The term of the Easement Agreement is ten years. In addition, the County will have the option, at its sole discretion, to elect a five year extension of the Easement Agreement. Morris County intends to utilize the Easement to dispose of non-recycled waste at the selected landfill(s) throughout the term of the Easement Agreement. The County, however, reserves the right not to deliver to the landfill any waste:

- that is designated by the County as a "recyclable" material and included in the County's Solid Waste Management Plan;
- to be processed by the proposed material recovery and processing facilities;
- to be delivered to a sanitary landfill, or other solid waste facility, which is constructed and/or utilized by the County which is located within the geographic boundaries of the County or located within the State to which waste has been validly directed by the NJDEPE; or,
- material which may be sold, given away or otherwise recycled.

The other important provisions of the Easement Agreement are provided below. Morris County will not be obligated to deliver any minimum amount or type of waste to the landfill for disposal. The County has agreed to deliver only non-recycled or non-reused waste which is generated within Morris County and which requires landfill disposal. The County will have the right to assign or sell or otherwise transfer its rights to the Easement to any public body or

governmental agency located within the State of New Jersey. In addition, Waste Management is obligated to provide additional landfill capacity to the County at the sole cost and expense of the company (including transportation), in the event Morris County is precluded or inhibited from utilizing the Easement as a result of any action by any governmental agency or court.

By entering into this type of agreement, Morris County has an incentive to conserve the capacity at the landfill easement it owns. Morris County will also design the service agreements for the proposed new facilities with incentives to conserve its landfill easement. As a means to limit the risk associated with dependence on out-of-State landfills, the County will undertake efforts to contact all solid waste management districts in New Jersey to establish contingency arrangements in the case Morris County is no longer legally permitted to use out-of-State landfills and to discuss potential long-term landfill disposal arrangements.

INVENTORY OF EXISTING FACILITIES

Morris County utilizes a variety of solid waste facilities for the management of its waste stream. These facilities include yard waste compost facilities, solid waste transfer stations, recycling facilities and small scale incinerators. Below is a listing of the solid waste facilities located in Morris County.

Compost Facilities:

- **Morris County Shade Tree Commission** is a County operated regional yard waste composting system which provides yard waste composting services for contracting municipalities both in and out of Morris County. The system consists of two compost facilities operated by the Morris County Shade Tree Commission: the Hanover Avenue Facility and the Camp Pulaski Facility.
 - **Hanover Avenue Facility:** (Permit #1431C1SEO1) Located off Hanover Avenue in Parsippany-Troy Hills Township. The site contains seven acres with windrow capacity of 3,500 cubic yards per acre and an annual capacity of 30,000 cubic yards. Municipalities which use the facility include: Florham Park, Lincoln Park, Long Hill Township, Madison, Morris Township, Morris Plains, Morristown and Victory Gardens.
 - **Camp Pulaski Site:** (Permit # 1427H-1SPO1) Located off of Waterloo Valley Road in Mt. Olive Township. The site contains 134 acres of which 12 acres are utilized for the composting activities. The facility has an annual capacity of 40,000 cubic yards. Municipalities which have agreements to use this facility include: Chatham Boro, Chester Township, Denville, East Hanover, Hanover, Jefferson, Mendham, Mount Arlington, Mount Olive, Parsippany-Troy Hills, Rockaway Township, Roxbury, Washington, Wharton and Hackettstown (out-of-County regional arrangement).

The Morris County Shade Tree Commission also rents composting equipment to the following municipalities: Butler, Chatham Boro, Chatham Township, Dover, East Hanover, Jefferson, Mendham Boro, Mountain Lakes, Montville, Pequannock, Riverdale and the Sussex County M.U.A.

The MCMUA, in conjunction with the Shade Tree Commission, is considering the development of a third regional composting facility to expand its service to additional municipalities. Should a site be selected, the requisite Plan Amendment and facility permit application will be forwarded to NJDEPE for review and approval.

In addition to the two compost facilities operated by the Morris County Shade Tree Commission, there are several additional compost facilities developed both privately and by individual municipalities which compost some of Morris County's yard waste. These additional compost facilities include:

Atlantic Green Valley Tree Service: (No Permit #) Located on North Passaic Ave. in Florham Park. This facility is inactive.

Boonton Town Municipal Compost Facility: (No Permit #) Located in Boonton Town, the facility operating in 1987 but had not applied for a permit.

Butler Municipal Compost Facility: (Permit # 1403A) Located at 1 Ace Road in Butler Borough. The facility is active and accepts vegetative waste generated in Butler.

Chatham Borough Municipal Compost Facility: (Permit #1401A1SP01) The facility is located off of the Duchamp Place Extension in Chatham Borough. The facility accepts vegetative waste generated in Chatham Borough.

Chatham Township Municipal Compost Facility: (Permit # 1405B) Located on Tanglewood Drive in Chatham Township. The facility is active and accepts vegetative waste generated in Chatham Township.

Dover Municipal Compost Facility: (Permit #1409B) Located on North Sussex Street in the Town of Dover. The facility processes leaves generated in Dover.

Florham Park Municipal Compost Facility: (Permit #1411D) Located at the Environmental Center on Columbia Turnpike in Florham Park. The facility is accepts vegetative waste generated in Florham Park.

Green Pond Corporation Compost Facility: (Permit #1435D) Located on R.R. 2, Johnson Road in Newfoundland (Rockaway Township). The facility is active and accepts vegetative waste generated in the Green Pond section of Rockaway Township.

Green Valley Compost Facility: (Permit #1411B) Located on North Passaic Ave in Florham Park. The facility is inactive.

Gro-Rite Greenhouse: (No Permit #) The facility is located in Lincoln Park and was operating but did not apply for a permit as of 1987. This facility is still active.

Hacklebarney State Park: (Permit #1438A) Located in Washington Township, this facility is active for park waste only.

Hanover Municipal Compost Facility: (No Permit #) The facility was operating but did not apply for a permit as of 1987. The facility is presently inactive.

Hopatcong State Park: (Permit #1436C) Located in Roxbury, this facility is for Park vegetative only.

Long Hill Township Municipal Compost Facility: (No Permit #) The facility located in Long Hill Township was operating but did not apply for a permit as of 1987.

Luker Park: (Permit #1410E) Located off of Eagle Rock Ave. in East Hanover. This facility is presently inactive.

Kinnelon Municipal Compost Facility: (Permit Pending) Located at 118 Kinnelon Road in Kinnelon. The facility is active and accepts vegetative waste generated in Kinnelon.

Mine Hill Municipal Compost Facility: (Permit #1420A1SP01) Located at Canfield Avenue in Mine Hill Township. The facility is active and accepts vegetative waste generated in Mine Hill.

Montville Municipal Compost Facility: (Permit #1421B) Located on Indian Lane in Montville. The facility is active and accepts vegetative waste generated in Montville Township.

Morristown Municipal Compost Facility: (Permit #1424A) Located on Lake Road in the Town of Morristown. The facility is active and accepts vegetative waste generated in Morristown.

Mountain Lakes Municipal Compost Facility: (Permit #142501) Located on Pocono Road in Mountain Lakes. The facility is active and accepts leaves generated in Mountain Lakes.

Mt. Olive Municipal Compost Facility: (Permit #1427D) Located on Bell Road in the northwest section of the Mt. Olive. The facility is active and accepts brush generated in Mt. Olive.

Netcong Municipal Compost Facility: (No Permit #) Located on Mountain Road in Netcong, the facility has been operating but did not apply for a permit as of 1987.

Pequannock Municipal Compost Facility: (Permit #1431O1SP01) Located at Bush League Field, Route 23 North in Pequannock Township. The facility is active and accepts vegetative waste generated in Pequannock Township.

Randolph Municipal Compost Facility: (Permit #1432C) Located at the Environmental Center on Sussex Turnpike in Randolph Township, the facility is active and accepts vegetative waste generated in Randolph Township.

Rockaway Township Municipal Compost Facility: (Permit #1435C) Located on Jacobs

Road in Rockaway Township. This facility is active and accepts vegetative waste generated in Rockaway Township.

Sisters of Charity: (Permit #1422B) Located at St. Elizabeth College on Convent Road in Convent Station (Morris Township). The facility is active and accepts vegetative waste generated at St. Elizabeth's College.

Stephens State Park: (Permit # 1427B) Located in Mt. Olive, this facility accepts the Park's vegetative waste.

Wharton Municipal Compost Facility: (No Permit #) Located on West Dewey Avenue in Wharton. The facility was operating but did not apply for a permit as of June 1987. This facility is presently inactive.

Several of the above referenced compost facilities are either inactive or do not have an operating permit. Morris County will offer to assist those facilities in coming into compliance. Those facilities which do not obtain the required permits or allow such permits to expire will not be considered as included within the County Plan. In such case, reapplication for Plan inclusion would be required.

Transfer Stations

Morris County currently utilizes a transfer station system for the efficient transport and disposal of solid waste to out-of-state sanitary landfills. The system consists of two facilities located at opposite ends of County. Morris County Transfer Station, Inc., a subsidiary of Chambers Development Corporation, operates both transfer stations and, under the terms of an Amended Settlement Agreement, provides transfer, transport and disposal services to Morris County through the end of 1994. In addition, a third transfer station has been included in the Plan for the transfer of vegetative waste to an out-of-County compost facility.

- **Mt. Olive Transfer Station (Permit #1427F)** Located at the intersection of Gold Mine Road and Flanders-Netcong Road in Mt. Olive Township. It is designed to process 510 tons per day. All waste types #10, 13, 23, 25 and 27 generated by the following 17 western municipalities are directed to this facility:
 - Chester Borough
 - Chester Township
 - Dover Town
 - Jefferson Township
 - Mendham Borough
 - Mendham Township
 - Mine Hill Township
 - Mt. Arlington
 - Mt. Olive Township
 - Netcong
 - Randolph Township
 - Rockaway Borough
 - Rockaway Township
 - Roxbury Township
 - Victory Gardens
 - Washington Township
 - Wharton

The transport routes to and from the Mount Olive Transfer Station are:

- Collection vehicles entering the Facility will utilize Route 206 northbound or southbound, turn onto Gold Mine Road, make a left hand turn into the Facility. Collection vehicles exiting the Facility will utilize Gold Mine Road and either north or south Route 206.
- Transfer trailers entering the Facility must utilize Interstate Route 80 to Route 206 south to Gold Mine Road. Transfer trailers exiting the Facility must utilize Gold Mine Road to Route 206 north to Interstate Route 80.

- **Parsippany-Troy Hills Transfer Station (Permit #1429J)** Located on the corner of Sharkeys and Edwards Roads in Parsippany-Troy Hills. The facility is designed to process 1000 tons per day. All waste types #10, 13, 23, 25 and 27 generated by the following 22 eastern municipalities are directed to this facility:
 - Boonton Town
 - Boonton Township
 - Butler Borough
 - Chatham Borough
 - Chatham Township
 - Denville Township
 - East Hanover Township
 - Florham Park Borough
 - Hanover Township
 - Harding Township
 - Kinnelon Borough
 - Lincoln Park Borough
 - Long Hill Township
 - Madison
 - Montville Township
 - Morris Plains Borough
 - Morris Township
 - Morristown
 - Mountain Lakes
 - Parsippany-Troy Hills Township
 - Pequannock Township
 - Riverdale Borough

The transport routes to and from the Parsippany-Troy Hill Transfer Station are:

- All collection vehicles, with the exception of rear loading packer trucks, will access the facility using eastbound Interstate Route 80 to eastbound Interstate Route 280, continuing on Interstate Route 280 to the Eisenhower Parkway exit, then return westbound on Interstate Route 280 to the New Road exit, turning right onto New Road, and then right onto Edwards Road to the Facility. All rear loading packer trucks will access the Facility using eastbound Route 46 to Edwards Road, continuing on Edwards Road to the Facility.
- All empty collection vehicles and loaded transfer trailers will exit the facility by turning onto Edwards Road, left onto New Road, enter eastbound Interstate Route 280, and then continue eastbound to the Eisenhower Parkway Interchange, where they will complete a 180 degree turn using appropriate portions of the cloverleaf interchange, and entering westbound Interstate Route 280 to the appropriate destinations.

- **Rotundi Leaf Transfer Station (? Permit #)** Located off of Watchung Avenue in Chatham Borough. This facility serves as a regional transfer station for vegetative waste being transported to an out-of-County compost facility. The transfer facility is regional since it accepts vegetative waste from Morris County generators as well as out-of-County generators and transfers it to a regional out-of-County compost facility. The capacity of the facility is approximately 260 tons per day.

Recycling Facilities

Morris County has included several recycling facilities in its Solid Waste Management Plan in the past. These facilities include:

- **Garden State Paper Recycling Center:** Located in the Iron Mountain Industrial Park on Route 46 in Mine Hill (Block 101; Lot 9). This recycling facility is operated by Garden State Paper for the processing of newspaper for recycling. This facility is a regional recycling facility accepting source separated newspapers from Morris and other nearby Counties.
- **Morris County Recycling Consolidation Center:** Located on Richboynton Road in Dover (Block 6-03; Lot 1). For a complete description of this facility see "Market Enhancement through the use of a Recycling Consolidation Center" presented in an earlier section. The facility accepts source separated traditional recyclable materials for consolidation and marketing. The capacity of this facility was originally proposed to be 30 tons per day. Due to approximately one and one half years operating experience and greater than expected use of the facility, it is now being proposed that the capacity of the facility be increased to 50 tons per day. The facility processes materials generated by both residential generators, collected through the use of curbside programs, as well as commercial/institutional generators. While most of the material processed at this facility has been generated in Morris County, some capacity has been made available to and will continue to be made available to appropriate out-of-County generated recyclable materials. This facility therefore partially serves as a regional recycling facility.
- **Mt. Hope Rock Products, Inc. Class "B" Recycling Center: (Permit #1439001167)** Located on Mt. Hope Road in Rockaway Township (Block 20001; Lot 5.01). This facility was proposed for the purpose of reclaiming/recycling non-hazardous hydrocarbon contaminated soil. The facility is designed to process Type 27 non-hazardous petroleum hydrocarbon contaminated soil and to decontaminate it so it may be incorporated into Mt. Hope's process to manufacture bituminous concrete/asphalt. This recycled soil replaces the use of virgin material in this process. The facility has the capacity to process 150 tons per hour for an average of 1,200 tons per day. This facility serves as a regional Class "B" recycling center in that it can accept out-of-County material providing it has excess capacity to do so.

- **Ox Contractors Stump Factory:** Located on Route 46 in Ledgewood (Roxbury Block 16; Lot 7.1). This facility recycles vegetative land clearing debris (stumps, brush, branches, logs, roots and other 100% natural wood items) by processing them into several grades of top soil, mulch and wood chips. The facility is restricted to accepting only 100% natural wood products. Prohibited from processing includes any material that has been painted, treated, stained, or been in contact with any form of chemical, petroleum, or preservative product. The facility has an operating capacity of 500 tons per day. The facility is a regional recycling facility and can accept appropriate material from any generator in or out-of-County.

Small Scale Incinerators

Morris County has included several small scale incinerators in its solid waste management plan for two reasons. The first reason is to provide capacity for the safe disposal of much of the medical waste generated by Morris County hospitals and other medical waste generators. The second reason is to enable existing and operating small scale incinerators to upgrade in order to come in compliance with current air quality and other environmental standards. It should be noted that all operators of small scale incinerators are required to recycle those materials mandated by local ordinance or pursuant to the County Plan. The small scale incinerators included in the Solid Waste Management Plan are:

- **Chilton Memorial Hospital Medical Waste Incinerator:** (Permit 1431001011) Located on West Parkway in Pompton Plains (Pequannock Township Block 411; Lot 6). The facility is restricted to processing medical and hospital waste ("red bag") as defined by N.J.A.C. 7:26-3A. The incinerator will operate for seven hours a day, seven days a week at a rate of 600-800 pounds per hour. The facility presently processes only medical waste generated at the hospital.
- **Dover General Hospital Medical Waste Microwave Shredder:** (Permit #1409001016) Located on Jardine Street in Dover (Block 2-02; Lots 2 and 3). Originally, Dover General had a proposed medical waste incinerator included in the Plan in a June 1990 Plan Amendment, certified by NJDEPE on April 19, 1991. This facility was restricted to processing medical and hospital waste ("red bag") as defined by N.J.A.C. 7:26-3A. It was designed to operate at a capacity of eight hours a day, six days a week at a rate up to 500 tons per hour. The incinerator's capacity was available to processible waste generated by Dover General. If there was excess capacity available after processing Dover General's medical waste, local medical waste generators as well as out-of-County medical waste generators would be permitted to utilize this incinerator providing that waste flow was approved by the generating county as well as by Morris County.

After having its proposed small scale medical waste incinerator incorporated into the MCSWMP, Dover General decided to replace its proposed incinerator with a microwave shredder. Since the location, capacity and service area of the proposed microwave shredder were virtually the same as the proposed medical waste incinerator, there was no requirement for a Plan Amendment. Now that the County is performing a formal

Plan Update, it is proposed that the Plan be amended to incorporate Dover General's proposed microwave shredder and to eliminate its proposed medical waste incinerator. This shredder is restricted to processing medical and hospital waste ("red bag") as defined by N.J.A.C. 7:26-3A. The capacity of the microwave shredder will be 550 pounds per hour and is available for the processible waste generated by Dover General. Should excess capacity be available, local medical waste generators as well as out-of-County medical waste generators would be permitted to utilize the microwave shredder providing this waste flow is approved by the generating county as well as by Morris County.

- **Morristown Memorial Hospital Medical Waste Incinerator: (Permit #1424F1SPO1)** Located on Madison Avenue in Morristown (Block 4201; Lots 1.00, 1.01, and 1.02). The facility is restricted to processing medical and hospital waste ("red bag") as defined by N.J.A.C. 7:26-3A. The facility capacity is 3/4 ton per hour while operating 16 hours per day. The source of the waste is restricted to that generated by Morristown Memorial Hospital's two divisions (100 Madison Avenue and Mt. Kemble Avenue) as well as that generated by local Morris County medical waste generators. The incinerator's operations are available to out-of-County medical waste generators on a regional basis providing this waste flow is approved by the generating county as well as by Morris County.
- **Sandoz Pharmaceutical Corporations Small Scale Solid Waste Incinerator: (Permit # 1410J1SPO1)** Located on Route 10 in East Hanover (Block 99; Lot 12). The material to be processed by this facility is restricted to non-hazardous, non-infectious waste generated on site by Sandoz. Under no circumstance is Sandoz allowed to process recyclable materials mandated to be recycled in either the East Hanover municipal recycling ordinance or in the Morris County District Recycling Plan. The waste to be processed shall be restricted to that processible waste generated on-site by Sandoz. The capacity of the facility is 780 pounds per hour and operates approximately ten hours per day.
- **St. Clares Hospital Medical Waste Incinerator: (? Permit #)** Located on Pocono Road in Denville Township (Block 50002; Lot 2). The facility is restricted to process special medical waste, as defined by N.J.A.C. 7:26-3A, and hospital waste generated by Denville Division of St. Clares-Riverside Medical Center.

BLANKET INCLUSION POLICY

Vegetative Waste Compost Facilities and Recycling Centers

Morris County proposes to amend its blanket vegetative waste compost facility plan inclusion policy and to include a blanket policy for recycling centers. The purpose of the blanket inclusion policies is to encourage and facilitate the development of the above referenced facilities by eliminating the more complicated and time consuming process of including each compost facility and recycling center in the County Plan pursuant to a formal plan amendment process as set forth in N.J.S.A. 13:1E-1 et seq.

The revised blanket inclusion policy is restricted to any new vegetative waste compost facility of less than 5,000 cubic yards of annual capacity. Pursuant to the blanket inclusion policy, any application for a vegetative compost facility of less than 5,000 cubic yards annual capacity for residential leaves and grass clippings, vegetative waste from farms, plant nurseries and greenhouses, produced from the raising of plants which include such crop residue as plant stalks, hulls, leaves and tree waste produced through a wood chipper is consistent with the Morris County Plan and no further plan amendment is required.

The revised blanket inclusion policy is restricted to any new recycling center which is a facility designed and operated solely for receiving, storing, processing and transferring source separated, non-putrescible or source separated commingled, non-putrescible metal, glass, paper, plastic containers, and corrugated and other cardboard, or other recyclable materials approved by NJDEPE.

For such compost facilities or recycling centers to be included within the County Plan pursuant to the blanket inclusion policy, the following procedures must be followed.

- a. A project description containing the following information shall be submitted to the host municipality and the County including the Morris County Solid Waste Advisory Council:
 1. The corporate name, address and telephone number of the person seeking to own and operate the proposed vegetative waste compost facility/recycling center;
 2. The name of the individual serving as the contact person for the compost facility/recycling center;
 3. The location of the proposed vegetative waste compost facility/recycling center, including lot and block, and generally recognized address of the site;
 4. The acreage of the site and/or square footage of the vegetative waste compost facility/recycling center;
 5. The zoning of the site;
 6. A description of the material(s) to be composted/recycled;
 7. A description of the compost facility/recycling center operation in a narrative form;

8. A map delineating the actual location of the facility in relation to the host municipality and neighboring communities;
 9. A description of the methods addressing environmental impacts such as odors, noise, dust, and visual impacts; and,
 10. A full copy of the complete application as submitted to the NJDEPE including all engineering design reports, maps, etc.
- b. The applicant shall publish two notices of the proposed application, once each week for two consecutive weeks, in the designated official paper of the host municipality or in the absence thereof a newspaper of general circulation within the host municipality. The notices shall set forth:
1. The nature of the project;
 2. The block and lot numbers of the site location;
 3. The general recognized address of the site;
 4. The location of the depositories (which in all cases shall be the municipal building and County Division of Solid Waste Management) for inspection of the complete application and supporting documents; and,
 5. A statement that written comments on the proposed application will be accepted by the County Division of Solid Waste Management for a period of 30 days from the date of the first notice.
- c. The applicant shall submit written documentation that all applicable local approvals and permits have been secured.
- d. The applicant shall notify by way of certified, return receipt mail all property owners within 200 feet of the property proposed for use in the vegetative waste compost facility/recycling center.
- e. If no substantive objections to the site location are raised by the host municipality, the County Division of Solid Waste Management, the Morris County Solid Waste Advisory Council or any other person, the facility shall be deemed consistent with the Morris County Solid Waste Management Plan.
- f. If, however, any such substantive objection is raised, as determined by the County, the proposed site and facility must be subject to formal plan amendment process pursuant to N.J.S.A. 13:1E-23 and 24.
- g. The County shall approve the vegetative waste compost facility/recycling center to be included in the County Plan under the blanket inclusion policy by duly adopting a resolution by the Board of Chosen Freeholders and such resolution shall be submitted to the NJDEPE along with a transmittal letter, once the blanket inclusion process has been completed for a particular site(s), and detailed project description set forth in "item a" above. Pursuant to N.J.S.A. 13:1E-24d., these modifications are determined to be minor and do not require subsequent County Freeholder action.

However, the County may adopt a subsequent plan amendment to include these modifications or make appropriate revisions.

For compost facilities processing in excess of 5,000 cubic yards annually, the applicant shall follow the formal solid waste plan amendment procedure pursuant to N.J.S.A. 13:1E-23 and 24 and shall obtain NJDEPE approval prior to construction of the facility pursuant to N.J.S.A. 13:1E-4 and 5.

For any facility proposing in-vessel technology, the formal plan amendment process shall be followed pursuant to N.J.S.A. 13:1E-1 et. seq., including notice, public hearing, County Freeholder approval, and subsequent NJDEPE approval prior to construction of the facility.

The construction or operation of any solid waste facility noted above shall be preceded by the acquisition of all necessary permits and approvals pursuant to N.J.S.A. 13:1E-1 et. seq., and all other applicable laws. The issuance of operating permits pursuant to the Solid Waste Management Act is limited to those applicants found by the NJDEPE and the Attorney General to be deserving of licensing under provisions of N.J.S.A. 13:1E-126.

Any residue generated as a result of the operation of the vegetative waste composting facility/recycling center shall be disposed of pursuant to the County Plan and the Interdistrict and Intradistrict Solid Waste Flow Rules (N.J.A.C. 7:26 et. seq.).

PLAN AMENDMENT

Pursuant to the directives by the NJDEPE, Morris County proposes to amend its Solid Waste Management Plan to address the recommendation stipulated in the Task Force Report. Other Plan modifications are also proposed. In summary, this Amendment to the Morris County Solid Waste Management Plan proposes to:

- delete waste-to-energy as the preferred resource recovery technology;
- delete the proposed 1,340 tons per day waste-to-energy facility which was proposed to be developed in accordance to the December 27, 1989 Plan Amendment which reflected the Service Agreement entered into between Foster Wheeler Morris County, Inc. and the Board of Chosen Freeholders;
- accept the Governor's Task Force Report's source reduction goals of declining per capita waste generation growth to 1995, no per capita change from 1995 to 2000, per capita decreases in generation from 2000 to 2005 and stable per capita generation thereafter;
- accept the Governor's Task Force Report's recycling goal of 60% of the total waste stream and the NJDEPE's goal of 50% of the municipal waste stream;
- expand the list of materials designated as mandated to be recycled;
- present municipal responsibilities for achieving the recycling objectives of the Plan;
- presents the County's intention to investigate and implement an aggressive enforcement program to insure compliance with the County's solid waste management and recycling program;
- present the County's intention to develop an in-County solid waste management system consisting of a bulky waste processing facility, a mixed waste processing facility, a solid waste composting facility and potentially, a recycling facility to supplement the County's source separation activities;
- present the County's intention to evaluate the implementation of an enhanced household hazardous waste disposal program which may include a permanent drop-off/consolidation facility and/or a mobile collection system;
- present Morris County's efforts toward regional utilization of facilities;
- describe Morris County's dependence on out-of-State landfilling;
- increase the capacity of the Morris County Recycling Consolidation Center in Dover from 30 TPD to 50 TPD;

- provide for a blanket Plan inclusion process for vegetative waste compost facilities and recycling centers;
- update the priority list of recycling services contained in the Amended District Recycling Plan dated October 1988 to include Waste Management of North Jersey in accordance with a September 15, 1990 ruling of the Court;
- include recommended guidelines to municipalities for assessing whether to grant commercial and institutional establishments an exemption from the source separation requirements of the Plan, and;
- modify Dover General Hospital's medical waste processing facility from a medical waste incinerator to a medical waste microwave shredder.

To insure the broadest possible participation by the general public in this plan amendment process, the Morris County Board of Chosen Freeholders will conduct a public hearing. All County residents, public officials or organizations interested in this action are encouraged to attend the public meeting and offer testimony.

Inquiries and written comments or questions concerning this proposed plan amendment may be addressed to:

Morris County Board of Chosen Freeholders
Morris County Courthouse
P.O. Box 900
Morristown, New Jersey 07963-0900

or

Morris County Municipal Utilities Authority
Morris County Courthouse
P.O. Box 900
Morristown, New Jersey 07963-0900

APPENDIX

- **Table A-1: 1990 Disposal figures used in projections**
- **Table A-2: Documented Municipal/Vegetative Recycling used in projections**
- **Table A-3: Documented Bulky/Industrial Recycling used in projections**
- **Fall 1992 Municipal Recycling Survey (Questionnaire)**

Table A1
1990 – Documented and Adjusted Disposal
Morris County, New Jersey

Municipality	Documented			Adjusted		
	Muni/Veg Disposed	Bulky/Ind Disposed	Total Disposed	Muni/Veg Disposed	Bulky/Ind Disposed	Total Disposed
	Tons	Tons	Tons	Tons	Tons	Tons
Boonton	5,773	1,682	7,455	4,144	1,186	5,330
Boonton Twp.	158	189	346	1,787	685	2,472
Butler	4,217	1,302	5,519	4,217	1,302	5,519
Chatham Boro.	3,304	860	4,163	3,117	809	3,926
Chatham Twp.	3,764	264	4,029	3,951	315	4,266
Chester Boro.	3,313	235	3,548	1,296	511	1,808
Chester Twp.	3,037	732	3,768	5,053	456	5,509
Denville	13,022	3,501	16,522	13,022	3,501	16,522
Dover	13,583	4,783	18,366	13,583	4,783	18,366
East Hanover	10,913	5,320	16,233	10,913	5,320	16,233
Florham Park	5,381	3,681	9,063	5,381	3,681	9,063
Hanover	9,167	4,457	13,624	9,167	4,457	13,624
Harding	1,829	425	2,255	1,829	425	2,255
Jefferson	11,336	1,386	12,722	11,336	1,386	12,722
Kinnelon	4,324	773	5,096	4,324	773	5,096
Lincoln Park	4,916	2,463	7,379	4,916	2,463	7,379
Long Hill Twp.	3,137	359	3,497	3,137	359	3,497
Madison	12,647	1,954	14,601	12,647	1,954	14,601
Mendham Boro.	3,064	218	3,281	3,124	565	3,689
Mendham Twp.	2,785	512	3,297	2,725	165	2,890
Mine Hill	2,331	99	2,430	2,331	99	2,430
Montville	8,914	4,439	13,352	8,914	4,439	13,352
Morris Twp.	7,778	2,256	10,034	7,778	2,256	10,034
Morris Plains	3,930	2,147	6,077	3,930	2,147	6,077
Morristown	28,888	6,655	35,543	28,888	6,655	35,543
Mountain Lakes	2,460	1,063	3,524	2,460	1,063	3,524
Mt. Arlington	502	1,323	1,825	502	1,323	1,825
Mt. Olive	11,588	3,969	15,557	11,588	3,969	15,557
Netcong	3,009	986	3,995	3,009	986	3,995
Parsippany	40,821	14,524	55,344	40,821	14,524	55,344
Pequannock	4,955	950	5,905	4,955	950	5,905
Randolph	9,223	2,822	12,045	9,223	2,822	12,045
Riverdale	2,145	457	2,602	2,145	457	2,602
Rockaway Boro.	2,055	221	2,276	4,047	1,470	5,517
Rockaway Twp.	13,479	5,240	18,719	11,487	3,991	15,478
Roxbury	14,375	3,883	18,258	14,375	3,883	18,258
Victory Gardens	375	0	375	375	0	375
Washington	6,334	2,030	8,364	6,334	2,030	8,364
Wharton	2,538	564	3,102	2,538	564	3,102
TOTALS	285,369	88,723	374,092	285,369	88,723	374,092

Notes:

Adjustments are made to municipalities with the same names, i.e. Boonton Town and Boonton Township due to reporting errors associated with their shared names. These municipalities are shaded in.

Adjustments are based on ratios established in the Morris County Generation and Composition Study, February 1983.

Muni/Veg Disposal includes: Type 10 (MSW), Type 11 (Non-Reg. Medical), Type 23 (Vegetative) & Type 25 (Animal Processing).

Bulky/Ind Disposal includes Type 13 (C & D) and Type 27 (Non-Hazardous Dry Industrial).

Documented disposal is from MCTS reports.

1000 tons of Bulky Waste disposed of at the Mt. Arlington Landfill has been added to Mt. Arlington's Bulky Disposal figure.

Table A2
1990 Documented Municipal/Vegetative Recycling
Morris County, New Jersey

Municipality	Total Municipal Recycling Tons	Newspaper All Sectors Tons	High-Grade Corrugated All Sectors Tons	Mixed Paper All Sectors Tons	Glass All Sectors Tons	Aluminum Cans All Sectors Tons	Ferrous Scrap Residential Tons	Non-Ferrous Scrap Residential Tons	Plastic Containers Residential Tons	Other Residential Tons	Food Waste All Sectors Tons	Leaves All Sectors Tons	Brush All Sectors Tons	Grass All Sectors Tons	Municipal All Sectors Tons	Other Municipal All Sectors Tons																							
																	BOONTON	BOONTONTWP	BUTLER	CHATHAM BORO	CHATHAM TWP	CHESTER BORO	CHESTER TWP	DENVER	DOVER	EAST HANOVER	FLORENCE	HANOVER	HARDING	JEFFERSON	KINNELON	LINCOLN PARK	LONG HILL TWP	MADISON	MENDHAM BORO	MENDHAM TWP	MINE HILL	MONTVILLE	MORRIS TWP
BOONTON	1,321.54	488.86	3.37	522.16	0.20	250.16	7.44	0.00	0.00	0.00	40.25	0.00	0.00	0.00	0.00	0.00																							
BOONTONTWP	1,321.54	488.86	3.37	522.16	0.20	250.16	7.44	0.00	0.00	0.00	40.25	0.00	0.00	0.00	0.00	0.00																							
BUTLER	374.11	238.10	16.16	23.34	0.00	61.57	7.06	4.72	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00																							
CHATHAM BORO	3,572.57	772.16	0.00	334.30	19.20	595.69	0.00	0.00	0.00	0.00	34.11	674.00	504.70	567.77	0.00	0.00																							
CHATHAM TWP	7,409.87	941.40	10.69	239.49	79.43	289.00	0.00	0.00	0.00	0.00	45.95	2,991.00	1,041.00	2,674.80	0.00	0.00																							
CHESTER BORO	2,374.37	697.26	3.20	762.10	0.00	244.66	0.00	0.00	0.00	0.00	84.47	0.00	0.00	573.00	0.00	0.00																							
CHESTER TWP	1,148.79	382.70	0.16	622.28	43.90	48.56	2.05	0.00	0.00	0.00	47.74	0.00	0.00	0.00	0.00	0.00																							
DENVER	939.14	309.00	59.78	161.99	100.21	236.76	14.40	0.00	0.00	0.00	38.43	1,279.50	674.91	0.00	0.00	0.00																							
DOVER	3,834.52	825.46	56.77	589.03	8.50	519.22	15.97	5.30	0.00	0.00	0.00	1,011.13	204.00	604.44	0.00	0.00																							
EAST HANOVER	4,516.40	717.76	158.70	1,603.87	338.11	279.37	7.90	0.00	0.00	0.00	0.00	890.60	137.50	321.00	0.00	0.00																							
FLORENCE	7,052.47	906.14	700.90	671.40	114.51	1,147.89	22.60	0.00	0.00	0.00	24.20	2,295.10	586.60	1,555.56	0.00	0.00																							
HANOVER	6,640.47	1,210.77	1,038.02	1,261.15	1,035.20	490.09	31.19	4.45	0.00	0.00	57.00	1,907.69	146.88	1,555.56	0.00	0.00																							
HARDING	812.56	448.18	21.85	189.87	188.86	124.98	8.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																							
JEFFERSON	2,183.67	903.60	0.00	462.70	2.50	207.50	20.80	23.50	0.00	0.00	43.47	516.00	0.00	0.00	0.00	0.00																							
KINNELON	3,938.41	502.90	100.60	1,002.50	141.89	196.30	69.90	130.78	5.60	0.00	48.31	1,351.35	238.48	0.00	0.00	0.00																							
LINCOLN PARK	8,721.90	810.80	23.20	1,378.20	3,582.00	217.90	22.50	128.90	11.50	0.00	85.80	1,374.20	611.80	421.00	22.90	0.00																							
LONG HILL TWP	3,181.90	1,518.75	2.25	1,224.64	0.00	298.66	18.64	0.00	0.00	0.00	63.79	0.00	26.25	0.00	0.00	0.00																							
MADISON	4,561.29	1,068.04	15.30	571.90	280.50	334.40	21.30	0.00	0.00	0.00	33.45	2,754.00	0.00	0.00	0.00	0.00																							
MENDHAM BORO	996.07	314.10	0.60	305.13	6.40	195.53	0.00	3.28	0.00	0.00	38.64	0.00	3.75	116.67	0.15	0.00																							
MENDHAM TWP	539.13	258.64	8.82	101.85	0.00	157.24	7.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																							
MINE HILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																							
MONTVILLE	3,423.19	1,111.54	63.38	1,189.26	3.25	370.20	22.10	178.10	0.00	0.00	0.00	169.60	0.00	288.89	0.00	0.00																							
MORRIS TWP	13,421.41	1,793.70	46.00	1,814.30	1,261.23	754.80	53.02	0.00	0.00	0.00	0.00	5,952.60	169.40	961.10	0.00	0.00																							
MORRIS PLAINS	5,074.64	240.19	878.06	1,165.90	828.36	215.90	11.96	0.00	0.00	0.00	72.69	1,084.61	71.75	482.22	7.60	0.00																							
MORRISTOWN	5,274.81	979.59	352.40	1,297.63	256.36	385.11	20.96	70.68	0.00	0.00	81.80	1,693.80	115.00	41.48	0.00	0.00																							
MT LAKE	1,254.90	420.50	0.00	61.40	142.90	140.80	7.30	0.00	0.00	0.00	0.00	373.90	91.80	0.00	0.00	0.00																							
MT ARLINGTON	390.79	159.60	0.17	76.74	0.00	51.32	3.36	0.00	0.00	0.00	0.00	97.50	0.00	0.00	0.00	0.00																							
MT OLIVE	4,934.13	1,552.00	3.88	499.05	379.10	484.85	31.74	0.00	0.00	0.00	96.17	0.00	261.94	367.22	0.00	0.00																							
NETTING	1,124.24	239.52	1.20	388.00	17.60	139.20	5.12	0.00	0.00	0.00	0.00	257.40	0.00	0.00	0.00	0.00																							
PARLIPPANY	28,013.72	5,519.06	4,914.40	5,326.52	2,410.60	1,133.24	109.18	58.31	0.00	0.00	33.00	3,400.00	263.80	3,939.73	0.00	0.00																							
PROJANNOCK	8,930.15	976.26	56.24	754.30	0.70	301.85	21.30	0.00	0.00	0.00	41.73	3,941.69	446.87	2,566.66	0.00	0.00																							
RANDOLPH	8,751.42	1,418.90	348.48	1,222.10	552.80	597.33	39.90	0.00	0.00	0.00	68.24	4,048.64	321.75	0.00	0.00	0.00																							
RIVERDALE	589.02	197.00	84.94	201.43	0.00	94.73	4.80	10.20	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00																							
ROCKAWAY BORO	2,724.19	1,176.52	41.47	786.50	21.00	264.87	2.30	0.00	0.00	0.00	97.40	1,022.90	159.38	0.00	0.00	0.00																							
ROCKAWAY TWP	4,648.44	1,122.10	367.10	1,618.20	359.80	732.55	26.47	1.44	0.00	0.00	22.90	387.11	0.00	0.00	0.00	0.00																							
ROXBURY	3,314.15	1,455.48	8.80	1,158.20	21.70	508.88	42.13	0.00	0.00	0.00	71.40	0.00	0.00	0.00	0.00	0.00																							
VICTORY GARDENS	109.98	13.28	0.00	2.30	0.00	21.90	1.20	0.30	0.00	0.00	0.00	70.50	0.00	0.00	0.00	0.00																							
WASHINGTON	2,088.09	639.60	13.68	485.40	185.10	376.10	21.60	13.24	0.00	0.00	209.70	48.40	63.55	28.95	0.00	0.00																							
WHARTON	1,424.72	565.62	128.14	316.19	157.86	158.18	15.80	3.10	4.99	0.00	21.00	0.00	0.00	0.00	0.00	0.00																							
TOTALS	163,848.16	34,212.69	9,934.91	31,547.62	12,698.38	12,251.06	893.37	1,004.00	24.32	988.73	3,788.48	38,624.12	5,143.31	15,311.49	53.49	0.00																							

Tonnages are approved by the NJDEP.
 Other Municipal Inclusions: animal waste and textile recycling.

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Table A3
1990 - Documented Bulky/Industrial Waste Recycling
Morris County, New Jersey

MUNICIPALITY	Total Bulk/Veg Recycling		Ferrous Scrap		Non-Ferrous Scrap		White Goods Auto Scrap		Motor Oil		Batteries		Tires		Other Plastic		Appliances		Concrete		Wood Waste		Food Scrap	
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
BOONTON	425.94	0.00	0.02	0.00	0.00	0.00	51.96	3.42	37.64	0.00	230.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.60	32.29	0.00	0.00	
BOONTON TWP	28.78	0.00	0.00	0.02	0.00	0.56	5.80	1.80	2.30	0.00	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.30	0.00	0.00	0.00	
BUTLER	356.95	0.00	5.45	0.57	0.00	93.10	62.57	10.87	69.50	0.00	104.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.30	0.00	0.00	0.00	
CHATHAM BORO	2,393.14	0.00	19.46	0.00	1.17	0.00	43.67	18.34	19.86	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.60	13.04	0.00	0.00	
CHATHAM TWP	913.89	0.00	3.96	0.00	0.00	0.00	2.10	13.00	4.90	0.00	501.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	388.62	0.00	0.00	0.00	
CHESTER BORO	618.84	0.00	3.30	0.00	12.85	0.00	27.77	4.20	0.30	0.00	20.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	549.70	0.00	0.00	0.00	
CHESTER TWP	197.02	0.00	28.57	0.00	0.00	0.00	0.00	2.68	6.40	0.00	17.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	141.50	0.00	0.00	0.00	
DENVILLE	610.27	0.00	50.30	51.35	0.00	0.00	147.00	27.60	28.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	240.00	65.50	0.00	0.00	
DOVER	5,233.84	0.00	18.01	0.04	7.63	0.00	14.53	0.00	35.63	0.00	5,108.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00	
EAST HANOVER	1,352.13	0.00	157.70	1.00	0.00	4.20	53.60	16.34	23.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	961.10	97.50	0.00	0.00	
FLORHAM PARK	958.26	0.00	67.10	37.43	0.00	0.00	8.96	9.90	10.85	0.00	65.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	763.12	0.00	0.00	0.00	
HANOVER	1,245.21	0.00	22.66	97.45	5.71	0.00	2.90	9.97	12.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	949.70	131.50	0.00	0.00	
HARDING	72.62	0.00	2.21	0.00	20.35	0.00	1.66	2.36	0.00	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.50	0.00	0.00	0.00	
JEFFERSON	2,420.00	0.00	12.80	3.20	0.00	0.00	15.10	0.00	38.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	128.20	0.00	0.00	0.00	
KINNELON	156.00	0.00	3.70	0.00	0.00	0.00	36.39	3.40	13.61	0.00	20.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
LINCOLN PARK	2,885.90	0.00	57.60	4.20	0.00	42.30	94.20	8.40	47.10	0.00	521.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,959.20	52.40	0.00	0.00	
LONG HILL TWP.	113.60	0.00	2.49	0.00	44.29	0.00	8.75	1.70	8.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.20	9.50	0.00	0.00	
MADISON	2,085.46	0.00	1,350.90	0.00	0.00	0.00	114.00	13.81	50.00	0.00	124.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	432.10	0.00	0.00	0.00	
MENDHAM BORO	284.05	0.00	0.00	0.00	0.00	0.00	14.61	0.00	10.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	256.30	3.00	0.00	0.00	
MENDHAM TWP	589.75	0.00	4.15	0.00	0.00	0.00	0.00	0.00	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	582.40	0.00	0.00	0.00	
MINE HILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
MONTVILLE	7,931.29	0.00	4,318.74	32.16	0.00	2,975.52	35.70	32.23	69.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	235.30	231.97	0.00	0.00	
MORRIS TWP	1,146.80	0.00	30.60	0.00	40.00	25.50	48.20	3.80	118.50	0.00	85.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	377.50	0.00	0.00	0.00	
MORRIS PLAINS	458.56	0.00	100.38	13.50	0.00	0.00	118.75	12.00	5.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.87	122.10	0.00	0.00	
MORRISTOWN	1,887.30	0.00	8.71	0.10	72.96	0.00	50.22	34.90	30.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	992.50	671.36	0.00	0.00	
MTN LAKES	106.40	0.00	10.90	0.00	0.00	0.00	0.00	0.80	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85.80	0.00	0.00	0.00	
MT ARLINGTON	307.66	0.00	0.80	0.00	38.64	0.00	0.00	2.10	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	244.80	15.92	0.00	0.00	
MT OLIVE	495.81	0.00	61.50	0.00	66.54	0.00	34.48	15.23	22.76	0.00	28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	267.30	0.00	0.00	0.00	
NETCONG	83.90	0.00	4.02	0.00	0.00	28.73	8.58	3.38	2.19	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00	
PARSIPPANY	5,771.55	0.00	320.29	2.39	56.00	259.58	64.67	45.48	129.29	0.00	1,179.60	0.00	64.11	0.00	0.00	0.00	0.00	0.00	0.00	84.00	48.94	0.00	0.00	
PEQUANNOCK	246.27	0.00	26.64	0.00	0.00	0.00	4.43	0.00	0.00	0.00	43.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	172.00	0.00	0.00	0.00	
RANDOLPH	994.23	0.00	23.70	0.89	0.00	0.00	12.89	19.19	55.62	0.00	173.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	687.00	21.74	0.00	0.00	
RIVERDALE	750.39	0.00	0.00	0.00	0.00	0.00	83.27	0.00	3.12	0.00	641.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.40	0.00	0.00	0.00	
ROCKAWAY BORO	773.10	0.00	62.73	22.96	12.83	0.00	120.73	23.13	47.26	0.00	68.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	377.00	0.00	0.00	0.00	
ROCKAWAY TWP	3,144.70	0.00	111.90	1.90	5.71	495.00	148.90	119.75	127.29	0.00	72.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,946.98	59.00	0.00	0.00	
ROXBURY	1,228.80	0.00	20.84	0.00	0.00	0.00	27.39	24.67	26.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,017.30	112.00	0.00	0.00	
VICTORY GARDENS	17.70	0.00	0.00	0.00	14.53	0.00	0.00	0.42	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
WASHINGTON	1,256.52	0.00	10.31	0.37	90.93	0.00	44.91	43.97	8.98	0.00	789.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	130.00	0.00	0.00	0.00	
WHARTON	312.99	0.00	0.80	0.00	0.00	0.00	0.00	7.89	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	284.30	7.50	0.00	0.00	
TOTALS	49,655.62	273.23	6,919.54	273.23	490.14	6,146.59	1,508.69	531.73	1,087.74	285.14	12,005.92	700.70	18,202.33	1,703.87	1,703.87	1,703.87	1,703.87	1,703.87	1,703.87	18,202.33	1,703.87	1,703.87	1,703.87	

Tonnages are approved by the NJDEPE
Wood Waste includes wood pallet, stump, log, wood chip and wood construction debris recycling
C:\LOTUS\SWMP\MV_BWREC.WK3

MORRIS COUNTY RECYCLING QUESTIONNAIRE

Municipality _____ Phone No. _____ Date _____

Municipal Recycling Coordinator _____

Mailing Address _____

A. RECYCLING DEPOT

1. Do you have a recycling depot: Yes ___ No ___ If no, go to section B.

2. Depot Manager _____ 3. Phone No. _____

4. Days/times open to the public _____

6. Do you accept:

Aluminium _____	Motor Oil _____	Plastic Bottles:
Glass _____	Batteries _____	PET _____
Newspaper _____	Tires _____	HDPE _____
Corrugated _____	Bulky Items _____	PVC _____
High Grade Paper _____	Leaves _____	Other _____
Magazines/Junk Mail _____	Grass _____	
Tin/Steel Cans _____	Yard Waste _____	
Other Materials _____		

7. How is Depot staffed: Self Service ___ Volunteer Organizations _____

SLAP ___ Other _____

8. Containers at Depot:

<u>Material</u>	<u>Container</u>	<u>Capacity</u>	<u>Ownership</u>	<u>Munic.</u>	<u>Vendor/Hauler</u>	<u>Lease</u>

9. Other Equipment at Depot (Baler/Separator, etc.)

<u>Equipment</u>	<u>Usage</u>	<u>Speed/Capacity</u>	<u>Ownership</u>	<u>Munic.</u>	<u>Vendor/Hauler</u>	<u>Lease</u>

10. Area/Size of Depot: _____ Please attach depot plan.

11. Can your depot be expanded to accept additional materials: Yes ___ No ___

12. Are you intending to accept additional materials: Yes ___ No ___

13. Are your site expansion capabilities constrained by wetlands, surrounding development, etc.: Yes ___ No ___; Please explain: _____

B. CURBSIDE COLLECTION PROGRAM

1. Do you provide curbside collection: Yes ___ No ___ If no, go to section C.

2. Which materials are collected at curbside, who does collection and where are materials taken:

Material	Who does pickup?		Where are materials delivered from curbside			
	Munic.	Hauler MCMUA	Market	Depot	Consol. Ctr.	Other

Aluminium	_____	_____	_____	_____	_____	_____
Glass	_____	_____	_____	_____	_____	_____
Newspaper	_____	_____	_____	_____	_____	_____
Corrugated	_____	_____	_____	_____	_____	_____
Magazines	_____	_____	_____	_____	_____	_____
Tin/Steel	_____	_____	_____	_____	_____	_____
Batteries	_____	_____	_____	_____	_____	_____
Plastic	_____	_____	_____	_____	_____	_____
PET	_____	_____	_____	_____	_____	_____
HDPE	_____	_____	_____	_____	_____	_____
PVC	_____	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____	_____

3. Vehicle/equipment used for curbside pickup:

Vehicle/Type	Capacity	Ownership			
		Own	Vendor/Hauler	MCMUA	Other

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

4. How often: Weekly ___ Bi-Weekly ___ Once a Month ___ Other _____

5. If you use a private hauler, do you have a contract: Yes ___ No ___; Term of contract _____; Expiration Date: _____

6. Do you pick up at condos/multi-family dwellings: Yes ___ No ___ If not, who does, or what recycling arrangements do multi-family dwellings have: _____

7. Do you provide recycling containers to residents: Yes ___ No ___

8. If yes, what type/capacity of containers: _____

9. If not, what types of containers are permissible: _____

C. PREPARATION OF MATERIAL

1. Do you accept materials commingled: Yes ___ No ___ If yes, which materials may be commingled: _____

2. Do you accept any paper in commingled form: (i.e., newspaper in brown paper bags; newspaper and magazines, etc.): Yes ___ No ___; Please explain _____
3. What are your requirements for the preparation of materials at the curb or delivered to your depot. Please attach a copy of your information sheet or newsletter or other publication that you use to instruct your residents.

D. MARKETS/TRANSPORTATION

1. Please provide the following information concerning your markets:

<u>Material</u>	<u>Market/Hauler</u>	<u>Do you pay for removal? How Much?</u>	<u>Do you receive payment? Last price received</u>	<u>Are Hauling charges included in price</u>
Commingled	_____			
Aluminium	_____			
Glass	_____			
Newspaper	_____			
Corrugated	_____			
High Grade	_____			
Magazines	_____			
Steel Cans	_____			
Tires	_____			
Batteries	_____			
White Goods	_____			
Scrap Metal	_____			
Plastic	_____			
Other	_____			

2. Do you receive payment promptly: Yes ___ No ___
3. Do you have a contract with market/hauler: Yes ___ No ___
4. Does private hauler take ownership of materials: Yes ___ No ___

5. How are materials transported to market:

<u>Material</u>	<u>Type of equip/ container</u>	<u>Ownership of equip</u>	<u>Frequency of trips</u>	<u>Average Weight</u>	<u>Cost per Trip</u>
Commingled *	_____				
Aluminium	_____				
Glass	_____				
Newspaper	_____				
Corrugated	_____				
High Grade	_____				
Magazines	_____				
Tin/Steel	_____				
Tires	_____				
Batteries	_____				
White Goods	_____				
Scrap Metal	_____				
Plastic	_____				

Other _____

* List or identify those materials commingled.

E. YARD WASTE

- 1. Do you require recycling of: Leaves ___ Grass ___ Brush ___ Other _____
- 2. Do you pick up at the curb: Leaves ___ Grass ___ Brush ___ Other _____
- 3. Which vegetative materials do you permit to go to the Transfer Station:
Leaves ___ Grass ___ Brush ___ Other _____
- 4. Do you use one of the County Compost Centers: Yes ___ No ___
- 5. Which location: Shade Tree ___ Camp Pulaski ___ ; Which materials: _____
- 6. Do you process your own yard waste: Yes ___ No ___ ; Which materials: _____
- 7. If you do, do you have a licensed compost center: Yes ___ No ___ ; License No. _____ ; Location _____
- 8. Method of leaf collection: Loose ___ Plastic Bags ___ Brown Paper Bag ___
Other: _____
- 9. Collection of leaves: Curbside ___ Bring to Depot ___ Other _____
- 10. Containers used for grass: Loose ___ Plastic Bags ___ Brown Paper Bags ___
Other _____
- 11. Method of grass collection: Curbside ___ Bring to Depot ___ Other _____
- 12. Preparation of brush: _____
- 13. Method of brush collection: Curbside ___ Bring to Depot ___ Other _____
- 14. Do you provide/sell bags/containers for compostable materials:
Yes ___ No ___ ; Explain: _____
- 15. What do you do with compost/mulch: _____
- 16. Do you promote "Cut it and leave it" for grass care: Yes ___ No ___

F. APPLIANCES/SCRAP METALS/OIL/ANTIFREEZE/BATTERIES/OTHER

1. Do you accept:

<u>Material</u>	<u>Curbside Collection?</u>	<u>Who Picks Up?</u>	<u>Amount charged?</u>	<u>Frequency of Pickup</u>
-----------------	---------------------------------	----------------------	----------------------------	--------------------------------

Appliances _____
 Scrap Metal _____

Motor Oil _____
 Antifreeze _____
 Batteries _____
 Other _____

2. What is the method/market for disposal: _____

3. Is tonnage reported to you: Yes ___ No ___

G. CONSTRUCTION/DEMOLITION MATERIALS/STUMPS

1. Which materials do you accept:

<u>Material</u>	<u>Curbside Collection</u>	<u>Delivered to Depot</u>	<u>Amount Charged</u>	<u>Frequency of Pickup</u>	<u>Disposition of Material</u>
Asphalt Shingles	_____	_____	_____	_____	_____
Wood Products	_____	_____	_____	_____	_____
Concrete	_____	_____	_____	_____	_____
Brick	_____	_____	_____	_____	_____
Paving Asphalt	_____	_____	_____	_____	_____
Stumps	_____	_____	_____	_____	_____
Plaster	_____	_____	_____	_____	_____
Cinder Block	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____

2. Do you mandate by ordinance, the disposition of materials at certified centers: Yes ___ No ___

3. Do you receive tonnage documentation: Yes ___ No ___

4. Would you support an ordinance requiring C & D materials to be recycled, if possible, and would you consider making it part of your planning approval process: Yes ___ No ___

5. Do you receive tonnage documentation: Yes ___ No ___

H. RECYCLING COORDINATOR

1. Part-time ___ Full-time ___ Paid: Yes ___ No ___ Volunteer: Yes ___ No ___

2. What are your key responsibilities: _____

3. What other positions do you hold: _____

4. Are there other members on the recycling staff: Yes ___ No ___; Please name them _____

5. To whom do you report: _____

6. Approximately how much time do you spend on recycling per week: _____

7. Do you make and oversee arrangements for markets: Yes ___ No ___ If not, who does: _____

8. Do you prepare the annual tonnage grant report and application: Yes ___ No ___ If not, who does: _____

I. ORDINANCE

- 1. Does your ordinance cover:
 - a. Commercial/Institutional Sector: Yes ___ No ___
 - b. Yard Waste/Leaf Section: Yes ___ No ___
 - c. Inspections & minimum fine of \$25.00: Yes ___ No ___
 - d. Mandated recyclable materials: Yes ___ No ___

2. Indicate the residential mandated recyclable materials:

Aluminium _____	Grass _____	Used Motor Oil _____
Glass Bottles _____	Corrugated _____	Batteries (Vehicle) _____
Newspaper _____	Steel Cans (Tin) _____	Appliances _____
Plastic Bottles _____	Magazines/Junk Mail _____	Tires _____
Yard Waste (Leaves/brush) _____		
Other _____		

3. Do you have procurement policies for purchasing products made with recycled content: Yes ___ No ___

4. If yes, please list items: _____

6. Have you instituted an enforcement program: Yes ___ No ___ If yes, please explain program: _____

7. Please attach a certified copy of your most recent enabling recycling ordinance.

J. RECYCLING TONNAGE GRANT

1. Do you receive satisfactory tonnage documentation from:
Haulers: Yes ___ No ___ Markets: Yes ___ No ___ Small Businesses: Yes ___ No ___
Institutions: Yes ___ No ___ Corporations: Yes ___ No ___

2. Do you feel you are getting most commercial documentation: Yes ___ No ___

3. Is Tonnage Grant money used for recycling programs: Yes ___ No ___

4. Is Tonnage Grant money in designated fund: Yes ___ No ___

5. List some of the purchases you have made with grant money: _____

K. PROMOTION/EDUCATION/PUBLICITY

- 1. Do you send out notifications twice a year to residents: Yes ___ No ___
- 2. If not, how often: _____
- 3. How do you publicize your recycling program: Recycling Newsletter ___
 Newspaper Press Release ___ Town Newsletter ___ School Newsletter/
 Programs ___ Bulletin Board ___ Signs ___ Radio ___ Cable TV ___
 Fliers ___ Brochures ___ Calendars ___ Presentations: ___ Other _____

- 4. What does your information include: What to recycle ___ How to recycle ___
 Where to recycle ___ Fines for not recycling ___ Tonnage ___ Other _____

- 5. Please attach copies of the various educational/promotional/publicity materials generated in your municipality within the past year.

L. BUSINESSES/INSTITUTIONS

- 1. Do you have a recycling program in Municipal Offices: ___ Schools ___
 Institutions ___ Other _____
- 2. Do you send recycling notification letters on a quarterly ___ semi-
 annual ___ annual basis _____
- 3. Do you assist in setting up recycling programs: Yes ___ No ___
- 4. Which materials do you mandate to be recycled:
 Newspaper _____ Steel Cans _____
 Office Paper _____ Plastic Containers _____
 Corrugated _____ PET _____
 Other paper _____ HDPE _____
 Glass _____ PVC _____
 Aluminium Cans _____ Other _____
- 5. Do you survey businesses for compliance: Yes ___ No ___
- 6. Have you conducted any waste audits of companies/businesses and assessed waste management practices: Yes ___ No ___
- 7. How many businesses and institutions are in your municipality: _____
- 8. Are you receiving tonnage information from businesses: All ___
 Majority ___ Minority ___ None _____
- 9. Have you informed businesses about the County Consolidation Center: Yes ___
 No _____
- 10. Have you informed your businesses about the Morris County Commercial Recycling Pickup program: Yes ___ No ___
- 11. Have you mailed the recycling comic book and business survey to businesses

and institutions: Yes ___ No ___

12. Do you allow businesses to bring materials to your depot: Yes ___ No ___

13. If so, which materials: _____

M. BUDGET/COST

1. Have you done a financial analysis of your recycling program: Yes ___ No ___

2. Do you know what your cost/savings per ton is: Yes ___ No ___

3. If you know, what is that cost or savings: _____

4. Do you have a recycling budget: Yes ___ No ___

5. If not, how do you get money appropriated for recycling projects: _____

6. Are your requests for funds usually honored: Yes ___ No ___

7. Is money spent for: Salaries ___ Equipment ___ Education ___
Seminars ___ Other _____

8. Is your tonnage grant money included in you budget: Yes ___ No ___

9. Do you feel that you have enough funds to conduct your recycling activities properly: Yes ___ No ___ If no, please explain: _____

N. MUNICIPAL SOLID WASTE COLLECTION

1. What solid waste collection arrangements do you have: Municipal Crew ___
Municipal Contract with Private Hauler ___ Individual Private Hauler
Contracts: _____

2. How often is solid waste collected: Once a Week ___ Twice a Week ___
Other _____

3. What number of containers are permitted per pickup: _____

4. Do you or your hauler reject trash that contains recyclables: Yes ___ No ___

5. If hauler is used, does contract include: Hauling & Tipping Fee Combined
___ Hauling Fee Separate from Tipping Fee ___; Other _____

6. Do you have a per bag/per container collection system: Yes ___ No ___

7. Are you considering a per bag/per container collection system:
Yes ___ No ___

8. Please explain your per bag/per container system: _____

8. In your opinion, what are the results of your per bag/per container system: _____

O. INCREASING RECYCLING RATES

- 1. The State recycling goal for solid waste is 50% by 1995. Your tonnage report for 1990 indicated a _____ % recycling rate. Do you feel your municipality will be able to meet the 50% goal by 1995: Yes ___ No ___
- 2. Have you considered how you intend to increase your recycling rates:
 - a. What additional materials will you include: _____
 - b. How will you improve material collections: _____
 - c. Will you target businesses/institutions for better compliance _____
 - d. What other approaches do you plan: _____
 - e. Will your depot be able to accommodate additional materials: _____
 - f. Please list additional materials to be considered _____

P. COUNTY SERVICES

The District Recycling staff is in partnership with you in meeting the mandated 50% goal. We would like to know in this section how we can be of greater service and assistance to you.

- 1. Are you knowledgeable of the services currently offered by the County:
 - a. The Morris County Curbside Recycling Pickup Program: Yes ___ No ___
 - b. The Commercial Recycling Collection Program: Yes ___ No ___
 - c. The County Consolidation Center: Yes ___ No ___
 - d. Education/Promotional Material: Yes ___ No ___
 - e. Recycling Library: Yes ___ No ___
 - f. Compost Facilities: Yes ___ No ___
 - g. Technical Assistance from Staff: Yes ___ No ___
- 2. Is your municipal administration knowledgeable of these services: Yes ___ No ___
- 3. Are you currently using any of these services: Yes ___ No ___; Which ones: _____

- 4. Are you satisfied with the services provided: Yes ___ No ___; Please comment: _____

- 5. Have you visited the County Consolidation Center: Yes ___ No ___; Would you be interested in visiting in the near future: Yes ___ No ___

- 6. Would services such as the following be of interest to you:
 - a. The expansion of the Consolidation Center to accept additional materials: Yes ___ No ___; Which additional materials: _____
 - b. Greater profit sharing from consolidated marketing: _____
 - c. County hauling of materials from curbside or from your depot to the Consolidation Center or to market: _____
 - d. Additional materials picked up at curbside: _____
 - e. Consolidate services and/or facilities with other towns: _____
 - d. Other (Please explain) _____

7. The County Consolidation Center was started as a pilot facility. We would be interested in your comments concerning an expanded facility. The County is exploring the possibility of expanding both materials accepted and recycling functions performed.

- a. If you currently sort recyclable materials, would you consider sending all your sorted materials to an expanded Morris County Consolidation Center that accepts aluminum, glass, steel cans, currogated, magazines, office paper, newspaper and possibly other materials: Yes ___ No ___
Please comment: _____
- b. If you currently sort recyclable materials, would you consider changing to a commingled collection system, if additional sorting equipment were in place at a new County Materials Recovery Facility (MRF): Yes ___ No ___
Please comment: _____
- c. If you currently commingle, would you consider changing to a collection system that includes combining with some sorting (Examples: Plastic, aluminium can and steel cans commingled; glass separated by color; newspaper separate): Yes ___ No ___ Please comment: _____
- d. If you currently commingle, would you consider using a new County MRF: Yes ___ No ___ Please comment: _____
- e. Would you be willing to contract with a new expanded county facility or a new county MRF: Yes ___ No ___ Please comment: _____
- f. Would you be willing to pay a tipping fee at a new expanded county facility or new county MRF: Yes ___ No ___ Please comment: _____

- g. Should the Dover facility continue to operate as it currently does, with possibly a new MRF build at a different location: Yes ___ No ___
Please comment: _____

- h. Should the Dover facility continue as it currently does with no additional facility(s): Yes ___ No ___ Please comment _____

- i. Where should county recycling facilities be built:
- a. One centrally located county facility: Yes ___ No ___ Please explain: _____

 - b. One facility in the eastern portion of the county and one facility in the western portion of the county: Yes ___ No ___
Please explain: _____

 - c. Other potential locations: _____

Thank you for the time you spent on this questionnaire. We are sure your input will help in establishing direction for a successful recycling future. We invite you to add any comments you may wish.