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FISCAL YEAR 1991

ABATEMENT PROGRESS REPORT FOR THE TWIN CITIES METROPOLITAN AREA

Report of the Metropolitan Council
to the
Legislative Commission
on
Waste Management

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The Metropolitan Council coordinates the planning and development of the seven-county Metropolitan Area. The Council is authorized by state and federal laws to plan for highways and transit, sewers, parks and open spaces, airports, land use, air and water quality, waste management, health, housing and aging.

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SUMMARY

Waste Generation

The Metropolitan Council projected that the seven-county Metropolitan Area would generate 2,778,000 tons of mixed municipal solid waste (MSW) in fiscal year 1991, a 1.61 percent increase from FY 1990 projection. The actual quantity of mixed solid waste reported as managed in the region was 2,733,000 tons--one percent less than what the Council projected for FY 1991. The Council forecasts growth in the waste stream during the next decade to be about 1.6 percent annually. The MSW stream is only a portion of the total solid waste generated in the region. The Council estimates that 3,583,400 tons of solid waste was generated in the region during FY 1991.

Waste Reduction

Waste reduction is the most preferred management option. The Council has promoted the reduction of yard waste and the need to reduce overall waste generation. The Council has also identified in its *Solid Waste Development Guide/Policy Plan* a number of measures that can be taken regionally to encourage waste reduction. Among the steps identified are weight-based fees, a toxic materials tax and an environmental protection fee to be assessed at landfills. The Council will continue to work with state and national entities in the development of effective waste reduction strategies. The metropolitan counties are participating with the Council in regional public education efforts. The counties are also jointly working to establish household hazardous waste management programs.

Waste Composition

Understanding the composition and characteristics of solid waste is very useful not only for anticipating potential issues and areas of concern but also for the ability to design new programs that address the changing details of waste generation and disposal. The waste stream is composed of a complex variety of materials that must be considered individually when management decisions are made. More research into the composition of the waste stream will be necessary to help the region identify opportunities to improve the waste management system and monitor the success of current programs. The Council is currently conducting a regional waste composition study in cooperation with the counties and the MPCA to develop a better understanding of the current regional waste stream.

Recycling

The amount of recycled materials reported increased during FY 1991. The counties reported in FY 1991 that 999,968 tons of recycled materials were collected. This equaled approximately 37 percent of the total MSW the Council reports as managed in the region (2,732,730 tons). In comparison, the FY 1990 total of materials recycled was 559,971 tons, which equaled approximately 23 percent of the total MSW the Council reported as managed by the region (2,413,000 tons). During FY 1991 the metropolitan counties intensified their efforts to track and report commercial/industrial recycling. Consequently, the commercial/industrial recycling reported by the counties in FY 1991 represented 67 percent of the total recycling reported.

CONCLUSIONS

The following conclusions are derived from the Issues and Conclusions sections of this report. They reflect policies contained in the Council's 1991 revised solid waste policy plan. The Council has included recommendations as required by Minnesota Statutes 473.149, subd. 6. This states, in part:

> ...The report must recommend any legislation that may be required to implement the plan.... [T]he council shall evaluate and report on the need to reassign governmental responsibilities among cities, counties, and metropolitan agencies to assure implementation and achievement of the metropolitan and local abatement plans and objectives.

This section concludes with a list of actions the Council will take as part of its planning role for regional solid waste management.

Waste Generation

- The Council has considerable experience in collecting and analyzing solid waste generation and management data. The data collected on the management of the mixed municipal solid waste stream confirms the Council's estimates of total generation of MSW. The Council's projections of future waste stream growth are much lower than the growth in the regional waste stream experienced by the region between 1970 and 1990.

- The solid waste generation projections developed by the Council are integral to its policy plan. The Council carries out its responsibility to plan for a comprehensive regional waste management system in accordance with the waste management hierarchy. The Council's projections, along with periodic updates from the annual Abatement Progress Report, form the basis of the Council's solid waste management knowledge for making development decisions about the solid waste management system.

Waste Reduction

- The Council will continue to monitor the growth in the amount of waste managed in the region. Both the counties and the Council will continue to promote waste reduction and develop improved methods for documenting results. Significant waste reduction must occur in order for the waste management system currently planned to be sufficient for the region's needs.

Recycling

- Recycling in the Twin Cities Metropolitan Area appears to have met and exceeded the Metropolitan Council's recycling objectives for FY 1991.

- County efforts to ensure that recycling options are available to most residents in cities and townships appear to have been successful. Of the 189 cities and townships located in the seven Metropolitan Area counties, only 4 communities failed to submit a report documenting

recycling tonnages collected during this period to their respective counties. With 92 percent of the cities and townships in the Metropolitan Area reporting recyclables collected at curbside, it appears that the regional recycling infrastructure as envisioned in the Council's *Solid Waste Management Development Guide/Policy Plan* has been successfully developed.

- Future recycling objectives will be difficult to meet unless recycling programs expand to add more materials and recycling becomes a habit for all people at home, at school and at work. In order for people to truly develop a recycling habit, recycling must be available and relatively convenient to everyone regardless of where they are.

- People will be asked to recycle as much of the waste stream as possible. It is expected that recycling programs may involve seven or more different recyclable materials in the future. Separation of each of these materials into component types requiring separate storage and collection will be an inconvenience to many, and may adversely affect participation rates and recycling tonnages in the future. If the cost to collect these separated materials increases relative to the price received from marketing the materials, it may not be practical to require generators to separate materials into numerous categories or require haulers to collect several separated components.

- To reach recycling levels beyond 40 percent, greater efforts should be directed at coordinating the collection of solid waste and recycling. Residents and businesses should be required to recycle whenever possible.

- In order to progress to the 50 percent recycling objective by 2000, volumes of recovered materials must increase. Fundamental changes will be required to handle the increase in the types and amounts of materials collected. Commingled recycling and commingled recycling/trash collection appear to offer the potential for improving convenience, and the opportunity for the recycling of additional materials at lower costs. The Council is open to using its Abatement Grants Program to help underwrite the cost of such demonstration programs during FY 1992 and FY 1993.

- Efforts to collect additional quantities of recyclable materials must continue to be directed at multifamily buildings. In urban areas such as Minneapolis, where over 32 percent of the population lives in structures with five or more units, this represents an untapped source from which additional recyclables can be collected. Multimaterial recycling programs need to be expanded to include all multifamily residences.

- In FY 1991, counties reported that yard waste composting and land-spreading abated approximately 6 percent of the region's MSW generation, representing about 56 percent of the projected total yard waste supply. While mulching and backyard composting accounted for a portion of the remainder, substantial quantities of yard waste are still being mixed and disposed of with MSW in spite of the legislative ban. Further efforts will need to be made by both the Council and counties to better educate the public on the requirements of the ban and the alternatives available for properly managing grass clippings, leaves and other yard and garden material. Counties should continue to offer centralized composting/land-spreading alternatives for those who choose to participate in such programs. Council policy suggests that the programs should pay their own way.

- The counties need to gather better data on recycling in the commercial/industrial sectors. A concerted effort should be made to combine the MPCA's enforcement of its reporting requirements with the counties' establishment of licensing programs for trash haulers and recyclers. Using these mechanisms together should allow the counties to significantly improve the quality of commercial/industrial recycling tonnage reports.

Centralized Processing

- The Council, as part of its 1991 solid waste plan, has established a policy to encourage that centralized processing facilities be planned, established and operated as part of a regional solid waste management system in order to manage not only MSW, but all solid waste, including rejects and residuals from processing facilities, in an environmentally safe and economic manner.

- The region has made great strides in the development of safe and effective waste processing facilities. The facilities that have been developed to date are fully operational. The level of rejects, residuals and ash produced by the facilities is comparable to the predicted rates planned by the counties. The regional policy plan calls for managing the residuals, rejects, and ash by methods other than landfilling. In order to accomplish this objective the counties will be required to work together to develop and implement programs and facilities.

Land Disposal

- The Council supports the revised landfill siting process, as it recognizes the importance of planning and developing a land disposal facility in the Metropolitan Area within the next five years.

- The region will exhaust all currently permitted regional landfill capacity by 1996 unless additional space is developed.

Waste Certification Reports

- In keeping with revised state statutes and the Council's solid waste policy plan, future waste certification reports will require all metropolitan counties to provide more detailed information on their progress toward reducing the amount of unprocessed waste entering the region's landfills. This will include their progress toward implementing waste sharing agreements among facilities and counties; monthly summaries of the type and description of loads that were received, rejected, transferred or denied access to a resource recovery or disposal facility; and future actions to be taken by the county and/or the facility operators to process additional types of materials not currently being processed at each facility.

RECOMMENDATIONS

Waste Generation

- Metropolitan counties, state agencies and the Council should develop a comprehensive strategy that quantifies on a periodic basis the region's total solid waste stream for use in future development and refinement of waste management policies and programs.

Waste Reduction

- Volume- or weight-based fees should provide sufficient fee increments to promote waste reduction. The provision of unlimited service should be discouraged.

- An environmental protection fee should be added to tipping fees at all land disposal facilities in the state. Funds accumulated from the fee should pay for all environmental protection costs, including the removal of toxic materials from the waste stream, and encourage generators to participate in further waste reduction efforts.

- A tax or fee should be assessed on a list of materials determined by the Minnesota Pollution Control Agency to cause a negative environmental impact. Monies accumulated should be placed in a dedicated fund used to reduce the toxicity of the waste stream.

Recycling

- Cities and counties should work to expand the number of materials recycled and should work toward same-day recycling and MSW collection.

- Cities and counties should make use of their licensing procedures to improve reporting of commercial/industrial recycling by private haulers/recyclers.

- Yard waste composting and direct land-speading should continue to be offered by counties although subsidies should begin to be phased out. The Council and counties should continue to inform people of the yard waste ban and encourage generators to mulch, compost or source-separate yard wastes for collection and processing at centralized yard waste management facilities.

COUNCIL ACTIONS

Waste Composition

- The Council will enter into an agreement with MPCA to perform a multiseason waste composition study at landfills and resource recovery facilities in the Metropolitan Area. The results from this study will be reported to the Legislative Commission on Waste Management by Nov. 1, 1992.

Waste Reduction

- The Council will dedicate a large portion of its resources in solid waste management to waste reduction efforts. The Council will work with the Office of Waste Management (OWM) and metropolitan counties to develop and implement a program to provide specific and targeted waste reduction assistance to commercial and industrial waste generators.

- The Council will work to establish the environmental protection fee and toxic materials tax called for in its policy plan as additional incentives for waste reduction. If these strategies are not sufficient to keep waste generation at or below projected levels, additional legislation may be sought.

- The Council will work with the region's trade associations to provide waste reduction seminars to the business community. The Council will also offer on-site waste reduction assistance to companies in the region who request assistance. The Council's efforts will be coordinated with the metropolitan counties.

- The Council will implement procurement procedures that will require the consideration of recycled content and recyclability in the preparation of bid specifications. The Council will encourage the other metropolitan agencies, counties and cities to implement similar procedures and, wherever possible, engage in joint purchasing agreements with these agencies.

Recycling

- The Council and OWM should work jointly on regional market development efforts that concentrate on identifying and expanding end markets to purchase increasing supplies of recyclables and recycled materials. This effort should be jointly funded.

- The Council will encourage the development of recycling programs that expand the number of materials collected through support of alternative collection programs using the Abatement Grant Funds.

REGIONAL WASTE MANAGEMENT PLAN

The Waste Management Act established a ranking for waste management methods in the following order of preference:

1. Waste reduction and reuse;
2. Waste recycling;
3. Composting of yard waste and food waste;
4. Resource recovery through mixed municipal solid waste composting or incineration; and
5. Land disposal.

Decisions about the management of solid waste in the region are governed by this hierarchy. As it revised the Solid Waste Management Development Guide/Policy Plan, the Council first examined the quantity and types of waste that required management in the region. From that information the Council began at the top of the waste management hierarchy as it established policy-based goals to achieve the maximum amount of landfill abatement possible at each level before moving on to the next. Thus, policy plan goal 1 (and related policies) focuses on a reduction in the quantity and toxicity of waste generated, while goal 2 addresses recycling and reuse, and goal 3 pertains to resource recovery and disposal facilities.

Similarly, development of the system plan section of the Council's policy plan began with the top of the hierarchy as it outlined a proposed schedule for developing facilities so that 100 percent of mixed solid waste and special waste will be processed to recover materials or energy by the year 2000. Projections of the waste stream that will require management were made assuming that a significant amount of waste reduction will occur. Next, careful consideration was given to the maximum amount of recycling the region could achieve by the year 2000 and a goal of 50 percent was set. Only then, after assuming that waste reduction would occur and that the region would achieve a 50 percent recycling rate, were needs for facility capacity identified.

Further, the Council made a policy decision to limit capacity for refused derived fuel (RDF) and incineration technologies to the levels currently planned by the counties. Thus, any identified need for additional management capacity would have to be met with composting technologies to avoid landfilling unprocessed waste.

The metropolitan counties will revise their solid waste master plans to be consistent with the Council's policy plan. This will require continued careful attention to the hierarchy by the counties. In addition, the hierarchy will be a consideration as the Council reviews landfill abatement projects and landfill siting/expansion requests, administers abatement grants, and carries out similar solid waste projects assigned by law.

The remainder of this report details the region's current efforts to implement the waste management hierarchy and achieve the goals and objectives established in the Council's policy plan. Substantial progress has been made in achieving the kind of balanced, integrated system envisioned in legislation. Successes are noted and, where appropriate, recommendations are made that will continue to move the region forward.

REGIONAL SOLID WASTE GENERATION

The Council collects information from metropolitan counties and regional waste facility operators to help determine the total amount of waste generated and managed in the region. In the past few years, an increasing percentage of the waste stream has been disposed of outside the Metropolitan Area. In order to obtain a complete picture of regional solid waste management, it has been necessary for the Council to obtain information from a variety of sources. To do this, the Council collects waste management information from cities, counties and the private sector. In addition, information on regional disposal facilities is collected from the Department of Revenue and the Minnesota Pollution Control Agency. Information on centralized processing facilities is collected from the counties and facilities. The Council also contacts non-Metropolitan Area sanitary landfills to assess the amount of Metropolitan Area waste that is received at those facilities. The sum total of all waste management facility and program information provides the managed total municipal waste stream in the region.

The Metropolitan Council is also charged with the development of regional projections for the waste stream over a 20-year planning horizon. The Council has gone through a rigorous process to make projections about future growth in the waste stream.

DATA - REGIONAL WASTE GENERATION ESTIMATES

The Council's waste generation estimates and recycling projections have been challenged as indicators of the need for the proposed Dakota County incinerator. The Council's 1985 *Solid Waste Management Development Guide/Policy Plan* estimated 1985 mixed municipal solid waste (MSW) generation at 1,991,000 tons. This figure did not account for recycling activities that predated 1985. The estimate was based on the following generation assumptions made by the consulting firm Pope Reid & Associates: urban residents - 2.75 lbs./day; rural residents - 2.0 lbs./day; commercial employees - 3.21 lbs./day; and industrial employees - 7.92 lbs./day.

Land disposal volume in the Metropolitan Area reported to the MPCA in 1985 totaled 1,947,943 tons. This substantiates the Council estimate because some net export was occurring and the Richards Asphalt plant accounted for approximately 20,000 tons of waste. The 1985 policy plan documented that land disposal varied up to 20 percent from year to year between 1972 and 1983. The low volumes occurred in 1973-1974, 1976-1977 and 1981-1982. Recessions, defined as two consecutive quarters of declining Gross National Product, began in 1973, 1980 and 1981. Another recession began in 1990. Except for the 1976-1977 period, when employment growth in the Twin Cities slowed, the periods of lower disposal correspond with the recessions in the U.S. economy.

The Council's projection for 1990 regional waste generation was 2,756,000 tons. This figure includes special waste and pre- and post-1985 recycling volumes. The estimate corresponds with consultant work performed for the Council by Cal Recovery and Franklin Associates, Ltd. The Council concluded that residents generated 2.64 lbs./day and commercial and industrial employees 7.03 lbs./day. This estimate exceeds the 2,708,323 tons identified as managed by the Solid Waste Management Coordinating Board (SWMCB) by two percent. The SWMCB identified management through recycling, yard waste composting, resource recovery and land disposal. This again corroborates the Council's estimate since the difference of less than nine percent can be explained

by materials that may not have been identified or by economic conditions that have been noted as affecting the disposal trend observed prior to 1985.

The Metropolitan Area's solid waste stream, which the Council estimates for FY 1991 at 3,580,400 tons, is primarily generated from residential, commercial, industrial, agricultural and construction-demolition activities. The materials that comprise these wastes are characterized as either mixed-municipal solid waste (MSW), solid waste in addition to MSW, or separately managed wastes. The estimates do not include power generation ash, auto hulks, or materials such as old pavement, which are recycled or otherwise managed outside of the solid waste system.

Table 1 contains the Council's forecasts of solid waste generation for the Metropolitan Area for FY 1991 through FY 1995. Fiscal year projections were derived by averaging the calendar year projections contained in the Council's revised solid waste policy plan. The Council's FY 1991 projection of regional MSW generation is 2,778,000 tons.

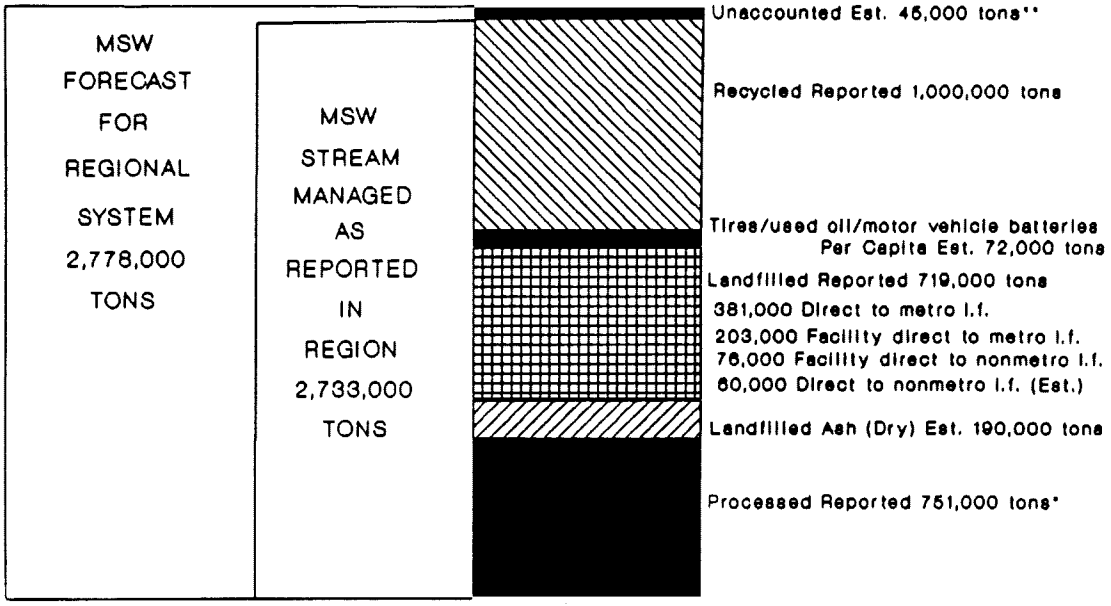
The non-MSW figure in Table 1 include estimates of materials that are not defined as MSW, such as construction-demolition debris, separately managed wastes and other materials specifically banned from being collected with MSW. The projections are based on maintaining the same relative proportion of the non-MSW waste stream to the total waste generation figure.

Table 1
REGIONAL FORECASTS OF MSW AND NON-MSW GENERATION, FY 1990 - FY 1995

Waste Type	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
MSW	2,724,500	2,778,000	2,822,500	2,868,000	2,914,500	2,961,500
Non-MSW	789,700	802,400	815,300	828,400	841,800	855,300
Total	3,514,200	3,580,400	3,637,800	3,696,400	3,756,300	3,816,800

Figure 2 details the Council's approximation of how the reported MSW stream was managed in the region. As stated earlier, this information is based upon data received from counties, municipalities, the Department of Revenue and centralized processing facilities. The MSW stream that was managed by the region is approximately 1.5 percent less than what was forecasted by the Council as being generated by the region. This variation is well within the expected deviation from the trend that should be anticipated during a recessionary period. Waste stream documentation has consistently corroborated the reliability of the Council's waste generation estimates. The Council projections appropriately account for generation by individuals and employees and include an adjustment for anticipated waste reduction.

METROPOLITAN AREA
TOTAL WASTE MANAGEMENT
FY1991



*MSW received by facilities, minus ash, rejects, residuals, TLO, excess and reycled materials.
**Includes special waste, litter, changes in conversion factors and waste densities, etc.
Source: Metropolitan Council

The Council has confidence in its estimates of future waste generation and the need it has identified for processing facilities. The Council's projections conservatively project that the combined effect of per capita and per employee generation increases will moderate from the 2.34 percent growth rate between 1987 and 1990 to a 1.6 percent rate in the future.

ISSUES - WASTE GENERATION

The Council has used waste generation estimates from information produced by nationally known consultants. Council staff and the consultant worked together to estimate the amount of solid waste the region would generate each year through the year 2010. The waste generation projections were based on the assumption that the Council's policies intended to slow the growth in the waste stream

were successful. The region is anticipating growth in employment during this decade that will outpace population growth. Increases in employment, if left unchecked by some form of waste reduction effort in the region, would produce a 3.4 percent annual growth in the waste stream. The Council has adopted policies supporting weight-based fees, public education encouraging waste reduction, and a hazardous materials fee to encourage reduction in both the volume and toxicity of the waste stream.

The projections in Table 1 represent the Council's best estimate of waste generation rates through 1995. The information generated by the counties in a separate analysis confirm the Council's estimates. The Council's waste projections have been and continue to be a reliable estimate of the waste generated in the Metropolitan Area.

The need to reduce waste generation by each generator is acute. Without significant waste reduction efforts the waste stream may grow beyond the estimated 1.6 percent rate. The "Waste Reduction" section of this report describes in more detail waste reduction efforts being implemented by the Council.

CONCLUSIONS - WASTE GENERATION

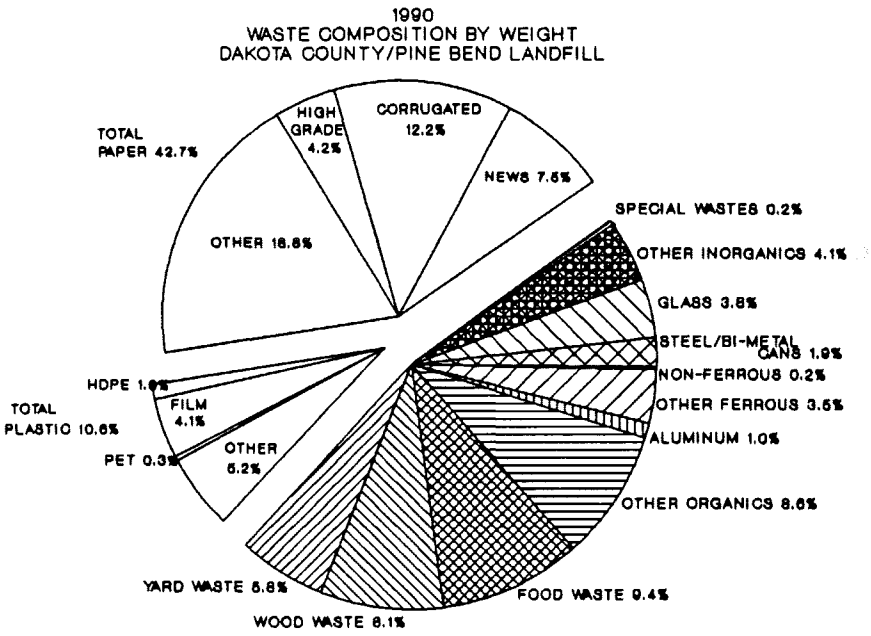
The Council has had considerable experience in collecting and analyzing solid waste generation and management data. The data collected on the management of the mixed municipal solid waste stream confirms the Council's estimates of total generation of MSW. The Council's projections of future waste stream growth are much lower than the growth in the regional waste stream between 1970 and 1990. The Council has based its projection of future growth in the waste stream on policy objectives that the Council will pursue.

The solid waste generation projections developed by the Council are integral to the policy plan. The Council discharges its responsibility to plan for a comprehensive regional waste management system in accordance with the waste management hierarchy. The Council's projections, along with periodic updates from the annual Abatement Progress Report, form the basis of the Council's solid waste management knowledge for making development decisions about the solid waste management system. The most current information available on regional solid waste management contained in this report does not indicate that there is a fundamental problem in the vision of the regional solid waste system as contained in the policy plan.

WASTE COMPOSITION

When the majority of MSW was disposed of in landfills, a sophisticated knowledge of the composition of MSW did not seem necessary. Now, as the region implements and operates a variety of management technologies to avoid landfilling waste, data about the composition of that waste has become increasingly important. The Council's solid waste policy plan calls for the metropolitan counties to cooperatively provide for the development and operation of MSW waste facilities and programs as one regional system that handles waste in the most appropriate and cost-effective way. Implicit in the plan's policies is the need to understand the various components of the waste stream in order to determine how each can be managed at as high a level in the hierarchy as possible, i.e. most appropriately. Further, the plan points out the counties' responsibility for planning for the management of all solid waste. Composition studies performed to date have focused on the MSW portion of the waste stream. Little attention has been paid to the types, quantities and current management strategies for non-MSW waste--information that will be important to assist the counties with the additional planning prescribed.

One of the most recent waste composition studies performed in the region was commissioned by Dakota County in 1990, and conducted by Franklin Associates Ltd. at Pine Bend landfill. The results of this two-season study are shown in Figure 3.



Major differences between the Dakota County study and a 1988 composition study performed at the Ramsey/Washington Resource Recovery Facility by Cal Recovery include:

-A reduction in the percentage of corrugated disposed of from 17.4 percent to 12.2 percent (perhaps attributable to increased commercial/industrial recycling activity),

-A reduction in the amount of yard waste disposed of from 11.8 percent to 5.8 percent (likely the result of a ban on the disposal of yard waste at landfills),

-A relative increase in the amount of food waste (6.8 percent to 9.4 percent) and other organics (6.8 percent to 8.6 percent) reported (insufficient data to determine why this change occurred; other constituents of the waste stream varied only a percent or two between the two studies).

Very little research has been done on the quantity and composition of non-MSW solid waste. The Council prepared some preliminary estimates of total solid waste generation for use in its solid waste policy plan, but acknowledged the need for significant further research to better understand quantities, characteristics and current management activities of these wastes.

Most recent waste composition studies performed in the region have been limited in scope by their length (one or two seasons), the number of locations examined (one or two), and the waste stream studied (MSW only). A similar lack of current data for disposal facilities statewide was recognized by the legislature during the 1990 session. To begin to address this issue, the legislature directed the Minnesota Pollution Control Agency (MPCA) to conduct a statewide analysis of the composition of mixed municipal solid waste. However, with the funding available, the MPCA had to select a limited number of sites for its composition studies. It did not identify any locations in the Metropolitan Area.

Although not benefiting from MPCA funding for waste composition studies, the Council saw an opportunity to cooperate with the MPCA to expand the scope of the state study, taking a broader look at total solid waste generation and better identifying the characteristics of the entire solid waste stream. Landfill Abatement Account funds were used to expand the MPCA's work into the Metropolitan Area.

At present, the Council is entering into an agreement with MPCA that will utilize both agencies' resources to conduct a four-season solid waste composition study at several facilities in the region selected because they are representative of various "waste sheds". This study will include examining materials at MSW facilities and developing and implementing a plan for primary research to evaluate in more detail the types, characteristics and volumes of materials going to non-MSW facilities.

Results of the studies should be available in late 1992. The data collected will be reported in a future Abatement Progress Report. It will be used to monitor progress toward implementing the region's plans and to help identify enhancements needed to further abate landfills.

WASTE REDUCTION

Both the state and the Council identify waste reduction as the most preferred waste management method. Legislation defines waste reduction as:

> an activity that prevents generation of waste including reusing a product in its original form, increasing the life span of a product, reducing material used in production or packaging, or changing procurement, consumption, or waste generation habits to result in smaller quantities of waste generated. (Minn. Stat., sec. 115A.03, subd. 36a)

The Council included this definition in its solid waste policy plan, but added the concept of reducing the toxicity of waste as it considered and established waste reduction goals and policies.

WASTE REDUCTION OBJECTIVES

The Council's revised solid waste policy plan addresses waste reduction in the following goal and policy statements:

> GOAL 1
> The toxicity and quantity of waste generated must be significantly reduced through influencing generators to produce less waste and substitute less toxic or nontoxic products for toxic ones.
>
> POLICY 1a
> An environmental protection fee should be added to tipping fees at all land disposal facilities in the state. Funds accumulated from the fee should pay for all environmental protection costs, including the removal of toxic materials from the waste stream, and encourage generators to participate in further waste reduction efforts.
>
> POLICY 1b
> A tax or fee should be assessed on a list of materials determined by the Minnesota Pollution Control Agency to cause a negative environmental impact. Monies accumulated should be placed in a dedicated fund used to reduce the toxicity of the waste stream.
>
> POLICY 1c
> The primary messages of public education and information programs should include waste reduction and toxicity reduction in addition to recycling.
>
> GOAL 2
> All solid waste generated in the Metropolitan Area should be collected and marketed in a manner that provides the greatest possible reuse and recycling of the materials.
>
> POLICY 2a
> The authority responsible for the management of waste collection should...ensure that volume- or weight-based fees are established for each waste generator....

Beginning with a policy-based assumption that growth in the waste stream will slow significantly in this decade and making its waste generation projections accordingly, the Council identified waste

processing and disposal capacity needs for a smaller waste stream than would be projected using historic growth rates.

By requiring the counties to plan for the management of this smaller waste stream, the Council has built a waste reduction goal for the region into the planning process. Although no specific incremental waste reduction goals are set in the policy plan, the system developed to meet the Council's growth projections through 2010 will manage 21 percent less waste than would have required management without the assumption of reduced waste stream growth.

DATA - WASTE REDUCTION

Data about the amount of waste reduction occurring in the region is primarily anecdotal. While both the region and the state Office of Waste Management have begun to explore methods for quantifying waste reduction, specific tonnage figures are not yet available.

In their *Regional Solid Waste Management Data Report*, the metropolitan counties estimated 83,832 tons of waste reduction occurred in calendar year 1990. The figure resulted primarily from estimating how much yard waste was likely generated in the region during 1990 and subtracting the amount of yard waste managed at composting sites during that time. The difference was assumed to be the result of backyard composting, a common waste reduction strategy.

Other strategies for promoting waste volume and toxicity reduction in the region included: public information campaigns; education campaigns in the region's schools; household hazardous waste collection days and the establishment of permanent household hazardous waste collection sites; and technical assistance to specific commercial and industrial generators seeking to reduce the volume of waste they generated. Both the Solid Waste Management Coordinating Board and the Metro Recycling Education Task Force are continuing their efforts to coordinate regional waste reduction efforts.

Financial commitment to waste reduction is another measure of effort in the region. In their SCORE reports to the Office of Waste Management, the metro counties identified expenditures of $1,396,629 for problem-materials management, household hazardous waste management and other waste reduction activities.

ISSUES - WASTE REDUCTION

Many of the strategies to reduce the volume and toxicity of waste generated--such as regulation of product design, manufacture and packaging, and the provision of financial incentives/disincentives--require action at the federal and/or state level. However, both the Council and the counties can play major supporting roles in ensuring that waste reduction occurs, particularly in the areas of consumer information and education. Both entities are committed to doing their share.

For its part, the Council has added an additional grants program, Education and Technical Assistance Grant Program for Source/Waste Reduction, funded through the Landfill Abatement Account. The program is designed to provide the opportunity and resources to provide waste reduction education and technical assistance programs and services to the public, abatement implementors and decision-

makers. In addition, Council staff have been assigned to offer technical assistance targeted at specific commercial and industrial generator groups to help them institute waste reduction programs. Further, the public information efforts (ad campaigns, grocery bag promotions, press releases, etc.) of the Council have been focused on waste reduction messages for the biennium.

The counties are undertaking similar efforts. Both individual county promotions and the coordinated efforts of the Metro Recycling Education Task Force will highlight waste reduction messages. A special committee of the Solid Waste Management Coordinating Board will continue its implementation of a regional household hazardous waste collection program and the establishment of permanent collection sites.

Both the counties and the Council have representatives who attend the Minnesota Source Reduction Network meetings chaired by the Office of Waste Management. This group meets quarterly to discuss waste reduction strategies and share information about successful waste reduction efforts occurring throughout the state. Council and county staff have also participated in efforts such as the Select Committee on Packaging and the Environment to develop and promote legislation targeted at reducing waste volume and toxicity.

Support for the establishment of volume-based fees has come from both the Council and the counties as well, resulting in making such a fee structure common in the region. More can be done to make the incremental volume- or weight-based fees meaningful as a waste reduction strategy by not providing a rate for unlimited volumes, increasing the fees charged at each incremental step, and/or adding more steps.

CONCLUSIONS - WASTE REDUCTION

The Council will continue to monitor growth in the waste stream managed in the region. Both the counties and the Council will continue to promote waste reduction through the programs previously described, and to develop improved methods for documenting results. Simply stated, significant waste reduction must occur in order for the waste management system currently planned to be sufficient for the region's needs.

Future abatement progress reports and future revisions of the Council's solid waste management policy plan will monitor the region's progress. The Council will work to establish the environmental protection fee and toxic materials tax called for in its policy plan as additional incentives for waste reduction. If these strategies are not sufficient to keep waste generation at or below projected levels additional legislation may be sought.

RECYCLING

After waste reduction and reuse, the most preferred waste management strategy is recycling. Recycling is the process of separating, collecting, and preparing materials for reuse and reusing the materials in their original form or as a material feedstock in a manufacturing process. Recycling can begin with the generator (household, business, industry, government entity) separating recyclable materials from wastes before collection or it may begin with the hauler, contractor, or resource recovery operator separating recyclable materials from collected MSW. Once the recyclable materials have been separated, they are often processed to remove contaminants and to make the material more economically transportable to market. Only after the materials have been reused as a material feedstock is the recycling process complete.

For purposes of this report, recycling (with certain exceptions noted below) counts only materials that would be classified as MSW if they were not recycled. For example, auto hulks are by definition (Minn. Stat. 115A.03, subd. 21) not considered MSW. While auto hulks are recycled, they are not counted in this report, which is focused on managing MSW. Certain materials (yard wastes, used oil, tires, lead acid batteries and major appliances) that are no longer considered MSW are counted in the recycling tonnages reported by counties.

In reporting the counties' recycling progress, the Council assumes the legislative definition of "total solid waste generation " described in Minn. Stat. 115A.551, subd. 1 which includes the total weight of:

1. Materials separated for recycling;

2. Materials separated for yard waste composting;

3. Mixed municipal solid waste plus yard waste, used oil, tires, lead acid batteries and major appliances; and

4. Residential waste materials that would be mixed municipal solid waste but for the fact that they are not collected as such.

RECYCLING OBJECTIVES

Minnesota Statutes 115A.551, subd. 2 establishes a minimum recycling goal for each county in the Metropolitan Area of 35 percent by weight of total solid waste generation (as defined above) by Dec. 31, 1993.

The Metropolitan Council no longer sets individualized recycling objectives for each of the counties, but rather has established overall recycling objectives in its 1991 *Solid Waste Management Development Guide/Policy Plan*. The policy plan presents waste generation forecasts and recycling objectives on a calendar-year basis. The following are the Metropolitan Council's recycling objectives for the region for the period 1990 - 2010.

Recycling Objectives for the Metropolitan Area

1990	1991	1992	1993	1994	1995	2000	2010
20%	25%	30%	35%	40%	45%	50%	50%

For purposes of this report, fiscal year numbers have been calculated by interpolating the objectives for the calendar years and rounding up to the nearest whole percent. Based on such an interpolation, the fiscal year recycling objectives for the Metropolitan Area are given below for FY 1991-FY 1995.

Recycling Objectives for the Metropolitan Area
Fiscal Years

FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
23%	28%	33%	38%	43%

DATA - RECYCLING

The FY 1991 recycling objective of 23 percent reflects the need to continue increasing the amount of recycled materials collected and marketed in the region. Table 2 presents the total amount of recycling reported by county and its percent of the total MSW stream estimated by county, as well as for the region as a whole.

Table 2
FISCAL YEAR 1991 RECYCLING/MATERIALS RECOVERED (tons)

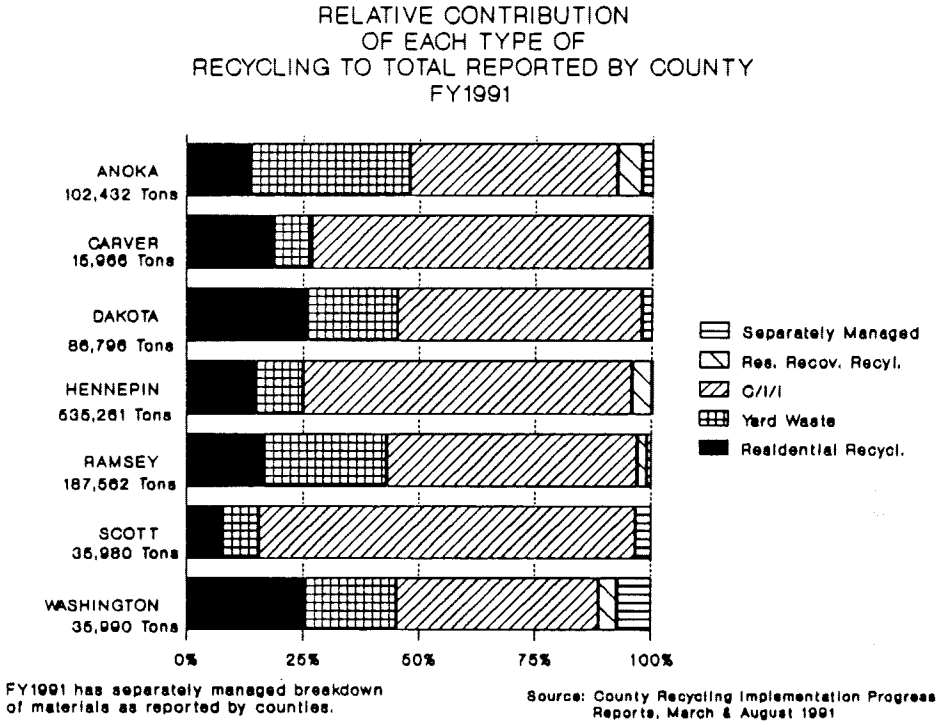
County	MSW Reported as Recycled by County	Council's Forecasted MSW Stream	Percent Recycled per Forecast	MSW Managed as Reported by County	Percent Recycled per MSW Managed	Council's FY 1991 Recycling Goal (%)
Anoka	102,413	226,000	45%	241,533	42%	23%
Carver	15,966	41,500	38%	42,500	38%	23%
Dakota	86,795	275,500	32%	275,500	32%	23%
Hennepin	535,261	1,439,500	37%	1,271,161	42%	23%
Ramsey	187,562	620,500	30%	488,531	38%	23%
Scott	35,980	52,500	69%	69,067	52%	23%
Washington	35,991	122,500	29%	144,190	25%	23%
Metropolitan Area	**999,968**	**2,778,000**	**36%**	**2,532,482**	**39%**	**23%**

* Includes all materials reported by metropolitan counties as having been recycled (recycling figures do not include estimates of yard waste reduction).

Source: County Recycling Progress Reports, March and August 1991.

The recycling tonnages shown in Table 2 are as reported by the respective counties. The total MSW tonnages are forecasts of total MSW generation prepared by the Metropolitan Council. The individual county forecasts are slightly different (usually larger) than the amount of total MSW reported as managed by the individual counties. In general, the counties as a group have reported managing less total MSW than the Council forecast for the region and as a result the percentage of recycling achieved as a group (39%) is slightly higher than the percentage shown in Table 2 above.

Figure 4 illustrates the relative contribution for each type of recycling reported by counties. In FY 1991, the counties reported a new category of recycling (separately managed), expanding the different types of recycling reported from four in FY 1990. The four original recycling categories were residential recycling, yard waste composting, commercial/industrial/institutional (C/I/I) recycling, and recycling reported by resource recovery facilities.



In FY 1991, all seven counties show C/I/I as the largest type of recycling. Residential recycling moved into second place as the next largest type of recycling in four counties, and has comparable tonnages to yard waste composting in one other county. In Anoka and Ramsey Counties, yard waste composting is the second greatest contributor of recycling tonnages, with residential recycling in third

place. While residential recycling increased relative to yard waste composting during FY 1991, it actually declined as a percentage of the total recycling in each county.

In FY 1991, C/I/I recycling accounted for approximately two-thirds of the total recycling reported by the seven counties. Table 3 below compares the C/I/I recycling data reported by the counties. Institutional tonnages are generally actual tonnages reported by the counties themselves and from city offices, school districts, hospitals and other institutional uses. Commercial and industrial recycling tonnages are estimated by counties based on limited survey data. These figures are the least reliable of the recycling data reported by the counties; and represent an area of concern with respect to the accuracy of the entire recycling report prepared by each of the counties, as the C/I tonnages represent from 48 to 89 percent of the total recycling reported by the counties.

Table 3
COMMERCIAL/INDUSTRIAL AND INSTITUTIONAL RECYCLING
FY 1990 and FY 1991

	Fiscal Year 1990				Fiscal Year 1991			
County	C/I Tons	Inst. Tons	Total Tons	Percent of total Recycled	C/I Tons	Inst. Tons	Total Tons	Percent of total Recycled
Anoka	20,111	121	20,232	42%	54,805	408	55,213	54%
Carver	3,208	214	3,422	50%	11,517	93	11,610	73%
Dakota	36,100	179	36,279	51%	44,797	798	45,595	53%
Hennepin	133,530	619	134,149	49%	397,995	4,151	402,146	75%
Ramsey	81,774	375	82,149	64%	103,055	1,949	105,004	56%
Scott	4,627	15	4,642	42%	32,030	80	32,110	89%
Washington	4,770	0	4,770	23%	16,997	139	17,136	48%
Metropolitan Area	**284,120**	**1,523**	**285,643**	**51%**	**661,196**	**7,618**	**668,814**	**67%**

Commercial/Industrial figures include tonnages from resource recovery and "dump and sort" facilities. Some additional institutional (govt., school) figures were placed by municipalities in residential recycling tonnages. FY 1990 figures do not include 222,635 tons pre-1985 C/I/I recycling claimed by Hennepin County, 15,000 tons C/I/I recycling claimed by Scott County and 9,230 tons C/I/I recycling (4,000 tons pre-1985) claimed by Washington County. FY 1991 figures include all C/I/I tons reported by the counties as having been recycled.

Source: County Recycling Progress Reports, March and August 1990, 1991.

Table 4 presents information on the number of curbside and drop-off recycling programs available in each county on June 30, 1990 and June 30, 1991. Cities offering curbside collection and drop-off recycling increased from a total of 162 to 176, a 9 percent increase for the year. During the same period, the number of cities providing only drop-off recycling declined from 17 to 8, a 53 percent decrease. In most cities, curbside collection is provided primarily to single-family residences and to

residential buildings containing up to four dwelling units. In some cities curbside recycling collection includes scattered small businesses located in residential neighborhoods.

Most curbside recycling programs collect aluminum and bimetal beverage and food containers, glass containers, and newsprint. Many also collect corrugated cardboard and plastic bottles. Hennepin County communities are required to collect a variety of plastic containers.

Multifamily buildings of five or more units have not traditionally been provided with residential curbside collection in most communities. For several years, residents of multifamily buildings have been requesting that their buildings become part of municipalities' residential collection programs. Significant efforts to include multifamily buildings as part of the recycling infrastructure have begun in Hennepin County where it's reported that one-third of the communities have begun collecting recycling from multifamily buildings. In addition, Anoka, Dakota and Ramsey Counties report that haulers are beginning to collect recyclables from multi-family buildings.

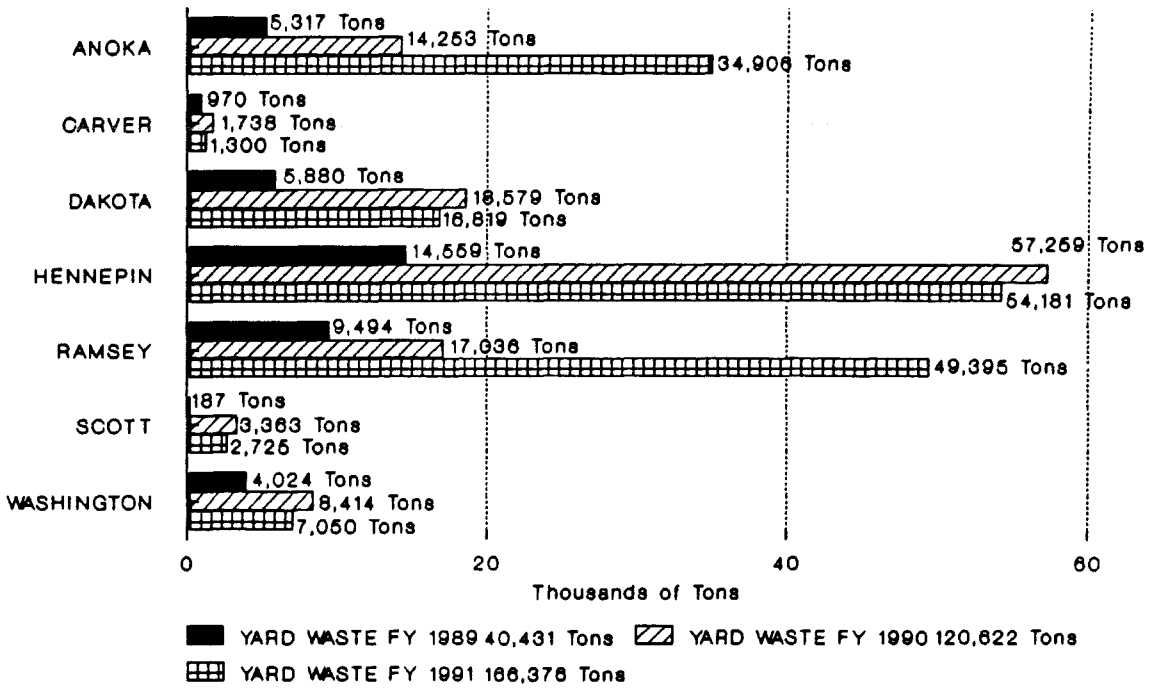
Table 4
COMPARISON OF SOURCE-SEPARATION ABATEMENT PROGRAMS
FY 1990 and FY 1991

	Fiscal Year 1990			Fiscal Year 1991		
County	Curbside/ Drop-off	Only Drop-Off	Total Programs	Curbside/ Drop-Off	Only Drop-Off	Total Programs
Anoka	15	6	21	16	5	21
Carver	9	5	14	15	3	18
Dakota	33	0	33	33	0	33
Hennepin	41	4	45	45	0	45
Ramsey	16	0	16	16	0	16
Scott	19	0	19	19	0	19
Washington	29	2	31	32	0	32
TOTAL	162	17	179	176	8	184

Source: County Recycling Progress Reports, March and August 1991

Figure 5 compares the quantity of yard waste managed by each county in FY 1989, FY 1990 and FY 1991. Note that Anoka and Ramsey Counties more than doubled the tonnages of yard waste that they managed compared to the preceding year. However, the five other counties all report a decline in the yard wastes tonnages managed.

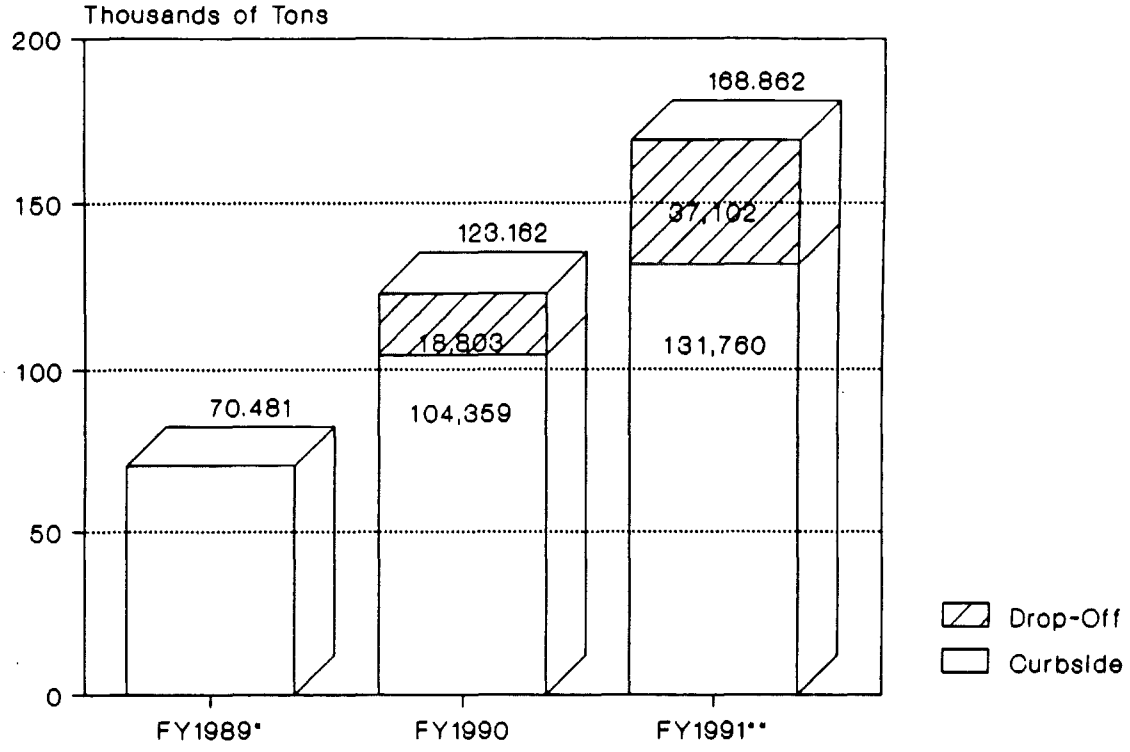
Figure 6
YARD WASTE REPORTED MANAGED (BY COUNTY)
FY 1989 , FY 1990 and FY 1991



SOURCE: County Recycling Implementation Progress Reports, March & August 1991

Figure 6 compares total residential recycling as reported by the counties for fiscal years 1989, 1990 and 1991. Note that the FY 1991 total represents a 37 percent increase over the tons reported recycled for FY 1990 and a 140 percent increase over the tonnage reported in FY 1989. Both curbside recycling programs and drop-off recycling centers have shown significant increases during FY 1991.

Figure 6
COMPARISON OF RESIDENTIAL RECYCLING



*FY1989 curbside and drop-off breakdown not available.
**FY1991 includes separately managed materials reported by counties.

ISSUES - RECYCLING

Overall Recycling

In general, recycling data reported by the seven counties in the Twin Cities Metropolitan Area suggest that the counties are well ahead of their recycling objectives, with all of the counties reporting recycling rates higher than the 23 percent objective established in the Council's revised policy plan. Four counties report that they have achieved recycling rates in excess of the 35 percent recycling rate mandated for Metropolitan Area counties in at the end of 1993. Hennepin and Carver Counties report recycling rates of 37 percent and 38 percent, respectively. Anoka County reports a recycling rate of 45 percent. And Scott County reports a recycling rate of 69 percent.

The principal issue with respect to recycling is that the data reported by the counties overall are very

soft. Because residential recycling is subsidized in some form by all of the counties, often through their cities, there is some credible measure of accountability. Haulers/recyclers report tonnage of each material recycled to respective cities, that in turn report the figures to the counties; in Dakota County, the county has established a brokerage that purchases recyclables from haulers and processes them for market, which provides the county with a means of double-checking the haulers' reports. Generally the same process applies in counties for yard waste, with haulers reporting to cities, which in turn report to the counties. Yard waste is usually measured by volume, with the data converted to tons using a standardized formula. Like residential recycling tonnages, yard waste tonnages reported are considered to be relatively accurate and consistent among the counties. Institutional data is also generally quite good.

However, commercial and industrial recycling data is very soft. Data reported by the counties are based on estimates prepared by counties, which in turn are based on sample surveys of business and industries in the counties. Recyclers and haulers providing recycling services to the commercial and industrial sectors have opposed providing tonnage data for their "clients" and do not report tonnages to either cities or counties. This practice is in sharp contrast to the tonnage figures for residential recycling programs, which are supported by weigh-receipts that the recyclers/haulers provide to cities, or the volume estimates of yard waste provided by haulers and yard waste management facility operators.

Although anecdotal accounts of increased C/I recycling and evidence of increased collection and marketing of recyclables overall seems to support the belief that growth in C/I recycling has indeed occurred, the reliability of C/I recycling data needs to be improved. The reporting of such high undocumented C/I tonnages may lead the commercial/industrial sector to believe that no additional effort is needed. Counties have the means to require recyclers and haulers to provide weigh-tickets or similar documentation on their commercial/industrial recycling activities. Under Minn. Stat. 115A.93, counties have the responsibility to license both haulers and "to impose requirements...as a condition of receiving and maintaining a license."

Residential Recycling

With counties and cities facing increased pressures to recycle at greater levels than has previously been achieved, recycling programs have begun to expand their collection programs to include nontraditional materials such as magazines, plastics and several paper grades, including computer and mixed paper. During FY 1990 the Metropolitan Council conducted a study of the potential supply of recyclables in the waste stream and the available market capacity. Franklin Associates, Ltd., performed the work. The supply-side and results indicated that even if 100 percent of the eight recyclables identified in the study were recycled, reaching a 35 percent recycling objective by 1993 and a 50 percent objective by 2000 would be a challenge. The eight materials studied included: old corrugated cardboard, mixed papers, glass containers, rigid plastic containers, metal (steel) food containers, aluminum, yard waste, and old newspapers. Clearly, the number of materials being recycled will need to increase to include even more items if recycling objectives in the future are to be successfully met.

Other studies by the Metropolitan Council in 1991 found that while most households claim to recycle, the actual number of households recycling in any given week can vary considerably. In order to increase residential recycling rates, households will not only have to recycle more materials, they will have to do so on a more consistent basis.

One way to increase participation rates is to collect recyclables on the same day as regular trash collection. Same-day collection allows recycling to benefit from the pre-established memory association of needing to "set out" the trash. It helps to reduce the argument that recycling requires "extra" effort. Same-day collection also has the added community benefit of reducing the number of days when materials are set out for collecting, and reducing the number of days of truck noise associated with trash and recycling collections.

There is concern that traditional source-separation programs that require households to separate recyclables by type (old corrugated cardboard, old newspapers, cans, glass, yard wastes, etc.) will face declining participation rates if households are required to separate and store even more materials (plastics, mixed paper, magazines, etc.) in order to meet recycling objectives.

A way to deal with the problem--expanding the number of recyclable materials while improving participation rates--may be an alternative source separation and collection program known as commingling. Commingling involves the mixing (commingling) of recyclables into only one or two groups rather than separating into five, six or more discrete component groups. By reducing the number of separations, people can save both time and storage space. Recycling collection vehicles can be made simpler and the cost of collection can be reduced because of the reduction in the number of curbside sorting operations (separation at curbside into the various bins in the collection vehicle).

Such a commingled recycling system would likely reduce collection costs per stop slightly, create some increased revenues from the additional amount of materials collected, and require added costs for processing to separate the commingled recyclables into their components for shipment to market. The principal advantage accrues mostly to the household by making recycling more convenient. Greater convenience should bring greater participation and higher recycling tonnages.

A variation of this basic idea of commingling recyclables involves the use of specially colored bags (often referred to as a "blue bag" system) for storing and collecting the recyclables. The blue bags are set out with the "trash" and picked up with the regular MSW collection. Trucks haul the combined load of MSW and blue bags to a transfer/sorting station, where the blue bags are removed and sent to a recycling line or separate facility for further separation and processing for market. The advantage of this variation is that it could eliminate the cost of a separate pickup for recyclables.

There are concerns with respect to commingling. Both variations require additional processing with corresponding higher processing costs. Both variations have the potential for contamination of the recyclable materials, causing higher rejection rates at facilities, and making recyclables less marketable or in some cases totally unmarketable. Glass fragments, for example, could become imbedded in paper or plastic making the paper or plastic difficult or impossible to recycle.

Nevertheless, one of the largest firms providing waste and recycling collection services in the region, Waste Management Inc., has begun pilot tests in several cities to test the commingled recyclables concept. Preliminary results seem to indicate that participation rates and revenues from recyclables have increased while contamination rates were lower than expected. Besides increasing recycling participation and volume of recyclables collected, municipalities have noticed greater program efficiencies, which have a direct relationship to program costs.

Haulers collecting both solid waste and recyclables have begun to explore commingled collection as

a alternative to separate trash and recycling collections. One of the biggest problems they face will be convincing officials to change a system that seems to be working and achieving results. Officials are concerned about the costs, benefits and public image of changing a workable system. Pilot projects, followed by demonstration programs, are needed before commingling is recommended for region-wide application.

Yard Waste

Yard waste managed in the region during FY 1991 amounted to slightly more than 166,000 tons, according to county estimates. This represents approximately 6 percent of the forecasted total MSW generated in the Metropolitan Area in FY 1991 and 56 percent of the estimated yard waste generated in the region. Only two counties showed substantial gains in yard wastes managed in FY 1991, while the other five counties showed a modest decrease in the amounts of yard waste they managed.

The reason for the decrease in yard wastes managed may represent a maturing of the yard waste programs in these counties, as well as the impact on waste generators of higher prices charged by haulers and/or counties for collecting and managing the material. The figures suggest that 44 percent of the yard waste likely to be generated is being handled outside of the counties' yard waste management systems. While more households are using mulching mowers or have otherwise reduced their bagging of yard wastes, an informal survey of wastes arriving at transfer stations and resource recovery facilities in the region found that some households are still disposing of yard wastes with MSW.

Commercial/Industrial/Institutional Recycling

Recycling tonnage figures from commercial and industrial activities continue to be undocumented and extremely soft. The present county methods to generate recycling data from this sector need to be thoroughly revised. A uniform C/I/I recycling reporting system needs to be established that provides more accurate and consistent reporting by the counties.

Many large shopping centers, single-tenant office buildings and large industries are presently recycling, but smaller shopping centers, multitenant and smaller office buildings, and small industries do not appear to be involved in comprehensive recycling programs. Many commercial recyclers have traditionally focused on one or two of the more valuable components of the commercial waste stream (for example, white office paper and corrugated cardboard). Past markets for these materials have been consistent and fairly strong. In some cases, recyclers were able to actually pay generators for their high-quality paper wastes and still make a profit because of the strong markets. Today, that is no longer the case.

Today, commercial recyclers have an oversupply of recycled materials and consequently weak market prices. While markets do appear to exist for all commercial recyclables, the margins for commercial recyclers have largely disappeared. Commercial recyclers must charge customers for the recycling service, and the cost is likely to be somewhat less than the costs charged by waste haulers, but the difference may be inadequate to cause smaller commercial and industrial establishments to undertake comprehensive recycling.

Markets

An expanded number of recyclable materials, higher participation rates, expansion of recycling programs to include the residents of larger multifamily buildings, and greater emphasis on helping smaller businesses to recycle will cause more recyclables to go to already saturated markets. As recycling programs in the Metropolitan Area continue to expand and as more recycling programs in Greater Minnesota come on line, market conditions will get worse. Recycling markets are often national and international in scope, and are largely unaffected by what happens in Minnesota. Because recycling is a growth industry nationwide, markets will undoubtedly grow over time, but there are likely to be oversupply problems and therefore depressed market prices for some time to come.

CONCLUSIONS - RECYCLING

Recycling in the Twin Cities Metropolitan Area appears to have met and exceeded the Metropolitan Council's recycling objectives for FY 1991 and it appears likely that all of the metro counties will meet or exceed the legislative goal of 35 percent recycling by Dec. 31, 1993.

County efforts to ensure that recycling options are available to most residents in cities and townships appear to have been successful. The 189 cities and townships located in the seven Metropolitan Area counties, only 4 communities failed to submit a report documenting recycling tonnages collected during this period to their respective counties. With 92 percent of the cities and townships in the Metropolitan Area reporting recyclables collected at curbside, it appears that the regional recycling infrastructure as envisioned in the Council's *Solid Waste Management Development Guide/Policy Plan* has been successfully developed.

While recycling appears to be expanding rapidly in the Metropolitan Area, there are areas of concern. Recycling objectives for later in the decade will be difficult to meet unless recycling programs expand to add more materials and recycling becomes a habit for all people at home, at school and at work. In order for people to truly develop a recycling habit, recycling must be available and relatively convenient to everyone regardless of where they are.

People will be asked to recycle as much of the waste stream as possible. It is expected that recycling programs may involve seven or more different recyclable materials in the future. Separation of each of these materials into component types requiring separate storage and collection will be an inconvenience to many, and may adversely affect participation rates and recycling tonnages in the future. If the cost to collect these separated materials increases relative to the price received from marketing the materials, it may not be practical to require generators to separate materials into numerous categories or require haulers to collect several separated components.

To reach recycling levels beyond 40 percent, greater efforts should be directed at coordinating the collection of solid waste and recycling. Greater efficiency and cost savings can be expected by requiring haulers to collect recyclables and solid waste on the same day. In conjunction with encouraging same-day collection, residents and businesses should be required to recycle whenever possible. In order to achieve this level of coordination, many cities will have to set some limits for residential trash haulers operating in their community. This may prove to be a hardship for some haulers initially as schedules are juggled to fit community pickup days. In order to reduce the problems, cities and counties should work closely with residential trash haulers to devise a fair and equitable schedule.

In order to progress to the 50 percent recycling objective by 2000, volumes of recovered materials must increase. Fundamental changes will be required to handle the increase in the types and amounts of materials collected. Commingled recycling and commingled recycling/trash collection appear to

offer the potential for improving convenience and the opportunity for the recycling of additional materials at lower costs. These and other ways to improve convenience and increase recycling participation rates need to be investigated and, if found to be workable, properly demonstrated before urging such a radical change in the system for both recyclers and the public. The Council is open to using its Abatement Grants Program to help underwrite the cost of such a demonstration program during FY 1992 and FY 1993.

Efforts to collect additional quantities of recyclable materials must continue to be directed at multifamily buildings. In urban areas such as Minneapolis, where over 32 percent of the population lives in structures with five or more units, this represents an untapped source from which additional recyclables can be collected. Multimaterial recycling programs need to be expanded to include all multifamily residences. It may also be appropriate to expand curbside programs to include small neighborhood businesses or even entire business districts in smaller, more rural communities.

In FY 1991, counties reported that yard waste composting and land-spreading abated approximately 6 percent of the region's MSW generation, representing about 56 percent of the projected total yard waste supply. While mulching and backyard composting accounted for a portion of the remainder, substantial quantities of yard waste are still being mixed and disposed of with MSW in spite of the legislative ban. Further efforts will need to be made by both the Council and counties to better educate the public on the requirements of the ban and the alternatives available for properly managing grass clippings, leaves and other yard and garden material. Counties should continue to offer centralized composting/land-spreading alternatives for those who choose to participate in such programs. Council policy suggests that the programs should pay their own way.

Existing reporting methods provide soft data on recycling efforts in the commercial/industrial sectors. The data presented in county recycling reports suggest that commercial/industrial recycling is widespread and being successfully implemented in all counties, and may discourage the development of new or expanded programs to assist businesses to undertake C/I recycling. For example, in one county 50 percent of the C/I/I recycling tonnages reported are generated by only four businesses and there are no efforts in that county to encourage small businesses to start recycling.

The counties need to gather better data on recycling in the commercial/industrial sectors. A concerted effort should be made to combine the MPCA's enforcement of its reporting requirements with the counties' establishment of licensing programs for trash haulers and recyclers. Using these mechanisms together should allow the counties to significantly improve the quality of commercial/industrial recycling tonnage reports.

CENTRALIZED PROCESSING

Centralized processing of MSW is accomplished through resource recovery facilities employing either mass burn, refuse-derived fuel (RDF) or composting technologies. Transfer stations help to regulate the flow of waste to processing facilities and also serve to remove recyclable materials from the waste stream prior to processing. Mixed municipal waste haulers are required to deliver waste to a processing facility or transfer station according to the designation ordinance in effect in the county. Three counties have not implemented designation in FY 1991 due to a lack of resource recovery facility capacity to send the waste. The counties that have implemented designation--Hennepin, Ramsey, Anoka, and Washington--had fully operational facilities during FY 1991. The design capacity of the operating facilities is 3,772 tons per day.

DATA - CENTRALIZED PROCESSING

Table 5 shows the current and planned centralized processing facilities for the Metropolitan Area through 1995. The facilities actually received 1,237,490 tons of waste, or 3,390 tons of waste per day.

Table 5
CENTRALIZED PROCESSING CAPACITY FOR THE METROPOLITAN REGION
(Tons Per Day Expected Average Daily Throughput)

CURRENTLY OPERATING FACILITIES	**TECHNOLOGY**	**CAPACITY**
Hennepin Energy Resource Corp.	mass burn	1,000 TPD
Ramsey/Washington Resource Recovery Project	RDF	1,000 TPD
Anoka/Hennepin Elk River Resource Recovery Facility	RDF	1,300 TPD
Reuter, Inc.	RDF	400 TPD
Richard's Asphalt	mass burn	72 TPD
ADDITIONAL FACILITIES PLANNED BY COUNTIES		
Dakota County Resource Recovery Facility (operational 1993)	mass burn	640 TPD
Scott/Carver MSW Composting Facility (operational 1992)	MSW compost	148 TPD
SUBTOTAL (by 1993)		4,560 TPD
PROPOSED PRIVATELY DEVELOPED FACILITIES		
Reuter Inc., RDF Reject and Residual Composting Facility	MSW compost	452 TPD
RECOMP Food Waste Composting Facility	food waste compost	300 TPD
TOTAL PROCESSING CAPACITY (by 1995)		**5,312 TPD**

The design capacity exceeds the amount of waste that the facilities may be expected to process on an annual basis. Seasonal variations in the flow of waste, down time for routine maintenance, and unexpected problems all limit the amount of waste that a facility may actually process. In addition, other circumstances may limit the amount of waste processed at resource recovery facilities.

Two facilities had processing capacity that was not fully used in FY 1991. The Reuter facility limited the waste it received to 280 tons per day. The Reuter facility is permitted to process an average of 400 tons per day of waste. Further, Anoka County did not have sufficient waste to meet its contractual obligation to NSP Elk River. Anoka delivered an annual average of 453 tons of waste per day to Elk River but was obligated to NSP to deliver 500 tons per day. In total, 17,000 tons of capacity at Elk River, intended for Anoka County use, was not used. The total processing capacity that was not used due to a facility limiting the waste it received or due to lower-than-projected waste deliveries was 26,600 tons in FY 1991. The waste processing capacity that was used in conjunction with underused capacity equals 3,460 tons per day of processing capacity in the region with existing facilities. Facility modifications to manage more of the waste stream could raise the ability of the region to process additional waste at existing facilities.

During FY 1991 Hennepin County landfilled 10,189 tons of waste received at transfer stations (not including rejects and unprocessible waste); Newport landfilled 70,879 tons of excess waste; and Elk River landfilled 153 tons of excess waste. The total excess waste landfilled from counties that have enacted designation was 81,221 tons of waste in FY 1991. Even if the operating facilities received all contracted wastes, there would still have been 54,600 tons (or 150 tons per day) of processible waste landfilled from counties that have enacted designation.

Table 6 shows the amount of MSW received by regional resource recovery facilities from FY 1987 through FY 1991. In FY 1987 only 1 percent of the estimated MSW stream was managed through centralized processing, compared to FY 1991, when 45 percent of the estimated MSW stream was sent to centralized processing facilities.

Table 6
WASTE RECEIVED AT CENTRALIZED PROCESSING IN THE METROPOLITAN AREA
FY 1987 - FY 1991
(in tons)

Facility	Type	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991
Richards	Mass Burn	20,200	21,448	17,873	23,354	24,046
Reuter	RDF	0	26,882	25,819	113,066	102,444
Newport (NSP)	RDF	0	349,543	360,648	399,360	398,309
Elk River (NSP)	RDF	0	0	0	321,673	349,410
HERC	Mass Burn	0	0	0	197,359	363,281
TOTAL		20,200	397,873	404,340	1,054,812	1,237,490

The region landfilled 40,144 tons of rejects or waste that could not be processed at the facility that received it. Likewise, 143,117 tons of processing residuals were produced in the region that were landfilled by processing facilities. In FY 1991 only 28 percent of the regional waste stream was converted to energy and 17 percent of the regional MSW was landfilled as rejects, residuals, or ash. Table 7 shows the amount received, landfilled (rejects, residuals, excess, recyclables and ash), and recycled by regional centralized processing facilities. Regional facilities landfill approximately 37 percent of the total weight received while processing 63 percent.

Table 7
MANAGEMENT OF MSW RECEIVED AT PROCESSING FACILITIES, FY 1991

Facility	Tons Received	Tons Rejects	Tons Residuals	Tons Excess	Recovered	Tons Ash	RDF/Energy Marketed
HERC	363,281	135	3,514	0	9,949	97,868	251,815
Elk River*	349,410	16,536	55,129	153	0	50,586	227,006
Newport**	398,309	0	59,303	70,879	7,489	30,886	229,752
Reuter***	102,444	23,473	25,171	N/A	N/A	2,778	51,022
Richards	24,046	0	0	0	0	8,387	15,659
Total Tons	1,237,490	40,144	143,117	71,032	17,438	190,505	775,254
Percent		3%	12%	6%	1%	15%	63%

* Anoka and Hennepin portion only.
** Ramsey, Washington and Hennepin portion only; Newport rejects included with residuals and excess materials;
*** Reuter figures do not include materials that are in storage.

Source: County Recycling Progress Reports, March and August 1990

The Council's revised solid waste management plan calls for residuals and rejects to be further reduced before landfilling by alternate management methods. The wet fraction of the waste stream could be reduced by removing food waste. Wastes that are unprocessible at an RDF facility are often either compostable or processible at a mass-burn facility. To have an efficient, fully functional regional solid waste management system actually calls for more processing facilities or expanded processing capability at existing facilities. NSP, which runs the Elk River and Newport facilities, has proposed to upgrade its processing lines to manage a higher percentage of the waste received. Whether new facilities are built or additional processing capacity is built into existing facilities, it is

clear that the region will need to improve the effectiveness of the waste processing portion of the regional waste management system to meet regional objectives.

The Council's revised solid waste policy plan indicates a need to develop additional processing capacity by 1993. Additional processing capacity is required to manage waste currently entering land disposal facilities and estimated future growth in the MSW stream. As Table 5 outlines, the Council has planned for the development of two MSW processing facilities by 1993, one in Dakota and one in Scott Counties. These two facilities are estimated to add 788 tons per day of processing capacity for the region. This additional capacity for processing the region's MSW stream is necessary in order to achieve the legislative goal of sending no unprocessed wastes to landfills. With the development of these facilities, the Council expects that landfilled materials will decrease, processing facility rejects and residuals will increase slightly and the amount of ash produced will increase.

ISSUES - CENTRALIZED PROCESSING

The Council's 1991 solid waste plan requires that a diversified system be developed that matches appropriate waste management technology with components of the waste stream. This requires building and operating different processing facilities using different technologies while also adhering to the state's mandated waste management hierarchy.

The Council's 1991 solid waste plan also emphasizes that new facilities should be designed for optimal efficiency, protect the region's environment and complement those facilities already in operation. It does not appear necessary or cost-effective for each county to develop a complete range of processing options (recycling, composting, energy recovery).

Different components of the MSW stream are produced in different volumes throughout the year. Also, there is considerable variation in the amount of waste generated in the region. The regional waste processing system cannot be run to use the optimal processing capacity at each facility at all times. The design capacity cannot be used to predict the actual volume of waste that facilities will process. The actual processing capacity of existing facilities appears to be 3,540 tons per day compared to the design capacity of 3,772 tons per day.

CONCLUSIONS - CENTRALIZED PROCESSING

The region has made great strides in the development of safe and effective waste processing facilities. The facilities that have been developed to date are fully operational. The level of rejects, residuals and ash produced by the facilities is comparable to the predicted rates planned by the counties. The regional policy plan calls for managing the residuals, rejects, and ash by methods other than landfilling. In order to accomplish this objective, the counties will be required to work together to develop and implement programs and facilities to manage the residuals, rejects, and ash by alternative methods. This strategy leads in part to a need for additional processing capacity. On the surface, the Council's policy plan projects that 5,312 tons per day of processing capacity will be needed in the region. This additional capacity appears to show the region will process 66 percent of the projected total waste stream. Looking closer, part of the processing capacity in the region will be devoted to managing processed rejects and residuals. The actual amount of MSW that will be processed when all planned facilities are operational is less than 50 percent. The need for additional processing facilities in the region to integrate regional waste management is very clear.

LAND DISPOSAL

Despite more restrictive legislation, increased tipping fees, shrinking capacity, serious environmental concerns and continuing public opposition, landfills continue to remain a method for managing MSW in the region. Furthermore, landfills will continue to receive significant amounts of wastes in spite the fact that land disposal is at the bottom of the state's waste management hierarchy.

DATA - LANDFILLS

The Council reviews landfill capacity for the region on an annual basis. The Council uses aerial surveys of regional land disposal facilities to account for remaining landfill capacity. The most recent aerial photographs used to determine the remaining capacity of landfills were taken in 1990.

The aerial survey showed that in 1990 there was an estimated 5,627 acre-feet of remaining capacity (one acre-foot equals approximate 1,613 cubic yards or 484 tons of solid waste) in the region's four land disposal facilities. Table 8 shows the remaining acre-feet of each metropolitan landfill from 1984 through 1990. The rate of consumption, as measured by the survey, was 1,790 acre-feet between 1988 and 1990. The rate of consumption between 1986 and 1988 was 1,812 acre-feet.

Table 8
REMAINING LANDFILL CAPACITY FROM AERIAL SURVEY DATA, 1984 - 1990
(In acre-feet*)

Facility	1984	1986	1988	1990
Anoka	756	24	20	661
Burnsville	2566	2098	1220	1141
Dakhue	207	50	closed	closed
Flying Cloud	250	174	closed	closed
Freeway	201	43	20	closed
Louisville	595	504	758	closed
Pine Bend	6797	5788	4783	3451
Woodlake	874	598	656	374
Total	12,246	9,279	7,457	5,627

* One acre-foot equals 1,613.3 cubic yard

Table 9 shows the amount of waste received at metropolitan land disposal facilities as reported by MPCA and the Department of Revenue. In FY 1991 the amount of MSW regional facilities

reported as being received and disposed of was 583,044 tons (based on 3.33 cu/yd per ton). In FY 1990 the amount of waste that regional disposal facilities landfilled was 955,844 tons. This represents a 39 percent reduction in wastes disposed of in metropolitan landfills from FY 1990 to FY 1991.

Table 9
MSW RECEIVED AT METRO & SURROUNDING NON-METRO LANDFILLS
1986 - 1991

Metro Disposal Facility	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991
Anoka	278,437	254,863	152,962	37,417	56,896	59,515
Burnsville	199,830	280,001	329,106	308,945	169,678	91,146
Dakhue	56,160	41,416	13,968	closed	closed	closed
East Bethel	53,412	55,366	59,905	34,392	closed	closed
Flying Cloud	484,423	53,388	9,268	closed	closed	closed
Freeway	43,379	43,338	24,958	22,743	7,956	closed
Louisville	217,562	321,923	211,493	189,006	106,512	closed
Pine Bend	625,248	819,205	884,699	803,953	540,979	376,473
Woodlake	83,895	129,634	157,430	226,307	73,823	55,910
Metropolitan Area Landfills	2,042,346	1,999,134	1,843,789	1,622,763	955,844	583,044
Non-Metro Disposal Facility	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**
Elk River	159,402	119,145	165,769	142,349	91,037	N/A
McLeod	27,548	30,543	53,727	75,911	63,086	N/A
Ponderosa	51,793	52,448	53,265	45,120	45,195	N/A
Sun Prairie	N/A	N/A	375	1,670	1,314	closing
Tellijohn	27,633	34,205	33,750	1,670	39,655	N/A
Yonak	56,839	54,229	61,904	46,297	51,466	N/A
Surrounding Non-metro landfills	323,215	290,570	368,790	313,017	291,753	0

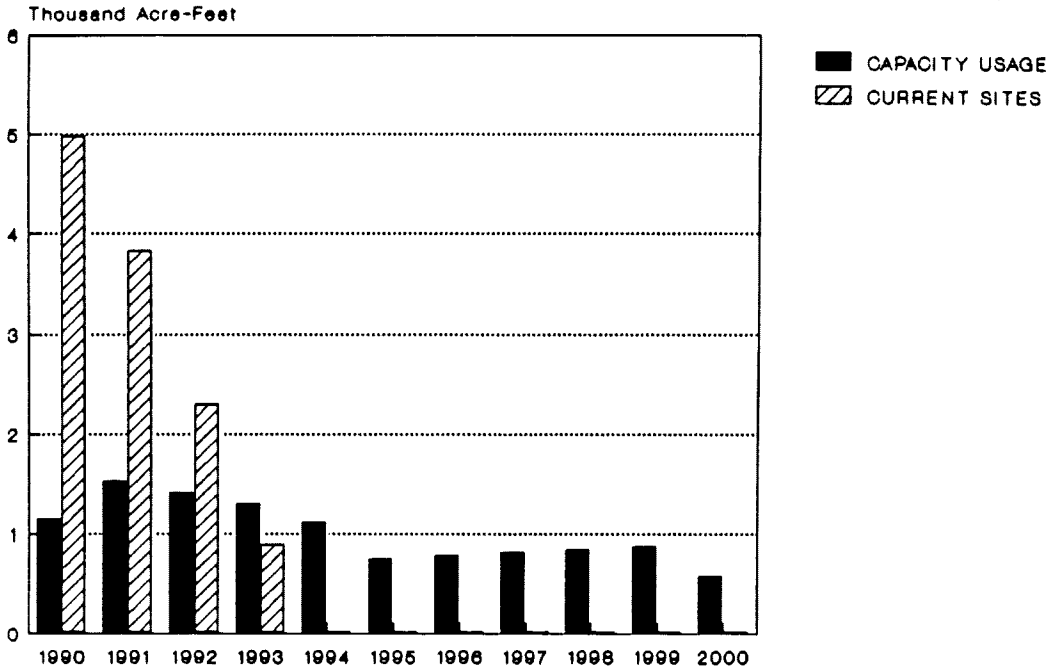
Calendar year figures were used for non-metro landfills and fiscal year figures were used for metro landfills.

Source: Minnesota Pollution Control Agency (calendar); Department of Revenue (fiscal year)

At current landfill consumption rates of approximately 580,000 tons of waste per year, it appears the region will exhaust remaining capacity within five years as Figure 7 illustrates.

The Council's revised solid waste policy plan will use landfill abatement as a key indicator of system progress. The Council's revised policy plan will monitor annually the amount of Metropolitan Area waste landfilled and compare each year's results with those of previous periods. The Council has set maximum MSW land disposal limits as a means of achieving the implementation of an integrated waste management system. The region's FY 1991 limit for land disposal is 1,353,900 tons. Including metro wastes landfilled outside the area by regional processing facilities, approximately 919,000 tons of metro wastes were collected and disposed of in metro and non-metro land disposal facilities (including an estimate of 191,000 tons of ash).

IMPLICATION OF
PROJECTED LANDFILL USE ON
EXISTING CAPACITY



Potential expansion capacity, 4,000 acre-feet
Potential exportation capacity, 1,500 acre-feet

SOURCE: Metropolitan Council

Landfill Siting Process

The legislature in 1991 placed a moratorium on the landfill replacement siting process. The legislature directed metropolitan counties, in consultation with the Council and Office of Waste Management, to develop a specific process for siting and developing two disposal facilities in the

Metropolitan Area, one to accommodate ash and MSW and one for MSW. The counties are directed to present this report to the Legislative Commission of Waste Management by December 1991. Even though the siting process was suspended, the legislation does ensure that a siting process will be completed.

ISSUES - LANDFILLS

Landfill Abatement

The counties, individually, have succeeded in reducing a substantial portion of unprocessed wastes from being disposed of in landfills. Further reduction in the disposal of unprocessed or processed wastes may occur through an integrated waste management system committed to managing each component of the waste stream with methods that rank as high in the waste management hierarchy as possible. The Council is promoting a waste management fee to be collected at landfills to pay for the costs of protecting the environment from landfill contamination. The higher fee at landfills is also intended to encourage greater waste reduction efforts.

CONCLUSIONS - LANDFILLS

The Council supports the revised landfill siting process, as it recognizes the importance of planning and developing a land disposal facility in the Metropolitan Area, within the next five years. Also, in order to reduce, abate and remove hazardous materials from being disposed of in landfills, the Council, as part of its 1991 revised solid waste policy plan, encourages that a surcharge be added to tipping fees at all land disposal facilities and to materials determined by MPCA to cause a negative environmental impact.

COUNTY CERTIFICATION REPORTS

The Minnesota Legislature banned the disposal of unprocessed MSW in landfills located in the Metropolitan Area after Jan. 1, 1990. Exceptions from this statute are provided for counties that certify waste as unprocessible or for waste that is transferred from a resource recovery facility that certifies the waste is unprocessible and that no other regional facility is capable of processing the waste.

Minnesota statutes stipulate that waste certification reports must be submitted to and approved by the Council (semi-annually) from each metropolitan county. Counties are required to submit certification reports that detail the management of waste generated and collected within their respective county.

DATA - WASTE CERTIFICATION REPORTS

Waste certification reports can serve as important indicators to the Council and legislature of the progress made by counties and resource recovery facilities toward the region's waste management goals. The Council uses the waste certification reports, along with other reports provided by the counties, to recommend policies and set objectives for the region. The council can prescribe or suggest system changes only when enough information is present to understand current solid waste operations.

The Council's 1991 revised solid waste policy plan, which contains specific waste certification review criteria, was not in effect when FY 1991 county reports were received by the Council. Therefore, the Council has used the criteria established in state statute to review the reports. The review criteria include requirements that the counties report the amount of unprocessed waste landfilled during the current period compared with previous periods; reasons the waste was not processed; a strategy and time line for developing techniques to ensure processing of the county's waste; and any effort and commitment by the counties to reduce the amount of unprocessed waste.

In addition, the state legislature revised the definition of processing as part of the Waste Management Act amendments to exclude the transfer, storage or exchange of waste. The date on which this amendment went into effect was after metropolitan counties had submitted waste certification reports to the Council. The results are that 35 percent of the wastes landfilled by facilities in FY 1991, excluding ash, by definition is labeled "processed" will be categorized as "unprocessed" in future certification reports.

Summary results for each of the seven counties follow:

Anoka County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
Anoka County reports an estimated 255,456 tons of MSW were generated in the county during FY 1991. Of that amount, Anoka County estimates 4,628 tons of unprocessed MSW were disposed of at facilities in and near the Metropolitan Area.

2. The reason(s) why the waste was not processed.
Anoka County stated in its waste certification reports that the size and characteristics of the waste (large-bulky items) did not permit processing.

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Anoka County stated that some of this waste is being sent to the HERC mass-burn facility in Hennepin County. Anoka also indicated it has formal waste sharing agreements with Hennepin County and Reuter, Inc. .

Carver County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
Carver County reports an estimated 42,500 tons of MSW were generated in the county during FY 1991. Of that amount, it is estimated that Carver disposed of 26,900 tons of unprocessed MSW at various disposal facilities in and near the Metropolitan Area.

2. The reason(s) why the waste was not processed.
Carver County stated in its waste certification report that the reason was the lack of a resource recovery facility in Carver County.

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Carver County reported that it is cooperating with Scott County to develop a resource recovery facility that will compost MSW. Carver County estimates the time line for completing this processing facility is approximately two years. No indication was given in the report on the progress the county has made to reduce the amount of unprocessed waste being landfilled.

Dakota County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
The Council estimates that Dakota County generated 275,500 tons of MSW in FY 1991. Of that amount, it is estimated that 190,800 tons were unprocessed. Dakota County states that a majority of the county's MSW is disposed of at Pine Bend and Burnsville land disposal facilities.

2. The reason(s) why the waste was not processed.
Dakota County stated in its waste certification report that the reason was due to the lack of a resource recovery facility in Dakota County.

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Dakota County is currently seeking MPCA approval for a resource recovery facility (mass burn). Dakota County estimates this facility will commence operations in 1993. Besides recycling approximately 85,000 tons of MSW in FY 1991, Dakota County states it is working with other metropolitan counties through the Solid Waste Management Coordinating Board to develop regional waste management strategies.

Hennepin County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
Hennepin County estimates that approximately 1,318,800 tons of MSW were generated in FY 1991. Because of the previous definition of "processed waste," Hennepin County sent no unprocessed wastes to land disposal facilities during FY 1991. Using the revised definition of "processed wastes," Hennepin County landfilled approximately 62,700 tons of unprocessed MSW in FY 1991.

2. The reason(s) why the waste was not processed.
Hennepin County states in their report there was not available capacity at the resource recovery facilities (Elk River-RDF or HERC) to process this waste.

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Hennepin County reports that it has contracts with NSP-Newport and Reuter, Inc., resource recovery facilities whereby Hennepin may be able to send waste to the other facilities if at any time it has more MSW than can be processed at HERC and NSP-Elk River. In addition, Hennepin has an agreement with Anoka whereby if it has excess waste and Anoka has not delivered its contracted amount to NSP-Elk River, Hennepin can send its waste to the facility as Anoka County waste. The county also report there is the potential to develop contracts with other metropolitan counties as facilities are developed.

Hennepin reports it is coordinating and sharing information with other counties and organizations through the Solid Waste Management Coordinating Board.

Ramsey County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
Ramsey County estimates that approximately 479,731 tons of MSW were generated in FY 1991 compared to the Council estimate of 620,500 tons. Ramsey County states in its waste certification report that no unprocessed MSW was disposed of during FY 1991. The county stated that all waste accepted by NSP at the facility was processed during FY 1991, according to the definition of "processing" in Minn. Stat. sec. 115A.03. The county states correctly that the revised definition of "processing" went into effect after the FY 1991 reporting period. In FY 1991, NSP's Newport-RDF facility disposed of 51,477 tons of "excess" MSW attributed to Ramsey County. In future waste certification reports, excess MSW would be included as unprocessed.

2. The reason(s) why the waste was not processed.
Not applicable

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Ramsey reports it is coordinating with other metropolitan counties and organizations through the Solid Waste Management Coordinating Board. Ramsey also reports that since the facility is owned and operated by NSP, it is the responsibility of NSP to certify processing capacities at Newport and other facilities in the region.

Scott County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
Scott County reported for FY 1991 an MSW generation estimate of 69,067 tons, compared to the Council's estimate of 52,500 tons. The Council, based upon its estimates of MSW generation, indicates that in FY 1991 there were approximately 18,000 tons of unprocessed MSW generated in Scott County that were disposed of at several landfills, including Ponderosa, McLeod and Burnsville landfills.

2. The reason(s) why the waste was not processed.
Scott County stated in the waste certification report that the reason was the lack of a designated central processing facility in Scott County.

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Along with developing an MSW composting facility with Carver County, Scott County reported it is using an incentive program to encourage waste haulers to increase the quantity of recyclable materials they collect in order to reduce the amount of unprocessed MSW entering the region's landfills. Scott County also reports it is coordinating and sharing information with other counties and organizations through the Solid Waste Management Coordinating Board.

Washington County

1. The quantity of waste generated in the county that was not processed prior to transfer to a disposal facility.
Washington County reported for FY 1991 an MSW generation estimate of 152,391 tons, compared to the Council's estimate of 142,500 tons. Washington County indicates in its certification report that no unprocessed MSW was disposed of during FY 1991. The county's report stated that all waste that was accepted by NSP at the facility was processed during FY 1991, according to the definition of "processing" in Minn. Stat. sec. 115A.03. The county states correctly that the revised definition of "processing" went into effect after the FY 1991 reporting period. In FY 1991, NSP's Newport-RDF facility disposed of 19,040 tons of "excess" MSW attributed to Washington County. In future waste certification reports, excess MSW would be included as unprocessed waste.

2. The reason(s) why the waste was not processed.
Not applicable

3. The strategy and timetable for the development of techniques to ensure processing of waste and any progress made by the county to reduce the disposal of unprocessed waste at a landfill.
Washington County reports it is coordinating with other metropolitan counties and organizations through the Solid Waste Management Coordinating Board. Washington County also reports that installation of new equipment and incentives for NSP to process additional wastes have resulted in reduced quantities of excess waste. Washington County restated Ramsey's remarks regarding NSP's ownership of the Newport facility and its responsibility to certify waste as unprocessed.

The county-reported data for these three six-month periods does not easily lend itself to critical analysis due to the short amount of time in which the data was gathered and the revised statutory

reporting requirements. In addition, counties that have implemented designation ordinances were not required to submit certification reports prior to August 1991. Data gathered from future county waste certification reports will be necessary in order to better evaluate the significance and trends of the amount of unprocessed wastes that are disposed of by metropolitan counties.

Table 10
MSW REPORTED AS MANAGED BY METROPOLITAN COUNTIES, FY 1991 (tons)

County	Materials Recovery	percent	Energy Recovery	percent	Landfill	percent	Total Managed
Anoka	102,413	42%	90,135	37%	48,885	20%	241,433
Carver	15,966	38%	1,656	4%	24,878	59%	42,500
Dakota	86,795	32%	8,065	3%	180,640	66%	275,500
Hennepin	535,261	42%	481,331	38%	254,569	20%	1,271,161
Ramsey	187,562	38%	178,639	37%	122,330	25%	488,531
Scott	35,980	52%	845	1%	32,242	47%	69,067
Washington	35,991	25%	62,955	44%	45,244	31%	144,190
County MSW Managed	**999,968**	**39%**	**823,626**	**33%**	**708,788**	**28%**	**2,532,382**
Total MSW Managed	**999,968**	**37%**	**823,626**	**30%**	**909,136**	**33%**	**2,732,730**

SOURCE: County Recycling Progress Reports, Certification Reports, March and August 1991

CONCLUSIONS - WASTE CERTIFICATION REPORTS

While the county certification reports did provide some insight into the amount of unprocessed waste disposed of at landfills, in most cases the counties provided only the minimum amount of information required under law.

In keeping with revised state statues and the Council's solid waste policy plan, future waste certification reports will require all metropolitan counties to provide greater detailed information on their progress toward reducing the amount of unprocessed waste entering the region's landfills. This will include their progress toward implementing waste sharing agreements among facilities and counties; monthly summaries on the type and description of loads that were received, rejected, transferred or denied access to a resource recovery or disposal facility; and future actions to be taken by the county and/or the facility operators to process additional types of materials not currently being processed at each facility.

In addition, due to a change in the definition of waste processing by the Minnesota Legislature, metropolitan counties will not be able to include transfer, exchange or storage of waste as management options in defining waste as being processed before disposal. The Council will continue to work with the counties to develop a waste certification report format that will provide the necessary information to assess the county's progress toward abating unprocessed waste from landfills.

APPENDIX A

1991 FISCAL ANOKA	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Under 5,000 Population														
Bethel	394	130	No	--	--	--	9.2	1.0	46.7	5.1	17.0	0.0	86.3	0.0
Burns Twp.	2,401	754	No	drop-off recycling 3/89	--	--	46.0	0.0	38.3	0.0	42.2	0.0	35.1	0.0
Centerville	1,633	519	No	curbside recycling 12/87, curbside yard Fall/85	Weekly Weekly	Yes	36.1	11.0	44.2	13.5	42.5	0.0	52.1	0.0
Circle Pines	4,704	1,562	No	curbside recycling 9/89, curbside yard waste 11/89	Weekly Weekly	Yes	178.7	58.0	76.0	24.7	175.8	0.0	74.8	0.0
Columbus Twp.	3,690	1,129	No	curbside recycling 3/90	2/month	Yes	59.2	0.0	32.1	0.0	67.1	0.0	36.4	0.0
Hilltop	749	410	No	curbside recycling 3/90	Weekly	Yes	13.7	0.0	36.6	0.0	14.8	0.0	39.4	0.0
Lexington	2,279	829	No	curbside recycling 10/88	2/month	Yes	34.6	70.0	30.4	61.4	35.8	4.0	31.4	3.5
Linwood Twp.	3,588	1,146	No	curbside recycling 3/91, drop-off recycling 6/88	2/month	Yes	49.2	1.0	27.4	0.6	70.0	0.0	39.0	0.0
St. Francis	2,538	760	No	drop-off recycling 7/88	--	--	38.4	0.0	30.3	0.0	55.4	7.0	43.7	5.5
Over 5,000 Population														
Andover	15,216	4,430	No	curbside recycling 11/89, drop-off recycling 6/88	2/month	Yes	296.4	0.0	39.0	0.0	372.1	0.0	48.9	0.0
Anoka	17,192	6,394	No	curbside recycling 9/88, drop-off recycling 9/88, curbside yard waste 10/88	2/month 2/month	Yes	541.3	358.5	63.0	41.7	552.6	277.8	64.3	32.3
Blaine	38,975	12,825	No	curbside recyling 1/89, curbside yard waste 3/89	Weekly Weekly	Yes	1,405.0	1,173.8	72.1	60.2	1,183.3	975.8	60.7	50.1
Columbia Heights	18,910	7,766	No	curbside recycling 4/89, drop-off recycling 7/86, curbside yard waste 8/89	Weekly Weekly	Yes	669.1	620.5	70.8	65.6	796.9	579.0	84.3	61.2
Coon Rapids	52,978	17,449	No	curbside recycling 4/90, drop-off recycling 2/89, curbside yard waste 4/90	Weekly Weekly	Yes	1,377.1	7.0	52.0	0.3	1,277.8	0.2	48.2	0.0
East Bethel	8,050	2,542	No	curbside recycling 5/90, drop-off recycling 1983	2/month	Yes	98.3	23.8	24.4	5.9	185.6	33.8	46.1	8.4
Fridley	28,335	10,909	No	curbside recycling 6/85, drop-off recycling 1979, drop-off yard waste 1985	2/month	Yes	740.4	1,212.0	52.3	85.5	925.1	454.5	65.3	32.1
Ham Lake	8,924	2,720	No	curbside recycling 1/91, drop-off recycling 7/88	Weekly	No	119.3	0.0	26.7	0.0	280.4	0.0	62.8	0.0
Lino Lakes	8,807	2,603	No	curbside recycling 6/89	Weekly	Yes	212.9	11.1	48.3	2.5	247.7	4.0	56.3	0.9
Oak Grove	5,441	1,638	No	curbside recycling 3/91, drop-off recycling 4/88	2/month	Yes	83.7	0.0	30.8	0.0	117.2	0.0	43.1	0.0
Ramsey	12,408	3,620	No	curbside recycling 10/90, drop-off recycling 4/87	2/month	Yes	376.2	1,782.8	60.6	287.4	429.3	24.0	69.2	3.9
Spring Lake Park	6,429	2,302	No	curbside recycling 1987, curbside yard waste 4/89, drop-off yard waste Fall/90	2/month Weekly	Yes	202.3	60.5	62.9	18.8	226.2	315.9	70.4	98.3
Miscellaneous(not broken out by community)											155.9			
Bunker Hills/Rice								10,647.0				14,155.6		

ANOKA COUNTY TOTALS

		July thru December 1990		January thru June 1991	
TOTAL POPULATION	243,641	TOTAL TONS		TOTAL TONS	
TOTAL HOUSEHOLDS	82,437				
RESIDENTIAL RECYCLING		6,587.1	54.1 lbs./person	7,270.6	59.7 lbs./person
RESIDENTIAL YARD WASTE		16,038.0	131.7 lbs./person	16,831.6	138.2 lbs./person
RESIDENTIAL SEPARATELY MANAGED		86.5		300.1	
COMMER/INDUS/INST. RECYCLING		22,311.9		28,667.1	
COMMER/INDUS/INST. YARD WASTE		118.4		1,917.6	
COMMER/INDUS/INST. SEPARATELY MANAGED		33.4		2,250.2	
FISCAL RESIDENTIAL RECYCLING		13,857.7			
FISCAL RESIDENTIAL YARD WASTE		32,869.6			
FISCAL RESIDENTIAL SEPARATELY MANAGED		386.6			
FISCAL COMMER/INDUS/INST. RECYCLING		50,979.0			
FISCAL COMMER/INDUS/INST. YARD WASTE		2,036.0			
FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED		2,283.6			

1991 FISCAL CARVER	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Under 5,000 Population														
Benton Twp.	895	276	No	drop-off recycling 1970	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Camden Twp.	910	287	No	drop-off recycling 1984	--	--	16.3	0.0	35.8	0.0	0.0	0.0	0.0	0.0
Carver	744	262	No	curbside recycling 1/91, drop-off recycling 1/91, drop-off yard waste 1986	--	--	0.0	0.0	0.0	0.0	14.8	3.0	39.7	8.1
Chaska Twp.	174	60	No	--	--	--	0.0	0.0	0.0	0.0	6.2	0.0	70.9	0.0
Cologne	563	216	No	curbside recycling 1/91, drop-off recycling 8/88, drop-off yard waste 10/88	--	--	32.5	6.0	115.5	21.3	40.9	3.0	145.4	10.7
Dahlgren Twp.	1,296	394	No	--	--	--	0.0	0.0	0.0	0.0	1.6	0.0	2.5	0.0
Hancock Twp.	364	110	No	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hollywood Twp.	1,060	327	No	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Laketown Twp.	2,232	601	No	--	--	--	0.0	0.0	0.0	0.0	1.6	0.0	1.5	0.0
Mayer	471	166	No	curbside recycling 7/88, drop-off yard waste 10/88	2/month	Yes	8.5	6.0	36.1	25.5	18.1	6.0	76.7	25.5
New Germany	353	138	No	curbside recycling 7/88, drop-off yard waste 10/88	2/month	Yes	7.3	6.0	41.4	34.0	16.0	6.0	90.9	34.0
San Francisco Twp.	773	244	No	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Victoria	2,354	756	No	curbside recycling 6/88, drop-off yard waste 10/82	Weekly	Yes	71.7	10.0	60.9	0.0	65.8	0.0	55.9	0.0
Waconia	3,498	1,401	No	curbside recycling 1988, curbside yard waste 10/85, drop-off yard waste 10/83	Weekly --	Yes	82.9	60.0	47.4	34.3	25.5	0.0	14.6	0.0
Waconia Twp.	1,287	407	No	Drop-off recycling 10/91	--	--	0.0	0.0	0.0	0.0	77.2	72.0	120.0	111.9
Watertown	2,408	848	No	curbside recycling 1/88, drop-off recycling 1990, drop-off yard waste 10/85	2/month	Yes	58.3	60.0	48.4	49.8	75.5	36.0	62.7	29.9
Watertown Twp.	1,349	439	No	--	--	--	0.0	0.0	0.0	0.0	20.8	0.0	30.8	0.0
Young America Twp.	916	285	No	--	--	--	0.0	0.0	0.0	0.0	26.3	0.0	57.3	0.0
Over 5,000 Population														
Chanhassen	11,732	4,016	No	curbside recycling 4/89, drop-off recycling 6/88, curbside yard waste 10/82, drop-off yard waste 10/82	Bi-weekly 2/year	No	557.9	183.0	95.1	31.2	413.5	78.0	70.5	13.3
Chaska	11,339	4,212	No	curbside recycling 10/91, drop-off recycling 1980, curbside yard waste, drop-off yard waste 10/82	-- --	--	387.3	243.0	68.3	42.9	299.5	456.0	52.8	80.4
Norwood/ Young America/ and Hamburg	1,351 1,354 492	515 457 184	No	curbside recycling 5/87, drop-off recycling 1990, drop-off yard waste 10/86	Weekly/ Bi-weekly	Yes	94.5	42.0	59.1	26.3	129.0	24.0	80.7	15.0
Miscellaneous (not broken out by community)					--	--	253.5	0.0	0.0	0.0	143.4	0.0	0.0	0.0

CARVER COUNTY TOTALS

		July thru December 1990		January thru June 1991	
		TOTAL TONS		TOTAL TONS	
TOTAL POPULATION 47,915					
TOTAL HOUSEHOLDS 16,601					
	RESIDENTIAL RECYCLING	1,570.7	65.6 lbs./person	1,375.7	57.4 lbs./person
	RESIDENTIAL YARD WASTE	616.0	25.7 lbs./person	684.0	28.6 lbs./person
	RESIDENTIAL SEPARATELY MANAGED	110.0		0.0	
	COMMER/INDUS/INST. RECYCLING	5,657.8		5,952.0	
	COMMER/INDUS/INST. YARD WASTE	0.0		0.0	
	COMMER/INDUS/INST. SEPARATELY MANAGED	0.0		0.0	
	FISCAL RESIDENTIAL RECYCLING	2,946.4			
	FISCAL RESIDENTIAL YARD WASTE	1,300.0			
	FISCAL RESIDENTIAL SEPARATELY MANAGED	110.0			
	FISCAL COMMER/INDUS/INST. RECYCLING	11,609.8			
	FISCAL COMMER/INDUS/INST. YARD WASTE	0.0			
	FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED	0.0			

1991 FISCAL DAKOTA	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Under 5,000 Population														
Lilydale	506	297	No	curbside recycling 4/89	Weekly	Yes	42.7	0.0	168.8	0.0	33.2	0.0	131.3	0.0
Mendota	164	69	No	curbside recycling 4/89, curbside yard waste varies, drop-off yard waste 11/88	Weekly Varies	Yes	0.4	0.0	4.9	0.0	0.0	0.0	0.0	0.0
Sunfish Lake	413	138	No	curbside recycling 4/89, curbside yard varies, drop-off yard waste 11/88	Weekly Varies	Yes	15.5	0.0	75.1	0.0	13.9	0.2	67.2	0.7
Rural SW Comm.:			No	curbside recycling 4/89,	Weekly/	Yes	344.3	23.5	47.6	3.2	377.5	4.2	52.2	0.6
Castle Rock Twp.	1,480	460		drop-off recyc. pre 7/88,	Bi-weekly									
Coates	186	66		drop-off yard waste 11/88										
Douglas Twp.	670	192												
Empire Twp.	1,340	426												
Eureka Twp.	1,405	447												
Greenvale Twp.	685	228												
Hampton	363	118												
Hampton Twp.	866	260												
Marshan Twp.	1,286	373												
Miesville	135	47												
New Trier	96	29												
Nininger Twp.	805	241												
Randolph	331	111												
Randolph Twp.	448	158												
Ravenna Twp.	1,926	546												
Sciota Twp.	252	86												
Vermillion	510	157												
Vermillion Twp.	1,201	354												
Waterford Twp.	485	182												
Over 5,000 Population														
Apple Valley	34,598	11,145	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard waste varies, drop-off yard waste 11/88	Weekly Varies	Yes	1,384.7	1,212.1	80.0	70.1	1,389.5	1,034.2	80.3	59.8
Burnsville	51,288	19,127	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard waste varies, drop-off yard waste 4/88	Weekly Varies	Yes	1,897.8	1,784.5	74.0	69.6	1,665.3	827.3	64.9	32.3
Eagan	47,409	17,427	No	curbside recycling 3/89, drop-off recyc. pre 7/88, curbside yard waste varies, drop-off yard waste 4/86	Weekly Varies	Yes	1,528.1	885.8	64.5	37.4	1,555.1	1,322.5	65.6	55.8
Farmington	5,940	2,064	No	curbside recycling 3/89, drop-off recyc. pre 7/88, curbside yard waste 4/89, drop-off yard waste 11/88	Weekly Varies	Yes	221.1	178.6	74.4	60.1	319.7	261.5	107.6	88.1

1991 FISCAL DAKOTA	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Hastings (Part in Dakota Co.)	15,440	5,401	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard waste varies, drop-off yard waste 1986	Weekly Varies	Yes	453.1	7.2	58.7	0.9	537.1	480.0	69.6	62.2
Inver Grove Hts.	22,477	7,803	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard varies, drop-off yard 11/88	Weekly Varies	Yes	472.9	185.4	42.1	16.5	703.3	154.8	62.6	13.8
Lakeville	24,854	7,851	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard varies, drop-off yard waste 11/88	Weekly Varies	Yes	878.8	395.8	70.7	31.9	934.7	497.7	75.2	40.0
Mendota Heights	9,431	3,302	No	curbside recycling 3/89, drop-off recyc. pre 7/88, curbside yard varies, drop-off yard waste 11/88	Weekly Varies	Yes	424.1	109.3	89.9	23.2	399.0	212.2	84.6	45.0
Rosemount	8,622	2,779	No	curbside recycling 2/89, drop-off recyc. pre 7/88, curbside yard waste 3/89, drop-off yard waste 11/88	Weekly Varies	Yes	294.2	235.9	68.2	54.7	238.8	274.1	55.4	63.6
South St. Paul	20,197	7,914	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard varies, drop-off yard waste pre/88	Weekly Varies	Yes	680.3	601.8	67.4	59.6	684.5	774.8	67.8	76.7
West St. Paul	19,248	8,441	No	curbside recycling 4/89, drop-off recyc. pre 7/88, curbside yard varies, drop-off yard waste 11/88	2/month or weekly Varies	Yes	746.7	418.2	77.6	43.5	827.0	613.0	85.9	63.7
Miscellaneous(not broken out by community)					--	--	722.8	2,510.1	0.0	0.0	2,521.2	1,814.7	0.0	0.0

		July thru December 1990 TOTAL TONS		January thru June 1991 TOTAL TONS	
TOTAL POPULATION	275,057				
TOTAL HOUSEHOLDS	98,239				
RESIDENTIAL RECYCLING		10,107.5	73.5 lbs./person	12,199.7	88.7 lbs./person
RESIDENTIAL YARD WASTE		8,548.2	62.2 lbs./person	8,271.0	60.1 lbs./person
RESIDENTIAL SEPARATELY MANAGED		1,244.8		829.6	
COMMER/INDUS/INST. RECYCLING		21,540.1		24,054.4	
COMMER/INDUS/INST. YARD WASTE		0.0		0.0	
COMMER/INDUS/INST. SEPARATELY MANAGED		0.0		0.0	
FISCAL RESIDENTIAL RECYCLING		22,307.2			
FISCAL RESIDENTIAL YARD WASTE		16,819.2			
FISCAL RESIDENTIAL SEPARATELY MANAGED		2,074.4			
FISCAL COMMER/INDUS/INST. RECYCLING		45,594.5			
FISCAL COMMER/INDUS/INST. YARD WASTE		0.0			
FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED		0.0			

1991 FISCAL HENNEPIN	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Under 5,000 Population														
Dayton	4,392	1,359	No	curbside recycling 9/89, curbside yard waste	Weekly Season	No	117.9	264.0	53.7	120.2	144.7	85.0	65.9	38.7
Deephaven	3,653	1,324	No	curbside recycling 9/87, curbside yard 1988, drop-off yard waste 1990	Weekly Season	Yes	150.2	25.8	82.2	14.1	175.4	13.4	96.0	7.3
Excelsior	2,367	1,160	Yes	curbside recycling 8/84, curbside yard 1988	Weekly Season	Yes	103.1	0.0	87.1	0.0	148.9	27.0	125.8	22.8
Fort Snelling	97	7	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Greenwood	614	250	No	curbside recycling 10/87, curbside yard 1989, drop-off yard waste 1990	Weekly Season	Yes	32.2	0.0	104.9	0.0	33.5	0.0	109.2	0.0
Hanover	269	82	No	--	--	--	34.4	0.0	255.8	0.0	11.4	0.0	84.4	0.0
Hassan Twp.	1,951	585	No	curbside recycling 5/89, curbside yard 1989	Weekly Season	Yes	80.0	0.0	82.0	0.0	89.3	0.0	91.5	0.0
Minnetonka Beach	573	204	No	curbside recycling 11/88, curbside yard waste 6/88	2/month Season	Yes	40.3	95.0	140.7	331.6	32.3	25.0	112.6	87.3
Minnetrista	3,439	1,195	No	curbside recycling 5/87, drop-off yard 1988	2/month	Yes	148.6	119.0	86.4	69.2	180.6	272.0	105.0	158.2
Osseo	2,704	995	No	curbside recycling 5/89, curbside yard waste 5/89	Weekly Weekly	Yes	60.7	80.5	44.9	59.5	67.0	92.5	49.5	68.4
Rockford	440	163	No	curbside recycling 8/88, drop-off recycling 8/89, curbside yard 1989	Bi-weekly Bi-weekly	Yes	71.8	20.4	326.4	92.7	73.4	0.0	333.5	0.0
Rogers	698	259	No	curbside recycling 8/89, curbside yard 1989	Weekly --	--	0.0	2.4	0.0	6.9	38.4	14.5	110.0	41.5
St. Bonifacius	1,180	398	No	curbside recycling 9/87, curbside yard 1989, drop-off yard 1988	2/month Season	Yes	106.3	3.6	180.2	6.1	70.0	0.0	118.6	0.0
Spring Park	1,571	741	No	curbside recycling 4/87, drop-off recycling 4/87, curbside yard 1988	Alt.Fri. 2/year	Yes	35.9	0.0	45.7	0.0	50.7	0.0	64.5	0.0
Tonka Bay	1,472	577	No	curbside recycling 6/87, drop-off recycling 7/87, curbside yard waste 10/88, drop-off yard 1989	Weekly 2/year	Yes	83.2	68.4	113.0	92.9	76.0	67.7	103.2	92.0
Wayzata	3,806	1,715	No	curbside recycling 7/87, drop-off recycling 1967, curbside yard 1986, drop-off yard 1986	Weekly --	Yes	311.7	515.7	163.8	271.0	304.2	172.5	159.8	90.6
Woodland	496	176	No	curbside recycling 10/87, drop-off recycling 10/87, curbside yard 1989	2/month 2/year	Yes	27.9	0.0	112.5	0.0	24.6	0.0	99.3	0.0

1991 FISCAL HENNEPIN	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Over 5,000 Population														
Bloomington	86,335	34,488	Yes	curbside recycling 4/89, drop-off recycling 1/87, curbside yard waste 4/89, drop-off yard waste 4/90	Weekly Weekly	Yes	4,053.0	0.0	93.9	0.0	3,853.8	2,093.1	89.3	48.5
Brooklyn Park	56,381	20,386	No	curbside recycling 6/89, drop-off recycling 1/89, curbside yard 1989, drop-off yard waste 4/90	Weekly Weekly	Yes	2,077.1	0.0	73.7	0.0	2,148.6	10.7	76.2	0.4
Champlin	16,849	5,423	No	curbside recycling 8/88, curbside yard 1988	Weekly Weekly	Yes	509.7	895.7	60.5	106.3	557.9	408.1	66.2	48.4
Corcoran	5,199	1,545	No	curbside recycling 8/88, drop-off recycling 8/88	Alt.Tues.	Yes	176.3	0.0	67.8	0.0	240.6	0.0	92.6	0.0
Eden Prairie	39,311	14,447	No	curbside recyc. by 8/89, drop-off recycling 1/89, curbside yard waste 10/89	Weekly Fall	Yes	1,477.0	589.0	75.1	30.0	1,501.3	300.0	76.4	15.3
Edina	46,070	19,860	Yes	curbside recycling 1987, drop-off recycling 1987, curbside yard 1989	Weekly Season	Yes	1,972.4	2,979.1	85.6	129.3	2,393.8	1,567.8	103.9	68.1
Golden Valley	20,971	8,273	No	curbside recycling 8/88, curbside yard 1988	Weekly Season	Yes	846.8	0.0	80.8	0.0	873.5	3,105.2	83.3	296.1
Hopkins	16,534	7,973	No	curbside recycling 1/89, drop-off recycling 1/89, curbside yard 1988	Weekly Season	Yes	446.4	82.0	54.0	9.9	452.3	165.5	54.7	20.0
Maple Grove	38,736	12,531	No	curbside recycling 5/89, drop-off recycling 5/89, curbside yard 1989	Weekly Fall	Yes	1,373.5	1,815.3	70.9	93.7	1,558.8	5,132.0	80.5	265.0
Minneapolis	368,383	160,682	No	curbside recycling 11/83, curbside yard waste 10/87	2/month Season	Yes	10,998.2	7,128.0	59.7	38.7	11,415.0	7,942.5	62.0	43.1
Minnetonka	48,370	18,687	No	curbside recycling 5/89, drop-off recycling 2/88, curbside yard 1988, drop-off yard 1988	Weekly Season	Yes	1,881.8	0.0	77.8	0.0	1,913.9	615.8	79.1	25.5
Mound	9,634	3,710	No	curbside recycling 10/85, drop-off recycling 10/85, curbside yard 1989, drop-off yard 1988	Weekly Fall	Yes	358.8	373.0	74.5	77.4	366.3	186.0	76.0	38.6
Richfield	35,710	15,551	No	curbside recycling 9/84, curbside yard 1988	Weekly Season	Yes	1,220.2	2,633.4	68.3	147.5	1,283.1	1,019.6	71.9	57.1
Robbinsdale	14,396	6,008	Yes	curbside recycling 6/88, drop-off recycling 6/88, curbside yard 1988	Weekly Season	Yes	769.7	281.3	106.9	39.1	708.4	67.4	98.4	9.4
St. Anthony	5,278	2,208	No	curbside recycling 12/89, drop-off recycling 1986, curbside yard waste 12/89	Weekly Season	Yes	203.7	37.2	77.2	14.1	237.3	10.6	89.9	4.0

1991 FISCAL HENNEPIN	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
St. Louis Park	43,787	19,925	No	curbside recycling 1/82, curbside yard 1986	Weekly Season	Yes	1,650.0	1,851.0	75.4	84.5	1,926.9	1,401.0	88.0	64.0
Shorewood	5,917	2,026	No	curbside recycling 7/87, drop-off recycling 7/87, curbside yard waste 6/90	Bi-weekly Spring	Yes	0.0	0.0	0.0	0.0	277.9	17.5	93.9	5.9
Henn. Recyc. Group:			No	curbside recycling 6/89, drop-off recycling 1/89, curbside yard 1989, drop-off yard waste 5/90	Weekly Weekly	Yes	2,639.7	3,601.2	70.8	96.6	2,801.8	2,759.3	75.2	74.0
Brooklyn Center	28,887	11,226												
Crystal	23,788	9,272												
New Hope	21,853	8,507												
Plymouth/	50,889	18,361	No	curbside recycling 4/86, drop-off recycling 4/86, curbside yard 1988, drop-off yard 1990	Weekly Season	Yes	1,738.0	2,260.0	67.8	88.2	1,884.7	350.0	73.5	13.7
Medicine Lake	385	169												
W. Henn. Recycling:			No	curbside recycling 8/88, drop-off recycling 11/86, curbside yard 4/87	Bi-weekly Season	Yes	1,110.8	168.7	116.6	17.7	1,023.6	106.5	107.5	11.2
Greenfield	1,450	457												
Independence	2,822	925												
Long Lake	1,984	747												
Loretto	404	167												
Maple Plain	2,005	696												
Medina	3,096	1,007												
Orono	7,285	2,613												
Miscellaneous(not broken out by community)							2,421.9							

TOTAL POPULATION	1,032,431		July thru December 1990 TOTAL TONS		January thru June 1991 TOTAL TONS	
TOTAL HOUSEHOLDS	419,060	RESIDENTIAL RECYCLING	39,329.2	76.2 lbs./person	38,939.7	75.4 lbs./person
		RESIDENTIAL YARD WASTE	25,889.7	50.2 lbs./person	28,028.2	54.3 lbs./person
		RESIDENTIAL SEPARATELY MANAGED	570.5		293.2	
		COMMER/INDUS/INST. RECYCLING*	197,480.0		204,365.6	
		COMMER/INDUS/INST. YARD WASTE	32.6		230.7	
		COMMER/INDUS/INST. SEPARATELY MANAGED	6.0		95.4	
		FISCAL RESIDENTIAL RECYCLING	78,268.9			
		FISCAL RESIDENTIAL YARD WASTE	53,917.9			
		FISCAL RESIDENTIAL SEPARATELY MANAGED	863.7			
		FISCAL COMMER/INDUS/INST. RECYCLING*	401,845.6			
		FISCAL COMMER/INDUS/INST. YARD WASTE	263.3			
		FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED	101.4			

*Some municipal office tonnages are included in residential recycling.

1991 FISCAL RAMSEY	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste*	Lbs. Pers. Recy.	Lbs. Pers. Yard*	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste*	Lbs. Pers. Recy.	Lbs. Pers. Yard*
Under 5,000 Population														
Gem Lake	439	140	No	curbside recycling 9/88	2/month	$ 8	6.6	0.0	30.1	0.0	6.4	0.0	29.3	0.0
Lauderdale	2,700	1,166	No	curbside recycling 7/87	2/month	No	61.7	0.0	45.7	0.0	81.3	0.0	60.2	0.0
North Oaks	3,386	1,085	No	curbside recycling 4/87	Monthly	$ 8	144.7	0.0	85.5	0.0	137.7	0.0	81.3	0.0
St. Anthony	2,449	1,245	No	curbside recycling 1/90, drop-off recycling 1979	Weekly	Yes	205.4	0.0	167.7	0.0	73.3	0.0	59.9	0.0
Spring Lake Park (Part in Ramsey Co.)	103	41	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Over 5,000 Population														
Arden Hills	9,199	2,904	No	curbside recycling 3/88	Weekly	Yes	304.0	0.0	66.1	0.0	305.0	0.0	66.3	0.0
Falcon Heights	5,380	2,016	No	curbside recycling 4/87, curbside yard 1990	2/month Weekly	$ 8	197.4	0.0	73.4	0.0	196.7	0.0	73.1	0.0
Little Canada	8,971	3,902	No	curbside recycling 7/87	Weekly	Yes	188.1	0.0	41.9	0.0	227.6	0.0	50.7	0.0
Maplewood	30,954	11,496	No	curbside recycling 11/88	2/month	Yes	561.0	0.0	36.2	0.0	535.6	0.0	34.6	0.0
Mounds View	12,541	4,702	No	curbside recycling 6/88	2/month	Yes	266.1	0.0	42.4	0.0	251.8	0.0	40.1	0.0
New Brighton	22,207	8,523	No	curbside recycling 7/87	2/month	Yes	507.5	0.0	45.7	0.0	577.0	0.0	52.0	0.0
North St. Paul	12,376	4,447	No	curbside recycling 7/87	2/month	Yes	341.2	0.0	55.1	0.0	330.8	0.0	53.5	0.0
Roseville	33,485	13,562	No	curbside recycling 7/87	2/month	No	863.0	0.0	51.5	0.0	1,036.9	0.0	61.9	0.0
St. Paul	272,235	110,249	No	curbside recycling 1981	2/month Weekly in Dist 14	No Yes 11& 14	5,769.0	0.0	42.4	0.0	6,818.5	0.0	50.1	0.0
Shoreview	24,587	8,991	No	curbside recycling 5/88	2/month	$ 6	852.6	7.2	69.4	0.6	919.8	0.0	74.8	0.0
Vadnais Heights	11,041	3,924	No	curbside recycling 10/88	Weekly	$ 8	204.8	0.0	37.1	0.0	272.2	0.0	49.3	0.0
White Bear Lake (Part in Ramsey Co.)	24,288	8,902	No	curbside recycling 4/88, curbside yard waste 7/88	Weekly	Yes	675.5	0.0	55.6	0.0	643.2	0.0	53.0	0.0
White Bear Twp.	9,424	3,205	No	curbside recycling 9/85, curbside yard waste 4/88	Weekly --	Yes	254.7	0.0	54.1	0.0	246.7	0.0	52.4	0.0
Miscellaneous (not broken out by community)							3,952.3	26,707.8			2,898.1	22,680.0	0.0	0.0

		July thru December 1990 TOTAL TONS		January thru June 1991 TOTAL TONS	
TOTAL POPULATION	485,765				
TOTAL HOUSEHOLDS	190,500				
	RESIDENTIAL RECYCLING	15,355.6	63.2 lbs./person	15,558.4	64.1 lbs./person
	RESIDENTIAL YARD WASTE	26,715.0	110.0 lbs./person	22,680.0	93.4 lbs./person
	RESIDENTIAL SEPARATELY MANAGED	1,115.1		1,132.5	
	COMMER/INDUS/INST. RECYCLING**	50,459.4		54,545.7	
	COMMER/INDUS/INST. YARD WASTE	0.0		0.0	
	COMMER/INDUS/INST. SEPARATELY MANAGED	0.0		0.5	
	FISCAL RESIDENTIAL RECYCLING	30,914.0			
	FISCAL RESIDENTIAL YARD WASTE	49,395.0			
	FISCAL RESIDENTIAL SEPARATELY MANAGED	2,247.6			
	FISCAL COMMER/INDUS/INST. RECYCLING**	105,005.1			
	FISCAL COMMER/INDUS/INST. YARD WASTE	0.0			
	FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED	0.5			

*Specific information on yard waste is not available for each community.
**Some institutional tonnages are included in residential recycling.

1991 FISCAL SCOTT	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Under 5,000 Population														
Belle Plaine	3,149	1,092	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Belle Plaine Twp.	691	211	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blakeley Twp.	456	140	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cedar Lake Twp.	1,688	523	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Credit River Twp.	2,854	864	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Elko	223	75	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Helena Twp.	1,107	352	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackson Twp.	1,359	459	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jordan	2,909	1,042	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Louisville Twp.	910	278	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Market	227	82	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Market Twp.	2,008	627	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Prague	2,356	870	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
St. Lawrence Twp.	418	122	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Creek Twp.	1,511	412	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Spring Lake Twp.	2,853	899	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Over 5,000 Population														
Prior Lake	11,482	3,901	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Savage	9,906	3,255	No	curbside recycling 1/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shakopee	11,739	4,163	No	curbside recycling 1/89, curbside yard waste 4/89	--	--	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scott County Total				curbside recycling 1/89, curbside yard waste 4/89	Varies Varies	Yes	1,284.0	513.0			1,441.3	273.0		

		July thru December 1990 TOTAL TONS		January thru June 1991 TOTAL TONS	
TOTAL POPULATION	57,846				
TOTAL HOUSEHOLDS	19,367				
	RESIDENTIAL RECYCLING	1,284.0	44.4 lbs./person	1,441.3	49.8 lbs./person
	RESIDENTIAL YARD WASTE	513.0	17.7 lbs./person	273.0	9.4 lbs./person
	RESIDENTIAL SEPARATELY MANAGED	108.0		251.3	
	COMMER/INDUS/INST. RECYCLING	10,656.0		18,587.3	
	COMMER/INDUS/INST. YARD WASTE	111.0		1,827.8	
	COMMER/INDUS/INST. SEPARATELY MANAGED	541.0		386.8	
	FISCAL RESIDENTIAL RECYCLING	2,725.3			
	FISCAL RESIDENTIAL YARD WASTE	786.0			
	FISCAL RESIDENTIAL SEPARATELY MANAGED	359.3			
	FISCAL COMMER/INDUS/INST. RECYCLING	29,243.3			
	FISCAL COMMER/INDUS/INST. YARD WASTE	1,938.8			
	FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED	927.8			

1991 FISCAL WASHINGTON	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Under 5,000 Population														
Afton	2,645	890	No	curbside recycling 9/88, curbside yard waste 4/90	2/month 4/month	No	76.3	1.5	57.7	1.1	87.3	2.0	66.0	1.5
Bayport	3,200	743	No	curbside recycling 10/89, drop-off recycling 1987, curbside yard waste 10/89	2/month 2/month	Yes	98.6	1.6	61.6	1.0	99.0	0.0	61.9	0.0
Baytown Twp.	939	302	No	curbside recycling 10/88	Monthly	No	19.6	0.0	41.7	0.0	23.9	0.0	50.8	0.0
Birchwood	1,042	364	No	curbside recycling 2/89, curbside yard waste 9/89	2/month 4/month	Yes	43.0	6.7	82.5	12.9	46.5	15.6	89.2	29.8
Dellwood	887	301	No	curbside recycling 1/89, curbside yard waste 9/89	2/month 4/month	Yes	43.5	5.3	98.1	12.0	43.3	13.3	97.5	29.9
Denmark Twp.	1,172	367	No	curbside recycling 9/89	Monthly	No	28.0	0.0	47.8	0.0	16.8	0.0	28.7	0.0
Grant Twp.	3,778	1,173	No	curbside recycling 1/90	Monthly	No	85.9	0.0	45.5	0.0	85.3	0.0	45.1	0.0
Grey Cloud Island	414	165	No	curbside recycling 6/90	Monthly	Yes	1.4	0.0	6.8	0.0	4.1	0.0	19.8	0.0
Hastings (Part in Washington Co.)	5	2	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hugo	4,417	1,416	No	drop-off yard waste 10/88	--	--	51.0	36.0	23.1	16.3	25.7	123.9	11.6	56.1
Lake St. Crx. Bch.	1,078	415	No	curbside recycling 7/88, curbside yard waste 1987	2/month 4/month	Yes	28.1	8.8	52.1	16.3	33.6	12.1	62.3	22.5
Lakeland	2,000	645	No	curbside recycling 5/88, curbside yard waste 1987	2/month 4/month	Yes	34.0	9.7	34.0	9.7	46.8	12.1	46.8	12.1
Lakeland Shores	291	101	No	curbside recycling 4/90, curbside yard waste 1987	2/month 4/month	Yes	4.7	1.6	32.3	11.0	2.7	2.0	18.6	13.9
Landfall	685	300	No	curbside recycling 4/90	2/month	Yes	6.9	0.0	20.1	0.0	8.5	0.0	24.7	0.0
Marine St. Croix	602	234	No	curbside recycling 4/90, drop-off recycling 1985, drop-off yard waste 4/90	Monthly	No	21.4	59.0	71.1	196.0	36.6	37.8	121.6	125.6
May Twp.	2,535	820	No	curbside recycling 4/90, drop-off recycling 1985	Monthly	No	65.9	0.0	52.0	0.0	95.4	0.0	75.2	0.0
New Scandia Twp.	3,197	1,060	No	curbside recycling 4/90, drop-off recycling 1985	Monthly	No	73.7	0.0	46.1	0.0	116.6	0.0	73.0	0.0
Newport	3,720	1,323	No	curbside recycling 4/90, drop-off recycling 1987, drop-off yard waste 4/90	4/month	Yes	97.1	0.0	52.2	0.0	80.1	0.0	43.0	0.0
Oak Park Heights	3,486	1,322	No	curbside recycling 9/89, drop-off recycling 1987, curbside yard waste 6/88	4/month 4/month	Yes	175.6	76.0	100.7	43.6	97.9	0.0	56.2	0.0
Pine Springs	436	135	No	curbside recycling 9/89	Monthly	No	8.8	0.0	40.4	0.0	10.5	0.0	48.1	0.0
St. Mary's Point	339	126	No	curbside recycling 10/88, curbside yard waste 1987	2/month 4/month	No	9.4	1.5	55.5	8.8	8.3	2.0	49.1	11.9
St. Paul Park	4,965	1,749	No	curbside recycling 2/90, drop-off recycling 1987, drop-off yard waste 10/90	4/month	Yes	136.0	92.0	54.8	37.1	138.5	234.0	55.8	94.3
Stillwater Twp.	2,066	639	No	curbside recycling 3/89	2/month	Yes	55.6	0.0	53.8	0.0	61.7	0.0	59.7	0.0
West Lakeland Twp.	1,736	524	No	curbside recycling 10/88	2/month	No	25.7	0.0	29.6	0.0	39.9	0.0	45.9	0.0
White Bear Lake (Part in Washington Co.)	416	168	No	curbside recycling 6/88	4/month	Yes	8.7	0.0	41.8	0.0	11.8	0.0	56.6	0.0
Willernie	584	227	No	curbside recycling 2/89	2/month	Yes	15.4	0.0	52.7	0.0	17.6	0.0	60.4	0.0

1991 FISCAL WASHINGTON	Population	House-holds	Recyc. Manda-tory	Type of Service	Pick-Up	City Bin	July thru December 1990 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard	January thru June 1991 Tons Resd. Recy.	Tons Yard Waste	Lbs. Pers. Recy.	Lbs. Pers. Yard
Over 5,000 Population														
Cottage Grove	22,935	6,856	No	curbside recycling 10/90, drop-off recycling 1987, drop-off yard waste 1985	4/month	Yes	501.3	328.0	43.7	28.6	808.9	1,133.2	70.5	98.8
Forest Lake	5,833	2,292	No	curbside recycling 7/89, drop-off yard waste 1984	2/month	Yes	153.2	390.0	52.5	133.7	183.0	481.8	62.7	165.2
Forest Lake Twp.	6,690	2,132	No	curbside recycling 7/89	2/month	Yes	153.2	0.0	45.8	0.0	187.5	0.0	56.0	0.0
Lake Elmo	5,903	1,973	No	curbside recycling 3/88, curbside yard waste 4/90, drop-off yard waste 1985	-- 4/month	Yes	191.3	391.0	64.8	132.5	184.6	898.5	62.5	304.4
Mahtomedi	5,569	1,874	No	curbside recycling 2/89	2/month	Yes	136.3	0.0	48.9	0.0	174.3	0.0	62.6	0.0
Oakdale	18,374	6,699	No	curbside recycling 11/89, drop-off recycling 1987, curbside yard waste 4/90	2/month 4/month	Yes	629.7	39.1	68.5	4.3	565.9	75.0	61.6	8.2
Stillwater	13,882	4,982	No	curbside recycling 9/89, drop-off recycling 1987, curbside yard waste 6/88	4/month 4/month	Yes	721.2	200.0	103.9	28.8	530.7	826.0	76.5	119.0
Woodbury	20,075	6,927	No	curbside recycling 1/90, curbside yard waste 4/89, drop-off yard waste 1984	4/month 4/month	Yes	775.0	486.3	77.2	48.4	666.0	1,046.7	66.4	104.3
Miscellaneous(not broken out by community)											85.0			

			July thru December 1990 TOTAL TONS			January thru June 1991 TOTAL TONS		
TOTAL POPULATION	145,896							
TOTAL HOUSEHOLDS	49,246							
		RESIDENTIAL RECYCLING	4,475.5	61.4	lbs./person	4,624.0	63.4	lbs./person
		RESIDENTIAL YARD WASTE	2,134.1	29.3	lbs./person	4,916.0	67.4	lbs./person
		RESIDENTIAL SEPARATELY MANAGED	16.4			2,689.5		
		COMMER/INDUS/INST. RECYCLING	6,834.9			10,300.6		
		COMMER/INDUS/INST. YARD WASTE	0.0			0.0		
		COMMER/INDUS/INST. SEPARATELY MANAGED	0.0			0.0		
		FISCAL RESIDENTIAL RECYCLING	9,099.5					
		FISCAL RESIDENTIAL YARD WASTE	7,050.1					
		FISCAL RESIDENTIAL SEPARATELY MANAGED	2,705.9					
		FISCAL COMMER/INDUS/INST. RECYCLING	17,135.5					
		FISCAL COMMER/INDUS/INST. YARD WASTE	0.0					
		FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED	0.0					

TOTALS FOR METRO AREA

		July thru December 1990		January thru June 1991	
		TOTAL TONS		TOTAL TONS	
TOTAL POPULATION 2,288,551					
TOTAL HOUSEHOLDS 875,450	RESIDENTIAL RECYCLING*	78,710	68.8 lbs./person	81,409	71.1 lbs./person
	RESIDENTIAL YARD WASTE	80,454	70.3 lbs./person	81,684	71.4 lbs./person
	RESIDENTIAL SEPARATELY MANAGED	3,251		5,496	
	COMMER/INDUS/INST. RECYCLING	314,940		346,473	
	COMMER/INDUS/INST. YARD WASTE	262		3,976	
	COMMER/INDUS/INST. SEPARATELY MANAGED	580		2,733	
	FISCAL RESIDENTIAL RECYCLING*	160,119			
	FISCAL RESIDENTIAL YARD WASTE	162,138			
	FISCAL RESIDENTIAL SEPARATELY MANAGED	8,747			
	FISCAL COMMER/INDUS/INST. RECYCLING	661,413			
	FISCAL COMMER/INDUS/INST. YARD WASTE	4,238			
	FISCAL COMMER/INDUS/INST. SEPARATELY MANAGED	3,313			

*Some municipal office tonnages are included in residential recycling.

Source: Metropolitan Council "1990 Census Counts of Total Population, Housing Units and Population Over & Under 18 for Twin Cities Metropolitan Area Communities," Pub. #320-91-055, March 1991; and County Recycling Implementation Progress Reports, March & August 1991

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APPENDIX B

473.848 RESTRICTION ON DISPOSAL.

Subdivision 1. Restriction. (a) After January 1, 1990, a person may not dispose of unprocessed mixed municipal solid waste at waste disposal facilities located in the metropolitan area unless:

(1) the waste has been certified as unprocessible by a county under subdivision 2; or

(2)(i) the waste has been transferred to the disposal facility from a resource recovery facility;

(ii) no other resource recovery facility in the metropolitan area is capable of processing the waste; and

(iii) the waste has been certified as unprocessible by the operator of the resource recovery facility under subdivision 3.

(b) For purposes of this section, mixed municipal solid waste does not include street sweepings, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the council.

Subd. 2. County certification; council approval. (a) Each county ~~that has not implemented designation of all or a portion of its mixed municipal solid waste to a resource recovery facility~~ shall submit a semiannual certification report to the council detailing:

(1) the quantity of waste generated in the county that was not processed prior to transfer to a disposal facility during the six months preceding the report;

(2) the reasons the waste was not processed;

(3) a strategy for development of techniques to ensure processing of waste including a specific timeline for implementation of those techniques; and

(4) any progress made by the county in reducing the amount of unprocessed waste.

(b) The council shall approve a county's report if it determines that the county is reducing and will continue to reduce the amount of unprocessed waste, based on the report and the county's progress in development and implementation of techniques to reduce the amount of unprocessed waste transferred to disposal facilities. If the council does not approve a county's report, it shall negotiate with the county to develop and implement specific techniques to reduce unprocessed waste. If the council does not approve three or more consecutive reports from any one county, the council shall develop specific reduction techniques that are designed for the particular needs of the county. The county shall implement those techniques by specific dates to be determined by the council.

Subd. 3. Facility certification; county reports. (a) The operator of each resource recovery facility that receives waste from counties in the metropolitan area shall certify as unprocessible each load of mixed municipal solid waste it does not process. Certification must be made to each county that sends its waste to the facility at intervals specified by the county. Certification must include at least the number and size of loads certified as unprocessible and the reasons the waste is unprocessible. Loads certified as unprocessible must include the loads that would otherwise have been processed but were not processed because the facility was not in operation, but nothing in this section relieves the operator of its contractual obligations to process mixed municipal solid waste.

(b) A county that sends its waste to a resource recovery facility shall submit a semiannual report to the council detailing the quantity of waste generated within the county that was not processed during the six months preceding the report, the reasons the waste was not processed, and a strategy for reducing the amount of unprocessed mixed municipal solid waste.

Subd. 4. Council report. The council shall include, as part of its report to the legislative commission on waste management required under section 473.149, an accounting of the quantity of unprocessed waste transferred to disposal facilities, the reasons the waste was not processed, a strategy for reducing the amount of unprocessed waste, and progress made by counties to reduce the amount of unprocessed waste. The council may adopt standards for determining when waste is unprocessible and procedures for expediting certification and reporting of unprocessed waste.

Subd. 5. **Definition.** For the purpose of this section, waste is "unprocessed" if it has not, after collection and before disposal, undergone at least one process, as defined in section 115A.03, subdivision 25, excluding storage, exchange, and transfer of the waste.

HIST: 1985 c 274 s 35; 1989 c 325 s 66; 1991 c 337 s 81,82

473.849 PROHIBITION; SOLID WASTE DISPOSAL.

No person may place processed or unprocessed mixed municipal solid waste that is generated in the metropolitan area in a disposal facility that does not comply with the minimum requirements for design, construction, and operation of a new mixed municipal solid waste disposal facility under Minnesota Rules in effect on January 1, 1991. Each metropolitan county shall, and each county in which is located a disposal facility may, enforce this prohibition and may impose penalties and recover attorney fees and court costs to the same extent as for enforcement of a designation ordinance under section 115A.86, subdivision 6. The commissioner of the pollution control agency may enforce this section under section 115.071 or 116.072.

HIST: 1991 c 337 s 83

NOTE: Effective January 1, 1992 for disposal facilities located outside the metropolitan area, as defined in section 473.121, and January 1, 1995 for all disposal facilities regardless of location.

APPENDIX C

ANOKA COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT
FROM July 1, 1990 TO December 31, 1990

FACILITY NAME Northern States Power RDF, Elk River COUNTY Anoka County

COMPLETED BY Brad Fields TITLE Administrative Assistant PHONE 421-4760, Ext. 1173

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

(complete one table for each resource recovery/disposal facility where county waste is processed/disposed; indicate quantities in tons)

Types of waste (please specify)	Waste received	Waste processed	Waste recycled	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Ash produced; complete table 4	Residuals produced; complete table 5
MSW	67,607	62,041		-0-	4,603	9,662	9,462
Non-MSW							
Construction-Demolition							
Yard Waste							
Industrial							
Other(specify) _____							
Paper							
Glass							
Ferrous Scrap			2,595				
Non-Ferrous Scrap							
Yard Waste							
Other(specify) _____							
TOTAL	67,607	62,041	2,595	-0-	4,603	9,662	9,462

Please use additional sheets as necessary to complete tables

COUNTY Anoka County FACILITY NAME Northern States Power

FROM July 1, 1990 TO December 31, 1990

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES
(From Table I; list by type and/or description of waste and complete one table for each facility)

Description/type of waste	Describe why this waste was denied access to this facility? None
Quantity	Describe the management plan and timelime to process this type of waste.
Was this waste processed elsewhere? By whom?	

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity	Describe the management plan and timelime to process this type of waste.
Was this waste processed elsewhere? By whom?	

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity	Describe the management plan and timelime to process this type of waste.
Was this waste processed elsewhere? By whom?	

Please use additional sheets as necessary to complete tables

COUNTY Anoka County FACILITY NAME Northern States Power

FROM July 1, 1990 TO December 31, 1990

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

(from Table I; list by type and/or description of waste; each county and/or resource recovery facility must account for and complete a separate section for wastes disposed at different landfills; include in this table reject and excess wastes that exceeds or doesn't meet the facility's processing capacity)

Disposal Facility Waste Management Landfill	Describe why this waste was delivered to a disposal facility? This is material that cannot be processed at an RDF facility. Examples of material include large items such as old furniture and mattresses.
Description/type of waste Non-processible material	
Quantity 4,603 tons	Describe the management plan and timelime to process this type of waste. Some of this waste is now sent to the HERC Mass Burn Facility. They are able to burn the larger items that will not go through our processing system. In December, 1990, 35 tons were sent to this facility.
Could this waste be processed elsewhere? Yes	
Disposal Facility	Describe why this waste was delivered to a disposal facility.
Description/type of waste	
Quantity	Describe the management plan and timelime to process this type of waste.
Could this waste be processed elsewhere?	

Please use additional sheets as necessary to complete tables

COUNTY Anoka County FACILITY NAME Northern States Power

FROM July 1, 1990 TO December 31, 1990

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY
(from Table I; please complete one section for each facility receiving ash)

Disposal Facility Becker Temporary Ash Storage Facility	Describe alternative plans for managing this type of waste. None
List tons of ash generated; and the facility where it was produced 9,352 tons UPA, Elk River	Describe the timelime to implement the management plan. N/A
Disposal Facility NSP, Wilmarth	Describe alternative plans for managing this type of waste. None
List tons of ash generated; and the facility where it was produced 272 tons NSP, Wilmarth	Describe the timelime to implement the management plan. N/A
Disposal Facility NSP, Red Wing	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced 38 tons NSP, Red Wing	Describe the timelime to implement the management plan.

Please use additional sheets as necessary to complete tables

COUNTY Anoka County FACILITY NAME Northern States Power

FROM July 1, 1990 TO December 31, 1990

TABLE V - QUANTITIES OF RESIDUALS PRODUCED BY PROCESSING

(from Table I; list type and/or description of waste; complete one section/table for each resource recovery facility)

Disposal Facility Waste Management Landfill, Ramsey, Minnesota	Could this waste be further processed? If so, by what methods and/or technology? Yes. Additional air classification and/or composting.
Description/type of waste Residue--Heavy fraction from RDF facility.	Describe the management plan and timelime to further process this type of waste. None
Quantity 9,029 tons	
Disposal Facility ReComp, St. Cloud, Minnesota	Could this waste be further processed? If so, by what methods and/or technology? Yes. Residue, or light fraction from compost facility, can go back to the RDF facility for fuel.
Description/type of waste Residue--Heavy fraction from RDF facility.	Describe the management plan and timelime to further process this type of waste. None
Quantity 433 tons	
Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timelime to further process this type of waste.
Quantity	

Please use additional sheets as necessary to complete tables

OUNTY Anoka County FACILITY NAME Northern States Power

ROM July 1, 1990 TO December 31, 1990

TABLE VI - QUANTITIES OF OTHER WASTES GENERATED IN THE COUNTY (include non-MSW waste streams generated within the county and waste that escape county's solid waste designation ordinaces)

Description/Type of waste	Describe plans for managing this type of waste. Data not available. Not designated. Can go anyplace hauler wants to take the material.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).

Please use additional sheets as necessary to complete tables

EFFORTS BY THE COUNTY TO ENCOURAGE AND ENSURE COOPERATION AMONG RESOURCE RECOVERY FACILITIES

(describe in detail the county's effort to ensure that wastes identified in Table II and III were processed)

For each description of waste (by facility) identified in Table II and Table III, indicate the efforts the county has made to further process that particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular description of waste.

The non-processible waste is sent to the HERC facility whenever possible. There is no formal agreement with Hennepin County to accept this waste. When HERC has available capacity, NSP coordinates sending this material to them.

Please use additional sheets as necessary to complete tables

COUNTY CERTIFICATION REPORT
FROM July 1, 1990 TO December 31, 1990

FACILITY NAME East Bethel Landfill (no scale available) COUNTY Anoka

COMPLETED BY Dave Harman TITLE Environmental Health Specialist PHONE 421-4760, ext. 7067

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

(complete one table for each resource recovery/disposal facility where county waste is processed/disposed; indicate quantities in tons)

Types of waste (please specify)	Waste received	Waste processed	Waste recycled	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Ash produced; complete table 4	Residuals produced; complete table 5
MSW							
Construction Demolition 65%	98,366 cubic yards						
Industrial 35%	52,966 cubic yards						
Yard Waste	4,584 cubic yards	4,584 cubic yards					
Industrial							
Paper							
Glass							
Ferrous Scrap							
Non-Ferrous Scrap							
Yard Waste							
Other (specify) Cardboard			150 cubic yards				
TOTAL	155,916 cubic yards	4,584 cubic yards	150 cubic yards				

Please use additional sheets as necessary to complete tables

COUNTY CERTIFICATION REPORT
FROM July 1, 1990 TO December 31, 1990

FACILITY NAME Anoka Regional Landfill COUNTY Anoka

COMPLETED BY Sherry Dahlheimer TITLE Anoka Regional Landfill Lead Office PHONE 421-0540

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

(complete one table for each resource recovery/disposal facility where county waste is processed/disposed; indicate quantities in tons)

Types of waste (please specify)	Waste received	Waste processed	Waste recycled	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Ash produced; complete table 4	Residuals produced; complete table 5
MSW	34,999.00						
Construction Demolition							
Industrial							
Yard Waste	240.11	240.11					
Fly Ash	3,240.00						
Other(specify) Tires	4,127.58	4,127.58					
Paper			16.60				
Glass			6.83				
Ferrous Scrap			74.81				
Non-Ferrous Scrap							
Yard Waste							
Other(specify) Appliances			152 units				
TOTAL	42,606.69	4,367.69	Tons 98.24 Units 152.00				

Please use additional sheets as necessary to complete tables

MSW LANDFILL CHARGES
January, 1991

Landfill Name	Total Fee/Ton	State	County	City	Owner
Burnsville Landfill 1000 W Cliff Road Burnsville, MN 55337 890-3248/890-3611 Rich/Bookkeeping	$61.08 $18.50 (unbagged) compostable $28.50 (bagged or brush) compostable	$6.66	$11.09	$3.33	$40.00 $18.50 $28.50
Elk River Landfill 22460 Hwy 169 NW Elk River, MN 55330 441-2464 RuthAnn	$47.00	$6.60	$.60	$3.30	$36.50
McCloud Landfill Rt 3 Box 708 Glenco, MN 55336 1-864-5503 Phil Schweitzer	$54.94 $16.50/cu.yd. (compacted) $12.50/cu.yd. (loose)	$6.66	$1.66	----	$46.62
Pine Bend Landfill 2495 E 117th Street Inver Grove Heights, MN 55077 457-2778 Mary	$61.98 Demo debris same rate	$6.66	$11.08	$3.33	$40.90
Waste Management Landfill 14730 Sunfish Lake Blvd Ramsey, MN 55303 421-0540 Sherry Dahlheimer	$56.36 Light demo same rate $64.36 (special waste)	$6.67 $6.67	$8.72 $8.72	$3.33 $3.33	$37.64 $45.64
Woodlake Landfill 4000 Hamill Road Medina, MN 55340 479-1428/944-2990 Sandra Flier	$50.90 Demo debris same rate	$6.66	$6.66	$3.33	$34.25
Yonak Landfill Rte 1, Box 56 Buffalo, MN 55313 1-963-3158 Wayne Yonak	$45.00 $8.50/yd. ($28.30/ton)	$6.66 Demo debris	$7.32	$1.16	~~$29.86 est.~~

MSW TRANSFER LOCATIONS

	Total Fee
East Bethel Landfill Transfer 701 217th Avenue NE East Bethel, MN 55011 434-7473/434-5637	$10.00/cu.yd. ($33.30/ton) to transfer $10.00/cu.yd. Demo debris to landfill Not accepting hauler refuse
Freeway Transfer 1001 Black Dog Rd Burnsville, MN 55337 890-1081	Out of business as of 1-1-91

MSW TRANSFER LOCATION (tires, appliances, mattresses additional fee)

Gallagers Transfer 1691 91st Ave NE Blaine, MN 55434 784-4709 Becky	$18.00/cu.yd. ($59.94/ton) Demo debris same rate
North Hennepin Recycling and Transfer 8550 Zachary Lane Maple Grove, MN 55369 425-2239 Tim Klatke	$15.00/cu.yd. ($33.30/ton)
Pine Lane Transfer 6320 E Viking Blvd Wyoming, MN 55092 462-5298 Wanda	$30.00/cu.yd. ($99.90/ton) Demo debris same rate

COUNTY CERTIFICATION REPORT

COUNTY Anoka FACILITY Elk River Resource Recovery

COMPILED BY Carolyn Smith, Solid Waste Abatement Specialist PHONE 421-4760,x1701

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste
Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities that the generator of the waste aggregates for collection, but does not include auto hulks, street sweepings, ash, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste
Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing
The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification. Processing does not include storage, exchange, and/or transfer of waste.

1. What is the total amount of all solid waste generated in the county during the six months covered by this report? 166,727.96 tons

2. What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? _____ tons

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

COUNTY SOLID WASTE CERTIFICATION REPORT

FROM JANUARY 1, 1991 TO JUNE 30, 1991

FACILITY NAME NSP - ELK RIVER COUNTY ANOKA

COMPLETED BY Brad Fields TITLE Administrative Assistant PHONE 421-4760 Ext. 1173

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

Types of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete table 3
MSW	69,338	51,607	-0-	23,946	10,271	11,915
Non-MSW						
Construction-Demolition						
Industrial						
Other(specify) _____						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
Paper						
Glass						
Ferrous Scrap	2,818					
Non-Ferrous Scrap						
Yard Waste						
Other(specify) _____						
TOTAL	2,818	-0-	-0-	-0-	-0-	-0-

Please use additional sheets as necessary to complete tables

COUNTY ANOKA FACILITY NAME [illegible]

FROM Brad Fields TO _____

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

List by generator the amount and type of waste that has been denied access or excluded from delivering waste to this facility

Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility? None
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste. None
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility? None
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste. None
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility? None
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste. None

Please use additional sheets as necessary to complete tables

COUNTY ANOKA FACILITY NAME NSP - ELK RIVER

FROM Brad Fields TO _____

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

List by month the total amount of waste each county and/or resource recovery facility disposed at landfills; include in this table the amount of excess (TLO), unprocessed, reject, recovered (recycling) and residual wastes landfilled.

TYPE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Unprocessed or Excess wastes	-0-	-0-	-0-	25	-0-	-0-
Rejects	327	244	228	338	270	328
Residuals	1,670	918	1,607	2,739	2,383	2,598
Recycling						
Ash	1,539	1,465	1,806	1,761	1,997	1,703
Total	3,536	2,627	3,641	4,863	4,650	4,629
List amount and disposal facility of excess or unprocessed wastes				25 Tons		
				Waste Mgmt. Landfill, Ramsey, MN		
List amount and disposal facility of reject wastes	327	244	228	338	270	328
	Waste Mgmt. Landfill					
List amount and disposal facility of residual wastes	1,670	918	1,607	2,739	2,383	2,598
	Waste Mgmt. Landfill					
List amount and disposal facility of recovered wastes						
List amount and disposal facility of ash	1,514 Becker Temp Ash Storage Fac.	1,221 Becker	1,646 Becker	1,704 Becker	1,784 Becker	1,528 Becker
	25 Wilmarth	244 Wilmarth	160 Wilmarth	57 Wilmarth	213 Wilmarth	174 Wilmarth 1 Red Wing

Please use additional sheets as necessary to complete tables

COUNTY ANOKA FACILITY NAME NSP - Elk River

FROM Brad Fields TO

TABLE IV - DESCRIPTION OF EXCESS, REJECTS & RESIDUALS WASTES

list type and/or description of waste; complete one section/table for each resource recovery facility

Describe excess waste Waste the facility could not process due to burn facility being down.	Describe the current processing strategies to process this type of waste. None.
Quantity 25 Tons	Could this waste be further processed? If so, by what methods and/or technology? Yes - Other facilities
Disposal Facility Waste Management Landfill, Ramsey, MN	Describe the management plan, including a timeline, to process this type of waste using alternative strategies. None.
Describe reject wastes Non-processible material	Describe the current processing strategies to process this type of waste. This is material that cannot be processed at an RDF Facility. Examples include large bulky items such as mattresses. Since installing new shredders at the facility, we have reduced the percentage of non-processible from 7.5% to 2.5% of waste delivered.
Quantity 1,735 Tons	Could this waste be further processed? If so, by what methods and/or technology? Yes. It could be burned at a mass burn facility.
Disposal Facility Waste Management Landfill, Ramsey, MN	Describe the management plan, including a timeline, to process this type of waste using alternative strategies. As described above, we have already implemented a plan to reduce this waste stream.
Describe residual wastes Heavy fraction from RDF Facility	Describe the current processing strategies to process this type of waste. Material left after air classification and ferrous magnet separation.
Quantity 11,915 Tons	Could this waste be further processed? If so, by what methods and/or technology? Yes. Additional air classification and/or composting.
Disposal Facility Waste Management Landfill, Ramsey, MN	Describe the management plan, including a timeline, to process this type of waste using alternative strategies. None.

Please use additional sheets as necessary to complete tables

COUNTY ANOKA FACILITY NAME NSP - ELK RIVER

FROM Brad Fields TO _____

TABLE VI - DESCRIBE IN DETAIL THE COUNTY'S EFFORTS TO ENCOURAGE AND IMPLEMENT WASTE SHARING AGREEMENTS AMONG THE RESOURCE RECOVERY FACILITIES

For each description of waste (by facility) identified in Table III, indicate the efforts the county has made to further process that particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular description of waste.

Anoka County has formal waste sharing agreements with Hennepin County and Rueter, Inc. In addition, we have been in contact with other counties and the Solid Waste Coordinating Board to explore other opportunities to apply the best technology for the appropriate waste stream.

Please use additional sheets as necessary to complete tables

COUNTY SOLID WASTE CERTIFICATION REPORT

FROM JANUARY 1, 1991 TO JUNE 30, 1991

FACILITY NAME Waste Management of MN, Inc.-Anoka COUNTY Anoka

COMPLETED BY Steve Kollodge TITLE Lead Office PHONE 421-0540

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

Types of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete table 3
MSW	22,886 Tons					
Non-MSW						
Construction-Demolition						
Industrial						
Other(specify) _____						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
Paper	7.90 Tons					
Glass	4.49 Tons					
Aluminum	.19 Tons					
Ferrous Scrap	66.47 Tons					
Non-Ferrous Scrap	Ø					
Yard Waste	262.80 Tons					
Other(specify) Tires	1716.61 Tons					
TOTAL	2058.46 Tons					

Please use additional sheets as necessary to complete tables

COUNTY SOLID WASTE CERTIFICATION REPORT

FROM JANUARY 1, 1991 TO JUNE 30, 1991

FACILITY NAME East Bethel Landfill COUNTY Anoka

COMPLETED BY [signature] TITLE Operator PHONE 434-7[illegible]
4345631

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

Types of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete tabl
MSW		220.5 tons				
Non-MSW						
Construction-Demolition	50,103.5 yards					
Industrial						
Other(specify) _____						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(spec
Paper			3.82 tons			
Glass			—			
Appliances Ferrous Scrap			425 50 tons			
Non-Ferrous Scrap						
Yard Waste				4523 yards		
Other(specify) Batteries			125			
TOTAL						

Please use additional sheets as necessary to complete tables

ANOKA RDF TONNAGES FOR 1990

1990 MONTH	TOTAL TONS DELIVERED	DAILY AVERAGE	TOTAL NON-PROCESSIBLE	% OF TOT. TONS DELIVERED	TOTAL TONS PROCESSED	% OF TONS DELIVERED	TOTAL TONS RDF	% OF TONS PROCESSED	TOTAL TONS RESIDUE	% OF TONS PROCESSED	TOTAL TONS FERROUS	% OF TONS PROCESSED	TOTAL DRY ASH	% OF TONS RDF	TOTAL BECKER ASH	BECKER WET ASH
JANUARY 26 DAYS	10,276.00	395.20	722.00	7.03%	9,569.00	93.12%	7,745.00	80.94%	1,273.00	13.30%	395.00	4.13%	1,397.00	18.04%	1,266.00	1,584.00
FEBRUARY 24 DAYS	8,807.00	367.00	636.00	7.22%	7,672.00	87.11%	6,500.00	84.72%	861.00	11.22%	311.00	4.05%	1,260.00	19.38%	1,194.00	1,494.00
MARCH 27 DAYS	11,055.00	409.40	1,145.00	10.36%	10,065.00	91.04%	8,495.00	84.40%	1,168.00	11.60%	403.00	4.00%	1,482.00	17.45%	1,428.00	1,786.00
APRIL 25 DAYS	11,267.00	450.70	906.00	8.04%	9,862.00	87.53%	7,824.00	79.33%	1,574.00	15.96%	464.00	4.70%	1,596.00	20.40%	1,559.00	1,951.00
MAY 26 DAYS	12,179.00	468.40	1,036.00	8.51%	11,053.00	90.75%	8,485.00	76.77%	2,056.00	18.60%	512.00	4.63%	1,535.00	18.09%	1,471.00	1,840.00
JUNE 26 DAYS	12,176.00	468.30	1,074.00	8.82%	10,671.00	87.64%	6,885.00	64.52%	3,318.00	31.09%	468.00	4.39%	1,226.00	17.81%	1,088.00	1,361.00
JULY 25 DAYS	11,641.00	465.64	879.00	7.55%	11,006.00	94.55%	8,898.00	80.85%	1,655.00	15.04%	453.00	4.12%	1,721.00	19.34%	1,676.00	2,097.00
AUGUST 27 DAYS	12,738.00	471.78	1,049.00	8.24%	10,757.00	84.45%	8,479.00	78.82%	1,821.00	16.93%	457.00	4.25%	1,659.00	19.57%	1,646.00	2,058.00
SEPTEMBER 24 DAYS	10,971.00	457.13	757.00	6.90%	10,478.00	95.51%	8,472.00	80.86%	1,593.00	15.20%	412.00	3.93%	1,640.00	19.36%	1,628.00	2,037.00
OCTOBER 27 DAYS	12,010.00	444.81	957.00	7.97%	10,647.00	88.65%	7,802.00	73.28%	2,372.00	22.28%	473.00	4.44%	1,408.00	18.05%	1,344.00	1,681.00
NOVEMBER 25 DAYS	10,824.00	432.96	688.00	6.36%	10,100.00	93.31%	8,515.00	84.31%	1,167.00	11.55%	417.00	4.13%	1,679.00	19.72%	1,891.00	1,512.00
DECEMBER 25 DAYS	9,423.00	377.00	308.00	3.27%	9,053.00	96.07%	7,816.00	86.34%	854.00	9.43%	383.00	4.23%	1,555.00	19.90%	1,546.00	1,933.00
TOTAL	133,367.00	434.42	10,157.00	7.62%	120,933.00	90.68%	95,918.00	79.31%	19,712.00	16.30%	5,148.00	4.26%	18,158.00	18.93%	17,737.00	21,334.00

ANOKA RDF TONNAGES FOR 1991

MONTH	TOTAL TONS DELIVERED	DAILY AVERAGE	TOTAL NON-PROCESSIBLE	% OF TOT. TONS DELIVERED	TOTAL TONS PROCESSED	% OF TONS DELIVERED	TOTAL TONS RDF	% OF TONS PROCESSED	TOTAL TONS RESIDUE	% OF TONS PROCESSED	TOTAL TONS FERROUS	% OF TONS PROCESSED	TOTAL DRY ASH	% OF TONS RDF	TOTAL BECKER ASH	BECKER WET ASH
RUARY DAYS	10,422.00	400.85	327.00	3.14%	9,814.00	94.17%	7,742.00	78.89%	1,670.00	17.02%	402.00	4.10%	1,539.00	19.88%	1,514.00	1,894.00
BRUARY DAYS	9,744.00	406.00	244.00	2.50%	9,429.00	96.77%	8,113.00	86.04%	918.00	9.74%	399.00	4.23%	1,465.00	18.06%	1,221.00	1,528.00
ARCH DAYS	11,023.00	424.00	228.00	2.07%	11,182.00	101.44%	9,136.60	81.70%	1,607.00	14.37%	439.00	3.93%	1,806.00	19.77%	1,646.00	2,059.00
RIL DAYS	13,106.00	504.08	338.00	2.58%	11,995.00	91.52%	8,661.00	72.21%	2,739.00	22.83%	595.00	4.96%	1,761.00	20.33%	1,704.00	2,131.00
Y DAYS	13,313.00	512.04	270.00	2.03%	12,468.00	93.65%	9,568.00	76.74%	2,383.00	19.11%	517.00	4.15%	1,997.00	20.87%	1,784.00	2,232.00
NE DAYS	11,730.00	469.20	328.00	2.80%	11,451.00	97.62%	8,367.00	73.24%	2,598.00	22.69%	466.00	4.07%	1,703.00	20.31%	1,528.00	1,912.00
LY DAYS	12,870.00	495.00	255.00	1.98%	11,947.00	92.83%	9,281.60	77.68%	2,138.00	17.90%	528.00	4.42%	1,849.00	19.92%	1,677.00	2,097.00
GUST DAYS																
PTEMBER DAYS																
TOBER DAYS																
VEMBER DAYS																
CEMBER DAYS																
TAL	82,208.00	453.19	1,990.00	2.42%	78,286.00	95.23%	60,868.00	77.76%	14,053.00	17.95%	3,346.00	4.27%	12,120.00	19.91%	11,074.00	13,853.00

NORTHERN STATES POWER COMPANY
ELK RIVER RESOURCE RECOVERY FACILITY

WASTE SUMMARY FOR: January 1991

	DAYS:	26				
	GDTC:	1,500	500	800	50	150	0
		TOTAL	ANOKA	HENNEPIN	SHERBURNE	TRI-COUNTY	OTHER
Beginning Inventory		906	108	354	(400)	844	0
Beginning Processing Shortfall		(3,368)	(488)	(2,408)	(558)	86	0
Waste Delivered to ERRRF		28,607	10,422	13,367	1,138	3,680	0
Contract Waste Diverted to Landfill		0	0	0	0	0	0
Total Delivered & Diverted Waste		28,607	10,422	13,367	1,138	3,680	0
Contract Waste Delivered		28,530	10,422	13,367	1,084	3,657	0
Surplus Waste Delivered		77	0	0	54	23	0
Total Waste Processed		27,216	9,814	12,706	1,136	3,560	0
Net Contract Waste Processed		27,216	9,814	12,706	1,136	3,560	0
Net Surplus Waste Processed		0	0	0	0	0	0
RDF Processed							
RDF Trans. to Combustion Facilities		21,470	7,742	10,023	896	2,808	0
RDF to Elk River Station		20,957	7,557	9,784	875	2,741	0
RDF to Wilmarth		513	185	239	21	67	0
RDF to Red Wing		0	0	0	0	0	0
RDF to Other		0	0	0	0	0	0
RDF landfilled		0	0	0	0	0	0
Process Rejects Landfilled (Residue)		4,630	1,670	2,162	193	606	0
Total Recovered Materials							
Ferrous		1,116	402	521	47	146	0
Aluminum		0	0	0	0	0	0
Other Material Sold		0	0	0	0	0	0
Total Waste Transferred		879	327	407	34	111	0
Total Non-Processible		879	327	407	34	111	0
Contract Non-Processible		865	318	404	33	110	0
Surplus Non-Processible		14	9	3	1	1	0
Waste Transferred		0	0	0	0	0	0
Contract Waste		0	0	0	0	0	0
Surplus Waste		0	0	0	0	0	0
Citizen's Area Waste Received		0	0	0	0	0	0
Waste Processed		--	--	--	--	--	--
Waste Landfilled		--	--	--	--	--	--
Fees Collected		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Haz./Unacc. Waste Disposed of by Hauler		0	0	0	0	0	0
Haz./Unacc. Waste Disposed of by Vendor		0	0	0	0	0	0
Moisture Loss Tons		285	95	127	18	45	0
Ending Inventory		1,133	294	481	(450)	808	0
Ending Processing Shortfall		(3,204)	(293)	(2,278)	(661)	28	0

NORTHERN STATES POWER COMPANY
ASH MANAGEMENT SERVICES AGREEMENT
MONTHLY SUMMARY FOR: January 1991

	Total	Anoka	Hennepin	Sherburne	Tri-County	Other
RDF to Elk River Station	21,469	7,557	9,784	875	2,741	512
RDF to Wilmarth	512	185	239	21	67	N/A
RDF to Red Wing	0	0	0	0	0	N/A
RDF Landfilled	0	0	0	0	0	0
Net RDF to Vendor	512	185	239	21	67	0
Wet Ash Received @ Becker	5,381	1,894	2,452	219	687	128
Tons of Ash Reused/Recycled	0	0	0	0	0	0
Average Moisture Content	20.05%					
E6A tons Becker	4,200	1,514	1,961	175	549	
E6A tons Wilmarth	70	25	33	3	9	
E6A tons Red Wing	0	0	0	0	0	
E9 tons (Variable Fee)	70	1539				
PT4 tons (Sherburne Cnty Fee)		1,894	2,452	0	0	

NORTHERN STATES POWER COMPANY
ELK RIVER RESOURCE RECOVERY FACILITY

WASTE SUMMARY FOR: February 1991

	DAYS:	24				
	GDTC:	1,500	500	800	50	150	0
		TOTAL	ANOKA	HENNEPIN	SHERBURNE	TRI-COUNTY	OTHER
Beginning Inventory		1,133	294	481	(450)	808	0
Beginning Processing Shortfall		(3,204)	(293)	(2,278)	(661)	28	0
Waste Delivered to ERRRF		24,648	9,744	10,549	991	3,364	0
Contract Waste Diverted to Landfill		0	0	0	0	0	0
Total Delivered & Diverted Waste		24,648	9,744	10,549	991	3,364	0
Contract Waste Delivered		24,617	9,744	10,549	991	3,333	0
Surplus Waste Delivered		31	0	0	0	31	0
Total Waste Processed		24,226	9,429	10,315	971	3,511	0
Net Contract Waste Processed		24,226	9,429	10,315	971	3,511	0
Net Surplus Waste Processed		0	0	0	0	0	0
RDF Processed							
RDF Trans. to Combustion Facilities		20,844	8,113	8,875	835	3,021	0
RDF to Elk River Station		16,282	6,337	6,933	653	2,360	0
RDF to Wilmarth		4,562	1,776	1,942	183	661	0
RDF to Red Wing		0	0	0	0	0	0
RDF to Other		0	0	0	0	0	0
RDF landfilled		0	0	0	0	0	0
Process Rejects Landfilled (Residue)		2,358	918	1,004	95	342	0
Total Recovered Materials							
Ferrous		1,024	399	436	41	148	0
Aluminum		0	0	0	0	0	0
Other Material Sold		0	0	0	0	0	0
Total Waste Transferred		639	244	272	28	95	0
Total Non-Processible		639	244	272	28	95	0
Contract Non-Processible		578	228	248	23	79	0
Surplus Non-Processible		61	16	24	5	16	0
Waste Transferred		0	0	0	0	0	0
Contract Waste		0	0	0	0	0	0
Surplus Waste		0	0	0	0	0	0
Citizen's Area Waste Received		0	0	0	0	0	0
Waste Processed		--	--	--	--	--	--
Waste Landfilled		--	--	--	--	--	--
Fees Collected		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Haz./Unacc. Waste Disposed of by Hauler		0	0	0	0	0	0
Haz./Unacc. Waste Disposed of by Vendor		0	0	0	0	0	0
Moisture Loss Tons		216	85	92	9	30	0
Ending Inventory		700	280	351	(467)	536	0
Ending Processing Shortfall		(3,607)	(291)	(2,384)	(673)	(259)	0

NORTHERN STATES POWER COMPANY
ASH MANAGEMENT SERVICES AGREEMENT
MONTHLY SUMMARY FOR: February 1991

	Total	Anoka	Hennepin	Sherburne	Tri-County	Other
RDF to Elk River Station	16,283	6,337	6,933	653	2,360	0
RDF to Wilmarth	4,562	1,776	1,942	183	661	N/A
RDF to Red Wing	0	0	0	0	0	N/A
RDF Landfilled	0	0	0	0	0	0
Net RDF to Vendor	4,562	1,776	1,942	183	661	0
Wet Ash Received @ Becker	3,925	1,528	1,671	157	569	0
Tons of Ash Reused/Recycled	0	0	0	0	0	0
Average Moisture Content	20.05%					
E6A tons Becker	3,138	1,221	1,336	126	455	
E6A tons Wilmarth	627	244	267	25	91	
E6A tons Red Wing	0	0	0	0	0	
E9 tons (Variable Fee)	627					
PT4 tons (Sherburne Cnty Fee)		1,528	1,671	0	0	

NORTHERN STATES POWER COMPANY
ELK RIVER RESOURCE RECOVERY FACILITY

STE SUMMARY FOR: March 1991 DAYS: 26

	GDTC: 1,500	500	800	50	150	0
	TOTAL	ANOKA	HENNEPIN	SHERBURNE	TRI-COUNTY	OTHER
Beginning Inventory	700	280	351	(467)	536	0
Beginning Processing Shortfall	(3,607)	(291)	(2,384)	(673)	(259)	0
Waste Delivered to ERRRF	35,348	11,023	19,518	1,156	3,651	0
Contract Waste Diverted to Landfill	0	0	0	0	0	0
Total Delivered & Diverted Waste	35,348	11,023	19,518	1,156	3,651	0
Contract Waste Delivered	32,738	11,023	17,044	1,063	3,608	0
Surplus Waste Delivered	2,610	0	2,474	93	43	0
Total Waste Processed	34,397	11,182	18,411	1,167	3,637	0
Net Contract Waste Processed	32,567	10,979	16,959	1,093	3,536	0
Net Surplus Waste Processed	1,830	203	1,452	74	101	0
RDF Processed						
RDF Trans. to Combustion Facilities	28,102	9,136	15,042	953	2,971	0
RDF to Elk River Station	24,514	7,969	13,121	832	2,592	0
RDF to Wilmarth	3,588	1,166	1,920	122	379	0
RDF to Red Wing	0	0	0	0	0	0
RDF to Other	0	0	0	0	0	0
RDF landfilled	0	0	0	0	0	0
Process Rejects Landfilled (Residue)	4,943	1,607	2,646	168	523	0
Total Recovered Materials						
Ferrous	1,351	439	723	46	143	0
Aluminum	0	0	0	0	0	0
Other Material Sold	0	0	0	0	0	0
Total Waste Transferred	703	228	377	24	74	0
Total Non-Processible	703	228	377	24	74	0
Contract Non-Processible	649	221	336	22	70	0
Surplus Non-Processible	54	7	41	2	4	0
Waste Transferred	0	0	0	0	0	0
Contract Waste	0	0	0	0	0	0
Surplus Waste	0	0	0	0	0	0
Citizen's Area Waste Received	0	0	0	0	0	0
Waste Processed	--	--	--	--	--	--
Waste Landfilled	--	--	--	--	--	--
Fees Collected	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Haz./Unacc. Waste Disposed of by Hauler	0	0	0	0	0	0
Haz./Unacc. Waste Disposed of by Vendor	0	0	0	0	0	0
Moisture Loss Tons	439	148	227	14	50	0
Ending Inventory	509	(255)	854	(516)	426	0
Ending Processing Shortfall	(4,524)	(616)	(2,862)	(739)	(307)	0

NORTHERN STATES POWER COMPANY
ASH MANAGEMENT SERVICES AGREEMENT
MONTHLY SUMMARY FOR: March 1991

	Total	Anoka	Hennepin	Sherburne	Tri-County	Other
RDF to Elk River Station	24,514	7,969	13,121	832	2,592	0
RDF to Wilmarth	3,587	1,166	1,920	122	379	N/A
RDF to Red Wing	0	0	0	0	0	N/A
RDF Landfilled	0	0	0	0	0	0
Net RDF to Vendor	3,587	1,166	1,920	122	379	0
Wet Ash Received @ Becker	6,333	2,059	3,390	215	670	0
Tons of Ash Reused/Recycled	0	0	0	0	0	0
Average Moisture Content	20.05%					
E6A tons Becker	5,063	1,646	2,710	172	535	
E6A tons Wilmarth	493	160	264	17	52	
E6A tons Red Wing	0	0	0	0	0	
E9 tons (Variable Fee)	5556 493	1926				
PT4 tons (Sherburne Cnty Fee)		2,059	3,390	0	0	

NORTHERN STATES POWER COMPANY
ELK RIVER RESOURCE RECOVERY FACILITY

WASTE SUMMARY FOR: April 1991	DAYS:	26				
	GDTC:	1,500	500	800	50	150	0
		TOTAL	ANOKA	HENNEPIN	SHERBURNE	TRI-COUNTY	OTHER
Beginning Inventory		630	(210)	810	(568)	598	0
Beginning Processing Shortfall		(4,403)	(571)	(2,904)	(790)	(138)	0
Waste Delivered to ERRRF		39,497	13,106	21,342	1,372	3,677	0
Contract Waste Diverted to Landfill		0	0	0	0	0	0
Total Delivered & Diverted Waste		39,497	13,106	21,342	1,372	3,677	0
Contract Waste Delivered		38,598	13,017	20,844	1,242	3,495	0
Surplus Waste Delivered		899	89	498	130	182	0
Total Waste Processed		36,586	11,995	19,923	1,186	3,482	0
Net Contract Waste Processed		35,538	11,850	19,181	1,137	3,370	0
Net Surplus Waste Processed		1,048	145	742	49	112	0
RDF Processed							
RDF Trans. to Combustion Facilities		26,418	8,661	14,386	856	2,514	0
RDF to Elk River Station		25,151	8,246	13,696	815	2,394	0
RDF to Wilmarth		1,267	415	690	41	121	0
RDF to Red Wing		0	0	0	0	0	0
RDF to Other		0	0	0	0	0	0
RDF landfilled		0	0	0	0	0	0
Process Rejects Landfilled (Residue)		8,353	2,739	4,549	271	795	0
Total Recovered Materials							
Ferrous		1,815	595	988	59	173	0
Aluminum		0	0	0	0	0	0
Other Material Sold		0	0	0	0	0	0
Total Waste Transferred		1,216	363	692	42	119	0
Total Non-Processible		1,036	338	564	34	100	0
Contract Non-Processible		997	331	538	32	96	0
Surplus Non-Processible		39	7	26	2	4	0
Waste Transferred		180	25	128	8	19	0
Contract Waste		0	0	0	0	0	0
Surplus Waste		180	25	128	8	19	0
Citizen's Area Waste Received		0	0	0	0	0	0
Waste Processed		--	--	--	--	--	--
Waste Landfilled		--	--	--	--	--	--
Fees Collected		$95.40	$95.40	$0.00	$0.00	$0.00	$0.00
Haz./Unacc. Waste Disposed of by Hauler		0	0	0	0	0	0
Haz./Unacc. Waste Disposed of by Vendor		0	0	0	0	0	0
Moisture Loss Tons		612	208	331	21	52	0
Ending Inventory		1,713	330	1,206	(445)	622	0
Ending Processing Shortfall		(2,952)	57	(2,110)	(738)	(161)	0

HERN STATES POWER COMPANY
MANAGEMENT SERVICES AGREEMENT
LY SUMMARY FOR: April 1991

	Total	Anoka	Hennepin	Sherburne	Tri-County	Other
to Elk River Station	25,151	8,246	13,696	815	2,394	0
to Wilmarth	1,267	415	690	41	121	N/A
to Red Wing	0	0	0	0	0	N/A
Landfilled	0	0	0	0	0	0
et RDF to Vendor	1,267	415	690	41	121	0
Asn Received @ Becker	6,501	2,131	3,540	211	619	0
s of Asn Reused/Recycled	0	0	0	0	0	0
rage Moisture Content	20.05%					
tons Becker	5,198	1,704	2,830	168	495	
tons Wilmarth	174	57	95	6	17	
tons Red Wing	0	0	0	0	0	
tons (Variable Fee)	174					
tons (Sherburne Cnty Fee)		2,131	3,540	0	0	

NORTHERN STATES POWER COMPANY
ELK RIVER RESOURCE RECOVERY FACILITY

WASTE SUMMARY FOR: May 1991

	DAYS:	26				
	GOTC:	1,500	500	800	50	150	0
		TOTAL	ANOKA	HENNEPIN	SHERBURNE	TRI-COUNTY	OTHER
Beginning Inventory		1,713	328	1,205	(445)	625	0
Beginning Processing Shortfall		(2,959)	55	(2,114)	(739)	(161)	0
Waste Delivered to ERRRF		40,397	13,313	21,962	1,417	3,705	0
Contract Waste Diverted to Landfill		0	0	0	0	0	0
Total Delivered & Diverted Waste		40,397	13,313	21,962	1,417	3,705	0
Contract Waste Delivered		39,154	13,296	20,878	1,357	3,623	0
Surplus Waste Delivered		1,243	17	1,084	60	82	0
Total Waste Processed		36,930	12,468	19,779	1,282	3,401	0
Net Contract Waste Processed		36,720	12,441	19,639	1,266	3,374	0
Net Surplus Waste Processed		210	27	140	16	27	0
RDF Processed							
RDF Trans. to Combustion Facilities		28,340	9,568	15,178	984	2,610	0
RDF to Elk River Station		23,748	8,018	12,719	824	2,187	0
RDF to Wilmarth		4,592	1,550	2,459	159	423	0
RDF to Red Wing		0	0	0	0	0	0
RDF to Other		0	0	0	0	0	0
RDF landfilled		0	0	0	0	0	0
Process Rejects Landfilled (Residue)		7,059	2,383	3,781	245	650	0
Total Recovered Materials							
Ferrous		1,532	517	821	53	141	0
Aluminum		0	0	0	0	0	0
Other Material Sold		0	0	0	0	0	0
Total Waste Transferred		807	270	433	28	76	0
Total Non-Processible		807	270	433	28	76	0
Contract Non-Processible		784	266	418	26	74	0
Surplus Non-Processible		23	4	15	2	2	0
Waste Transferred		0	0	0	0	0	0
Contract Waste		0	0	0	0	0	0
Surplus Waste		0	0	0	0	0	0
Citizen's Area Waste Received		0	0	0	0	0	0
Waste Processed		--	--	--	--	--	--
Waste Landfilled		--	--	--	--	--	--
Fees Collected		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Haz./Unacc. Waste Disposed of by Hauler		0	0	0	0	0	0
Haz./Unacc. Waste Disposed of by Vendor		0	0	0	0	0	0
Moisture Loss Tons		617	205	326	22	64	0
Ending Inventory		3,756	698	2,629	(360)	789	0
Ending Processing Shortfall		(1,926)	439	(1,619)	(696)	(50)	0

NORTHERN STATES POWER COMPANY
ASH MANAGEMENT SERVICES AGREEMENT
MONTHLY SUMMARY FOR: May 1991

	Total	Anoka	Hennepin	Sherburne	Tri-County	Other
RDF to Elk River Station	23,748	8,018	12,719	824	2,187	0
RDF to Wilmarth	4,591	1,550	2,459	159	423	N/A
RDF to Red Wing	0	0	0	0	0	N/A
RDF Landfilled	0	0	0	0	0	0
Net RDF to Vendor	4,591	1,550	2,459	159	423	0
Wet Ash Received @ Becker	6,610	2,232	3,540	229	609	0
Tons of Ash Reused/Recycled	0	0	0	0	0	0
Average Moisture Content	20.05%					
E6A tons Becker	5,285	1,784	2,830	183	487	
E6A tons Wilmarth	631	213	338	22	58	
E6A tons Red Wing	0	0	0	0	0	
E9 tons (Variable Fee)	631					
PT4 tons (Sherburne Cnty Fee)		2,232	3,540	0	0	

NORTHERN STATES POWER COMPANY
ELK RIVER RESOURCE RECOVERY FACILITY

WASTE SUMMARY FOR: June 1991 DAYS: 25

	GDTC:	1,500 TOTAL	500 ANOKA	800 HENNEPIN	50 SHERBURNE	150 TRI-COUNTY	0 OTHER
Beginning Inventory		3,756	698	2,629	(360)	789	0
Beginning Processing Shortfall		(1,926)	439	(1,619)	(696)	(50)	0
Waste Delivered to ERRRF		34,615	11,730	18,043	1,170	3,672	0
Contract Waste Diverted to Landfill		0	0	0	0	0	0
Total Delivered & Diverted Waste		34,615	11,730	18,043	1,170	3,672	0
Contract Waste Delivered		34,117	11,730	17,879	1,165	3,343	0
Surplus Waste Delivered		498	0	164	5	329	0
Total Waste Processed		34,001	11,451	18,060	1,216	3,274	0
Net Contract Waste Processed		32,266	11,107	16,893	1,125	3,141	0
Net Surplus Waste Processed		1,735	344	1,167	91	133	0
RDF Processed							
RDF Trans. to Combustion Facilities		24,902	8,387	13,227	891	2,398	0
RDF to Elk River Station		21,122	7,114	11,219	755	2,034	0
RDF to Wilmarth		3,763	1,267	1,999	135	362	0
RDF to Red Wing		17	6	9	1	2	0
RDF to Other		0	0	0	0	0	0
RDF landfilled		0	0	0	0	0	0
Process Rejects Landfilled (Residue)		7,713	2,598	4,097	276	743	0
Total Recovered Materials							
Ferrous		1,385	466	736	50	133	0
Aluminum		0	0	0	0	0	0
Other Material Sold		0	0	0	0	0	0
Total Waste Transferred		964	328	510	34	92	0
Total Non-Processible		964	328	510	34	92	0
Contract Non-Processible		920	314	485	32	89	0
Surplus Non-Processible		44	14	25	2	3	0
Waste Transferred		0	0	0	0	0	0
Contract Waste		0	0	0	0	0	0
Surplus Waste		0	0	0	0	0	0
Citizen's Area Waste Received		0	0	0	0	0	0
Waste Processed		--	--	--	--	--	--
Waste Landfilled		--	--	--	--	--	--
Fees Collected		$106.00	$106.00	$0.00	$0.00	$0.00	$0.00
Haz./Unacc. Waste Disposed of by Hauler		0	0	0	0	0	0
Haz./Unacc. Waste Disposed of by Vendor		0	0	0	0	0	0
Moisture Loss Tons		0	0	0	0	0	0
Ending Inventory		3,406	649	2,102	(440)	1,095	0
Ending Processing Shortfall		(995)	748	(1,118)	(688)	63	0

NORTHERN STATES POWER COMPANY "REVISED"
ASH MANAGEMENT SERVICES AGREEMENT
MONTHLY SUMMARY FOR: June 1991

	Total	Anoka	Hennepin	Sherburne	Tri-County	Other
RDF to Elk River Station	21,228	7,114	11,219	755	2,034	106
RDF to Wilmarth	3,763	1,267	1,999	135	362	N/A
RDF to Red Wing	18	6	9	1	2	N/A
RDF Landfilled	0	0	0	0	0	0
Net RDF to Vendor	3,781	1,273	2,008	136	364	0
Wet Ash Received @ Becker	5,704	1,912	3,015	203	547	28
Tons of Ash Reused/Recycled	0	0	0	0	0	0
Average Moisture Content	20.05%					
E6A tons Becker	4,538	1,528	2,410	162	437	
E6A tons Wilmarth	517	174	275	19	50	
E6A tons Red Wing	2	1	1	0	0	
	5,057	1,703				
E9 tons (Variable Fee)	520					
PT4 tons (Sherburne Cnty Fee)		1,912	3,015	0	0	

CARVER COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT

COUNTY Carver FACILITY None

COMPLETED BY Michael Lein TITLE Environmental Services Director PHONE 448-1217

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste

Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities which is generated and collected in aggregate, but does not include street sweepings, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste

Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing

The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification.

What is the total amount of all solid waste generated in the county during the six months covered by this report? 20,500 tons *as per Met Council estimates.

What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? 20,491 tons * Carver County estimate.

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 8

To Jan Gustafson	From Mike Lein
Co. Met Council	Co. Carver County
Dept.	Phone # 448 1217
Fax # 291-6550	Fax # 448-1206

COUNTY CERTIFICATION REPORT

FROM 7-1-90 TO 12-31-90

FACILITY NAME Not applicable (no resource recovery facility) COUNTY Carver

COMPLETED BY Michael Lein TITLE Environmental Services Director PHONE 448-1217

TABLE I. RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

(complete a table for each resource recovery/disposal facility where county waste is processed/disposed; use tons)

Types of waste	Waste received	Waste processed	Waste recycled	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Ash produced; complete table 4	Residuals produced; complete table 5
MSW							
Non-MSW							
Construction-Demolition							
Yard Waste							
Industrial							
Other(specify)							
Other(specify)							
Paper							
Glass							
Ferrous Scrap							
Non-Ferrous Scrap							
Yard Waste							
Other(specify)							
Other(specify)							
TOTAL							

Please use additional sheets as necessary to complete tables

COUNTY Carver FACILITY NAME None - not applicable

FROM 7-1-90 TO 12-31-90

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

(From Table I; list by type and/or description of waste and complete one table for each facility)

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity	Describe the management plan and timelime to process this type of waste.

Was this waste processed elsewhere? By whom?

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity	Describe the management plan and timelime to process this type of waste.

Was this waste processed elsewhere? By whom?

Please use additional sheets as necessary to complete tables

COUNTY Carver FACILITY NAME None

FROM 7-1-90 TO 12-31-90

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

(from Table I; list by type and/or description of waste; each county and/or resource recovery facility must account for and complete a separate section for wastes disposed at different landfills; include in this table reject and excess wastes that exceed or do not meet the facility's processing capacity)

Disposal Facility Various permitted sanitary landfills	Describe why this waste was delivered to a disposal facility? Carver County does not have a designated resource recovery facility.
Description/type of waste Unprocessed mixed municipal waste.	
Quantity	Describe the management plan and timeline to process this type of waste. Carver County is cooperating with Scott County in the development of a resource recovery facility. It is estimated that the facility will be operational in about two years. This timetable could be influenced by vendor negotiations, permit and EAW review, and pending legislation.
Could this waste be processed elsewhere? No	

Disposal Facility	Describe why this waste was delivered to a disposal facility.
Description/type of waste	
Quantity	Describe the management plan and timeline to process this type of waste.
Could this waste be processed elsewhere?	

Please use additional sheets as necessary to complete tables

COUNTY Carver FACILITY NAME Not applicable

FROM 7-1-90 TO 12-3-190

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY

(from Table I; please complete one section for each facility receiving ash)

Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.
Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.
Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.

Please use additional sheets as necessary to complete tables.

COUNTY Carver FACILITY NAME Not applicable

FROM 7-1-90 TO 12-31-90

TABLE V - QUANTITIES OF RESIDUALS PRODUCED BY PROCESSING

(from Table I; list type and/or description of waste; complete one section/table for each resource recovery facility)

Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timeline to further process this type of waste.
Quantity	
Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timeline to further process this type of waste.
Quantity	
Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timeline to further process this type of waste.
Quantity	

Please use additional sheets as necessary to complete tables

COUNTY Carver FACILITY NAME Not applicable

FROM 7-1-90 TO 12-31-90

TABLE VI - QUANTITIES OF OTHER WASTES GENERATED IN THE COUNTY (include non-MSW waste streams generated within the county and wastes that "escape" county's solid waste designation ordinances)

Description/Type of waste	Describe plans for managing this type of waste.
	We have no estimates of these types of wastes.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).

Please use additional sheets as necessary to complete tables

EFFORTS BY THE COUNTY TO ENCOURAGE AND ENSURE COOPERATION AMONG RESOURCE RECOVERY FACILITIES (Describe in detail efforts to ensure wastes identified in Table II and III were processed)

For each description of waste (by facility) identified in Table II and Table III, indicate the efforts the county has made to further process each particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the dates that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular waste.

Carver County currently estimates that 10,639 tons of mixed municipal solid waste are being landfilled from Carver County. The county is cooperating with Scott County in the development of a resource recovery facility and is actively participating in efforts sponsored by the Solid Waste Management Coordinating Board to cooperatively manage solid waste.

Please use additional sheets as necessary to complete tables

Rec'd 10-14-91

COUNTY CERTIFICATION REPORT

COUNTY Carver County FACILITY ____

COMPLETED BY Michael Lein TITLE Env. Services Director PHONE 448-1217

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste
Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities that the generator of the waste aggregates for collection, but does not include auto hulks, street sweepings, ash, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste
Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing
The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification. Processing does not include storage, exchange, and/or transfer of waste.

1. What is the total amount of all solid waste generated in the county during the six months covered by this report? Unknown tons

2. What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? 21,500 tons

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 9
To Daryl Washington	From Mike Lein
Co.	Co.

COUNTY SOLID WASTE CERTIFICATION REPORT

FROM JANUARY 1, 1991 TO JUNE 30, 1991

FACILITY NAME NA COUNTY Carver

COMPLETED BY Michael Lein TITLE Env. Services Director PHONE 448-1217

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

Types of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete table 3
MSW	NA					
Non-MSW						
Construction-Demolition						
Industrial						
Other(specify) _____						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
Paper	7,356.48					
Glass	724.63					
Ferrous Scrap	57.55					
Non-Ferrous Scrap	78.49					
Yard Waste	684					
Other(specify) Plastic co-mingled cans	6.09 58.19					
TOTAL	8965.43					

Please use additional sheets as necessary to complete tables

COUNTY _____ FACILITY NAME _____

FROM 1-1-91 TO 6-30-91

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

List by generator the amount and type of waste that has been denied access or excluded from delivering waste to this facility

Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste.
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste.
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste.

Please use additional sheets as necessary to complete tables

OUNTY Colusa FACILITY NAME NA

ROM 1-1-91 TO 6-30-91

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

List by month the total amount of waste each county and/or resource recovery facility disposed at landfills; include in this table the amount of excess (TLO), unprocessed, reject, recovered (recycling) and residual wastes landfilled.

TYPE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Unprocessed or Excess wastes	NA					
Rejects						
Residuals						
Recycling						
Ash						
Total	✓					
List amount and disposal facility of excess or unprocessed wastes						
List amount and disposal facility of reject wastes						
List amount and disposal facility of residual wastes						
List amount and disposal facility of recovered wastes						
List amount and disposal facility of ash						

Please use additional sheets as necessary to complete tables

COUNTY Cascade FACILITY NAME [illegible]

FROM 6-1-91 TO 6-30-91

TABLE IV - DESCRIPTION OF EXCESS, REJECTS & RESIDUALS WASTES list type and/or description of waste; complete one section/table for each resource recovery facility	
Describe excess waste	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.
Describe reject wastes	Describe the current processing strategies to process this type of waste.
antity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.
Describe residual wastes	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.

Please use additional sheets as necessary to complete tables

OUNTY Carver FACILITY NAME [illegible]

OM 1-1-91 TO 6-30-91

TABLE V - QUANTITIES OF WASTES GENERATED AND COLLECTED IN COUNTIES THAT HAVE NOT MPLEMENTED DESIGNATION OF WASTES TO A RESOURCE RECOVERY FACILITY

escription/Type of waste	Describe plans for managing this type of waste.
MSW	Carver County is cooperatly with Scott Coung in the Dvelpment of a MSW composting facility.
uantity of waste approx. 11,500 tons	Describe the timeline to implement the management plan(s). Negociations are ongoing with a predicted mid 1993 start up date for the facility. * Total MSW minus recycling minus 5% waste reduction (1,075 tons)

escription/Type of waste	Describe plans for managing this type of waste.
antity of waste	Describe the timeline to implement the management plan(s).

cription/Type of waste	Describe plans for managing this type of waste.
ntity of waste	Describe the timeline to implement the management plan(s).

Please use additional sheets as necessary to complete tables

COUNTY Carver FACILITY NAME ---

FROM 1-1-91 TO 6-30-91

TABLE VI - DESCRIBE IN DETAIL THE COUNTY'S EFFORTS TO ENCOURAGE AND EMPLEMENT WASTE SHARING AGREEMENTS AMONG THE RESOURCE RECOVERY FACILITIES

For each description of waste (by facility) identified in Table III, indicate the efforts the county has made to further process that particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular description of waste.

Carver County is participatig in the development of waste sharing agreements with other counties through the Solid Waste Management Coordinating Board.

Please use additional sheets as necessary to complete tables

CARVER COUNTY

DATE: 1/1 THRU 6/30/90

RECYCLING TONS BY MATERIAL (Use attached conversion table)	Commercial/ Industrial	Resource Recovery	????????? Dump & Sort
PAPER: Corrugated Cardboard	903.74		
Newsprint	2.49		
Glossy/Magazine			
High Grade/Office	~~10,082.67~~ 504		
Mixed Grades/Junk Mail			
Phone Books			
Other (specify)			
METAL: Aluminum Food/Bev. Containers			
Steel/Tin Cans	1.25		
*Ferrous (iron) Scrap			
*Non-ferrous (other metal) Scrap			
Other (specify) comminaled tin/aluminum	3.54		
GLASS: Container			
Other (specify)			
PLASTICS: PET (SPI Code 1)			
HDPE (SPI Code 2)			
Film Plastics			
Mixed Plastics			
Other (specify)			
ORGANICS**: Yard Waste			
Tree/Brush/Wood Waste			
Other (specify)			
MISCELLANEOUS: Household Batteries			
Household Items (Include furniture/ housewares/toys,etc./NOT major appliances			
Textiles			
Other (specify)			
TOTAL	~~10,993.74~~ 5952.02	0	0
SEPARATELY MANAGED WASTES: Household Hazardous Waste			
Used Major Appliances			
Motor Vehicle Batteries			
Oil -- ONLY if reused/recycled;			
Tires -- NOT incinerated			
Other (specify)			
TOTAL	0	0	0

Daryl;
Note changes in
LRD reported tons.
on

*Excludes auto hulks
**If source separated & collected & processed separately

DAKOTA COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT
FROM JULY TO DECEMBER 1990

FACILITY NAME _____ COUNTY DAKOTA

COMPLETED BY LISA RING TITLE RESOURCE RECOVERY ANALYST PHONE 891-7002

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT
(complete one table for each resource recovery/disposal facility where county waste is processed/disposed; indicate quantities in tons)

Types of waste (please specify)	Waste received	Waste processed	Waste denied access to facility; complete table 2	Waste sent to landfills, complete table 3	Ash produced; complete table 4	Rejects & Residuals produced; table 5
MSW						
Non-MSW						
Construction-Demolition						
Yard Waste						
Industrial						
er(specify)						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS
(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
Paper	5,476.65					
Glass	1,421.10					
Ferrous Scrap	201.15					
Non-Ferrous Scrap						
Yard Waste				6,732.69		
Other(specify)	PLASTICS 32.80					
TAL	7,850.75		6,014	6,732.69		

HOUSEHOLD ITEMS - 716.40
BATTERIES - 2.65

Please use additional sheets as necessary to complete tables

FROM J-Y TO DECEMBER

ILITY NAME _____ COUNTY PLACER

PLETED BY LISA LINES TITLE RESOURCE RECOVERY ANALYST PHONE 991-7262

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

(complete one table for each resource recovery/disposal facility where county waste is processed/disposed; indicate quantities in tons)

es of waste ase specify)	Waste received	Waste processed	Waste denied access to facility; complete table 2	Waste sent to landfills, complete table 3	Ash produced; complete table 4	Rejects & Residues produced; table 5
W						
-MSW						
struction-molition						
d Waste						
ustrial						
er(specify)						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
er	5,476.65					
s	1,421.10					
rous Scrap	201.15					
-Ferrous P						
d Waste				6,732.69		
er(specify)	PLASTICS 32.80					
AL	7,850.75		6,914	6,732.69		

HOUSEHOLD ITEMS - 716.40
BATTERIES - 2.65

Please use additional sheets as necessary to complete tables

COUNTY DAKOTA FACILITY NAME [illegible]

FROM [illegible] TO [illegible]

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES
(From Table I; list by type and/or description of waste and complete one table for each facility)

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timelime to process this type of waste.
Description/type of waste	Describe why this waste was denied access to this facility?
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timelime to process this type of waste.
Description/type of waste	Describe why this waste was denied access to this facility?
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timelime to process this type of waste.

Please use additional sheets as necessary to complete tables

UNTY DAKOTA FACILITY NAME PINE BEND SANITARY LANDFILL

OM JULY TO DECEMBER 93

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

(from Table I; list by type and/or description of waste; each county and/or resource recovery facility must account for and complete a separate section for wastes disposed at different landfills; include in this table reject and excess wastes that exceeds or doesn't meet the facility's processing capacity)

Disposal Facility: PINE BEND	Describe why this waste was delivered to a disposal facility? Because the County does not have a resource recovery facility yet.
Description/type of waste: MSW	
Quantity: 662,098 cy / 198,630 tons	Describe the management plan and timelime to process this type of waste. The County hopes to begin operating a resource recovery facility in 1993
Could this waste be processed elsewhere? NO	
Disposal Facility: PINE BEND	Describe why this waste was delivered to a disposal facility. Because the County does not have a resource recovery facility yet.
Description/type of waste: FOUNDARY SAND	
Quantity: 62,489 cy / 18,747 tons	Describe the management plan and timelime to process this type of waste. The County hopes to begin operating a resource recovery facility in 1993.
Could this waste be processed elsewhere? NO	

Please use additional sheets as necessary to complete tables

COUNTY SPOTA FACILITY NAME BURNSVILLE SANITARY LANDFILL

FROM — TO —

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

(from Table I; list by type and/or description of waste; each county and/or resource recovery facility must account for and complete a separate section for wastes disposed at different landfills; include in this table reject and excess wastes that exceeds or doesn't meet the facility's processing capacity)

Disposal Facility: BURNSVILLE	Describe why this waste was delivered to a disposal facility? Because the County does not have a resource recovery facility yet
Description/type of waste: MSW	
Quantity: 146,221 CY 43,866 tons	Describe the management plan and timelime to process this type of waste.
Could this waste be processed elsewhere? NO	The county hopes to begin operating a resource recovery facility in 1993
Disposal Facility: BURNSVILLE	Describe why this waste was delivered to a disposal facility. Because the County does not have a resource recovery facility yet.
Description/type of waste: FOUNDRY SAND	
Quantity: 17,077 CY 5,130 tons	Describe the management plan and timelime to process this type of waste. The County hopes to begin operating a resource recovery facility in 1993
Could this waste be processed elsewhere? NO	

same

Please use additional sheets as necessary to complete tables

ITY [illegible] FACILITY NAME [illegible]

[illegible] TO

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY
(from Table I; please complete one section for each facility receiving ash)

tonnage of the ash or fuel (e.g. RDF) generated; and the facility where it was produced.

[illegible]el (e.g. RDF) is generated estimate ash implications and describe plans for managing this type of waste.

[illegible]sh is generated directly from waste processing operations indicate whether fuel was produced and describe the the management plan for [illegible]osing this type of waste.

Please use additional sheets as necessary to complete tables

COUNTY _____ FACILITY NAME _____

FROM _____ TO _____

TABLE V - QUANTITIES OF REJECTS & RESIDUALS PRODUCED BY PROCESSING

(from Table I; list type and/or description of waste; complete one section/table for each resource recovery facility)

Description/type of waste	Describe the current processing strategies to process this type of waste.
Quantity	
Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?

Describe the management plan, including a timeline, to process this type of waste using alternative strategies.

Please use additional sheets as necessary to complete tables

NTY ____ FACILITY NAME ____

1 ____ TO ____

ABLE VI - QUANTITIES OF OTHER WASTES GENERATED IN THE COUNTY (Include non-MSW waste streams generated within the county and waste that escape county's solid waste designation ordinaces)

ription/Type of waste	Describe plans for managing this type of waste.
onstruction/ Demolition Waste	This waste is currently being landfilled at Pine Bend, but since it is outside of the County's designation, I don't see what
antity of waste (by age)	Describe the timelime to implement the management plan(s). we can do about it just yet. Eventually the County would like to see this waste come under the designation ordinance and send the
6,814 tons approximately (Yearly estimate)	combustible fraction to the RDF
ription/Type of waste	Describe plans for managing this type of waste.
MSW	It is estimated that approximately 50 tons of MSW is leaving the County each week- about 200/month. With the economy the way it is and hiring freezes, etc, it
antity of waste (by nage)	Describe the timelime to implement the management plan(s). does not appear likely that the county will be able to employ people to research and discover
200 tons	where the waste is escaping and what haulers are disobeying the designation ordinance
ription/Type of waste	Describe plans for managing this type of waste.
ntity of waste (by nage)	Describe the timelime to implement the management plan(s).

Please use additional sheets as necessary to complete tables

EFFORTS BY THE COUNTY TO ENCOURAGE AND ENSURE COOPERATION AMONG RESOURCE RECOVERY FACILITIES

scribe in detail the county's effort to ensure that wastes identified in Table II and III were processed)

or each description of waste (by facility) identified in Table II and Table III, indicate the efforts the county as made to further process that particular waste, other facilities that were contacted to process that waste, he frequency and manner of contact made to the other facilities and the final decision of the facilities that vere contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery acility pursued cooperative waste agreements for additional processing of that particular description of waste.

The County is currently attempting to get a Resource Recovery Facility permitted by the MPCA. As you are undoubtedly aware this is turning into a completely political issue and is becoming increasingly difficult. The County hopes that the benefits of the facility will outweigh the misinformation and unsupported fears of the facility's opponents. The County still hopes to begin operations in 1993.

Post-it™ brand fax transmittal memo 7671 | # of pages ▸

To Carol Prest	From Met Council
Co. Solid Waste	Co.
Dept.	Phone #
Fax #	Fax #

Please use additional sheets as necessary to complete tables

COUNTY CERTIFICATION REPORT

COUNTY DAKOTA FACILITY _____

COMPLETED BY LISA KING et al TITLE RESOURCE RECOVERY PHONE 891-7002

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste
Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities that the generator of the waste aggregates for collection, but does not include auto hulks, street sweepings, ash, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste
Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing
The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification. Processing does not include storage, exchange, and/or transfer of waste.

1. What is the total amount of <u>all</u> solid waste generated in the county during the six months covered by this report? 257,624.24 tons

2. What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? 246,296.24 tons

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

COUNTY SOLID WASTE CERTIFICATION REPORT

FROM JANUARY 1, 1991 TO JUNE 30, 1991

FACILITY NAME _____ COUNTY OAKOTA

COMPLETED BY LISA RING TITLE RESOURCE RECOVERY ANALYST PHONE 891-7002

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

Types of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete table 3
MSW						
Non-MSW						
Construction-Demolition						
Industrial						
Other(specify) _____						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
Paper	6,617.94					
Glass	1,856.93					
Ferrous Scrap	1,213.83					
Non-Ferrous Scrap	964.85					
Yard Waste				8,043.21		
Other(specify) MISC. (ATTACH) UNDOCUMENTED	2,817.45				23,465.00	
TOTAL	13,471.03			8,043.21	23,465.00	

Please use additional sheets as necessary to complete tables

COUNTY DAKOTA FACILITY NAME _____

FROM JAN. TO JUNE, 1991

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

List by generator the amount and type of waste that has been denied access or excluded from delivering waste to this facility

Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility? N.A. - THERE IS NO FACILITY.
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste. DAKOTA COUNTY HOPES TO HAVE ITS RESOURCE RECOVERY FACILITY OPERATING IN LATE 1993 OR EARLY 1994.
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility? N.A. - THERE IS NO FACILITY.
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste. DAKOTA COUNTY HOPES TO HAVE ITS RESOURCE RECOVERY FACILITY OPERATING IN LATE 1993 OR EARLY 1994.
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility? N.A. - THERE IS NO FACILITY.
Quantity Was this waste processed elsewhere? By whom?	Describe the management plan and timeline to process this type of waste. DAKOTA COUNTY HOPES TO HAVE ITS RESOURCE RECOVERY FACILITY OPERATING IN LATE 1993 OR EARLY 1994.

Please use additional sheets as necessary to complete tables

OUNTY DAKOTA FACILITY NAME PINE BEND SANITARY LANDFILL

ROM JAN. TO JUNE 1991

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

List by month the total amount of waste each county and/or resource recovery facility disposed at landfills; include in this table the amount of excess (TLO), unprocessed, reject, recovered (recycling) and residual wastes landfilled.

TYPE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Unprocessed or Excess wastes						
Rejects						
Residuals						
Recycling						
Ash						
Total						
List amount and disposal facility of excess or unprocessed wastes						
List amount and disposal facility of reject wastes						
List amount and disposal facility of residual wastes						
List amount and disposal facility of recovered wastes						
List amount and disposal facility of ash						

Please use additional sheets as necessary to complete tables

COUNTY DAKOTA FACILITY NAME BURNSVILLE SANITARY LANDFILL

FROM JAN. TO JUNE, 1991

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

List by month the total amount of waste each county and/or resource recovery facility disposed at landfills; include in this table the amount of excess (TLO), unprocessed, reject, recovered (recycling) and residual wastes landfilled.

TYPE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Unprocessed or Excess wastes						
Rejects						
Residuals						
Recycling						
Ash						
Total						
List amount and disposal facility of excess or unprocessed wastes						
List amount and disposal facility of reject wastes						
List amount and disposal facility of residual wastes						
List amount and disposal facility of recovered wastes						
List amount and disposal facility of ash						

Please use additional sheets as necessary to complete tables

OUNTY DAKOTA FACILITY NAME _____

ROM JAN. TO JUNE, 1991

TABLE IV - DESCRIPTION OF EXCESS, REJECTS & RESIDUALS WASTES

list type and/or description of waste; complete one section/table for each resource recovery facility

Describe excess waste N.A.	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.
Describe reject wastes N.A.	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.
Describe residual wastes N.A.	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.

Please use additional sheets as necessary to complete tables

COUNTY DAKOTA FACILITY NAME BURNSVILLE LANDFILL

FROM JAN TO JUNE, 1991

TABLE V - QUANTITIES OF WASTES GENERATED AND COLLECTED IN COUNTIES THAT HAVE NOT IMPLEMENTED DESIGNATION OF WASTES TO A RESOURCE RECOVERY FACILITY

Description/Type of waste	Describe plans for managing this type of waste.
MSW	DAKOTA COUNTY HOPES TO CONSTRUCT A RESOURCE RECOVERY FACILITY.
Quantity of waste	**Describe the timeline to implement the management plan(s).**
140,950 yd^3 42,285 TONS	IT IS HOPED THAT THE RESOURCE RECOVERY FACILITY WILL BE OPERATIONAL IN LATE 1993 OR EARLY 1994.
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste	Describe the timeline to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste	Describe the timeline to implement the management plan(s).

Please use additional sheets as necessary to complete tables

OUNTY DAKOTA FACILITY NAME PINE BEND LANDFILL

ROM JAN. TO JUNE, 1991

ABLE V - QUANTITIES OF WASTES GENERATED AND COLLECTED IN COUNTIES THAT HAVE NOT IMPLEMENTED DESIGNATION OF WASTES TO A RESOURCE RECOVERY FACILITY

Description/Type of waste	Describe plans for managing this type of waste.
MSW	DAKOTA COUNTY HOPES TO CONSTRUCT A RESOURCE RECOVERY FACILITY.
Quantity of waste 530,137 YD³ 159,041 TONS	Describe the timeline to implement the management plan(s). IT IS HOPED THAT THE RESOURCE RECOVERY FACILITY WILL BE OPERATIONAL IN LATE 1993 OR EARLY 1994.
Description/Type of waste FOUNDRY SAND	Describe plans for managing this type of waste. THERE ARE CURRENTLY NO PLANS TO MANAGE THIS WASTE.
Quantity of waste 37,759 YD³ 11,328 TONS	Describe the timeline to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste	Describe the timeline to implement the management plan(s).

Please use additional sheets as necessary to complete tables

COUNTY DAKOTA FACILITY NAME _____

FROM JAN. TO JUNE, 1991

TABLE VI - DESCRIBE IN DETAIL THE COUNTY'S EFFORTS TO ENCOURAGE AND IMPLEMENT WASTE SHARING AGREEMENTS AMONG THE RESOURCE RECOVERY FACILITIES

For each description of waste (by facility) identified in Table III, indicate the efforts the county has made to further process that particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular description of waste.

ALTHOUGH DAKOTA COUNTY IS CURRENTLY INVOLVED IN PRELIMINARY DISCUSSIONS WITH OTHER COUNTIES, WITH REGARD TO WASTE SHARING AGREEMENTS, THE COUNTY DOES NOT PLAN TO COMMIT TO MAJOR DECISIONS ON THIS MATTER UNTIL THE RESOURCE RECOVERY FACILITY IS PERMITTED OR DENIED A PERMIT.

Please use additional sheets as necessary to complete tables

OFFICE OF WASTE MANAGEMENT REPORT
JULY 1, 1990 - JUNE 30, 1991

MATERIAL		Res. Recycling 7-12/90	Res. Recycling 1-6/91	Total Res. Recyc.	Doc. C/I Recycling 7-12/90	Doc. C/I Recycling 1-6/91	Total D C/I Recyc.	Nondoc. C/I Recycling 7-12/90	Nondoc. C/I Recycling 1-6/91	Total ND C/I Recyc	TOTAL FY 91 RECYCLING
PAPER:	Corrugate	29.77	240.75	270.52	76.23	235.36	311.59	0.00	0.00	0.00	582.11
	Newsprint	5916.28	5814.95	11731.23	6.03	33.92	39.95	0.00	0.00	0.00	11771.18
	Office	0.00	15.27	15.27	110.89	202.40	313.29	0.00	0.00	0.00	328.56
	Mixed	0.00	0.00	0.00	110.89	72.80	183.69	0.00	0.00	0.00	183.69
	Other (phone)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other (Mag.)	0.00	2.49	2.49	0.00	0.00	0.00	0.00	0.00	0.00	2.49
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL		5946.05	6073.46	12019.51	304.04	544.48	848.52	0.00	0.00	0.00	12868.03
METAL:	Al food/bev.	551.32	91.43	642.75	5.94	1.60	7.54	0.00	0.00	0.00	650.29
	Steel/tin	100.21	40.05	140.26	7.15	27.25	34.40	0.00	0.00	0.00	174.66
	Other scrap	93.93	1468.37	1562.30	0.00	2.34	2.34	0.00	0.00	0.00	1564.64
SUBTOTAL		745.46	1599.85	2345.31	13.09	31.19	44.28	0.00	0.00	0.00	2389.59
GLASS:	Container	1628.46	1847.48	3475.94	1.50	9.45	10.95	0.00	0.00	0.00	3486.89
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL		1628.46	1847.48	3475.94	1.50	9.45	10.95	0.00	0.00	0.00	3486.89
PLASTICS:	PET	0.00	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.61
	HDPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Mixed	28.44	116.76	145.20	0.36	4.28	4.64	0.00	0.00	0.00	149.84
	Other (film)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL		28.44	117.37	145.81	0.36	4.28	4.64	0.00	0.00	0.00	150.45
ORGANIC:	Yard Waste	8516.92	8043.21	16560.13	0.00	0.00	0.00	0.00	0.00	0.00	16560.13
	Tree/wood	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL		8516.92	8043.21	16560.13	0.00	0.00	0.00	0.00	0.00	0.00	16560.13
MISC.:	HHld batteries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	L.A. batteries	1019.69	631.83	1651.52	0.00	0.00	0.00	0.00	0.00	0.00	1651.52
	Major Appl.	905.80	1109.35	2015.15	0.00	0.00	0.00	0.00	0.00	0.00	2015.15
	Tires	515.98	198.22	714.20	0.00	0.00	0.00	0.00	0.00	0.00	714.20
	Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Food Waste	0.00	0.00	0.00	0.00	300.00	300.00	0.00	0.00	0.00	300.00
	Textiles	0.00	385.43	385.43	0.00	0.00	0.00	0.00	0.00	0.00	385.43
	Mech. Sep. Recy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other (HHW)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other (HHLD)	1022.60	492.65	1515.25	0.00	0.00	0.00	0.00	0.00	0.00	1515.25
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other(non-doc.)	0.00	0.00	0.00	0.00	0.00	0.00	21332.00	23465.00	44797.00	44797.00
SUBTOTAL		3464.07	2817.48	6281.55	0.00	300.00	300.00	21332.00	23465.00	44797.00	51378.55
TOTALS		20329.40	20498.85	40828.25	318.99	889.40	1208.39	21332.00	23465.00	44797.00	86833.64
OWM-FY91											

HENNEPIN COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT

COUNTY HENNEPIN FACILITY _____

COMPLETED BY Kathie Doty Principal Administrative Assistant 348-9266
Tim Goodman TITLE Solid Waste Division Manager PHONE 348-2863

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste
Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities that the generator of the waste aggregates for collection, but does not include auto hulks, street sweepings, ash, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste
Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing
The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification. Processing does not include storage, exchange, and/or transfer of waste.

1. What is the total amount of <u>all</u> solid waste generated in the county during the six months covered by this report? unknown tons

2. What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? 654,134 tons

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

FROM JANUARY 1, 1991 TO JUNE 30, 1991

LITY NAME _____ COUNTY HENNEPIN

PLETED BY Kathie Doty / Tim Goodman TITLE Principal Administrative Assistant / Solid Waste Division Manager PHONE 348-9[illegible]5 / 348-2[illegible]3

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

s of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete table 3
N	297,508	189,316	N/A	7,203	69,943	22,113
MSW	0	0	0	0	0	0
truction-olition	0	0	0	0	0	0
strial	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable
r(specify)						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
	0	0	0	0	0	0
	0	0	0	0	0	0
us Scrap	8,932	0	0	0	0	0
Ferrous	0	0	0	0	0	0
Waste	0	0	0	0	0	0
r(specify)	0	0	0	0	0	0
AL	8,932	0	0	0	0	0

Please use additional sheets as necessary to complete tables

OM _____ TO _____

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

List by generator the amount and type of waste that has been denied access or excluded from delivering waste to this facility

e. or origin of is waste	Describe the waste and indicate why this waste was denied access to this facility? Not available
uantity	Describe the management plan and timeline to process this type of waste.
as this waste processed sewhere? By whom?	
enerator or origin of is waste	Describe the waste and indicate why this waste was denied access to this facility?
uantity	Describe the management plan and timeline to process this type of waste.
Was this waste processed lsewhere? By whom?	
enerator or origin of is waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity	Describe the management plan and timeline to process this type of waste.
Was this waste processed lsewhere? By whom?	

Please use additional sheets as necessary to complete tables

NTY HENNEPIN FACILITY NAME HERC/NSP - Elk River

M _____ TO _____

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

y month the total amount of waste each county and/or resource recovery facility disposed at landfills; include in this table the unt of excess (TLO), unprocessed, reject, recovered (recycling) and residual wastes landfilled.

E	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
rocessed or ss wastes	736	0	0	0	4,157	2,310
cts	192	51	385	696	451	528
dunls	2,422	1,276	2,866	4,878	4,039	4,330
ycling	0	0	0	0	0	0
	11,570	10,128	10,181	13,686	11,903	12,475
l	14,920	11,455	13,432	19,260	20,550	19,643
amount and osal facility xcess or un- cessed wastes	736	0	0	0	4,157	2,310
	TO WOODLAKE				TO WOODLAKE	TO WOODLAKE
amount and osal facility eject wastes	260 HERC 2,162 NSP	272 HERC 1,004 NSP	220 HERC 2,646 NSP	329 HERC 4,549 NSP	258 HERC 3,781 NSP	233 HERC 4,097 NSP
amount and osal facility esidual es	10 HERC to Woodlake	11 HERC to Woodlake	8 HERC to Woodlake	6 HERC to Woodlake	18 HERC to Woodlake	18 HERC to Woodlake
	182 NSP to Elk River	40 NSP to Elk River	377 NSP to Elk River	691 NSP to Elk River	433 NSP to Elk River	510 NSP to Elk River
amount and osal facility ecovered es	917 HERC to Woodlake	838 HERC to Woodlake	607 HERC to Woodlake	922 HERC to Woodlake	674 HERC to Woodlake	748 HERC to Woodlake
	521 NSP to Elk River	436 NSP to Elk River	723 NSP to Elk River	988 NSP to Elk River	821 NSP to Elk River	736 NSP to Elk River
amount and osal facility sh	9,085 HERC to Laraway	8,190 HERC to Laraway	6,526 HERC to Laraway	10,050 HERC to Laraway	8,025 HERC to Laraway	9,184 HERC to Laraway
	2,485 NSP to Becker	1,938 NSP to Becker	3,654 NSP to Becker	3,636 NSP to Becker	3,878 NSP to Becker	3,291 NSP to Becker

Please use additional sheets as necessary to complete tables

FROM _____ TO _____

TABLE IV - DESCRIPTION OF EXCESS, REJECTS & RESIDUALS WASTES

list type and/or description of waste; complete one section/table for each resource recovery facility

Describe excess waste MMSW	Describe the current processing strategies to process this type of waste. HERC, NSP-ELK RIVER
Quantity 7,203	Could this waste be further processed? If so, by what methods and/or technology? Yes, if capacity was available at other facilities.
Disposal Facility Woodlake	Describe the management plan, including a timeline, to process this type of waste using alternative strategies. --Contracts with NSP-Newport and Reuter. --Potential contracts with other metropolitan counties as facilities are developed. --Potential exclusions to private facilities.
Describe reject wastes Oversized, stringy materials, etc. at NSP-Elk River	Describe the current processing strategies to process this type of waste. Processed at HERC, if possible.
Quantity 03	Could this waste be further processed? If so, by what methods and/or technology? Hennepin County is explaining the possibility of shearing some of the rejected waste.
Disposal Facility Elk River Woodlake	Describe the management plan, including a timeline, to process this type of waste using alternative strategies. Internal discussions are in process. Alternative strategies will be addressed in the Master Plan.
Describe residual wastes RDF residuals	Describe the current processing strategies to process this type of waste. None have been tried in the first half of 1991.
Quantity 19,811	Could this waste be further processed? If so, by what methods and/or technology? Residuals could possibly be composted or processed at a waste-to-energy facility.
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies. Hennepin County plans to gather better data on the composition of residuals and then explore the possibility of developing contracts to compost the residuals or send to HERC.

Please use additional sheets as necessary to complete tables

1 _____ ___ TO _____

LE V - QUANTITIES OF WASTES GENERATED AND COLLECTED IN COUNTIES THAT HAVE NOT
EMENTED DESIGNATION OF WASTES TO A RESOURCE RECOVERY FACILITY

ıption/Type of waste	Describe plans for managing this type of waste. Not applicable.
.ity of waste	Describe the timeline to implement the management plan(s).
;ption/Type of waste	Describe plans for managing this type of waste.
ity of waste	Describe the timeline to implement the management plan(s).
;ption/Type of waste	Describe plans for managing this type of waste.
.ity of waste	Describe the timeline to implement the management plan(s).

Please use additional sheets as necessary to complete tables

TABLE VI - DESCRIBE IN DETAIL THE COUNTY'S EFFORTS TO ENCOURAGE AND IMPLEMENT WASTE SHARING AGREEMENTS AMONG THE RESOURCE RECOVERY FACILITIES

For each description of waste (by facility) identified in Table III, indicate the efforts the county has made to further process that particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular description of waste.

Hennepin County has agreements in place with Reuter, Inc., and the Ramsey-Washington RDF facility whereby, if at any time, Hennepin has more MMSW than can be processed at HERC and NSP-Elk River, Hennepin may be able to send waste to the other facilities. In instances where said excess waste exists, staff contacts both facilities to see what capacity they have available. Waste is then routed appropriately.

Hennepin also has an agreement with Anoka whereby if Hennepin has excess waste and Anoka has not delivered its contracted amount to NSP-Elk River, Hennepin can send its waste to the facility as Anoka County waste.

Finally, Hennepin is discussing similar arrangements with other counties.

	TOTAL MUNICIPAL SOLID WASTE RECEIVED				NON-PROCESSIBLES		PROCESS REJECTS UNPROC		FERROUS RECOVERED		ASH RESIDUE	
	HERC	RSP-ER	RSP-REMOVT	LANDFILLS	HERC	RSP	HERC	RSP	HERC	RSP	HERC	RSP
JULY	32,147.65	20,530.26		2,013.36	26.46	1,529.00	206.24	2,874.00	938.12	786.00	7,136.95	3,721.00
AUGUST	33,395.16	20,267.78		1,316.64	12.26	1,670.00	488.79	2,903.00	858.54	729.00	10,148.06	3,302.00
SEPTEMBER	29,587.95	18,976.31		707.89	3.85	1,297.00	307.93	2,738.00	877.35	709.00	7,145.86	3,522.00
OCTOBER	21,105.41	22,942.24	1,235.31	6,587.68	11.32	1,737.00	198.27	4,304.00	668.94	857.00	5,743.64	3,164.00
NOVEMBER	32,282.34	13,743.36	98.17	6.12	6.59	963.00	409.04	1,599.00	1,056.86	572.00	8,977.54	2,820.00
DECEMBER	30,192.52	11,224.08		0.00	5.02	464.00	331.31	1,095.00	841.53	491.00	7,654.72	2,491.00
SECOND HALF 1990 TOTAL	178,711.03	107,684.03	1,333.48	11,131.69	65.50	7,600.00	1,941.58	15,513.00	5,241.34	4,144.00	46,806.77	19,020.00

March 15, 1991

RAMSEY COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT
FROM 7/1/90 to 12/31/90

(Note: items in bold are questions from the County Certification Report form issued by Metropolitan Council staff on February 4, 1991.)

COUNTY:	Ramsey
FACILITY:	Ramsey/Washington Resource Recovery Facility
COMPLETED BY:	Norm Schiferl
TITLE:	Program Analyst
PHONE:	292-7903

What is the total amount of all solid waste generated in the county during the six months covered by this report?

Not known at this time.

What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report?

The most recent official estimate by Ramsey County of waste generation is in the Ramsey County Master Plan for Solid Waste Management. The Master Plan shows an estimate for 1990 of 475,900 tons of waste generated. Assuming that the last half of 1990 accounts for half of the estimate, 237,950 tons were generated in the County during the six months covered by this report. This figure is essentially an estimate of mixed municipal solid waste (MSW) plus recyclables separated for recycling, including yard waste separated for composting and landspreading.

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

Information for TABLE I in the Certification form is contained in the following tables. The first table is a summary of waste management at the Ramsey/Washington County Resource Recovery Facility. All waste delivered from Ramsey and Washington Counties is reflected. For the last half of 1990, a separate column also reflects the totals for all waste received, including 1,313 tons delivered from Hennepin County. The second table summarizes waste management for waste delivered from only Ramsey County.

Note that Tons Delivered reflects Acceptable Waste and Unacceptable Waste, as defined in the Ramsey County Solid Waste Ordinance and Washington County Solid Waste Ordinance, that was received at the facility (see TABLE II from the Certification form for waste denied access to the facility).

SUMMARY OF MANAGEMENT OF WASTE
AT THE RAMSEY/WASHINGTON COUNTY RESOURCE RECOVERY FACILITY
1989 AND 1990

All Waste Received

Item	1/1/89 - 6/30/89	7/1/89 - 12/31/89	1/1/90 - 6/30/90	7/1/90 - 12/31/90 (not inc. Henn. Co.)	7/1/90 - 12/31/90 (inc. Henn. Co.)
Tons Delivered	177,739	193,891	205,469	204,258	205,591
Tons Processed[1]	128,266	143,662	168,856	163,132	164,245
% of Tons Del.	72.2%	74.1%	82.2%	79.9%	79.9%
Tons RDF	87,737	100,445	131,607	121,164	122,020
% of Tons Del.	49.4%	51.8%	64.1%	59.3%	59.4%
% of Tons Proc.	68.4%	69.9%	77.9%	74.3%	74.3%
Tons Ferrous Recy.	972	1,661	5,821	3,294	3,314
% of Tons Del.	0.5%	0.9%	2,8%	1.6%	1.6%
% of Tons Proc.	0.7%	1.2%	3.4%	2.0%	2.0%
Tons Landfilled					
Excess Waste[2]	44,560	41,401	33,421	38,591	38,810
Residue[3]	35,792	37,472	30,294	35,268	35,474
Ferrous not Mktd.	3,741	4,084	1,135	3,408	3,434
Total Landfilled	84,095	82,957	64,850	77,267	77,718
% of Tons Del.	47.3%	42.8%	31.6%	37.8%	37.8%

NOTES:
There are some slight discrepancies due to rounding.
[1] Waste that proceeds through the two processing lines.
[2] Waste that does not proceed directly through the processing lines, but is transferred to another waste facility.
[3] Material remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

Waste Received from Ramsey County[4]

Item	1/1/89 - 6/30/89	7/1/89 - 12/31/89	1/1/90 - 6/30/90	7/1/90 - 12/31/90
Tons Delivered	129,749	141,540	149,992	149,108
Tons Processed[1]	93,634	104,873	123,265	119,086
% of Tons Del.	72.2%	74.1%	82.2%	79.9%
Tons RDF	64,048	73,325	96,073	88,450
% of Tons Del.	49.4%	51.8%	64.1%	59.3%
% of Tons Proc.	68.4%	69.9%	77.9%	74.3%
Tons Ferrous Recy.	710	1,213	4,249	2,405
% of Tons Del.	0.5%	0.9%	2,8%	1.6%
% of Tons Proc.	0.7%	1.2%	3.4%	2.0%
Tons Landfilled				
Excess Waste[2]	32,529	30,223	24,397	28,171
Residue[3]	26,128	27,355	22,115	25,746
Ferrous not Mktd.	2,731	2,981	829	2,488
Total Landfilled	61,389	60,559	47,341	56,405
% of Tons Del.	47.3%	42.8%	31.6%	37.8%

NOTES:

There are some slight discrepancies due to rounding.

[1] Waste that proceeds through the two processing lines.

[2] Waste that does not proceed directly through the processing lines, but is transferred to another waste facility.

[3] Material remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

[4] Based on previous studies, Ramsey and Washington Counties have agreed that 73% of total waste received is attributable to Ramsey County.

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

Description/type of waste

Contractually defined unacceptable waste.

Quantity

14 tons

Describe why this waste was denied access to this facility?

The Service Agreement between Ramsey and Washington Counties, and Northern States Power Company (NSP) delineates the classes of materials that are not acceptable at the Resource Recovery Facility. Unacceptable waste includes waste which would likely pose a threat to health or safety or which may cause damage to or materially adversely affect the operation of the Facility.

Describe the management plan and timeline to process this type of waste.

This waste will continue to be managed as appropriate by category. The Counties, in conjunction with the Ramsey/Washington County Resource Recovery Project Board and NSP, as appropriate, will continue to explore methods to reduce the amount of this and other wastes that may be landfilled.

Was this waste processed elsewhere? By whom?

The final destination of all waste denied access to the Facility is the responsibility of the hauler.

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT LANDFILL

Disposal Facility

Pine Bend Landfill, Dakota County

Description

All waste accepted by NSP at the Facility is processed, according to the definition of "Processing" in Minn. Stat. Sec. 115A.03, Subd. 25, which is:

> "Processing" means the treatment of waste after collection and before disposal. Processing includes but is not limited to reduction, storage, separation, exchange, resource recovery, physical, chemical, or biological modification, and transfer from one waste facility to another.

At the Resource Recovery Facility, most solid waste received proceeds

through the two processing lines. Certain types of waste that are not suitable for these processing lines, along with any solid waste received which exceeds NSP's processing capabilities, are transferred from the tipping floor to Pine Bend Landfill. Residuals from the processing lines, and unmarketed ferrous metals are also landfilled.

Quantity

See table under TABLE I.

Could this waste be processed elsewhere?

If capacity is available at a facility where a particular type of waste would be processible.

Describe why this waste was delivered to a disposal facility.

1. Excess waste exceeded facility processing capacity.
2. Residue could not be further processed at the Facility.
3. Secondary materials could not be marketed.
4. Unacceptable materials could not be processed at the Facility.

Describe the management plan and timeline to process this type of waste.

Washington and Ramsey Counties, in conjunction with the Ramsey/Washington County Resource Recovery Project and NSP, continue to examine methods for managing this type of waste to divert it from landfilling. Specific methods currently include the following:

1. The Counties and NSP amended the Service Agreement in February 1991 to proceed with a residue processing system to produce additional RDF and recyclable material. Final engineering for this system is currently taking place. The system would include equipment to process residue into any one or more of the following: ferrous and non-ferrous metals; ground glass, stone, and grit; combustible material to be reinjected into the RDF stream; and a heavy residue fraction which may be landfilled.

2. Communication with Hennepin and Anoka Counties regarding the potential for processing certain waste at other processing facilities.

3. Installation of new equipment. In August 1989 new shredding and related equipment was installed which has increase the processing capacity on the processing lines.

4. Amendments to the Service Agreement between NSP and Ramsey and Washington Counties to provide an incentive

fee for NSP to process additional waste over the amounts specified in the original Service Agreement approved in 1986. The incentive fee concept was initiated in 1989 for a two-year period, and extended for the term of the Service Agreement in July 1990.

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY

RDF produced at the Facility is combusted at NSP's Red Wing and Wilmarth electrical generating plants. Management of the ash produced from the combustion of RDF is the responsibility of NSP.

TABLE V - QUANTITIES OF RESIDUALS PRODUCED BY PROCESSING

See TABLE III.

EFFORTS BY THE COUNTY TO ENCOURAGE AND ENSURE COOPERATION AMONG RESOURCE RECOVERY FACILITIES

See TABLES II and III.

COUNTY CERTIFICATION REPORT
FROM 7/1/91 to 12/31/91

(Note: items in bold are questions from the County Certification Report form issued by Metropolitan Council staff on July 26, 1991.)

COUNTY:	Ramsey
FACILITY:	Ramsey/Washington Resource Recovery Facility
COMPLETED BY:	Norm Schiferl
TITLE:	Program Analyst
PHONE:	292-7903

1. What is the total amount of all solid waste generated in the county during the six months covered by this report?

Not known at this time.

2. What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report?

The most recent official estimate by Ramsey County of total mixed municipal waste generation is in the Ramsey County Master Plan for Solid Waste Management. The Master Plan shows an estimate for 1990 (the Plan does not show an estimate for 1991) of 475,900 tons of waste generated. If this figure is divided in half to represent generation for one-half of a year, 237,950 tons would have been generated in the County during the six months covered by this report. This figure is essentially an estimate of mixed municipal solid waste (MSW) plus recyclables separated for recycling, including yard waste separated for composting and landspreading.

The most recent estimate of how the mixed municipal waste stream and selected separately managed waste streams were managed is contained in the Regional Solid Waste Management Data Report adopted by the Solid Waste Management Coordinating Board on June 26, 1991. This report shows that a total of 226,036 tons were managed during the first half of 1990 and 251,788 tons during the second half. These figures include: MSW; recyclables separated for recycling (that would have been placed in MSW were they not recycled); yard waste separated for composting and landspreading; yard waste reduction; and tires, used oil, and lead acid batteries separated for separate management.

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

Information for TABLE I in the Certification form is contained in the following tables. The first table is a summary of waste management at the Ramsey/Washington County Resource Recovery Facility. All waste delivered from Ramsey and Washington Counties is reflected. (Waste delivered from Hennepin County is not included.) The second table summarizes waste management for waste delivered from only Ramsey County.

Note that Tons Delivered reflects Acceptable Waste and Unacceptable Waste, as defined in the Ramsey County Solid Waste Ordinance and Washington County Solid Waste Ordinance, that was received at the facility (see TABLE II from the Certification form for waste denied access to the facility).

SUMMARY OF MANAGEMENT OF WASTE
AT THE RAMSEY/WASHINGTON COUNTY RESOURCE RECOVERY FACILITY
1989 - 1991

Waste Received from Ramsey and Washington Counties

Item	1/1/89 - 6/30/89	7/1/89 - 12/31/89	1/1/90 - 6/30/90	7/1/90 - 12/31/90	1/1/91 - 6/30/91
Tons Delivered	177,739	193,891	205,469	204,258	191,862
Tons Processed[1]	128,266	143,662	168,856	163,132	163,845
% of Tons Del.	72.2%	74.1%	82.2%	79.9%	85.4%
Tons RDF	87,737	100,445	131,607	121,164	133,964
% of Tons Del.	49.4%	51.8%	64.1%	59.3%	69.8%
% of Tons Proc.	68.4%	69.9%	77.9%	74.3%	81.8%
Tons Ferrous Recy.	972	1,661	5,821	3,294	1,989
% of Tons Del.	0.5%	0.9%	2,8%	1.6%	1.0%
% of Tons Proc.	0.7%	1.2%	3.4%	2.0%	1.2%
Tons Landfilled					
Excess Waste[2]	44,560	41,401	33,421	38,591	31,926
Residue[3]	35,792	37,472	30,294	35,268	23,731
Ferrous not Mktd.	3,741	4,084	1,135	3,408	4,035
Total Landfilled	84,095	82,957	64,850	77,267	59,692
% of Tons Del.	47.3%	42.8%	31.6%	37.8%	31.1%

NOTES:

There may be slight discrepancies due to rounding. Also, to account precisely for inputs and outputs at the Facility during each time period, additional information would need to be considered regarding moisture loss of waste, and the inventory of waste on the tipping floor at the beginning and end of each period.

[1] Waste that proceeds through the two processing lines.

[2] Waste that does not proceed directly through the processing lines, bu is transferred to another waste facility; includes non-processible waste.

[3] Material remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

Waste Received from Ramsey County[4]

Item	1/1/89 - 6/30/89	7/1/89 - 12/31/89	1/1/90 - 6/30/90	7/1/90 - 12/31/90	1/1/91 - 6/30/91
Tons Delivered	129,749	141,540	149,992	149,108	140,059
Tons Processed[1]	93,634	104,873	123,265	119,086	119,607
% of Tons Del.	72.2%	74.1%	82.2%	79.9%	85.4%
Tons RDF	64,048	73,325	96,073	88,450	97,794
% of Tons Del.	49.4%	51.8%	64.1%	59.3%	69.8%
% of Tons Proc.	68.4%	69.9%	77.9%	74.3%	81.8%
Tons Ferrous Recy.	710	1,213	4,249	2,405	1,452
% of Tons Del.	0.5%	0.9%	2,8%	1.6%	1.0%
% of Tons Proc.	0.7%	1.2%	3.4%	2.0%	1.2%
Tons Landfilled					
Excess Waste[2]	32,529	30,223	24,397	28,171	23,306
Residue[3]	26,128	27,355	22,115	25,746	17,324
Ferrous not Mktd.	2,731	2,981	829	2,488	2,946
Total Landfilled	61,389	60,559	47,341	56,405	43,576
% of Tons Del.	47.3%	42.8%	31.6%	37.8%	31 %

NOTES:

There are some slight discrepancies due to rounding.

[1] Waste that proceeds through the two processing lines.

[2] Waste that does not proceed directly through the processing lines, b is transferred to another waste facility; includes non-processible waste.

[3] Material remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

[4] Based on previous studies, Ramsey and Washington Counties have agree that 73% of total waste received from the two counties is attributab to Ramsey County.

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

Generator or origin of this waste. Quantity.

During the first half of 1991, fourteen loads with a total of 47,258.30 pounds (23.6 tons) were rejected at the Ramsey/Washington County Resource Recovery Facility. These loads included two loads with a total of 303.3 pounds of asbestos, and twelve loads with a total of 46,955 pounds of medical waste. The generator and hauler of the asbestos wastes are unknown. The generator of five of the medical waste loads is unknown, while the other seven loads were generated by several hospitals.

Describe the waste and indicate why this waste was denied access to this facility.

The Service Agreement between Ramsey and Washington Counties, and Northern States Power Company (NSP) delineates the classes of materials that are not acceptable at the Resource Recovery Facility. Unacceptable waste includes waste which would likely pose a threat to health or safety, or which may cause damage to or materially adversely affect the operation of the Facility; the Service Agreement lists specific unacceptable wastes.

Was this waste processed elsewhere? By whom?

The final destination of all waste denied access to the Facility is the responsibility of the hauler. The Ramsey County Solid Waste Ordinance (Section XII, Subsection 3.B.) provides that rejected waste must be disposed in accordance with all applicable laws.

Describe the management plan and timeline to process this type of waste.

This waste will continue to be managed as appropriate by category. The Counties, in conjunction with the Ramsey/Washington County Resource Recovery Project Board and NSP, as appropriate, will continue to explore methods to reduce the amount of this and other wastes that may be landfilled. Over the operational history of the Facility, NSP has altered its equipment and operations to be able to manage more of the waste stream (see table under TABLE I, "Summary of Management of Waste at the Ramsey/Washington County Resource Recovery Facility"). This process will continue to address various wastes that are currently unacceptable to NSP.

NSP and the Counties have also been discussing problem materials with the Minnesota Office of Waste Management, in order to ensure appropriate management of these materials.

NSP and the Counties are currently addressing medical waste issues, and are working with the Minnesota Pollution Control Agency and the Minnesota Department of Health to ensure that NSP's employees' health and safety are protected when managing medical waste.

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT LANDFILL

All waste accepted by NSP at the Facility between January 1 and June 30, 1991 was processed, according to the definition of "Processing" in Minn. Stat. Sec. 115A.03, Subd. 25, which is:

> "Processing" means the treatment of waste after collection and before disposal. Processing includes but is not limited to reduction, storage, separation, exchange, resource recovery, physical, chemical, or biological modification, and transfer from one waste facility to another.

(Effective August 1, 1991, for the purposes of Minn. Stat. Sec. 473.848, this definition has been changed to exclude transfer, exchange and storage.)

At the Resource Recovery Facility, most solid waste received proceeds through the two processing lines. During the reporting period, certain types of waste that were not suitable for these processing lines, along with any solid waste received which exceeded NSP's processing capabilities, were transferred from the tipping floor to Pine Bend Landfill, along with residuals from the processing lines. Unmarketed ferrous metals were also landfilled.

For quantities of specific wastes, see table under TABLE I, "Summary of Management of Waste at the Ramsey/Washington County Resource Recovery Facility." Also, a monthly summary of statistical information on quantities of waste types, prepared by the Ramsey/Washington County Resource Recovery Project, is being forwarded under separate cover.

With regard to ash, management of the ash produced from the combustion of RDF at NSP's Red Wing and Wilmarth electrical generating plants is the responsibility of NSP.

TABLE IV - DESCRIPTION OF EXCESS, REJECTS & RESIDUALS WASTES

Excess Waste

Describe excess waste. Excess waste is waste that does not proceed directly through the processing lines at the Ramsey/Washington County Resource Recovery Facility, but is transferred to another waste facility. Excess waste includes both Processible Waste and Non-Processible Waste, as defined in the Service Agreement between Ramsey and Washington Counties and NSP, as amended. (Excess waste is not a defined term in the Service Agreement, and should not be confused with the defined term, Excess County Waste.)

Quantity. See table under TABLE I, "Summary of Management of Waste at the Ramsey/Washington County Resource Recovery Facility."

Disposal facility. To date, all excess waste has been disposed at Pine Bend Landfill in Dakota County.

Describe the current processing strategies to process this type of waste. Installation of new equipment and establishment of incentives for NSP have resulted in reduced quantities of excess waste. In August 1989 new shredding and related equipment was installed which has increased the processing capacity on the processing lines at the Facility. Through amendments to the Service Agreement between Ramsey and Washington Counties, an incentive fee concept was initiated in 1989 for a two-year period, and extended in July 1990 for the term of the Service Agreement. There is an incentive fee for NSP to process additional waste over the amounts specified in the original Service Agreement approved in 1986.

Could this waste be further processed? If so, by what methods and/or technology? Excess waste includes both Processible and Non-Processible Waste. Ramsey and Washington Counties, the Ramsey/Washington County Resource Recovery Project, and NSP are involved in efforts with Hennepin County to explore the potential for processing Non-Processible Waste at the HERC mass burn facility. NSP has indicated that it can increase its capabilities to process Processible Waste due to availability of combustion capacity at its Wilmarth power plant and ongoing improvements in processing capability at the Facility in Newport.

Describe the management plan, including a timeline, to process this type of waste using alternative strategies. The efforts described in the previous paragraph are in progress.

Reject Wastes

Describe reject wastes. Rejects is a defined term in the Service Agreement. It includes Non-Processible Waste, which is incorporated in the discussion on excess waste above, and residuals (not a defined term in the Service Agreement), which is discussed below.

Residual Wastes

Describe residual wastes. Residuals refers to materials remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

Quantity. See table under TABLE I, "Summary of Management of Waste at the Ramsey/Washington County Resource Recovery Facility."

Disposal facility. To date, all residual wastes have been disposed at Pine Bend Landfill in Dakota County.

Describe the current processing strategies to process this type of waste. Could this waste be further processed? If so, by what methods and/or technology? Describe the management plan, including a timeline, to process this type of waste using alternative strategies.

The Counties and NSP amended the Service Agreement in February 1991 to proceed with a residue processing system to produce additional RDF and recyclable material. NSP has ordered the equipment, and the system is

expected to be in operation during 1992. The system will include equipment to process residue into any one or more of the following: ferrous and non-ferrous metals; ground glass, stone, and grit; combustible material to be reinjected into the RDF stream; and a heavy residue fraction. The heavy residue fraction would be landfilled, or processed at another resource recovery facility if appropriate technology and capacity becomes available to process this material.

TABLE V - QUANTITIES OF WASTES GENERATED AND COLLECTED IN COUNTIES THAT HAVE NOT IMPLEMENTED DESIGNATION OF WASTES TO A RESOURCE RECOVERY FACILITY

Not applicable to Ramsey County.

TABLE VI - DESCRIBE IN DETAIL THE COUNTY'S EFFORTS TO ENCOURAGE AND IMPLEMENT WASTE SHARING ARRANGEMENTS AMONG THE RESOURCE RECOVERY FACILITIES.

Ramsey County is participating with the Solid Waste Management Coordinating Board (SWMCB), which is coordinating waste sharing arrangements. The SWMCB has a three tiered approach to waste sharing:

1. Develop arrangements between existing facilities to process MSW;
2. Develop arrangements between existing facilities and counties without designation to process MSW; and
3. Develop arrangements between facilities to process residue.

Ramsey County has been working with other counties and NSP on the first tier:

The Ramsey/Washington County Resource Recovery Facility is owned and operated by NSP. Pursuant to the Service Agreement, dated October, 1986, and approved by the Metropolitan Council, NSP is free to receive waste from other counties, provided that receipt of such other waste does not impair NSP's contractual commitments to Ramsey and Washington Counties. This provision was included to allow NSP the ability to compete in the waste management industry to obtain waste and to maximize use of its facility in Newport. This provision encourages waste sharing by allowing NSP to negotiate for unprocessed or excess waste with other counties, and use the facility to its greatest extent. NSP has negotiated such an agreement with Hennepin County, and Hennepin County did deliver waste to Newport in the past year.

The Service Agreement between NSP and the counties has successfully privatized resource recovery in the two counties. Because of this relationship, NSP is responsible for the excess and non-processible waste. This means that it is NSP that controls where unprocessed waste flows. The requirements in Minn. Stat. Section 473,848, as amended in 1991, now require NSP to certify that processing capacity is not available if waste is landfilled. It is NSP's responsibility, therefore, to seek that capacity.

It is important to note that Ramsey and Washington Counties have also been working with NSP to ensure that excess waste, including non-processible waste, is managed appropriately. The Counties have been working through the SWMCB to facilitate negotiations between NSP and other counties. The Counties and NSP are also working on potential amendments to the Service Agreement to provide for expedient transfer of unprocessed waste to other facilities. The Counties are negotiating with Anoka and Hennepin counties to develop arrangements to encourage waste sharing.

The Counties and NSP have been exploring residue management for several years, and NSP is in the process of adding equipment to further process residue. Depending on the character and quantity of residue that remains after that system is operational, the Counties and NSP may explore other processing opportunities in the system for that material.

SCOTT COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT

COUNTY Scott FACILITY No current disposal facility

COMPLETED BY Michael Ryan TITLE Solid Waste Coordinator PHONE 496-8177

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste

Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities which is generated and collected in aggregate, but does not include street sweepings, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste

Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing

The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification.

What is the total amount of all solid waste generated in the county during the six months covered by this report? _____ tons * See last page

What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? 15652 tons - landfilled only.

Note mixed municipal solid waste is not mixed municipal solid waste until it is generated and collected in aggregate. *Continued below.

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

* Solid Waste that is generated and managed separately is not mixed municipal solid waste. Therefore, we have reported what was collected in aggregate.

COUNTY CERTIFICATION REPORT

FROM July 1, 1990 **TO** Dec. 31, 1990

FACILITY NAME Scott County does not currently have any disposal facilities **COUNTY** Scott County

COMPLETED BY Michael Ryan **TITLE** S.W. Coord. **PHONE** 496-8177

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

(complete a table for each resource recovery/disposal facility where county waste is processed/disposed; use tons)

Types of waste	Waste received	Waste processed Energy	Waste recycled	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Ash produced; complete table 4	Residuals produced; complete table 5
MSW					15,652		
Non-MSW							
Construction-Demolition							
Yard Waste							
Industrial							
Other(specify) tires		Sold to PU *1456					
Other(specify) used oil		*274					
Paper			5389				
Glass			371				
Ferrous Scrap			5731				
Non-Ferrous Scrap			260				
Yard Waste			624				
Other(specify) tires			364				
Other(specify) appliances			71				
auto batteries			10				
TOTAL			12820				

* Not part of reported Municipal Solid Waste: 15652

PU = Public Utility

Please use additional sheets as necessary to complete tables

'OUNTY Scott

FACILITY NAME Scott County does not have a resource recovery facility, currently

ROM _____ TO _____

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

(From Table I; list by type and/or description of waste and complete one table for each facility)

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity	Describe the management plan and timelime to process this type of waste.

Was this waste processed elsewhere? By whom?

Description/type of waste	Describe why this waste was denied access to this facility?
Quantity	Describe the management plan and timelime to process this type of waste.

Was this waste processed elsewhere? By whom?

Please use additional sheets as necessary to complete tables

COUNTY Scott

FACILITY NAME Scott County does not currently have a sanitary landfill

FROM _____ TO _____

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

(from Table I; list by type and/or description of waste; each county and/or resource recovery facility must account for and complete a separate section for wastes disposed at different landfills; include in this table reject and excess wastes that exceed or do not meet the facility's processing capacity)

Disposal Facility Burnsville Ponderosa McLeod Pine Bend	Describe why this waste was delivered to a disposal facility? Scott County's Compost facility is still in the negotiation stages. No waste designation authority currently exists to direct this waste to a resource recovery facility elsewhere.
Description/type of waste Municipal Solid Waste	
Quantity 15,652 tons	Describe the management plan and timelime to process this type of waste. Scott County is encouraging haulers to increase type and quantity of recyclable materials through "PERC" rebate incentive program, providing curb-side containers, and assisting in public information. A time line for the compost facility is being revised and will be submitted as an addendum to this report before April 1, 1991.
Could this waste be processed elsewhere? Doubtful, haulers are aggressively seeking alternatives	
Disposal Facility	Describe why this waste was delivered to a disposal facility.
Description/type of waste	
Quantity	Describe the management plan and timelime to process this type of waste.
Could this waste be processed elsewhere?	

Please use additional sheets as necessary to complete tables

'OUNTY Scott FACILITY NAME _____

ROM _____ TO _____

Does Not Apply

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY

(from Table I; please complete one section for each facility receiving ash)

Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.
Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.
Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.

Please use additional sheets as necessary to complete tables.

COUNTY Scott

FACILITY NAME Scott County does not currently have a sanitary landfill

FROM _____ TO _____

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

(from Table I; list by type and/or description of waste; each county and/or resource recovery facility must account for and complete a separate section for wastes disposed at different landfills; include in this table reject and excess wastes that exceed or do not meet the facility's processing capacity)

Disposal Facility Burnsville Ponderosa McLeod Pine Bend	Describe why this waste was delivered to a disposal facility? Scott County's Compost facility is still in the negotiation stages. No waste designation authority currently exists to direct this waste to a resource recovery facility elsewhere.
Description/type of waste Municipal Solid Waste	
Quantity 15,652 tons	Describe the management plan and timelime to process this type of waste. Scott County is encouraging haulers to increase type and quantity of recyclable materials through "PERC" rebate incentive program, providing curb-side containers, and assisting in public information. A time line for the compost facility is being revised and will be submitted as an addendum to this report before April 1, 1991.
Could this waste be processed elsewhere? Doubtful, haulers are aggressively seeking alternatives	
Disposal Facility	Describe why this waste was delivered to a disposal facility.
Description/type of waste	
Quantity	Describe the management plan and timelime to process this type of waste.
Could this waste be processed elsewhere?	

Please use additional sheets as necessary to complete tables

'OUNTY Scott FACILITY NAME _____

ROM _____ TO _____

Does Not Apply

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY

(from Table I; please complete one section for each facility receiving ash)

Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.
Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.
Disposal Facility	Describe alternative plans for managing this type of waste.
List tons of ash generated; and the facility where it was produced	Describe the timelime to implement the management plan.

Please use additional sheets as necessary to complete tables.

COUNTY Scott FACILITY NAME _____

OM _____ TO _____ Does Not Apply

TABLE V - QUANTITIES OF RESIDUALS PRODUCED BY PROCESSING

(from Table I; list type and/or description of waste; complete one section/table for each resource recovery facility)

Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timelime to further process this type of waste.
Quantity	
Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timelime to further process this type of waste.
Quantity	
Disposal Facility	Could this waste be further processed? If so, by what methods and/or technology?
Description/type of waste	Describe the management plan and timelime to further process this type of waste.
Quantity	

Please use additional sheets as necessary to complete tables

COUNTY Scott FACILITY NAME _____

FROM _____ TO _____

No Hard Information Available

TABLE VI - QUANTITIES OF OTHER WASTES GENERATED IN THE COUNTY (include non-MSW waste streams generated within the county and wastes that "escape" county's solid waste designation ordinances)

Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste (by tonnage)	Describe the timelime to implement the management plan(s).

Please use additional sheets as necessary to complete tables

EFFORTS BY THE COUNTY TO ENCOURAGE AND ENSURE COOPERATION AMONG RESOURCE RECOVERY FACILITIES (describe in detail efforts to ensure wastes identified in Table II and III were processed)

For each description of waste (by facility) identified in Table II and Table III, indicate the efforts the county has made to further process each particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the dates that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular waste.

Scott County has no current waste disposal facility.

1. Coordination with other counties through SWMCB, Metro Council, MnOWM and MPCA.
2. Report requirement through licensing, allows Scott County to obtain data relative to type, quantity and marketability of recyclables, as well as non-recyclable waste. Follow-up coordination with haulers allows Scott County to exchange information with haulers.

Question #1 from first page:

This question cannot be answered with the data we collect. Counties are not required to plan for or manage <u>all</u> solid waste.

Although we acknowledge that county annual reports shall contain "information, as the council may prescribe in its policy plan, concerning solid waste generation and management within the county." 473.803 Subd. 3. Counties are only responsible "for abating to the greatest feasible and prudent extent the need for and practice of land disposal of mixed municipal solid waste..." 473.803 Subd. 1c. In the absence of any specific mandates, (except for Household Hazardous Waste and recycling goals) Scott County has concentrated its efforts on Mixed Municipal Solid Waste and not the broader category of Solid Waste. We have not attempted to quantify nor address solid wastes which are not Mixed Municipal Solid Wastes.

COUNTY CERTIFICATION REPORT

COUNTY SCOTT FACILITY No current disposal facility

COMPLETED BY Julie Grist TITLE Solid Waste Coordinator PHONE 496-8177

For purposes of this report, the following definitions will be used:

Mixed Municipal Solid Waste
Garbage, refuse, and other solid waste from residential, commercial, industrial, and community activities that the generator of the waste aggregates for collection, but does not include auto hulks, street sweepings, ash, construction debris, mining waste, foundry sand, and other materials, if they are not capable of being processed by resource recovery as determined by the Council. Separately managed special wastes such as lead acid batteries, tires, used oil, appliances and industrial wastes, are also not included, provided they are not disposed of in sanitary landfills.

Solid Waste
Garbage, refuse, sludge from a water supply treatment plant or air contaminant treatment facility, and other discarded waste materials and sludges, in solid, semisolid, liquid, or contained gaseous form, resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include hazardous waste; animal waste used as fertilizer; earthen fill, boulders, rock; sewage sludge; solid or dissolved material in domestic sewage or other common pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents or discharges which are point sources subject to permits under section 402 of the federal Water Pollution Control Act, as amended, dissolved materials in irrigation return flows; or source, special nuclear, or by-product materials as defined by The Atomic Energy Act of 1954, as amended.

Processing
The treatment of waste after collection and before disposal. Processing includes reduction; separation; resource recovery; and physical, chemical, or biological modification. Processing does not include storage, exchange, and/or transfer of waste.

1. What is the total amount of <u>all</u> solid waste generated in the county during the six months covered by this report? 71,700 * tons * see last page

2. What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report? 16,600 tons

Complete the following tables as provided and quantify all figures in tons. Attach additional pages if necessary.

Attach copies of all facility reports received by the county during the reporting period.

FROM JANUARY 1, 1991 TO JUNE 30, 1991

ACILITY NAME No current disposal facility COUNTY SCOTT

OMPLETED BY Julie Grist TITLE Solid Waste Coordinator PHONE 496-8177

TABLE I - SOLID WASTE CERTIFICATION REPORT - SUMMARY TABLE

(complete this table for each resource recovery and/or disposal facility where county waste is managed; indicate quantities in tons)

Types of waste	Waste received	Waste processed into energy	Waste denied access to facility; complete table 2	Waste sent to landfills; complete table 3	Quantity of ash produced; complete table 3	Quantity of residuals; complete table 3
MSW				16,600		
Non-MSW						
Construction-Demolition	140,500					
Industrial						
Other(specify) _____						

SUPPLEMENTARY DATA ABOUT RECOVERED AND/OR RECYCLED MATERIALS

(please indicate the amount and type of material recycled and/or recovered in tons)

Types	MSW	Non-MSW	Const-Demo	Yard Waste	Industrial	Other(specify)
Paper						
Glass		* Please refer to attachment				
Ferrous Scrap						
Non-Ferrous Scrap						
Yard Waste						
Other(specify) _____						
TOTAL						

Please use additional sheets as necessary to complete tables

COUNTY SCOTT FACILITY NAME

FROM 1-1-90 TO 6-30-91

Does not apply

TABLE 11 - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

List by generator the amount and type of waste that has been denied access or excluded from delivering waste to this facility

Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity	Describe the management plan and timeline to process this type of waste.
Was this waste processed elsewhere? By whom?	
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity	Describe the management plan and timeline to process this type of waste.
Was this waste processed elsewhere? By whom?	
Generator or origin of this waste	Describe the waste and indicate why this waste was denied access to this facility?
Quantity	Describe the management plan and timeline to process this type of waste.
Was this waste processed elsewhere? By whom?	

Please use additional sheets as necessary to complete tables

OUNTY SCOTT FACILITY NAME No current disposal facility

ROM 1-1-90 TO 6-30-91

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT A LANDFILL

List by month the total amount of waste each county and/or resource recovery facility disposed at landfills; include in this table the amount of excess (TLO), unprocessed, reject, recovered (recycling) and residual wastes landfilled.

TYPE	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Unprocessed or Excess wastes	2,760	2,770	2,760	2,760	2,770	2,770
Rejects						
Residuals						
Recycling						
Ash						
Total						
List amount and disposal facility of excess or unprocessed wastes	Total amount equals 16,600 tons. Waste goes to the Burnsville, Ponderosa, McLeod, Pine Bend and Tellijohn Landfills.					
List amount and disposal facility of reject wastes						
List amount and disposal facility of residual wastes						
List amount and disposal facility of recovered wastes						
List amount and disposal facility of ash						

Please use additional sheets as necessary to complete tables

COUNTY SCOTT FACILITY NAME No currrent disposal facility

FROM 1-1-90 TO 6-30-91

Does not apply

TABLE IV - DESCRIPTION OF EXCESS, REJECTS & RESIDUALS WASTES
list type and/or description of waste; complete one section/table for each resource recovery facility

Describe excess waste	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.
Describe reject wastes	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.
Describe residual wastes	Describe the current processing strategies to process this type of waste.
Quantity	Could this waste be further processed? If so, by what methods and/or technology?
Disposal Facility	Describe the management plan, including a timeline, to process this type of waste using alternative strategies.

Please use additional sheets as necessary to complete tables

COUNTY SCOTT FACILITY NAME No current disposal facil

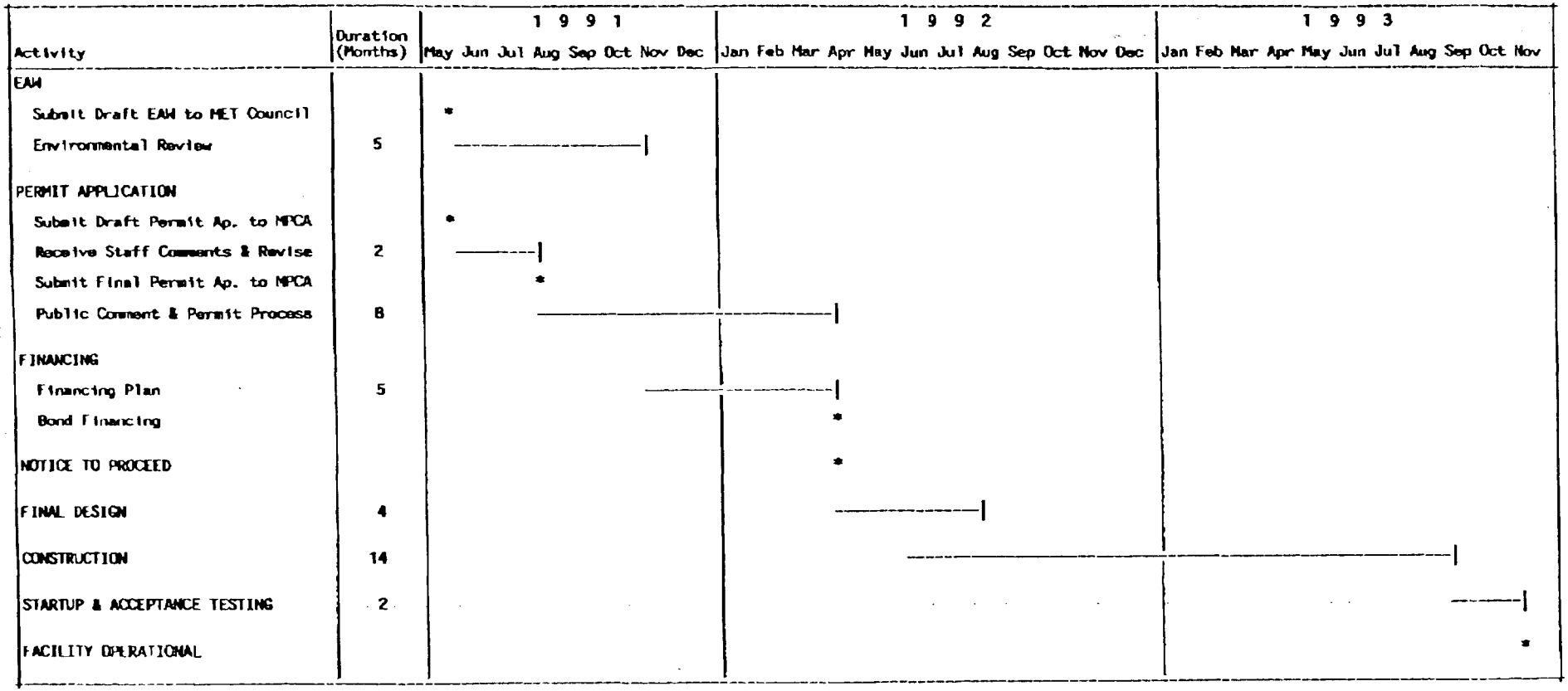
FROM 1-1-90 TO 6-30-91

TABLE V - QUANTITIES OF WASTES GENERATED AND COLLECTED IN COUNTIES THAT HAVE NOT IMPLEMENTED DESIGNATION OF WASTES TO A RESOURCE RECOVERY FACILITY

Description/Type of waste	Describe plans for managing this type of waste.
Municipal Solid Waste	Presently, Scott Co. is negotiating for the Scott/Carver Compost Facility. Waste generated during the reporting period goes to landfills listed on Table III. Designation is also being negotiated and planned for implementation in 1991.
Quantity of waste	Describe the timeline to implement the management plan(s).
16,600 tons	Scott Co. continues to encourage haulers to increase recycling through the "PERC" incentive program. A timeline for the Scott/Carver Compost Facility is attached.
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste	Describe the timeline to implement the management plan(s).
Description/Type of waste	Describe plans for managing this type of waste.
Quantity of waste	Describe the timeline to implement the management plan(s).

Please use additional sheets as necessary to complete tables

SCOTT/CARVER RESOURCE RECOVERY FACILITY
TIMELINE
7/2/91



OUNTY SCOTT FACILITY NAME No current disposal facility

ROM 1-1-90 TO 6-30-91

TABLE VI - DESCRIBE IN DETAIL THE COUNTY'S EFFORTS TO ENCOURAGE AND IMPLEMENT WASTE SHARING AGREEMENTS AMONG THE RESOURCE RECOVERY FACILITIES

For each description of waste (by facility) identified in Table III, indicate the efforts the county has made to further process that particular waste, other facilities that were contacted to process that waste, the frequency and manner of contact made to the other facilities and the final decision of the facilities that were contacted. Include the tonnage of the waste and the date that the county and/or the resource recovery facility pursued cooperative waste agreements for additional processing of that particular description of waste.

Scott County has no current disposal facility.

1. Coordination with other counties through SWMCB, Metro Council, MNOWM and the MPCA. Working closely with Carver County on the Compost Facility Project.

2. Report requirement through licensing, allows Scott County to obtain data relative to type, quantity and marketability of recyclables, as well as non-recyclable waste. Follow-up coordination with haulers allows Scott County to exchange information among the haulers.

Question #1 from page 1:

The tonnage reported is a number we feel comfortable reporting in that it reflects amounts that we have actual figures on. We do not feel that this number captures ALL solid waste generated in the county and that we could not capture the total amount with our reporting mechanisms in place.

Please use additional sheets as necessary to complete tables

WASHINGTON COUNTY
CERTIFICATION REPORTS
FY 1991

COUNTY CERTIFICATION REPORT

From July 1, 1990 to December 31, 1990

COUNTY:	Washington
FACILITY:	Ramsey/Washington Resource Recovery Facility
COMPLETED BY:	David Hagen
TITLE:	Senior Environmental Health Specialist
PHONE:	430-6678

What is the total amount of <u>all</u> solid waste generated in the county during the six months covered by this report?

Not known at this time.

What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report?

The October 1986 Washington County <u>Solid Waste Management Master Plan</u> provides the most recent official estimate of the County's waste generation. The Plan gives a 1990 mixed municipal solid waste (MSW) estimate of 94,427 tons. Assuming that the last half of 1990 accounts for half of the estimate; 47,000 tons of MSW were generated in the County during the six months covered by this report.

TABLE I - RESOURCE RECOVERY/DISPOSAL FACILITY CERTIFICATION REPORT

Information for this table is provided below. Note that Tons Delivered reflects Acceptable Waste and Unacceptable Waste, as defined in the Washington County Solid Waste Ordinance and Ramsey County Solid Waste Ordinance, that was received at the facility (see Table 2 for waste denied access to the facility)

Item	1/1/89 - 6/30/89	7/1/89 - 12/31/89	1/1/90 - 6/30/90	7/1/90 - 12/31/90 (not inc. Henn. Co.)	7/1/90 - 12/31/90 (inc. Henn. Co.)
Tons Delivered	177,739	193,891	205,469	204,258	205,591
Tons Processed [1]	128,266	143,662	168,856	163,132	164,245
% of Tons Delivered	72.2%	74.1%	82.2%	79.9%	79.9%
Tons RDF	87,737	100,445	131,607	121,164	122,020
% of Tons Delivered	49.4%	51.8%	64.1%	59.3%	59.4%
% of Tons Processed	68.4%	69.9%	77.9%	74.3%	74.3%
Tons Ferrous Recycled	972	1,661	5,821	3,294	3,314
% of Tons Delivered	0.5%	0.9%	2.8%	1.6	1.6%
% of Tons Processed	0.7%	1.2%	3.4%	2.0%	2.0%
Tons Landfilled					
Excess Waste [2]	44,560	41,401	33,421	38,591	38,810
Residue [3]	35,792	37,472	30,294	35,268	35,474
Ferrous not Marketed	3,741	4,084	1,135	3,408	3,434
Total Landfilled	84,095	82,957	64,850	77,267	77,718
% of Tons Delivered	47.3%	42.8%	31.6%	37.8%	37.8%

NOTES:

[1] Waste that proceeds through the two processing lines.

[2] Waste that does not proceed directly through the processing lines, but is transferred to another waste facility.

[3] Material remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

Description/type of waste

Contractually defined unacceptable waste.

Quantity

14 tons.

Describe why this waste was denied access to this facility?

The Service Agreement between Ramsey and Washington Counties, and Northern States Power Company (NSP) delineates the classes of materials that are not acceptable at the Resource Recovery Facility. Unacceptable waste includes waste which would likely pose a threat to health or safety or which may cause damage to or materially adversely affect the operation of the Facility.

Describe the management plan and timeline to process this type of waste.

This waste will continue to be managed as appropriate by category. The Counties, in conjunction with the Ramsey/Washington County Resource Recovery Project Board and NSP, as appropriate, will continue to explore methods to reduce the amount of this and other waste that may be landfilled.

Was this waste processed elsewhere? By whom?

The final destination of all waste denied access to the Facility is the responsibility of the hauler.

TABLE III - QUANTITIES OF UNPROCESSED WASTE DISPOSED AT LANDFILL

Disposal Facility

Pine Bend Landfill, Dakota County

Description

All waste accepted by NSP at the Facility is processed, according to the definition of "Processing" in Minn. Stat. Sec. 115A.03, Subd. 25, which is:

> "Processing" means the treatment of waste after collection and before disposal. Processing includes but is not limited to reduction, storage, separation. exchange, resource recovery, physical, chemical, or biological modification, and transfer from one waste facility to another.

At the Resource Recovery Facility, most solid waste received proceeds through the two processing lines. Certain types of waste that are not suitable for these processing lines, along with any solid waste received which exceeds NSP's processing capabilities, are transferred from the

tipping floor to Pine Bend Landfill. Residuals from the processing lines, and unmarketed ferrous metals are also landfilled.

Quantity

See Table 1.

Could this waste be processed elsewhere?

If capacity is available at a facility where a particular type of waste would be processible.

Describe why this waste was delivered to a disposal facility.

1. Excess waste exceeded facility processing capacity.
2. Residue could not be further processed at the Facility.
3. Secondary materials could not be marketed.
4. Unacceptable materials could not be processed at the Facility.

Describe the management plan and timeline to process this type of waste.

Washington and Ramsey counties, in conjunction with the Ramsey/Washington County Resource Recovery Project and NSP, continue to examine methods for managing this type of waste to divert it from landfilling. Specific methods currently include the following:

1. The Counties and NSP amended the Service Agreement in February 1991 to proceed with a residue processing system to produce additional RDF and recyclable material. Final engineering for this system is currently taking place. The system would include equipment to process residue into any one or more of the following: ferrous and non-ferrous metals; ground glass, stone, and grit; combustible material to be reinjected into the RDF stream; and a heavy residue fraction which may be landfilled.

2. Communication with Hennepin and Anoka Counties regarding the potential for processing certain waste at other processing facilities.

3. Installation of new equipment. In August 1989 new shredding and related equipment was installed which has increased the processing capacity on the processing lines.

4. Amendments to the Service Agreement between NSP and Ramsey and Washington Counties to provide an incentive fee for NSP to process additional waste over the amounts specified in the original Service Agreement approved in 1986. The incentive fee concept was approved in 1989 for a two-year period, and extended for the term of the Service Agreement in July 1990.

TABLE IV - QUANTITIES OF ASH SENT TO A DISPOSAL FACILITY

RDF produced at the Facility is combusted a NSP's Red Wing and Wilmarth electrical generating plants. Management of the ash produced from the combustion of RDF is the responsibility of NSP.

TABLE V - QUANTITIES OF RESIDUALS PRODUCED BY PROCESSING

See Table III.

EFFORTS BY THE COUNTY TO ENCOURAGE AND ENSURE COOPERATION AMONG RESOURCE RECOVERY FACILITIES.

See Tables II and III.

COUNTY CERTIFICATION REPORT

From January 1, 1991 to June 31, 1991

COUNTY:	Washington
FACILITY:	Ramsey/Washington Resource Recovery Facility
COMPLETED BY:	David Hagen
TITLE:	Senior Environmental Health Specialist
PHONE:	430-6678

What is the total amount of all solid waste generated in the county during the six months covered by this report?

Not known at this time.

What is the total amount of mixed municipal solid waste generated in the county during the six months covered by this report?

The October 1986 Washington County Solid Waste Management Master Plan provides the most recent official estimate of the County's waste generation. The Plan gives mixed municipal solid waste (MSW) estimate of 95,185 tons for 1991 (an extrapolation between the 1990 and 1995 values). Assuming that the first half of 1990 accounts for half of the estimate; 47,593 tons of MSW were generated in the County during the six months covered by this report.

A more recent, and therefor more accurate estimate of the MSW stream, including selected separately managed wastes, is contained in the Regional Solid Waste Management Data Report adopted by the Solid Waste Management Coordinating Board on June 26, 1991. This report shows that a total of 147,213 tons were managed in 1990. This figure includes: MSW; recycling; yard waste composting and landspreading; yard waste reduction; and the separated management of tires, used oil, and lead acid batteries. By assuming a waste stream growth rate of 1.6% (Metropolitan Council estimate), an estimate can be made for 1991 at 149,568 tons or 78,784 tons for the first half of 1991.

WASTE MANAGEMENT SUMMARY
RAMSEY/WASHINGTON COUNTY RESOURCE RECOVERY FACILITY
(Waste Received Washington County Only)
1989 - 1991

Item	1/1/89 - 6/30/89	7/1/89 - 12/31/89	1/1/90 - 6/30/90	7/1/90 - 12/31/90	1/1/91 - 6/30/91
Tons Delivered [1]	47,990	52,351	55,477	55,150	51,803
Tons Processed [2]	34,632	38,789	45,591	44,046	44,238
% of Tons Delivered	72.2%	74.1%	82.2%	79.9%	84.4%
Tons RDF	23,689	27,120	35,534	32,714	36,170
% of Tons Delivered	49.4%	51.8%	64.1%	59.3%	69.8%
% of Tons Processed	68.4%	69.9%	77.9%	74.3%	81.8%
Tons Ferrous Recycled	262	448	1,572	889	537
% of Tons Delivered	0.5%	0.9%	2.8%	1.6	1.0%
% of Tons Processed	0.7%	1.2%	3.4%	2.0%	1.2%
Tons Landfilled					
Excess Waste [3]	12,031	11,178	9,024	10,420	8,620
Residue [4]	9,664	10,117	8,179	9,522	6,407
Ferrous not Marketed	1,010	1,103	306	920	1,089
Total Landfilled	22,706	22,398	17,510	20,862	16,117
% of Tons Delivered	47.3%	42.8%	31.6%	37.8%	31.1%

NOTES:

[1] Waste delivered from Washington County accounts for 27% of total deliveries to the Facility.

[2] Waste that proceeds through the two processing lines.

[3] Waste that does not proceed directly through the processing lines, but is transferred to another waste facility; includes non-processible waste.

[4] Material remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

TABLE II - QUANTITIES OF WASTE DENIED ACCESS TO RESOURCE RECOVERY FACILITIES

Generator or origin of this waste. Quantity.

During the first half of 1991, fourteen loads totaling 47,258.30 pounds (23.63 tons) were rejected at the Ramsey/Washington County Resource Recovery Facility (Facility). These loads included two loads with a total of 303.30 pounds (0.15 tons) of asbestos, and twelve loads with a total of 46,955 pounds (23.48 tons) of medical waste. The generator of five of the medical waste loads is unknown, while the other seven loads were generated by several hospitals.

Describe the waste and indicate why this waste was denied access to this facility.

The Service Agreement between Washington and Ramsey Counties, and Northern States Power Company (NSP) delineates the classes of materials that are not acceptable at the Facility. Unacceptable waste includes waste which would likely pose a threat to health of safety, or which may cause damage to or materially adversely specific unacceptable wastes.

Was this waste processed elsewhere? By whom?

The final destination of all waste denied access to the Facility is the responsibility of the hauler. The Washington County Solid Waste Management Ordinance (Section XI, Subsection 1.C.2.) provides that rejected waste must be disposed in accordance with all applicable laws.

Describe the management plan and timeline to process this type of waste.

This waste will continue to be managed appropriately by category. The Counties, in conjunction with the Ramsey/Washington County Resource Recovery Project Board and NSP will continue to explore methods to reduce the amount of this and other waste being landfilled. Over the operational history of the Facility, NSP has altered its equipment and operations to be able to manage more of the waste stream (see Table I). This process will continue to address various wastes that are currently unacceptable at the Facility.

NSP and the Counties have also discussed problem materials with the Minnesota Office of Waste Management to ensure appropriate management of these materials.

NSP and the Counties are currently examining medical waste issues, and are working with the Minnesota Pollution Control Agency and the Minnesota Department of Health to develop a strategy to address the health and safety concerns of Facility employees, as well as waste management practices at hospitals and clinics.

Describe the current processing strategies to process this type of waste.

Installation of new equipment and the establishment of contract incentives for NSP have resulted in reduced quantities of excess waste. In August 1989 the installation of new shredding and related equipment produced an increase in the processing capacity of the processing lines at the Facility. Through amendments to the 1986 Service Agreement with NSP, an incentive fee for NSP to process additional waste was implemented.

Could this waste be further processed? If so, by what methods and/or technology?

Excess waste includes both processible and non-processible waste. Washington and Ramsey Counties, the Ramsey/Washington County Resource Recovery Project, and NSP are involved in efforts with Hennepin County to explore the potential for processing non-processible waste at the HERC mass burn facility. NSP has indicated that it can increase its capabilities at its Wilmarth power plant and ongoing improvements in processing capability at the Facility in Newport.

Describe the management plan, including a timeline, to process this type of waste using alternative strategies.

The efforts described in the previous paragraph are in progress.

REJECT WASTES

Describe reject wastes.

"Rejects" is a defined term in the Service Agreement. It includes non-processed waste, which is incorporated in the discussion on excess waste above, and residuals (not a defined term in the Service Agreement), which is discussed below.

RESIDUAL WASTES

Describe residual wastes.

"Residuals" refers to materials remaining after waste proceeds through the two processing lines to produce RDF and ferrous metals.

Quantity.

See TABLE I.

Disposal Facility.

To date, all residual wastes have been disposed at Pine Bend Landfill in Dakota County.

It is important to note that Washington and Ramsey Counties have also been working with NSP to ensure that excess waste, including non-processible waste, is managed appropriately. The Counties have been working through the SWMCB to facilitate negotiations between NSP and other counties. The Counties are exploring options for changes in the Service Agreement with NSP which would provide a mechanism for payment of pass-through costs for transporting and processing excess waste at another facility. Formal discussions with Anoka and Hennepin Counties have been held to facilitate waste sharing arrangements.

The Counties and NSP are also working on potential amendments to the Service Agreement to provide to expedient negotiating with Anoka and Hennepin Counties to develop arrangements to encourage waste sharing.

The Counties and NSP have been exploring residue management for several years, and NSP is in the process of adding equipment to further process residue. Depending on the character and quantity of residue that remains after that system is operational, the Counties and NSP may explore other processing opportunities in the system for that material.