

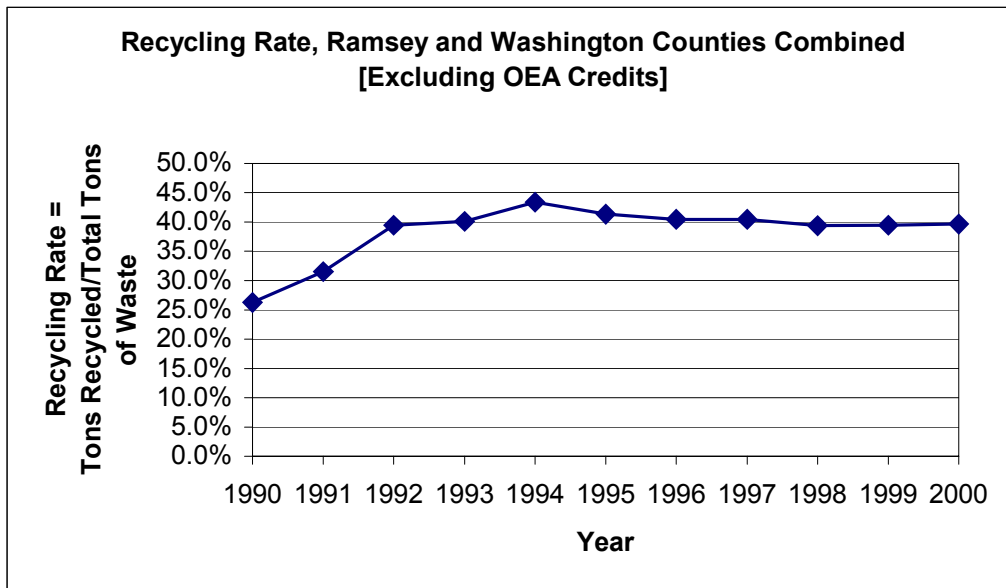
Appendix 2B Recycling

Recycling is a prominent feature in Minnesota's policies for waste management. The Metropolitan Solid Waste Management Policy Plan (1997) recognizes recycling as an integral component of the integrated solid waste management system. That plan reaffirms the region's commitment to recycle 50% of the waste stream.

The trend in Ramsey and Washington Counties has been that recycling rates are stagnant or declining making it difficult to reach the achievable goals. This means that resources are being wasted that could have been recovered, and more waste is managed by disposal than regional and local plans call for.

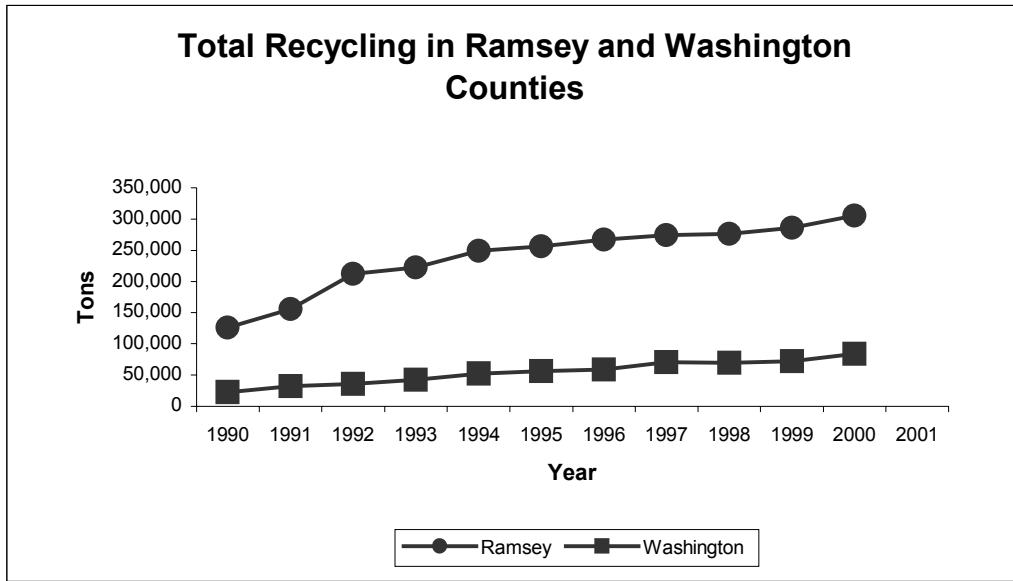
Recycling Rates, 1990 - 2000

Minnesota law and County plans place significant emphasis on recycling. Minnesota has been very aggressive in pursuit of recycling, and, as a result, is one of the leading states in the recovery of materials for recycling. The metropolitan area has set a goal of recycling 50% of the mixed municipal waste (MSW) generated. The State grants up to 8% in recycling credits for yard waste and waste reduction activities by counties in the measurement of recycling goals, which can create confusion. A 50% goal actually means the measurement/estimate and reporting of 42% recycling. The recycling rates for Ramsey and Washington Counties are shown in the following chart, depicting the difficulty the counties have had in achieving the 50% goal in recent years.

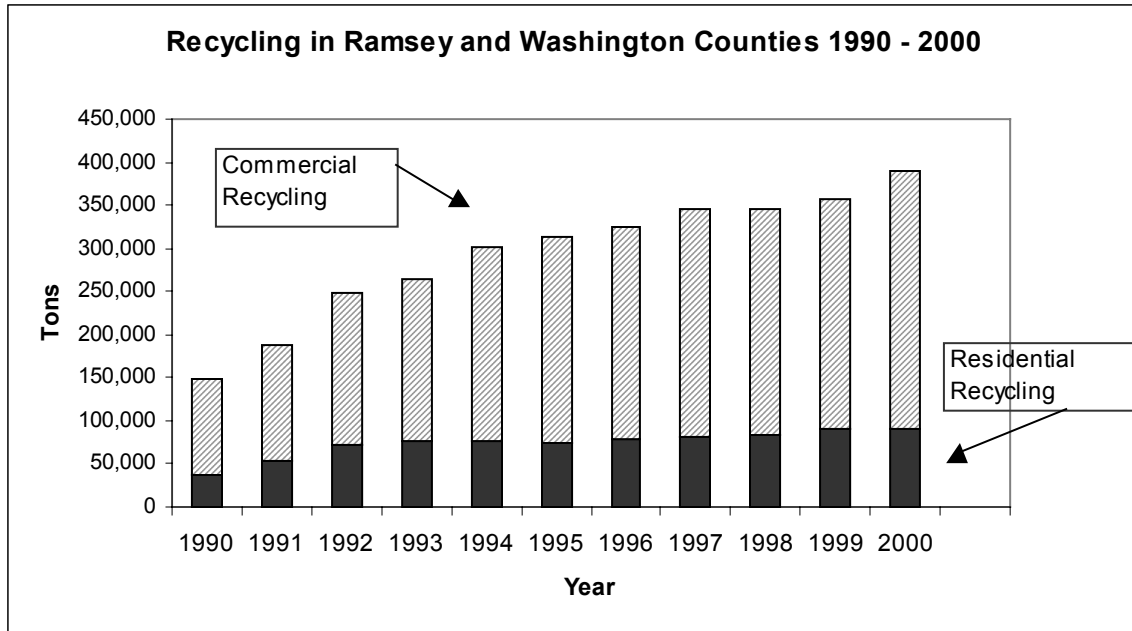


Recycling Tonnages, 1990 – 2000

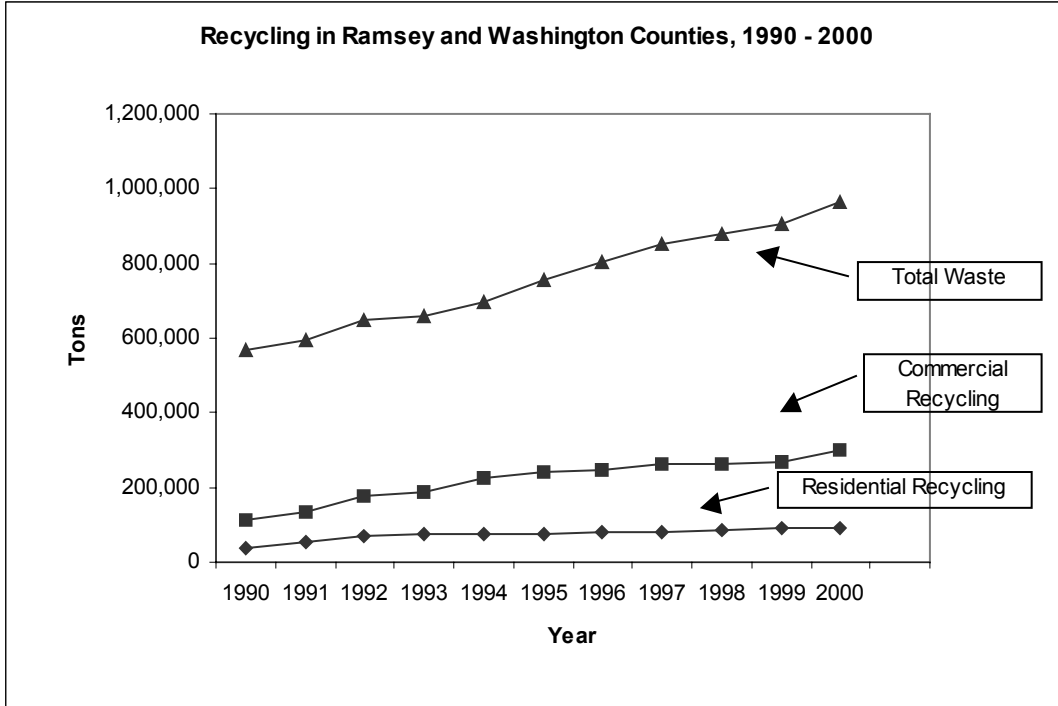
The following chart illustrates the growth in the total tons of materials recycled by residents and commercial sources in Ramsey and Washington Counties:



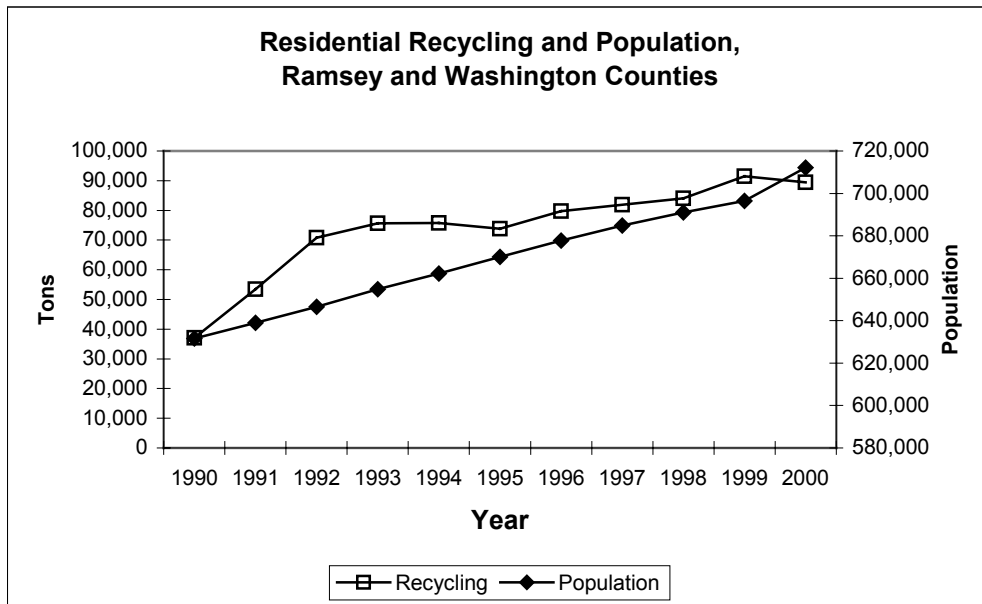
While about half of the MSW is generated by residential and half by commercial generators, more recycling occurs by commercial entities. About $\frac{3}{4}$ of the materials recovered for recycling are from commercial sources.



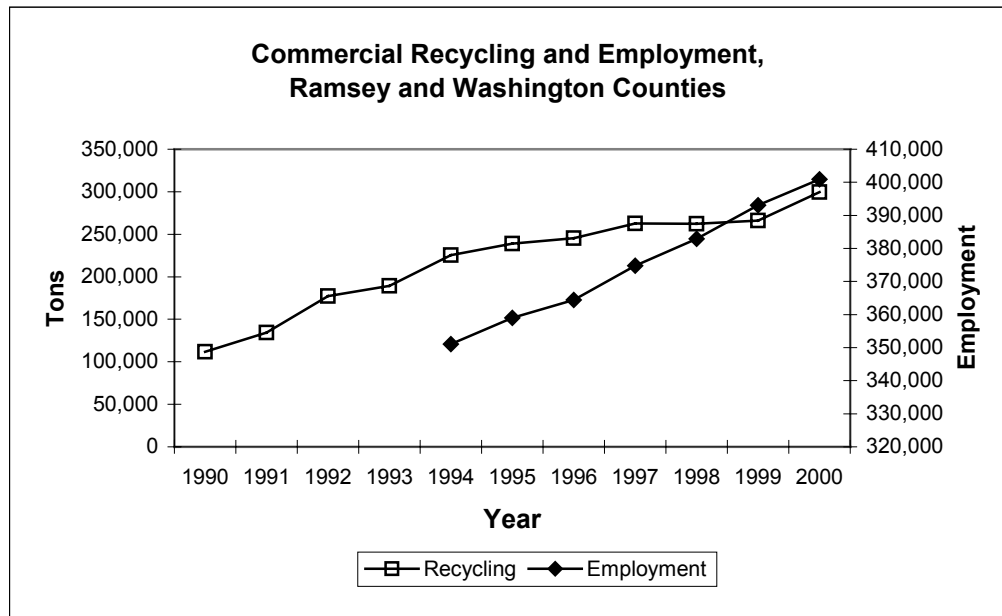
Recycling Growth Lags Behind Total Waste, Population and Employment Growth
 Both residential and commercial recycling volumes grew during the 1990's, particularly in the early part of the decade. However, recycling growth has not kept pace with growth in total waste.



Data for Ramsey and Washington Counties shows that for residential recycling, there were significant increases in tonnages recovered in the early 1990's, but that has leveled off in the past few years. Shown against population and household growth, the data for residential recycling show that the trend is downward. Recycling data are measured using information provided by cities and towns that oversee municipal recycling programs.



Commercial data are combined from actual data and estimates, using methodologies developed by the metropolitan counties and the OEA. These data show that recycling has not kept pace with growth in employment during the 1990's (employment data presented for 1994 through 2000).



Recyclables Lost to Disposal

The loss of recyclable materials to waste disposal systems puts an unnecessary burden on the limited capacity of resource recovery facilities in the region. If recyclables go to a landfill, particularly one outside of the metro region, energy is wasted transporting materials long distances only to bury them in the ground, rather than use them as feedstock for industry.

Recyclable materials lost to disposal are also lost opportunities to conserve resources, as discussed in the Resource Conservation Problem Statement (Appendix 2-C). A failure to keep recyclables out of the waste stream is a failure to fully achieve key goals in State law and regional policy on resource conservation, sustainability, and protection of health and the environment. Instead, maximizing the reuse of mined, harvested, and manufactured materials through recycling reduces pollutants, conserves water, fossil fuel, forest, mineral, and other resources, and reduces greenhouse gas emissions.

Waste composition data indicate that significant recycling opportunities remain for both residential and commercial generators. Findings of the 1999 Waste Composition Study conducted at the Ramsey/Washington County Resource Recovery Facility by the State of Minnesota and the Solid Waste Management Coordinating Board are presented in the following table. Additional materials can be recovered from both residential and commercial sources, but it appears the greater potential lies with commercial entities.

**Potentially Recyclable/Compostable Materials
Ramsey/Washington County Resource Recovery Facility,
MSW Waste Composition Study (1999)**

	Total	Residential	Commercial
Paper	24%	21%	25%
Newsprint	5%	6%	3%
High Grade Office	2%	1%	3%
Mags/Catalogs	2%	2%	2%
Cardboard	6%	2%	9%
Boxboard	3%	3%	1%
Mixed Paper	8%	7%	9%
Plastic	4%	2%	5%
1 & 2 Bottles	1%	2%	1%
Film	3%	---	4%
Glass Bottles/Jars	2%	3%	1%
Metal	5%	4%	5%
Aluminum Cans	<1%	1%	<1%
Steel Cans	<1%	1%	<1%
Other Metals	4%	2%	4%
Food Waste	14%	13%	14%
Pallets, wood scrap	4%	---	8%
TOTAL RECYCLABLES	51%	41%	58%
Non-recyclable, Compostable Paper	9%	9%	9%

These findings reinforce observations from the Resource Recovery Project, which studied disposal trends at the Facility in 1999. Over a period of several months, the Project documented significant quantities of recyclable materials, such as corrugated cardboard and office paper, in random commercial loads of MSW tipped at the facility.

Factors that could affect residential recycling rates include:

- ◆ Convenience of sorting and placing materials out;
- ◆ Same-day recycling as garbage collection;
- ◆ Awareness and reinforcement;
- ◆ Volume based fees;
- ◆ Language barriers;
- ◆ Differences in programs among communities.

Factors that could affect commercial recycling rates include:

- ◆ Economic incentives or disincentives to separate and arrange for recycling;
- ◆ Storage space;
- ◆ Lack of availability of service, especially in leased property;
- ◆ Lack of understanding about costs/benefits of recycling;
- ◆ Differences in programs offered by haulers and collectors, or lack of availability of service from hauler;
- ◆ Securing interest and participation of tenants;
- ◆ Difficulties gaining proper participation of cleaning staff, especially contracted cleaning services;
- ◆ Participant education;
- ◆ Contamination problems;
- ◆ Convenience and simplicity of programs (encourages participation).

Recycling: A Valuable Part of the Economy

Recycling has a significant economic place in Minnesota. A recent report from the Minnesota Office of Environmental Assistance (*Minnesota's Value-Added Recycling Manufacturing Industries: An Economic and Environmental Profile* (June 1997) shows:

- Minnesota has one of the highest recycling rates in the nation.
- Manufacturers who use the collected materials as feedstock contribute substantial benefits to the state.
- On the economic side, estimates derived from OEA survey data and the 1996-97 American Business Directory indicate that these companies employ 8,700 people and have sales of nearly \$1.5 billion.
- Estimates based on an economic model indicate that the total value-added to the state economy is between \$1.3 and \$1.9 billion. Total associated employment (which includes direct, indirect and induced employment) is estimated between 18,000 to 26,000 people.
- The OEA estimates that these companies generate annual state tax revenues of \$40 to \$66 Million.

When recyclable materials are not recovered from solid waste, Minnesota loses opportunities to support local sources of feedstock for its industries. Increasing recovery can promote resource self-sufficiency and economic growth for local communities.