
3.0 SOLID WASTE COLLECTION & GENERATION

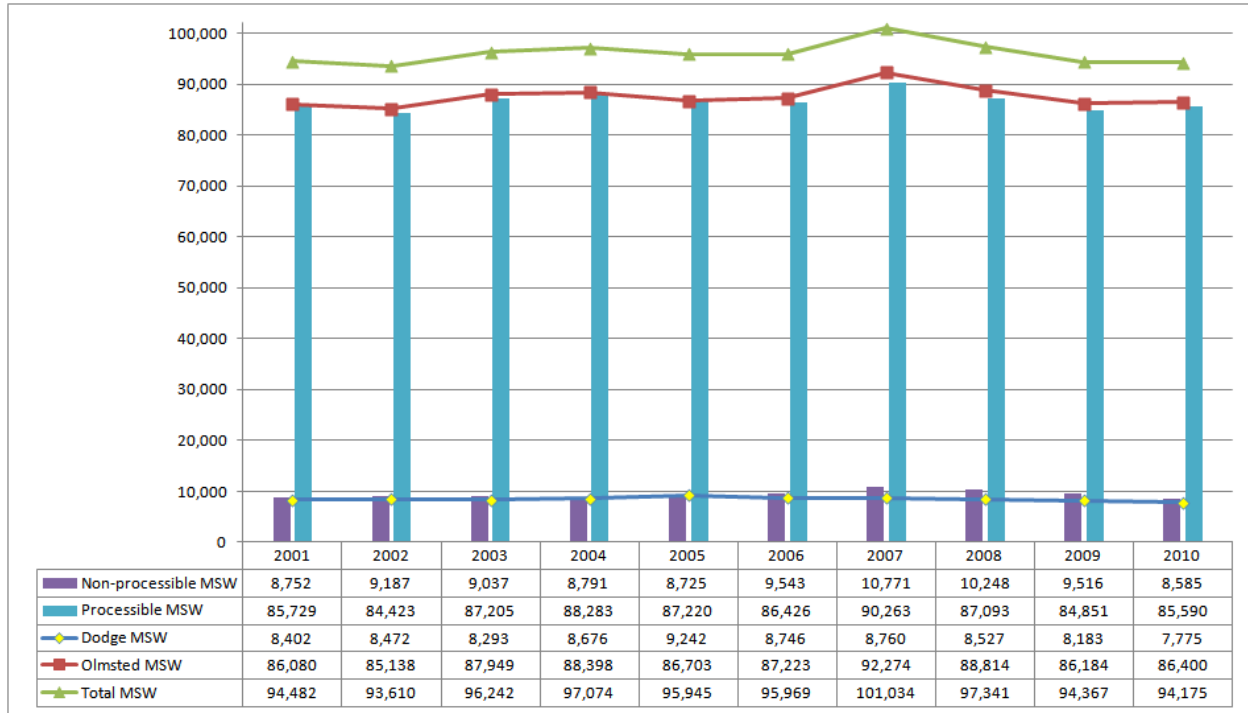
All city and rural residents have the option to use a licensed commercial garbage hauler to deliver garbage to Olmsted waste facilities or self-haul their own garbage to a permitted disposal facility. Collection options in some rural areas may be limited and costly. It is estimated that approximately 93 percent of the population utilize collection services. Based on activity at the Olmsted County Recycling Center (OCRC), it is estimated that approximately 3 percent of the total population self-hauls their waste to that facility.

Approximately 84% of the County's population lives in a city, and 16% lives in a township (rural). It is difficult to distinguish how much garbage from rural sites is disposed on site versus how much is self-hauled to Olmsted facilities or to another county, however for the purposes of this Plan, it is estimated 3.47% of the population disposes of waste on-site, resulting in approximately 2,099 tons of Municipal Solid Waste (MSW) disposed of on-site as shown in the Goal Volume Table (Attachment A). Implementation of designation in Olmsted County would apply to all generators, including those who currently self-haul. State-wide regulations restricting agricultural sites from on-site disposal would aid in prevention of on-site disposal.

3.1 Generation

MSW generation is shown in Figure 3-1 below and represents waste delivered to Olmsted County facilities for the past 10 years.

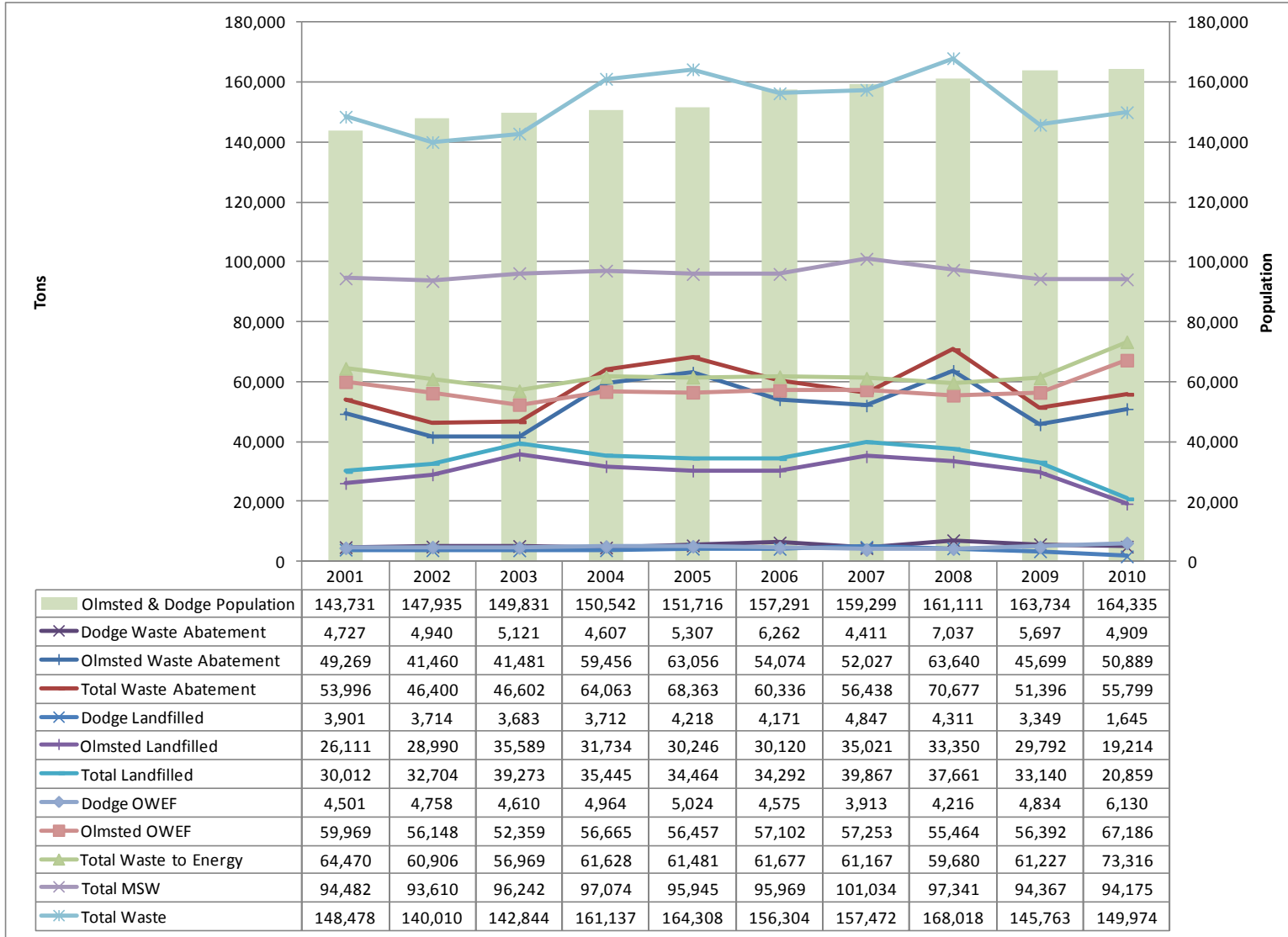
**Figure 3-1
WASTE TRENDS FOR DODGE AND OLNSTED COUNTIES**



The OWEF has a fixed capacity and has always operated at high rate of availability, as may be expected, waste growth since 2000 has been managed through waste abatement activities, increased recycling and landfill disposal.

Figure 3-2 illustrates the waste trends for Olmsted and Dodge Counties for the past ten years.

Figure 3-2
Waste Trends for Dodge & Olmsted Counties



In 2007, construction began on a 3rd unit to provide capacity for expected growth in the MSW stream, to reduce the need for landfilling. However, due to the economic downturn, waste generation dropped off, and waste quantities have not increased as expected.

3.2 Waste Composition

Good information about the types and quantities of materials in the mixed-municipal solid waste is essential for planning, implementing and evaluating solid waste management programs. It is important to note that wastes sampled at the OWEF are not representative of the total Olmsted County waste stream because recycling occurs before the MSW is delivered to the facility, and bulky items such as carpet, and other waste considered unacceptable at the OWEF were going to the Kalmar Landfill.

Figure 3-3 below compares data gathered in 2003-2004 with data gathered in 2008-2009 (the most recent waste sort data available). Waste sort data statistics from waste sorts during the years indicated were prorated for the total amount of waste disposed and combines it with the amount of materials recycled. Paper recycling has seen the largest relative increase during the review periods. This is likely due to the evolution of better collection systems and continued educational efforts over time. A decline in the amount of paper found in the waste sort samples over time parallels this finding. The decline in organic recycling may be due to cost, service availability and related transportation logistics. (See also Figure 3-4).

Figure 3-3

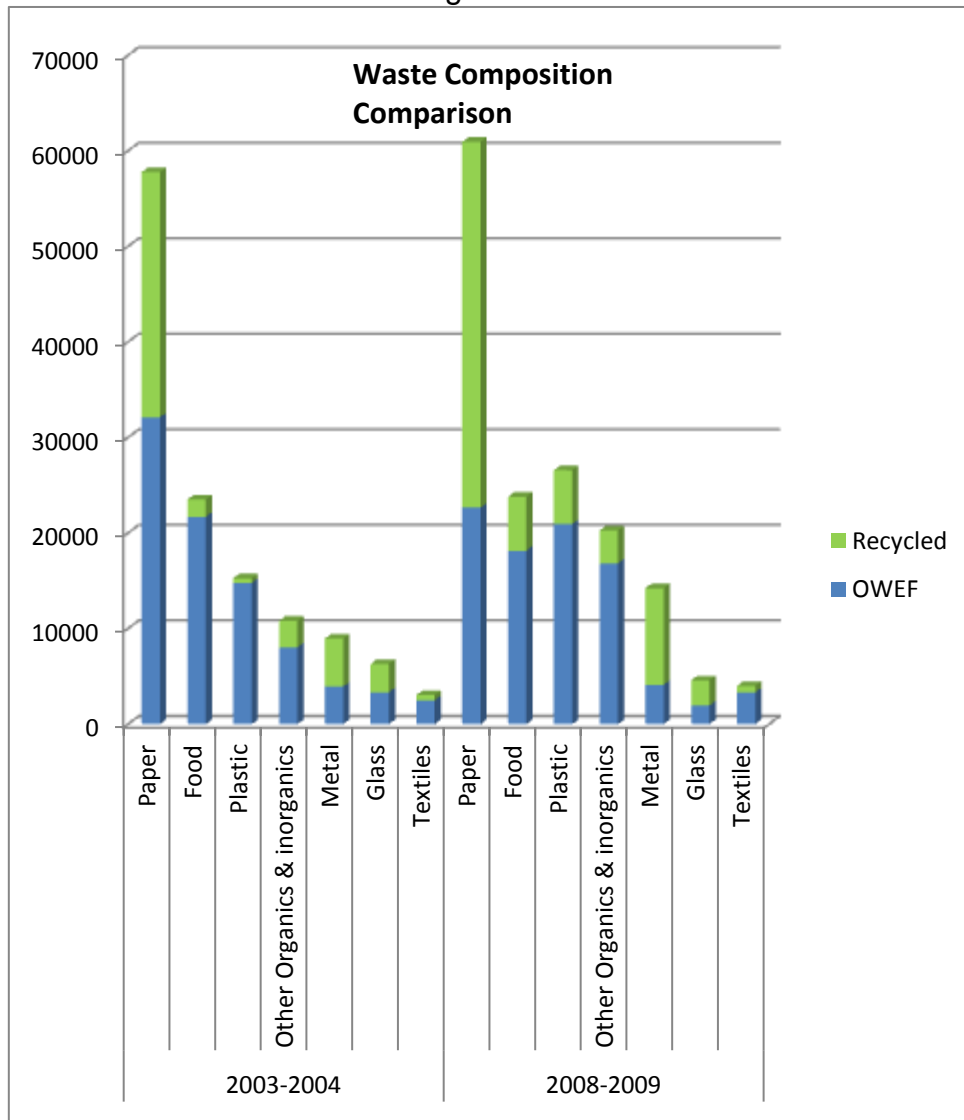


Figure 3-4

WASTE SORT DATA PERCENTAGE

	1989	1996	2004	2009
Newsprint	9.5	2.82	2.7	2.99
High Grade Paper	3.58	4.61	2.7	1.41
Other Paper	25.44	23.8	20.1	16.74
Corrugated Cardboard	10.72	9.11	9.39	3.18
Glass	3.88	1.63	2.24	2.19
Aluminum	0.92	0.67	0.8	0.39
Plastics	12.13	12.62	16.75	23.59
Food	11.3	15.41	24.61	20.44
Yard Waste	0	1.02	0.96	3.9
Textiles (Fabric)	2.42	5.83	2.83	3.75

3.3 Collection & Generation Constraints and Opportunities

In the early 1980's, when the Olmsted Waste-to-Energy Facility project was being developed, the Olmsted County Commissioners set a policy that the solid waste management system be based on economic sustainability, fiscal responsibility and fairness. They wanted a system that:

- limits the liability to the citizens of Olmsted County by providing facilities located in the county for waste generated in the county;
- requires those who generate waste pay the price for proper management
- uses no local property tax dollars to fund it, and
- is based on the Minnesota Solid Waste hierarchy

A system of volume or weight-based fees was set up, so those who throw more away, pay more. This system results in a higher waste disposal fees than landfills, but incentivizes waste abatement activities. Since the recycling, composting, and hazardous waste program costs are included in the tipping fee, and provided free or at a reduced cost, generators can directly affect the amount they pay by utilizing these programs and reducing their waste. This system is still in place today.

Licensed garbage haulers operate in an open market without restrictions on how much they are allowed to bill their customers. Competition and market forces should prevent haulers from price gouging generators. In addition, a self-haul option is available when generators wish not to use a licensed garbage hauler. Because of these factors, hauler collection rates vary by generators and collection areas. On average, generators located in a city that has contracted with only one licensed hauler pay less than generators in an open market. Eyota and Chatfield are examples of two cities that contract to use one licensed garbage hauler for their residents.

Olmsted County's garbage disposal rate structure is based on one component for waste delivered to OCRC and on two components for waste directly delivered to the OWEF or Kalmar Landfill.

Delivered to OCRC:

- The garbage rate structure at OCRC is based on volume of garbage delivered. At current rates, \$5 for 30-gallons of garbage, \$8 for 60 gallons, \$12 for 90-gallons, and \$20 for a cubic yard. Bulky items like furniture and mattresses are a fee of \$9 per item. In total for 2010, all garbage fees at OCRC generated about \$143/ton before hauling charges. After factoring in hauling charges, net garbage fees equal about \$125/ton from OCRC.

Delivered directly to Kalmar Landfill or OWEF:

- The main component is the tipping fee rate of \$83/ton, which is based on weight of garbage delivered to Kalmar Landfill or OWEF.
- The other component is service charge, either billed and collected by licensed garbage haulers on all pretax charges billed by the hauler, or a per ton rate for self-haulers tipping at Kalmar Landfill or OWEF - current rate is \$35/ton.

The combination of these two components represents the total tipping fees generated to help support the operations of the integrated solid waste management system. The total tipping fee rate is currently at \$118/ton for self-haulers and initially was set to net \$118/ton for generators using a licensed garbage hauler. Since the second component of the tipping fee is based on a percentage of total pretax charges and garbage haulers typically charge their customers based on volume of waste in addition to the collection service they provide, this causes overall per ton tipping fees to fluctuate between generators. The generators that produce more waste and have less frequent collection service per ton of waste generated (usually commercial) will end up paying less than \$118/ton, and the generators that generate less waste but have more frequent collection service per ton of waste generated (usually residential) pay more than \$118/ton. In 2010, the average tipping fees per ton including service charge was approximately \$125 for all garbage disposed of in Olmsted County.

The haulers under contract with the County usually have credit accounts set up with the finance department. Loads are weighed at the facilities and invoices sent to the hauler each month based on \$83.00 per ton for in-county wastes. In addition, the hauler collected service fee is remitted monthly by the hauler to the finance department.

Persons not holding a contract pay the equivalent of \$118 per ton which equates to the combination of the \$83 per ton tip fee plus the service fee. Rates are by volume at Recycling Center Plus which equal approximately \$118/ton after deducting the transportation costs to the disposal sites.

It is estimated that the average household in Olmsted County generates approximately 30 pounds of garbage per week. The average cost to the household is approximately \$30 per month for collection and disposal.

However, self-haulers, and/or businesses who haul waste out of county would have an unfair economic advantage. Implementation of Designation would be beneficial to all generators because the Olmsted County facilities offer a secure, long-term disposal at the same price for all generators. The Minnesota Pollution Control Agency recently approved Olmsted County's Designation Plan (See Attachment D), and implementation is moving forward. All current Licensed Commercial Haulers have signed an Acceptable Waste Delivery Agreement requiring the waste collected be delivered to Olmsted County Facilities.

3.4 Major Solid Waste Generators

The major employers in Olmsted County are listed in Figure 3.5 and provide information on businesses and institutions in the Rochester area with 500 or more employees. Specific volumes and types of waste generated from each business is unavailable, and any information obtained from haulers on incoming waste is considered to be data private in accordance with Minnesota Statutes 13.03; 115A.93 Subd. 5; and 115A.882.

Figure 3-5
Major Employers in Olmsted County

Firm	Employees	Type of Business
Mayo Clinic	32,000	Medical/Hospital
IBM	Not available	Electronics/Computer
Rochester Public Schools	2,144	Education Services
Olmsted County	1,177	Government
McNeilus Truck & Manufacturing*	850	Mobile concrete mixers, Garbage trucks
City of Rochester	834	Local Government
Charter Communications	690	Cable Television/High Speed Internet
Crenlo	640	Fabricated Metal
Interstate Hotels & Resorts	590	Hotel/Restaurant Services
RCTC	500	Post Secondary Education

**Located in Dodge County*

Source: Rochester Area Economic Development Inc.

The Mayo Foundation has established a fully integrated and self-sustaining solid waste management system for the collection, processing and disposal of its Solid Waste which supports the objectives of the Olmsted County Solid Waste Management Plan. Nothing in this Plan is designed to restrict the Mayo Foundation from taking their mixed municipal solid waste and infectious waste to the Mayo Medical Waste Incinerator as long as this facility operates in accordance with Minnesota State, Olmsted County, and municipal or township laws, rules and regulations. Olmsted County staff and Mayo staff meet regularly to stay up to date with changes within the respective systems, changes in legislation and other solid waste issues.

IBM-Rochester, Rochester Public Schools, Olmsted County, the City of Rochester and RCTC all have established internal recycling and waste abatement programs in place. Staff regularly offers assistance to any business that is interested and has worked with many of the businesses within Olmsted County.

It is estimated that approximately 40% of the waste is generated by the Commercial/industrial sector and 60% by the residential sector. Specific volumes and types of waste generated from each business is unavailable, and any information obtained from haulers on incoming waste is considered to be data private in accordance with Minnesota Statutes 13.03; 115A.93 Subd. 5; and 115A.882.

Olmsted County has an Industrial Waste Management Plan that addresses the management of non-municipal solid waste materials that are received at the County's solid waste facilities. This document can be reviewed at the Olmsted County Environmental Resources Department.

3.5 CONSTRUCTION & DEMOLITION DEBRIS

Olmsted County operates the only permitted construction and demolition (C & D) debris site in Olmsted County. The majority is privately handled. Only about 17.6 percent of the C & D debris generated in Olmsted County is disposed at the Olmsted County site. Figure 3-6 represents the amount of construction and demolition material reported in Olmsted County. For more information on Construction and Demolition Debris management, see section 4.7.

Figure 3-6
Annual Construction & Demolition Waste Generation

	2009 Cubic Yards	2009 Tons	2010 Cubic Yards	2010 Tons
1) Amount of C & D Waste landfilled	73,054	5,510	95,257	6,522
2) Amount from line 1 that was disposed at :				
-Olmsted County Kalmar Landfill	12,546	4,523	15,157	5,128
-5 other landfills combined	70,990	987	86,368	1394
3) Amount from line 1 that was recycled or reused	2,030	348	3,780	330
Total Construction & Demo Debris Originating from Olmsted County Addresses	85,566	5,858	105,305	6,852
4) Amount from line 3 that was processed on site and sold as new product	2,030	348	3,780	330

3.6 Financial Incentives for Waste Reduction & Recycling

To pay the full cost of waste disposal in an environmentally sound manner is the best way to influence waste reduction habits. Paying the full cost of an integrated solid waste management system provides an economic incentive to reduce the amount of waste generated through a desire to reduce costs. Through the waste abatement programs of recycling, composting, and proper hazardous waste management, waste generators can reduce the amount paid in disposal fees.

The Solid Waste Management Tax is based on the cost of disposal. Counties that process waste pay more state tax than counties who landfill waste with less incentive to recycle or reduce waste for generators who landfill. A tax credit or rebate (such as the previous “processing credit”) would encourage waste to be disposed higher up on the Solid Waste hierarchy and create a disincentive to landfilling.