



Overview

In 2009, the Minnesota Pollution Control Agency (MPCA) commissioned a study to develop quantifiable information comparing open and organized municipal solid waste (MSW) and recycling collection systems. The analysis revealed that organized collection systems consistently result in lower overall costs to consumers. In addition, recycling capture rates are typically higher in organized systems. Organized collection also reduces noise pollution, road wear, air emissions and fuel consumption.

In an open collection system, individual customers choose their own waste hauler. In an organized system, waste hauling services are coordinated by a public entity through a competitive bidding process. Nearly 30 percent of the communities in Minnesota have organized MSW and recycling collection systems compared to 72 percent nationally.

Following is a brief summary of the findings. A copy of the complete report, entitled *Analysis of Waste Collection Service Arrangements* is available on the MPCA website at www.pca.state.mn.us.

Economic benefits

Lower residential service rates

The report found consumers in organized MSW collection cities experience reduced rates compared to non-organized residents. A resident can save as much as \$100 per year by living in a city with organized collection.

For example, the city of Maplewood expects its residents to save \$1.6 million city-wide per year after a recent switch to an organized system. The average Maplewood household will see a 50 percent decrease in trash hauling bills compared to the open collection system.

Collection System	Average Monthly Rate		
	30 Gallon	60 Gallon	90 Gallon
Open MSW	\$22.64	\$25.46	\$25.46
Organized MSW	<u>\$14.83</u>	<u>\$16.98</u>	<u>\$22.23</u>
Difference	\$7.81	\$8.48	\$3.23
% Change	+34.5%	+33.3%	+12.7%

The averages in the table to the right include garbage service, taxes, surcharges and recycling service fees.

Road wear

Reducing the impact on roads and alleys, by reducing the number of heavy duty vehicles traveling on them is a benefit and goal of municipalities interested in moving from an open to an organized collection system. Organized cities typically have one truck traveling a particular route compared to two to eight trucks per route in an open system. Nearly 86 percent of the road wear in alleys and eight percent of the road wear in high traffic areas is due to garbage trucks.

The potential economic impact of road maintenance costs associated with garbage trucks has been estimated by some city officials. For example, the city of Roseville estimates the cost to reconstruct one mile of seven-ton street at approximately \$500,000. Roseville engineering staff believe the city's streets would last an estimated five to ten years longer if garbage truck traffic was limited. The reduced road maintenance could potentially save each of Roseville's 9,400 single family households \$20 to \$40 per year. This represents a savings of \$188,000 to \$376,000 per year.

Similarly, the city of Oakdale has estimated that reducing the number of MSW haulers from five down to one traveling down an alley would conservatively result in a more than four percent reduction in street maintenance costs per year. With an annual street maintenance budget of \$3 million, Oakdale could save \$120,000 to more than \$300,000 per year.



Environmental benefits

Recycling rates

Cities with organized recycling collection systems have a higher rate of recycled materials collected per-household. Reasons include:

- Cities with organized recycling have more control over the details of the system (e.g. materials collected, sorting instructions for residents, collection days and frequency).
- Organized cities also have more control over public education tools and message content – recycling public education campaigns are more cost-effective if outreach tools are consistent in message and design and available in several formats (brochures, web pages, public service announcements, etc.).
- Cities with both organized MSW and recycling have the opportunity to reach the same residential audience with multiple service messages. Contacts with residents can address both MSW and recycling issues.

Collection System	Pounds recycled materials collected per household per year
Open MSW and recycling	510
Open MSW / organized recycling	583
Organized MSW and recycling	573
Average for organized recycling	579

Reduced fuel consumption and emissions

Creating efficiencies in waste collection activities can reduce both fuel consumption and emissions. Fuel consumption during collection activities in cities with open collection systems is typically much higher than that of cities with organized systems. The numbers below signify the percentage of additional fuel used in these open cities than if they were to switch to an organized system.

- Eagan 216%
- Duluth 294%
- Rochester 250%
- Woodbury 355%
- St. Paul 437%

The number of haulers and their market share can affect overall fuel consumption and emissions. In an open system, trucks from many haulers travel the same alley. In an organized system there may be the same number of haulers, but only one truck travels down each alley, resulting in lower fuel use. Even open cities with one hauler having more than 60 percent of the market share (e.g. Eagan) would see a significant reduction in fuel use by switching to an organized system. A city with many haulers each having a smaller market share (e.g. St. Paul) would realize even greater savings.

Fewer vehicle miles traveled also result in less air pollutant emissions from heavy duty waste/recycling collection vehicles. Public concern has increased regarding human health and environmental impacts of particulate matter and nitrogen oxides which are emitted in large amounts from heavy duty vehicles.

Myths of organized collection

Organized collection means that there will only be one hauler in the community.

There are many examples of cities that have organized and chosen to use a group of haulers instead. In this situation, the city is zoned to maximize collection efficiency, but each hauler retains a certain market share.

Small haulers will never win the contract.

This depends upon the values of the city. If a city chooses to promote local and/or small businesses as criteria in their request for proposal, small haulers have an advantage.

Organized collection creates a monopoly.

The most effective method of keeping rates low is to consistently re-bid waste services through an open and competitive process. At the end of the contract period, the public entity reopens the competitive bidding process, to ensure that residents continue to receive the lowest rates available. Effective collection arrangements prevent monopolies and price gouging.