



Resource Recycling Systems
Sustainable Systems for a Waste-Free Future

CHIPPEWA COUNTY MATERIALS RECOVERY AND FACILITY MANAGEMENT OPTIONS STUDY

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INTRODUCTION

- State cuts have reduced recycling grants to counties and municipalities.
- Tax levy caps have removed the capacity of local municipalities to raise revenue through increases in property taxes.
- Recycling costs to municipalities and landowners are expected to continue to rise.
- In response to these circumstances, the Recycling Division is conducting a study to determine where changes could be made to gain efficiencies in municipal programs.



BACKGROUND

Chippewa County Department of Land Conservation and Forest Management, Recycling Division is assessing where changes could be made to gain efficiencies in municipal programs.

- Determine the effectiveness of the household recycling programs and MRFs in Chippewa County.
- Provide the County with information and options for future changes.

Resource Recycling Systems and SEH will:

- Conduct a Recyclable Materials Market Analysis
- Assess Current and Historical Volumes
- Assess the Costs, Benefits and Feasibility of the various management options that could be used to Improve the efficiency, or expand the utility of Materials Recovery Facilities.

DELIVERABLE PRODUCTS

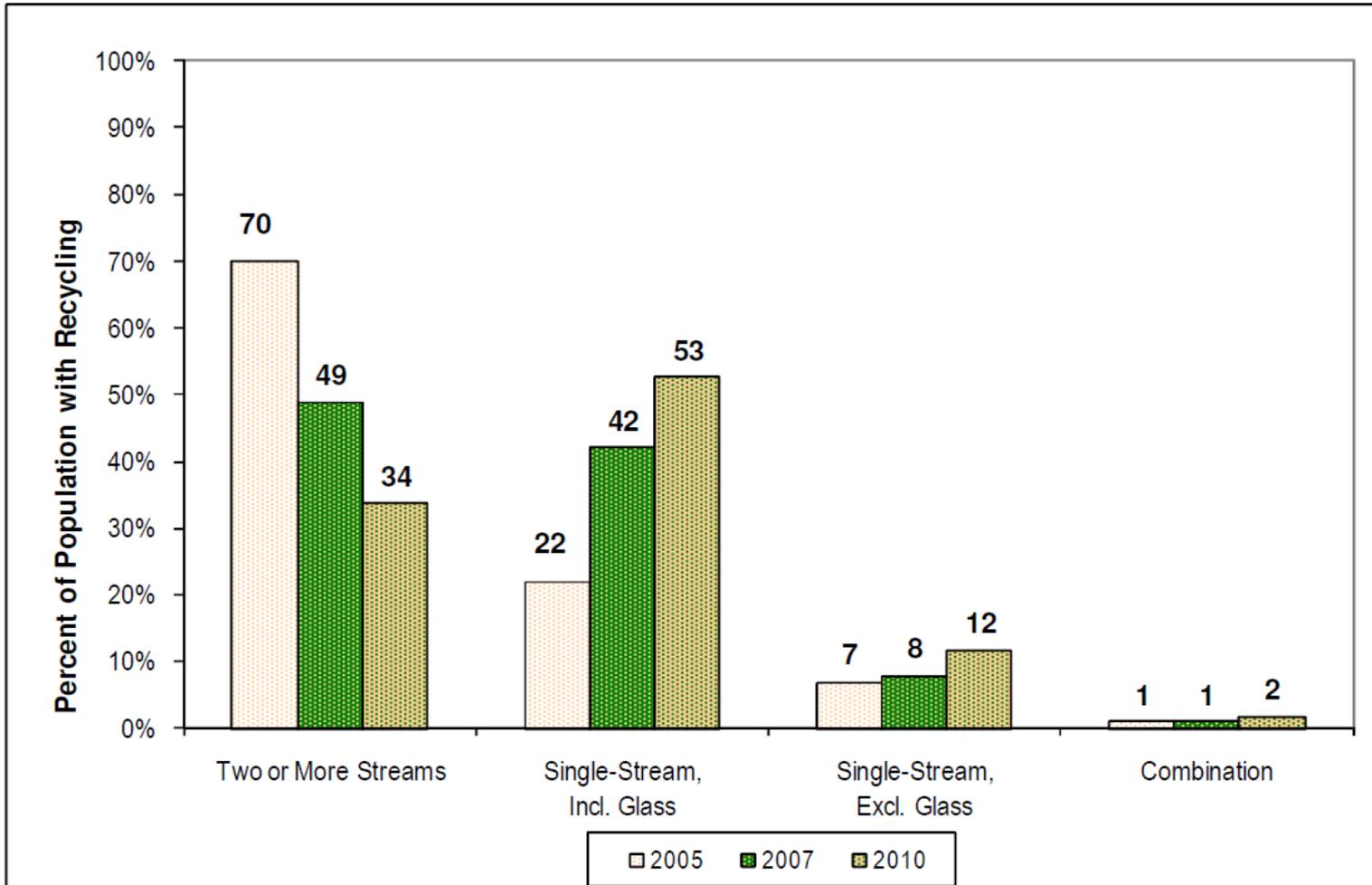
- Market Analysis Report that contains market analysis for historic, current and projected market values for single sort, commingled and source separated recyclable materials.
- Recyclable Materials Volume Analysis Report that will evaluate the recyclable waste stream and volume of recyclable materials in Chippewa County.
- MRF Options Analysis Report that summarizes the anticipated costs, benefits, and feasibility of the three management options to expand the utility of material recovery facilities.



TREND TO DUAL OR SINGLE SORT

- Reinvigorate Recycling Program
- More Efficient Collection
- Possible Routes Reduction
- Easily Add Materials
- Expand Program without Increasing Operating Costs
- Reduce Waste Disposal Costs
- Engages Regional Material Processors
- Commercial & Multi-family Is Easily Integrated
- Compatible with Cart Based Yard and Food Waste Collection

NATIONAL TRENDS



In 2010, 64% of American households had access to single sort recycling



SINGLE AND DUAL SORT PROCESSING

- Significant increase in system capabilities in the past 5 years has reduced recyclable material lost during processing (Residuals)



Improved screens, optical sorters and front end metering to separate fibers and containers

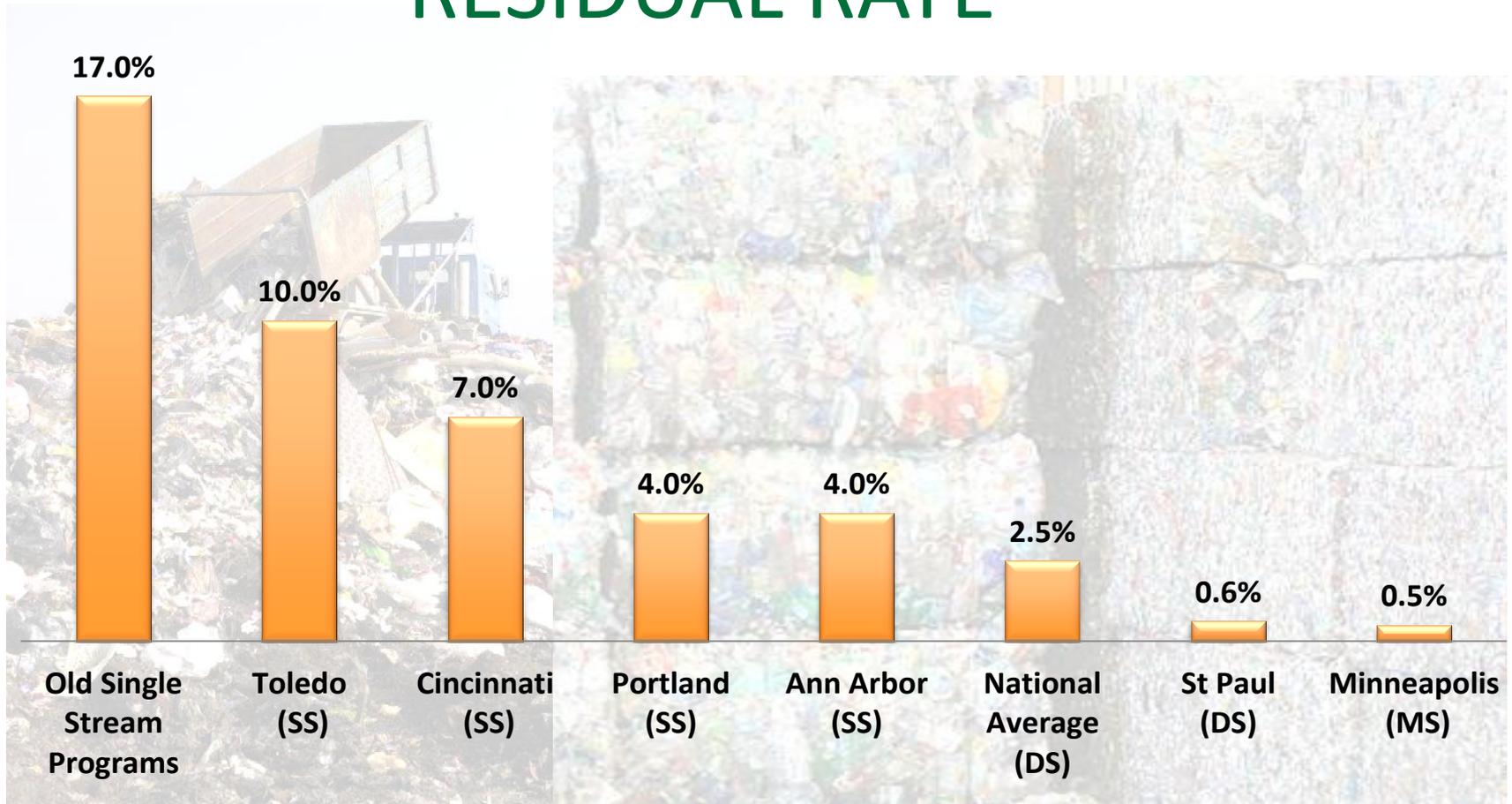


Glass Removal up front to reduce contamination



More plastics are recyclable

MATERIAL RECOVERY FACILITY (MRF) RESIDUAL RATE*



- Residual rate is the amount of material thrown out at the recycling facility and is composed of:
 - Non-recyclable materials and
 - Recyclable materials that weren't sorted correctly

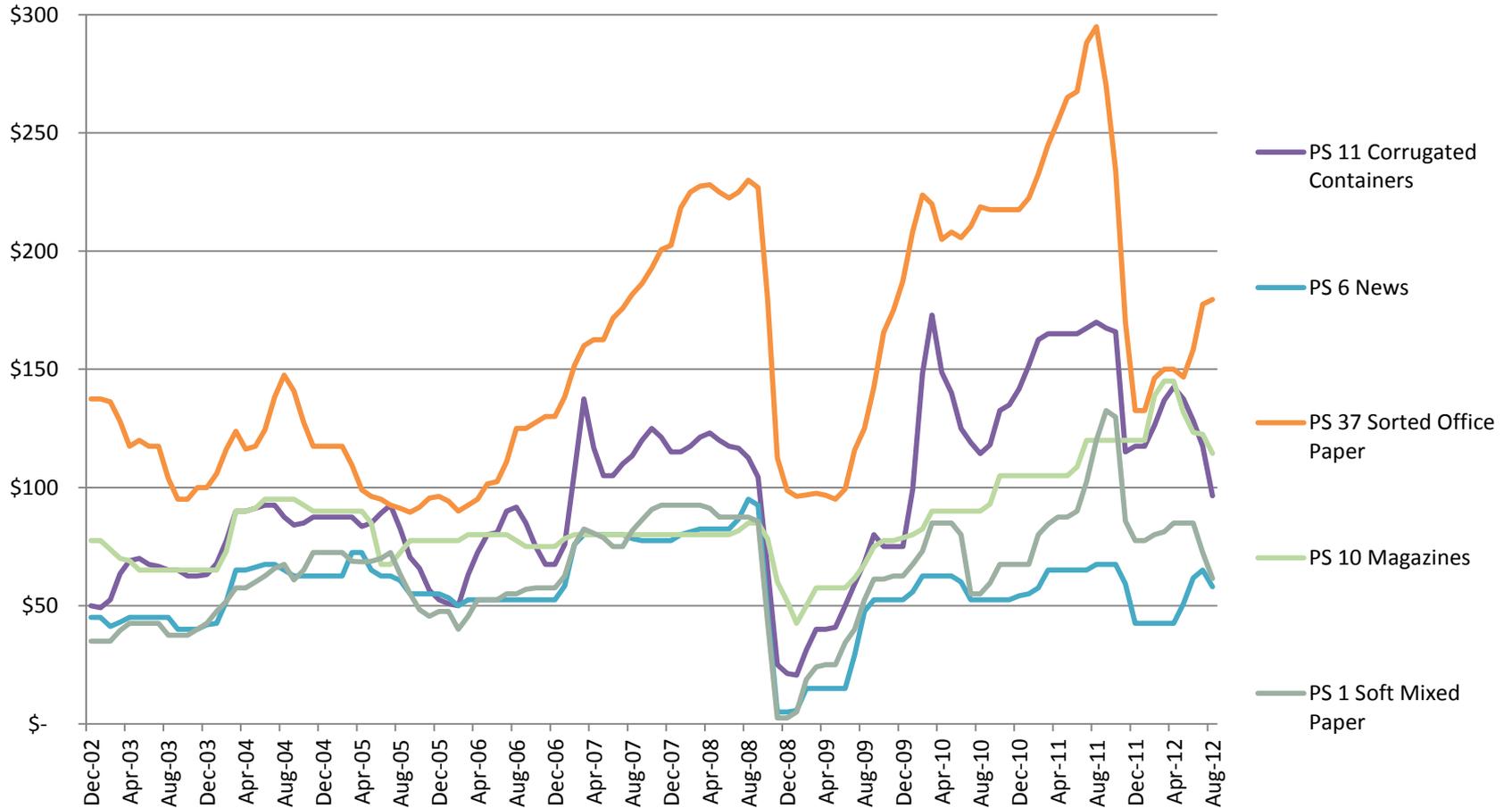


RECYCLING MARKET TRENDS

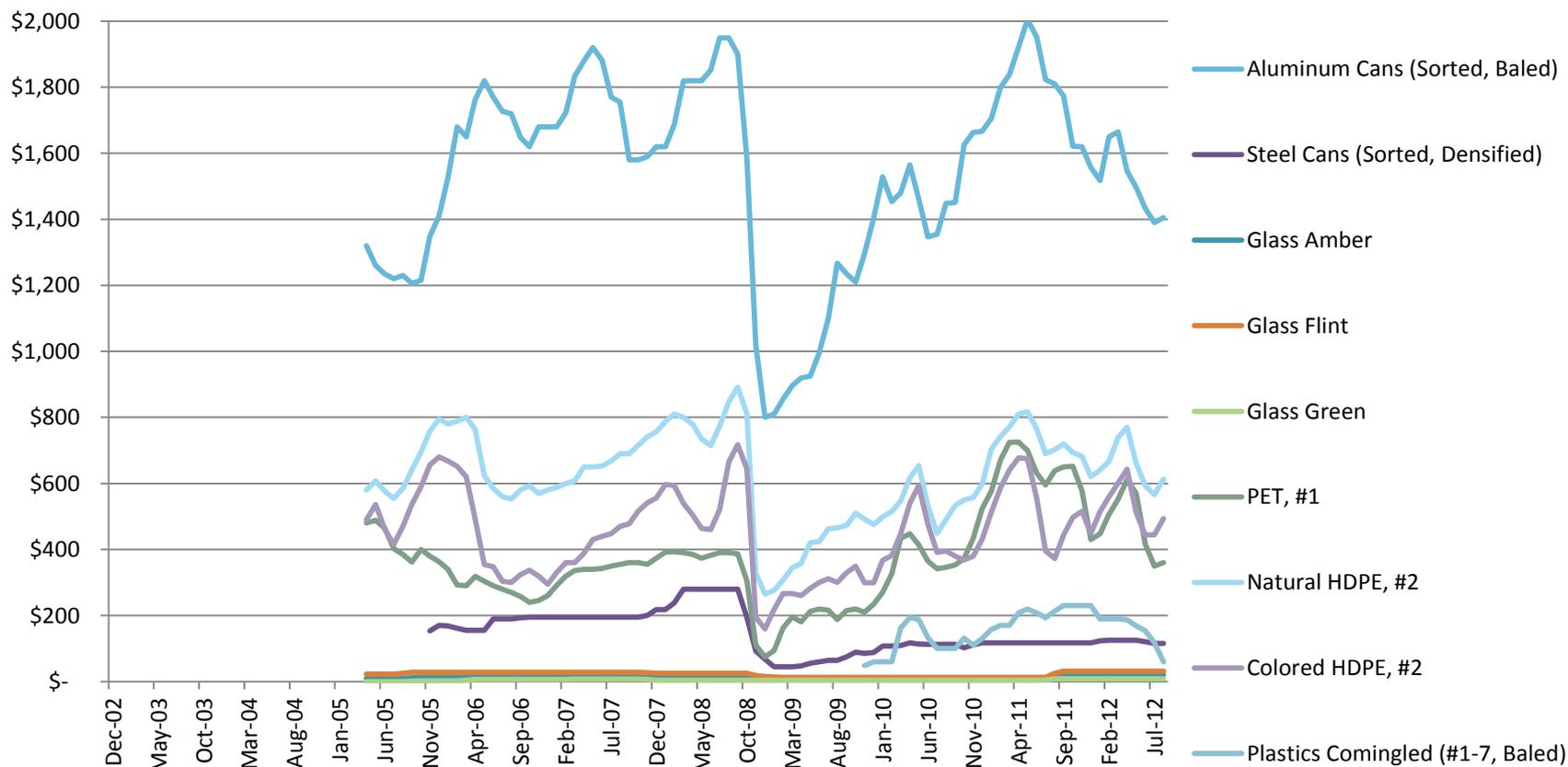
- End markets have expanded for more materials, especially the #3-#7 plastics, which has provided opportunities for Material Recovery Facilities (MRF's) to increase their list of accepted materials and collected volumes.
- The Recycling industry, which sells recycled commodities and finished goods to customers, has expanded at an average annual rate of 4.4% over the past five years.
- Higher levels of government regulation and voluntary manufacturing and product requirements for recycled content will benefit the industry by pushing potential downstream customers to use recycled goods in manufacturing processes.

HISTORICAL MARKET DATA –

FIBER (\$ PER TON)



HISTORICAL MARKET DATA – CONTAINERS (\$ PER TON)



MARKET IMPACT

- No evidence of decreased prices paid for single or dual sort material with performance based processing contract, but processing fees differ based on program type
- No difficulty for facilities to move material to market
 - Strong demand from established regional/domestic markets for all materials
- Processing fees for single and dual sort MRFs range from \$60 - \$80 per ton
 - Revenue above processing fee is split between MRF processor and Community
 - More efficient to sort material in a central location than on the curb

ECONOMICS OF RECYCLING

- Overall, the economics of recycling continue to work in favor of the communities and the refuse haulers.
- Arrangements with an area MRF in which haulers rebate communities based on the cost per ton using a blended commodities pricing index.
- A revenue sharing arrangement provides an incentive for both the MRF and hauler to maintain high quality and market standards and for the community to encourage residents to participate in the recycling program and educate residents how materials should be set out to maximize the benefit of the program.

GLOBALIZATION OF RECYCLED COMMODITIES

- The Average Commodity Revenue (ACR) contract approach is one of the best mechanisms for a community to hedge the risks of volatile swings in the value of recycled commodities.
- Recycled commodities are in demand locally, but adjusting operations to the trends of globalization of markets is a wise strategy for the future.
- Increasing global demand for recycled paper in the coming years as new uses for poly-coated paper grades emerge for items such packaging as aseptic juice boxes.
- Single-stream recycling will continue to grow in use as increasing demand for more commodities emerge.

QUESTIONS

Thank you for your Attention

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