City of Roseville
2016 Year-End Recycling Report

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Our mission is to reduce waste today through innovative resource management and to reach a waste-free tomorrow by demonstrating that waste is preventable, not inevitable.

This year-end report contains information on several areas that Eureka Recycling tracks to monitor the success of Roseville's zero waste recycling program over the course of each year. As a non-profit social enterprise organization we believe tracking and reporting this data is an essential way to ensure program transparency. It also gives Eureka Recycling and city staff the tools needed to successfully manage the program.

This report covers the following categories of information:

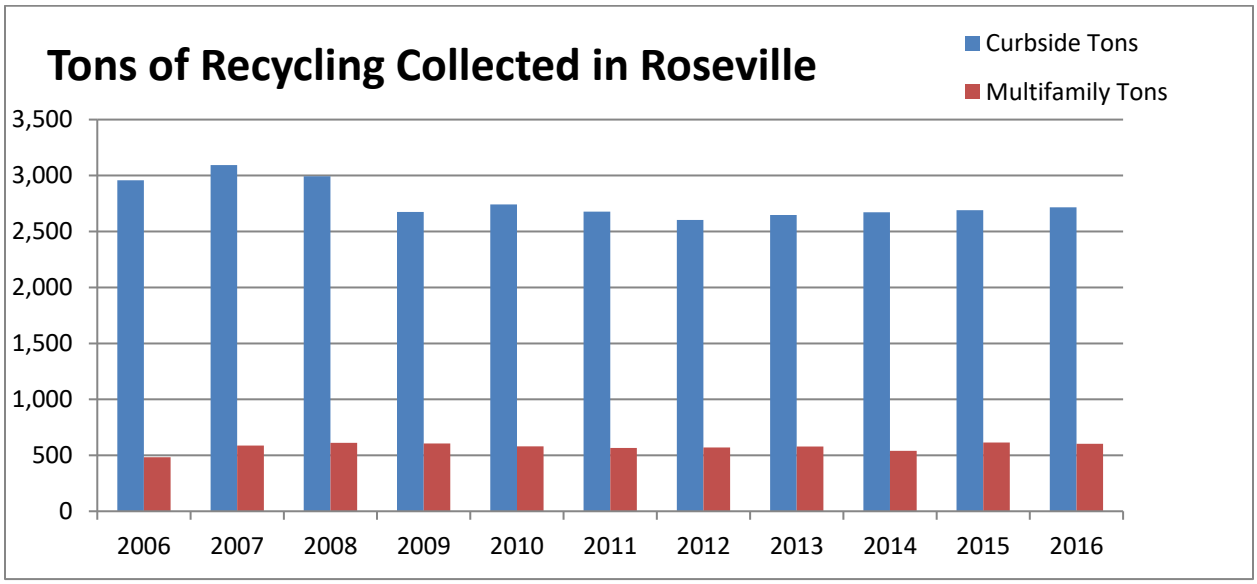
Introduction

This is the third year that Roseville has had a single sort recycling program with wheeled carts. The program continues to function smoothly with decreasing numbers of people calling the hotline with recycling questions or concerns. Participation continues to be the highest in Ramsey County at 94%. Despite the continued lightening of packaging, the tons of recycling collected in Roseville in 2016 rose by o.5%.

Market prices showed slow and steady improvement throughout 2016 with Roseville receiving just over $17,911 in revenue. In addition, there continues to be a significant and positive environmental impact from the recycling efforts of Roseville residents. More details on these and other aspects of the program can be found within the pages of this report.

TONS OF MATERIAL RECYCLED

Total tonnage collected in Roseville in 2016 was 3,320 tons. This represents a small (0.5%) increase over the previous year. This is something to be proud of considering the continuing trend towards the lightening of individual products and packaging that make up recycled materials. Recycling rates are measured by weight industry wide, but that metric doesn't tell the complete story. Manufacturers are continuing to find lighter and lighter weigh packaging options. Products once bottled in glass are now bottled in plastic or aluminum. Aluminum and plastic bottles are getting thinner and lighter. Also, fewer and fewer households subscribe to physical newspapers and magazines, opting instead to get their news and entertainment on computers, tablets, and phones. Roseville's 0.5% increase very likely represents a bigger percentage increase in terms of actual recycling efforts by residents, because it takes more material to create a ton now than it has in the past.



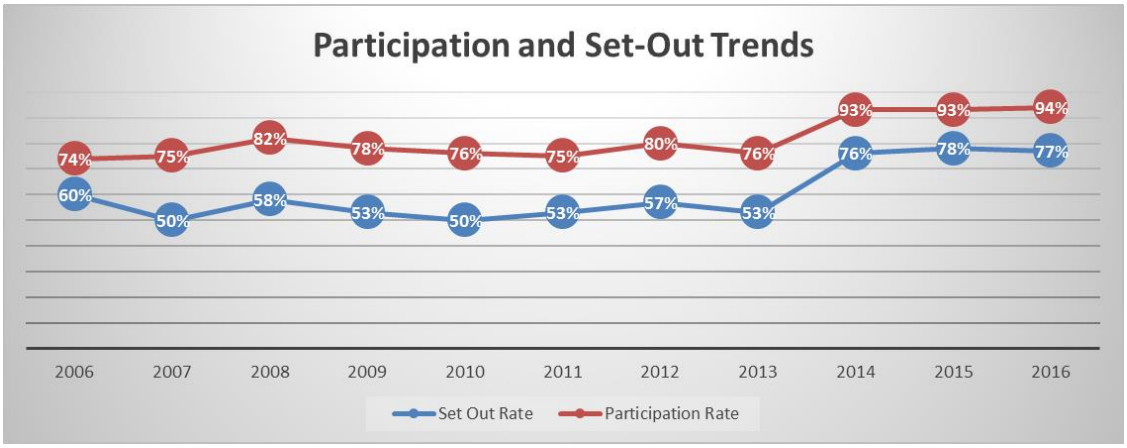
PARTICIPATION

Roseville is one of the few cities in the metropolitan area in which the actual city-specific participation trend information is gathered and made available. 94% participation is the highest of any city in Ramsey County that Eureka has data for.

In previous years the study was conducted manually with staff going out to the routes before the truck collected and counting set-outs, marking on a map which houses were setting out material and which were not. This was done in one 200-250 household sample section in each route with the same section being used each year. This method yields information to study the trends year to year in the number of people that set out in any given week and also the percentage of households that participate in the program at all.

Taking advantage of new equipment installed in the fall of 2016 on our trucks and our customer service hotline, we are now able measure set-outs and participation every collection day throughout the year. Each time a cart is tipped the system logs that tip for that address. On a quarterly basis we can run a report detailing what percentage of households set out recycling in any given week. We can also run a report that details if and how often all households in the city participate in the recycling program.

This new method of collecting participation information should make the process of monitoring who is participating in the program easier and more accurate as a human being making marks on a map is less accurate than a computer counting tips.



Eureka Recycling conducted the annual participation and set-out rate trend study in the fall of each year. (See Appendix C for the definitions, and methodologies of the participation, and set-out rate studies.)

COMPOSITION OF MATERIALS

Each year Eureka Recycling conducts a composition of the material collected in Roseville.

While this is certainly not an industry standard, Eureka Recycling believes that this information is important for cities to have as they plan their budgets, make decisions on

their education and outreach work plans and communicate with residents about what to recycle and the success of their program overall.

Type of Material	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage	% of Total Tonnage
Total Annual Tons	3,441	3,681	3,556	3,281	3,322	3,244	3,173	3,225	3,212	**3,305**	**3,320**
Papers											
News Mix	63.98%	56.46%	66.00%	61.65%	59.68%	51.53%	56.86%	54.40%	56.27%	54.08%	**50.00%**
Cardboard	6.71%	13.23%	4.50%	5.48%	7.34%	10.33%	9.09%	8.78%	8.59%	7.35%	**12.80%**
Boxboard	2.37%	7.60%	2.60%	5.48%	3.79%	7.04%	5.81%	2.54%	4.48%	4.38%	**4.44%**
Wet Strength	0.36%	0.10%	0.50%	0.00%	1.77%	0.46%	0.50%	0.58%	0.84%	0.74%	**0.57%**
Phone Books	1.33%	0.11%	0.10%	0.02%	0.12%	0.14%	0.28%	0.37%	0.00%	0.00%	**0.14%**
Milk Cartons & Juice Boxes	Not collected	Negligible	Negligible	Negligible	0.02%	0.03%	0.47%	0.07%	0.31%	0.19%	**0.19%**
Textiles	0.40%	Negligible	Negligible	0.02%	0.02%	Negligible	0.20%	0.09%	0.11%	0.16%	**0.23%**
Residual	0.24%	0.11%	0.50%	0.06%	0.07%	0.27%	0.19%	0.07%	N/A	N/A	**N/A**
TOTAL	**75.40%**	**76.60%**	**74.20%**	**72.72%**	**72.81%**	**69.79%**	**73.40%**	**66.90%**	**70.60%**	**66.90%**	**68.37%**
Containers											
Total Glass	14.89%	15.15%	16.70%	17.54%	17.31%	18.08%	16.94%	18.78%	17.58%	21.36%	**19.52%**
Steel Cans	2.64%	2.00%	2.40%	2.43%	2.65%	2.49%	2.38%	3.30%	2.09%	2.12%	**1.39%**
Aluminum	1.48%	1.10%	1.40%	1.40%	1.43%	2.10%	1.37%	1.99%	1.13%	0.98%	**1.04%**
Total Plastics	4.70%	4.01%	4.60%	5.75%	5.67%	6.94%	5.63%	7.29%	6.13%	6.09%	**5.24%**
Residual	0.89%	0.15%	0.70%	0.17%	0.12%	0.60%	0.28%	1.74%	N/A	N/A	**N/A**
TOTAL	**24.60%**	**22.40%**	**25.80%**	**27.28%**	**27.19%**	**30.21%**	**26.60%**	**33.10%**	**26.93%**	**30.55%**	**27.19%**

* Recycling collected in Two Sort System from 2006-2013. Single sort began in 2014

Increases in Cardboard

The 2016 composition study revealed an increase of the percentage of cardboard of almost 5.5%. This can be linked to an increase in online shopping and rapid delivery offered by shipping companies. More people are buying more things online. This creates an increase in the amount of cardboard boxes households have to recycle each week.

From a zero waste perspective this suggests the need for factors that balance this increase in consumption. More is not necessarily better unless the products we are manufacturing and purchasing have been designed to be:

- Durable and last a long time
- Repairable if they break
- Exchanged to others when they are no longer needed and not thrown away.
- Made from materials that are free of toxins
- Completely re-usable, recyclable or compostable at the end of their lifecycles
- Made by local businesses that keep the revenue from the sale of these products within the local economy creating local living wage jobs.

Non-Preferred Items and Residual Rates in Single-Sort Recycling Programs

Non-Prefered Items											
Scrap Metal	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**0.25%**
Bulky Ridgids	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**0.02%**
SUB-TOTAL	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**0.27%**
Residual	**1.13%**	**0.26%**	**1.20%**	**0.23%**	**0.19%**	**0.91%**	**0.47%**	**1.81%**	**2.47%**	**2.55%**	**4.17%**
TOTAL	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

For more information on the methodology of the composition analysis done by Eureka Recycling, please see Appendix B.

"Non-Preferred Items" refers to items that may in some months be able to be marketed for recycling but are not compatible with a mechanically sorted curbside recycling program. These are items that cause damage to machinery or hazard to staff in MRFs. Eureka has begun to sort and measure these items as they appear more regularly in cart based collection systems where the driver cannot see the items before they end up in the truck. The best method of reducing these materials is to do additional education to let residents know they should not place them in with their recycling.

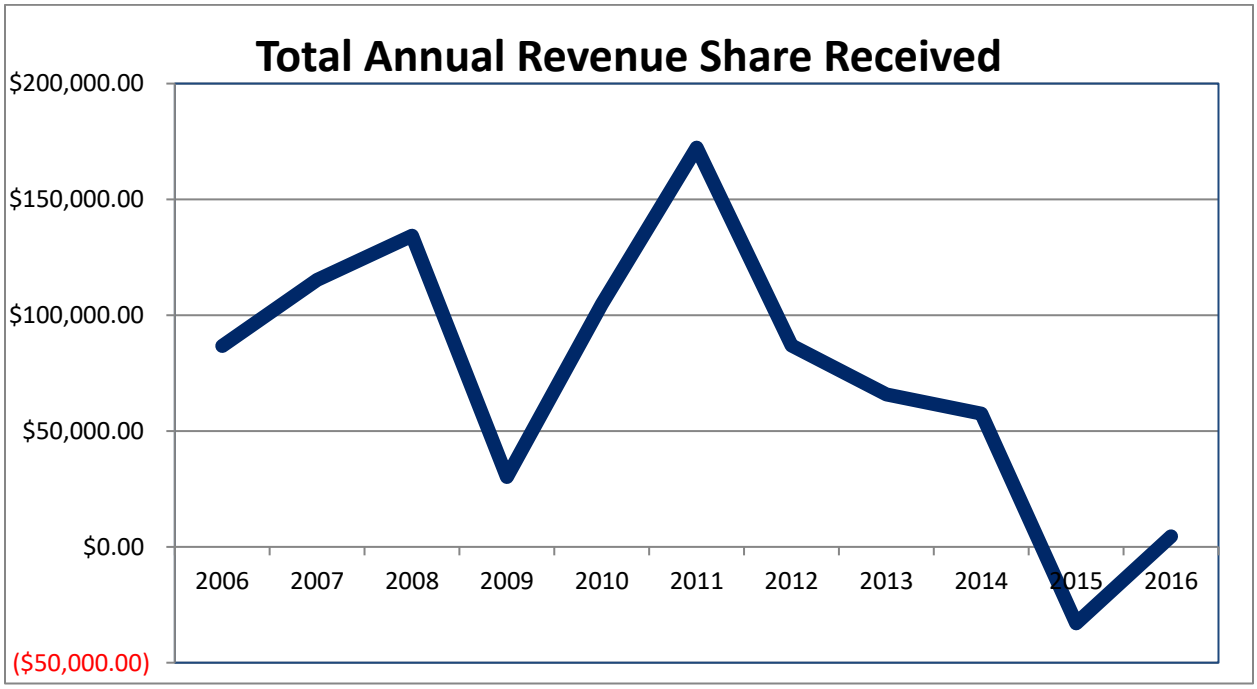
"Residual" refers to the amount of material collected from residents that is either not actually recycled. In 2016, the residual rate increased. Although still under 5%, which is considered excellent in a single sort MRF, it does indicate more effort may be needed to keep non-recyclable items out of the recycling. Plastic bags, Black plastic, Styrofoam, and plastic pouches continue to be the most common non-recyclable items in the residual. Some if it like fuel tanks and needles can cause hazards to staff or to the equipment in the MRF.

Engaging with residents through education (including the Guide to Recycling) in-mold labels on all recycling carts, our zero waste hotline, and outreach at many city sponsored events all lead to a lower residual rate. Regular communications makes it easy for Roseville residents to stay informed, and be clear about what is and is not recyclable in their city.

REVENUE

Since 2006, the City of Roseville has received more than $870,000 in revenue from the sale of its recyclables. The materials that Roseville residents set out are valuable. They required tons of natural resources, a great deal of energy, and hours of labor to produce. Much of that value still remains in the items after they are used. Recycling this material captures that value and reinvests it into the next generation of products reducing costs and creating significant environmental benefit. The market for recycled material generates billions of dollars each year in the United States alone. This material is highly sought after by manufacturers who want to make new products out of it.

In 2016 Roseville received $17,911.99 in revenue from the sale of recyclable materials. Commodity prices remained low in the first quarter of 2016 leading to the city receiving no revenue from the sale of product to markets. This turned around in the second quarter of the year with moderate improvements in prices being paid by markets. By the end of the year Roseville had received just over $17,911. While this may be a far cry from the revenues the city saw a few years ago it is revenue that the city can use to make improvements to the city's waste reduction programs or to keep the cost of recycling low for the residents.



Global, Regional, and Local Market Conditions Affecting Prices

Recycled materials are commodities just like other products such as, corn, cotton, and oil. In our modern, global economy things that happen near and far can impact the prices paid

for material on the open market. The following are the major factors influencing the prices paid for recycled materials. Some are very local issues affecting glass prices. Others are more global in nature and involve the economies of other countries like China.

Summary of Current Market Conditions
In 2016, the overall prices paid by end markets for the material recycled in the city's program began the year low with the gross revenue generated from the sale of materials still being exceeded by the cost for processing. The "zero floor" clause of Roseville's contract in 2016 meant that Eureka Recycling absorbed the $13,376 in lost processing fees.

In the second quarter of the year prices began to show a slow and steady increase. In the second quarter Roseville saw just over $2,869 in revenue. By the end of the year that had risen to just over $17,911.

The low cost of oil continues to put downward pressure on the price of recyclable plastics as manufacturers can choose to use virgin oil over recycled content.

Cardboard saw a steady increase. With more and more people joining the online shopping phenomenon all those shipments in cardboard boxes meant that not only did we see an increase in the amount of cardboard in the recycling. It also caused an increase in the prices paid by manufacturers for recycled cardboard to make the next generation of boxes. Old corrugated cardboard (OCC) prices were up 60% by the end of 2016.

Steel also showed price improvements from January to December. The price for steel went up nearly 35% by the end of the year, with higher spike in prices mid-year during the summer. At its peak steel was up 90% from its January price.

Prices paid for glass remain very low in 2016. The existence of only one processing facility for glass in Minnesota means that the supply of glass is still as high or higher than the capacity of the local market to process and sell it. As a result, while Eureka is still able to sell and recycle the glass here in a local market the cost of processing and shipping that mixed glass to Strategic Materials Inc. (SMI) exceeds the price paid for it. While the economic value of glass may currently be low, the environmental benefits and the positive impact glass has when recycled locally supporting jobs locally still makes it a net positive material.

Why does recycling glass matter?
Without immediate planning and action, some of Minnesota's recycled glass will end up in landfills or dropped from programs all together, and without a long-term solution that requires responsibility and some investment from producers, like bottle deposit legislation, glass may cease to be recycled at all. Glass collected for recycling that needlessly ends up in a landfill will end up costing the cities and their residents more money while reducing their recycling programs' environmental benefits.

There are significant, undisputable environmental and economic benefits achieved from recycling glass. These include energy savings, reduction of air and water pollution, and a

reduced need to mine new resources. Furthermore, State, municipal and environmental advocates agree that environmental benefits reduce dramatically the further we stray from the highest and best use of recycled glass, so glass bottles recycled into glass bottles should be the primary goal and then the next best markets for the smaller glass and fines need to be developed. These environmental impacts are the reason Eureka Recycling has been committed to finding a solution to keep bottle-to-bottle recycling viable despite changes in collection methods.

- Glass bottles and jars are 100% recyclable and can be recycled endlessly without any loss in purity or quality.
- Over a ton of natural resources are saved for every ton of glass recycled.
- Energy costs drop about 2-3% for every 10% recycled glass, also called cullet, used in the manufacturing process.
- One ton of carbon dioxide is reduced for every six tons of recycled container glass used in the manufacturing process.

ENVIRONMENTAL BENEFITS

The environmental benefits of Roseville's zero-waste recycling program are quantified transparently using widely-accepted environmental models. This ensures that all residents have a chance to see how their efforts can be measured and quantified.

There are many ways to calculate the benefits of recycling. To better explain these benefits in commonly understood terms, government agencies, research scientists, and economists have created several "calculators" to translate the amounts of recycled materials collected, and processed into equivalent positive societal and environmental benefits.

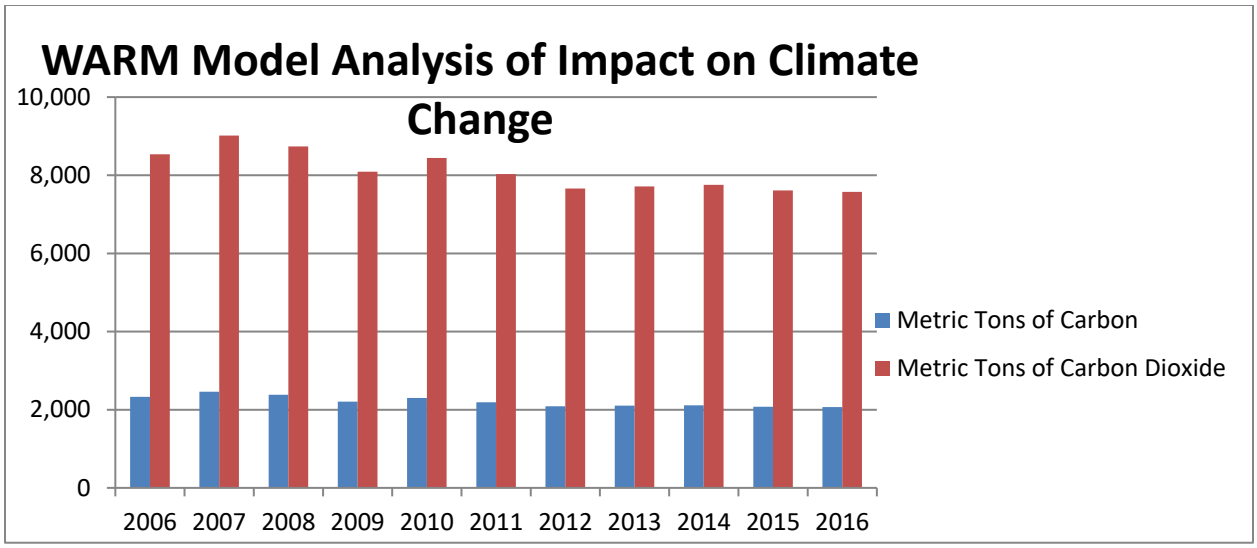
Because of the increasing societal focus on causes of, and solutions to, climate change, it has become imperative to measure waste reduction (and all of our activities) in terms of its impact on the environment. This allows us to speak in a common language, understand the impact of our choices, and help us prioritize the personal, and policy actions that we take. Many cities around the country work with the International Council for Local Environmental Initiatives (ICLEI) to quantify and now register the climate change impacts of their city. It is also important to calculate the carbon impact of waste reduction as the global effort continues to enact a carbon "cap and trade" system.

In addition to climate change mitigation, there are other environmental benefits to recycling, including saving energy and protecting air quality, water quality, natural resources, natural beauty, habitat, and human health.

The Environmental Protection Agency (EPA) WARM Calculator

The equations used in environmental calculations try to take into account the "full life cycle" of each material—everything from off-setting the demand for more virgin materials (tree harvesting, mining, etc.) to preventing the pollution that would have occurred if that material were disposed of (burned or buried). Different calculators may include some or all of the many factors that contribute to the "full life cycle" so results will vary from calculator to calculator.

While there are many models emerging to calculate greenhouse gas reductions, the most recognized, and standard model is the U.S. Environmental Protection Agency's Waste Reduction Model (WARM). WARM was designed to help solid waste planners and organizations track and voluntarily report greenhouse gas emissions reductions from several different waste management practices. WARM, last updated in June 2014, recognizes 46 material types.



MTCE (Metric tons of carbon equivalent), and $MTCO_2E$ (Metric tons of carbon dioxide emissions) are figures commonly used when discussing greenhouse gas emissions. For more information about the process of measuring the environmental benefits of waste reduction, visit http://epa.gov/climatechange/wycd/waste/measureghg.html#click

What do all these numbers mean?

In addition to preventing pollution, an important impact of recycling is that is conserves a huge amount of energy. Making products and packaging from raw materials harvested from nature uses a much larger amount of energy than using recycled materials.

Every manufactured item has the energy used to make it "embedded" into it. Recycling takes advantage of that energy, as it is easier and more energy efficient to make a glass bottle from another glass bottle than from raw materials.

The WARM model and other calculators measure the difference between recycling all these tons of materials and using them to make new products versus sending them to an incinerator and making replacement products from raw materials. This difference is expressed as the amount of CO2 that was not produced because we did not have to make and use all the energy that would have been needed if we used raw materials.

The numbers above help municipalities calculate and track their environmental footprint. For more information about the process of measuring the environmental benefits of waste reduction, visit http://epa.gov/climatechange/wycd/waste/measureghg.html#click.

These numbers, however, don't have much meaning to the average person. To help recyclers understand the significance of their actions, the EPA has also developed tools to translate these numbers into equivalent examples that people can more easily understand.

- For example, using the figures above, the EPA estimates that **Roseville would have had to remove 1,595 cars from the road for one year to have had the same environmental impact in 2016 as they did by recycling.** To achieve this, nearly 10.5% of Roseville's households would have had to give up one car for a year.

- Another way to look at it is that the residents of Roseville prevented the environmental impact of having burned a 55 gallon drum of gasoline for each household.

Although WARM is the most widely peer-reviewed, and accepted model, it is considered to have several flaws. Many believe the use of this calculator is conservative, and understates the real impact of waste reduction efforts, but it offers a conservative starting place to measure our impacts, and work towards our goals. Even with these conservative calculations, the impacts of Roseville's recycling program prove to be quite significant.

Measuring Environmental Benefits Calculator (MEBCalc™)

Jeffrey Morris, Ph.D., Economist at Sound Resource Management in Seattle, has developed a calculator that begins with the EPA's WARM calculator, and expands upon it to gather information on not just carbon, and CO_2, but also several other important environmental, and human health indicators. Although not yet widely used, this calculator shows the significant benefits that WARM does not consider.

The MEBCalc™ model expands, and shows the benefits other than just energy savings, and carbon savings. Recycling materials with zero waste in mind recognizes not just the value in the resource itself, but the contribution to the health of the community when materials are kept out of landfills, and incinerators, avoiding the toxic, and carcinogenic emissions.

Roseville	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Recycling Tons	3441	3682	3556	3281	3322	3243	3173	3225	3212	3305	3320
Carbon Dioxide Equivalent Reduction Metric Tons (eCO_2)	9,437.3	9,619.0	9,683.5	8,814.0	8,739.3	8,425.1	8,106.2	8,478.7	8,386.3	8,159.5	8,088.0
Human Health—Carcinogens Reduction Metric Tons (eBenzene)	1.9	1.9	1.9	1.9	1.9	2	1.8	1.9	1.7	1.7	1.7
Human Health—Non-Carcinogen Toxins Reduction Metric Tons (eToluene)	4,609.7	5,253.0	4,665.7	4,452.0	4,518.0	4,699.6	4,375.0	4,280.1	3,953.0	3,810.2	4,064.9
Human Health—Particulates Reduction Metric Tons ($ePM_{2.5}$)	4.4	6.6	4.2	4.4	4.8	5.9	5.1	4.2	3.6	3.3	4.4
Acidification Reduction Metric Tons (eSO_2)	26.9	27	27.3	25.3	25.5	27.1	24.3	25.7	22.7	20.6	22.1

Appendix A

Roseville Multi-Family Tonnage by Property - 2015

Residential Buildings

Property Name	Primary Address	2006 Total lbs.	2007 Total lbs.	2008 Total lbs.	2009 Total lbs.	2010 Total lbs.	2011 Total lbs.	2012 Total lbs.	2013 Total lbs.	2014 Total lbs.	**2015 Total Lbs.**	**2016 Total Lbs.**
1144 Dionne Street	**Dionne Street, 1144**	7,150	8,457	5,961	5,167	6,906	5,892	5,539	5,557	5,957	6,979	**7,369**
1363 County Road B	**County Road B, 1363**	1,892	1,910	2,744	2,629	2,255	2,090	2,426	2,296	2,487	2,668	**2,601**
161 McCarrons Street~	**McCarrons Street, 161**	439	198	-	-	-	-	-	-	-	-	
161 Minnesota Avenue	**Minnesota Avenue, 161**	148	678	423	646	1,076	1,264	1,258	1,226	1,582	1,695	**1,419**
1614 Eldridge Avenue	**Eldridge Avenue, 1614**	1,424	1,280	2,651	4,237	3,583	3,858	3,230	1,457	1,983	1,479	**1,474**
1624 Eldridge Avenue	**Eldridge Avenue, 1624**	2,541	2,029	1,996	2,629	2,249	1,842	4,753	3,897	3,596	3,242	**4,902**
Skillman Villas	**Skillman Avenue, 1629**	2,505	3,002	2,951	2,686	2,151	1,981	2,897	1,929	1,674	1,903	**1,629**
1635 Eldridge Avenue	**Eldridge Avenue, 1635**	3,284	1,702	1,650	2,333	2,380	2,026	1,881	1,912	2,210	2,081	**1,163**
1705 Marion Street	**Marion Street, 1705**	1,437	1,578	224	291	1,370	840	587	523	844	623	**620**
1750 Marion Street	**Marion Street, 1750**	3,511	3,576	4,317	3,906	3,386	2,741	1,617	2,080	-	851	**595**
2125-2133 Pascal Street	**Pascal Street, 2125**	2,514	3,184	5,239	4,717	4,829	5,007	5,093	5,538	5,517	5,326	**6,707**
2180 Haddington Road	**Haddington Road, 2180**	964	1,285	737	1,690	1,484	1,214	1,749	1,784	1,560	1,703	**1,805**
2275 Rice Street ^	**Rice Street, 2275**	1,924	2,830	2,852	2,973	869	-	-	-	-	-	
2447 County Road B	**County Road B, 2447**	2,584	2,867	3,143	2,519	2,567	2,572	2,642	2,098	2,522	2,661	**3,271**
2610 Snelling Curve	**Snelling Curve, 2610**	2,929	2,696	3,164	3,113	3,284	3,323	3,678	3,055	2,890	3,612	**3,457**
2900 Highcrest Road	**Highcrest Road, 2900**	4,581	4,436	2,715	2,534	3,597	3,512	3,720	3,444	2,049	2,594	**2,859**
2950 Highcrest Road	**Highcrest Road, 2950**	2,980	2,295	2,486	2,685	2,496	1,742	1,817	1,209	1,331	1,187	**1,517**
Applewood Pointe	**Applewood Court, 1480**	47,799	58,215	46,499	39,220	36,217	30,640	25,912	23,956	23,819	23,533	**27,356**
Applewood Pointe at Langton Lake	**Langton Lake Drive, 1996**	-	-	-	-	-	7,419	16,144	24,786	27,487	25,722	**21,949**
Aquarius Apartments	**County Road C2, 2425**	-	-	15,391	17,449	12,570	11,702	13,094	15,157	14,376	13,796	**13,648**
Bonaventure	**Lexington Avenue North, 3090**	7,490	8,105	7,033	5,367	5,497	5,281	5,033	4,465	6,023	5,190	**5,218**
Centennial Gardens East & West	**Centennial Drive, 1420**	26,759	21,852	22,677	23,021	21,122	20,025	20,137	20,888	20,374	20,206	**17,987**
Cherrywood Pointe	**Cleveland Avenue North, 2996**	-	-	-	-	-	-	3,962	8,407	10,995	10,724	**9,338**
Coventry Seniors Apartments	**Snelling Avenue, 2820**	19,939	19,110	22,729	24,917	22,952	21,268	21,247	21,275	20,041	21,277	**20,115**
Dale Terrace Apartments	**County Road B, 720**	9,360	7,793	12,033	13,323	12,343	11,572	10,371	9,892	9,997	10,998	**11,629**
Dellwood Condominiums	**Dellwood Street, 1725**	1,226	1,923	2,650	2,630	2,721	3,298	2,891	2,439	2,887	3,603	**3,860**
Eagle Crest	**Lincoln Drive, 2925**	13,892	60,799	56,057	57,249	64,086	67,291	70,827	68,040	70,991	59,310	**58,883**
Executive Manor Condos	**Old Highway 8, 3153-3155**	12,385	14,530	17,674	17,185	15,918	16,897	19,637	18,055	16,322	16,073	**18,451**
Garley Apartments	**County Road B, 1634**	2,153	1,161	1,415	1,547	1,420	1,793	1,897	1,487	1,524	1,726	**1,966**
Greenhouse Village	**Larpenteur Avenue, 1021**	19,032	37,098	28,751	24,581	30,384	25,402	22,453	25,797	23,539	22,201	**24,751**
Hamline House Condos	**Hamline Avenue, 2800**	34,102	33,973	32,182	29,441	24,522	22,481	20,586	21,206	21,171	20,589	**25,655**
Hamline Terrace	**Terrace Drive, 1360-1410**	12,817	12,230	17,366	19,233	23,416	23,105	20,080	20,639	19,132	19,436	**20,474**
Heritage Place	**County Road B West, 563**	21,892	23,110	17,258	16,066	19,781	18,879	16,649	18,963	18,189	17,787	**16,518**
Hillsborough Manor	**Woodbridge Street, 2335**	16,298	17,755	28,418	35,852	29,398	21,312	19,284	24,054	25,407	47,638	**42,532**
Karie Dale Apartments	**Dale Street North, 2355**	6,691	7,455	9,794	8,483	7,508	7,910	6,931	7,151	8,711	10,741	**10,290**
Lake Josephine Condominiums	**Lexington Avenue North, 3076**	9,411	8,313	7,040	6,632	6,179	6,603	6,389	5,817	5,175	6,765	**6,983**
Lar Dale Apartments	**Larpenteur Avenue West, 655**	2,068	2,189	2,348	1,546	2,472	2,865	3,326	3,224	3,431	3,541	**4,542**
Lexington Court	**Lexington Avenue, 2192-2206**	3,390	2,970	4,293	5,076	4,092	4,808	5,924	7,020	6,743	9,509	**11,048**
Lexington Twin Apartments	**Lexington Avenue, 1890**	5,674	5,519	5,456	5,689	5,014	5,371	5,791	5,549	5,971	6,239	**5,440**
Lexlawn/Roselawn Apartments	**Lexington Avenue, 1943**	3,142	2,888	3,774	4,033	3,788	4,074	3,788	3,369	2,711	3,233	**3,090**
Marion Street/ Brittany Apartments	**Larpenteur Avenue, 175**	11,980	16,150	17,191	17,485	18,645	11,838	11,263	8,711	2,627	2,581	**63**
McCarrons Apartments	**McCarrons Boulevard North, 204**	5,092	4,919	5,543	5,039	4,939	4,172	3,743	3,884	5,867	7,316	**1,706**
McCarrons Lake Condos	**McCarrons Boulevard N, 185**	-	-	-	-	-	5,076	7,757	9,407	9,584	10,195	**8,372**
Midland Grove Condos	**Midland Grove Road, 2200**	48,162	60,937	50,758	45,718	48,159	50,575	54,288	49,123	43,548	39,886	**43,230**

Property Name	Primary Address	2006 Total lbs.	2007 Total lbs.	2008 Total lbs.	2009 Total lbs.	2010 Total lbs.	2011 Total lbs.	2012 Total lbs.	2013 Total lbs.	2014 Total lbs.	**2015 Total Lbs.**	**2016 Total Lbs.**
Msocs	**Huron Street North, 1898**	-	-	-	615	4,326	3,717	2,452	2,369	3,185	2,072	**360**
Northwestern College Apartments	**Lydia Avenue, 1610**	6,061	7,839	4,941	4,379	4,055	4,111	3,418	3,653	3,775	3,299	**2,754**
Northwestern College/Snelling Terrace	**Snelling Drive East, 2906**	7,386	16,027	12,542	12,253	12,443	10,702	11,261	11,308	6,879	11,302	**10,832**
Palisades	**Sandhurst Drive West, 560**	40,078	41,635	55,306	51,667	45,972	47,910	40,893	45,973	49,821	53,587	**54,182**
Parkview Estate Condominiums	**Oxford Street, 2670**	28,447	29,206	30,816	29,683	24,738	24,793	23,440	25,588	26,361	24,372	**33,208**
Parkview Manor	**Dale Street North, 2202-2210**	4,931	4,553	5,085	5,612	4,698	4,518	4,242	4,799	4,586	5,259	**5,526**
Parkview Terrace Condos	**Oxford Street, 2690**	3,960	33,244	28,285	23,919	21,702	19,169	17,420	16,521	16,706	17,184	**15,629**
Ramsey Square Condos	**Dale Street North, 2710**	-	35,796	34,991	35,127	41,288	38,930	37,992	40,702	44,247	46,485	**41,454**
Riviera Apartments	**Highway 36 West, 925 & 965**	12,473	13,597	19,108	17,369	15,204	15,900	14,110	15,255	14,406	15,547	**16,385**
Rose Hill Estates	**County Road B, 591**	4,341	4,904	5,880	5,345	3,775	5,514	5,281	7,552	7,743	10,449	**13,149**
Rose Mall Apartments	**Albert Street, 2201-2221**	37,328	41,412	43,984	47,376	41,250	42,786	39,486	37,841	35,987	38,473	**41,754**
Rose Park Apartments (1615)	**Eldridge Avenue, 1615**	1,809	1,091	1,721	2,076	1,922	1,678	1,479	1,336	1,574	1,200	**924**
Rose Park Estates	**Fry Street, 2136**	4,757	5,426	6,065	6,466	4,253	4,591	5,084	4,510	4,540	4,500	**5,565**
Rose Park Commons	**County Road B, 1610**	2,266	2,324	1,967	2,396	2,079	1,858	1,827	1,808	1,865	1,764	**1,687**
Rose Vista Apartments	**Rose Vista Court, 1222-1263**	19,697	18,366	24,634	26,822	23,830	23,146	20,789	20,499	24,767	25,817	**27,309**
Rosedale Estates North	**Rice Street, 2835**	21,885	24,253	33,475	34,083	26,954	22,234	19,283	20,899	21,290	24,688	**24,629**
Rosedale Estates South	**Rice Street, 2735**	20,750	23,864	26,581	27,377	23,770	21,632	19,071	20,251	21,867	23,092	**20,756**
Roselawn Village	**Roselawn Avenue, 1074**	5,576	5,950	5,616	5,417	4,730	5,563	5,633	4,792	4,880	4,889	**4,457**
Rosepointe	**Hamline Avenue North, 2545**	32,645	29,485	33,312	31,688	31,195	29,229	27,706	28,977	29,948	37,623	**38,712**
Roseridge Estates	**Samuel Street, 2086-2090**	2,653	3,099	3,829	4,537	3,744	5,739	6,519	5,255	6,084	5,435	**5,800**
Rosetree Apartments	**Highway 36, 655**	12,251	12,394	12,654	11,831	10,236	8,515	8,026	7,421	7,075	8,258	**7,568**
Roseville Apartments, LLC	**Eldridge Avenue, 1625**	2,037	2,546	1,833	2,106	1,730	2,172	2,538	3,764	3,745	2,857	**2,452**
Roseville Arms Condos	**Elmer Street, 160**	789	1,565	3,269	3,068	2,074	2,780	3,049	3,148	3,459	5,970	**5,331**
Roseville Commons	**County Road C2 West, 2496**	8,332	7,515	8,281	9,065	6,415	6,470	5,999	6,841	8,233	6,001	**7,434**
Roseville Estates	**Lexington Avenue, 2599**	5,593	9,842	12,312	10,028	7,472	6,588	9,453	8,345	6,433	6,862	**8,844**
Roseville Seniors	**Larpenteur Avenue West, 1045**	25,581	33,600	30,521	27,577	23,698	24,268	20,647	24,456	24,314	24,340	**25,173**
Roseville Terrace	**Dunlap Street, 1759**	5,363	4,785	5,032	5,469	4,658	4,167	3,876	3,671	3,965	3,567	**2,900**
Roseville Townhomes	**Old Highway 8, 3085**	-	13,423	20,619	24,021	23,733	22,322	29,349	23,836	23,976	19,905	**23,169**
Rosewood Village	**Highway 36 West, 1630**	44,374	41,062	34,271	43,368	38,264	36,605	39,188	41,640	37,574	37,059	**41,081**
Sienna Green Apartments*	**Snelling Avenue, 2275**	9,199	9,683	9,659	11,486	7,813	13,325	15,008	19,042	21,103	20,064	**17,294**
South Oaks Apartments	**County Road D West, 1080**	4,067	5,951	6,751	5,930	5,969	4,886	4,344	4,101	3,942	4,472	**4,139**
Sun Place Apartments	**Marion Street, 1721**	5,169	4,093	4,926	6,107	6,451	5,942	4,896	5,678	5,318	5,058	**6,102**
Sunrise Assisted Living	**Snelling Avenue North, 2555**	17,031	16,647	15,869	16,693	13,118	11,330	12,300	14,856	17,900	17,641	**18,806**
Talia Place	**Old Highway 8, 3020**	2,790	1,683	1,761	2,569	2,620	1,892	1,891	1,868	1,701	2,698	**3,852**
Terrace Park	**Terrace Drive, 1420**	12,784	13,045	9,853	8,911	10,533	11,067	9,371	8,640	8,494	8,908	**10,020**
The Lexington (Roseville)	**Lexington Avenue North, 2775**	37,081	30,796	35,417	35,409	38,816	39,023	42,959	40,501	41,026	41,416	**39,110**
The Riviera 2	**Highway 36 West, 885**	6,562	6,602	8,968	8,053	6,740	5,431	6,168	6,773	8,576	8,284	**7,731**
Valley 8 Apartments	**Old Highway 8, 3050**	11,085	9,910	12,626	13,491	11,637	12,593	12,702	10,655	10,204	11,453	**10,597**
Victoria Place	**Victoria Street North, 2250**	-	14,911	16,130	14,015	14,647	15,396	16,260	15,389	14,975	15,354	**14,634**
Villa Park Community Condominiums	**County Road B, 500**	15,890	14,276	18589	16,924	17,962	15,178	11,537	13,001	13,006	13,321	**13,568**
Villas at Midland Hills	**Fulham Street, 1940**	2,873	11,653	12,600	11,506	11,375	11,722	12,318	13,667	13,647	14,078	**12,610**
Roseville Arms Condos	**160 Elmer St**	-	-	-	-	-	-	-	-	-	-	**5,331**
	Total Pounds for Residential Buildings	869,454	1,081,050	1,137,662	1,133,370	1,075,514	1,046,950	1,041,556	1,067,947	1,072,021	1,113,019	**1,129,300**

Non-Profits

Property Name	Primary Address	2006 Total lbs.	2007 Total lbs.	2008 Total lbs.	2009 Total lbs.	2010 Total lbs.	2011 Total lbs.	2012 Total lbs.	2013 Total lbs.	2014 Total lbs.	**2015 Total Lbs.**	**2016 Total Lbs.**
Keystone Foodshelf	**Hamline Avenue North, 2833**	-	-	-	-	-	14,258	27,119	29,787	27,282	25,528	**21916**
Keystone Communities	**Victoria Street, 2750**	20,205	22,122	23,413	21,614	20,340	18,408	17,719	16,316	15,000	15,193	**13094**
	Total Pounds for Non-Profit Buildings	20,205	22,122	23,413	21,614	20,340	32,666	44,838	46,103	42,282	40,721	**35010**

Municipal Buildings												
Property Name	Primary Address	2006 Total lbs.	2007 Total lbs.	2008 Total lbs.	2009 Total lbs.	2010 Total lbs.	2011 Total lbs.	2012 Total lbs.	2013 Total lbs.	2014 Total lbs.	**2015 Total Lbs.**	**2016 Total Lbs.**
Acorn Park	**County Road C, 286**	-	-	-	-	-	184	761	487	493	677	**350**
Central Park Lexington	**Lexington Ave North, 2540**	-	-	-	-	-	-	-	33	-	-	
Central Park Victoria West	**Victoria Street North, 2495**	-	-	-	-	-	46	741	628	-	-	
City Hall	**Civic Center Drive, 2660**	28,244	28,474	24,682	20,562	21,228	21,590	18,786	16,775	15,317	10,539	**11494**
Evergreen Park Ballfield	**County Road B West, 1810**	497	515	456	818	305	336	404	190	789	70	**1379**
Fire Station 1 Roseville**	**Lexington Avenue, 2701**	3,226	3,630	2,134	2,058	2,063	1,890	**	214	555	1,566	**987**
Fire Station 3 Roseville***	**Dale Street North, 2335**	1,564	2,786	3,604	2,960	3,968	3,437	2,911	2,568	-	-	
Golf Course	**Hamline Avenue North, 2323**	2,729	2,654	2,080	2,149	2,689	2,048	2,093	1,671	1,532	1,635	**1702**
Harriet Alexander Nature Center	**Dale Street North, 2520**										1,918	**1911**
License Center (Active but not on routes)	**Lexington Avenue, 2737**	79	178	10	38	31	26	-	-	-	-	
Owasso Ballfields	**Victoria Avenue, 2659**	120	36	400	361	295	-	171	134	149	16	**169**
Public Works Garage	**Woodhill Drive, 1140**	8,341	12,089	13,916	13,566	16,863	16,644	17,608	17,680	16,398	18,063	**14331**
Skating Center	**Civic Center Drive, 2661**	4,877	5,038	5,244	3,938	5,057	7,514	6,692	8,806	11,046	11,944	**12215**
State Farm Insurance	**Lexington Avenue North, 2201**	-	-	705	1,758	718	759	241	480	746	926	**673**
Wildlife Rehabilitation Center	**Dale Street North, 2530**	14,607	13,948	12,726	12,513	11,840	10,509	9,158	9,649	8,536	9,108	**13605**
	Total Pounds for Municipal Buildings	64,283	69,348	65,957	60,720	65,057	64,983	59,566	59,315	55,561	56,463	**58816**

	2006 Total lbs.	2007 Total lbs.	2008 Total lbs.	2009 Total lbs.	2010 Total lbs.	2011 Total lbs.	2012 Total lbs.	2013 Total lbs.	2014 Total lbs.	**2015 Total Lbs.**	**2016 Total Lbs.**
Total Pounds for Roseville per year	**953,942.01**	**1,172,519.83**	**1,227,032.00**	**1,215,703.72**	**1,160,910.89**	**1,144,598.32**	**1,145,960.00**	**1,173,365.00**	**1,169,864.77**	**1,210,202**	**1,223,126**

Total Units in 2016	**6169**
Total Units in 2015	**6,158**
Total Units in 2014	**6,112**
Total Units in 2013	**6,049**
Total Units in 2012	**6,049**
Total Units in 2011	**5,999**
Total Units in 2010	**5,781**
Total Units in 2009	**5,781**
Total Units in 2008	**5,781**
Total Units in 2007	**5,662**
Total Units in 2006	**5,367**

*Har Mar Apartments changed name to Sienna Green Apartments as of November 2010
** Fire Station 1 was demolished and is being rebuilt. Will reopen in 2013
***Fire Station 3 was closed in the fall of 2013 when Fire Station 1 was reopened
In 2013, two property names were updated in our records. 1610 County B is now Rose Park Commons and 1615 Eldrige is now Rose Park Apartments
^2275 Rice Street canceled September 2010. Building is demolished
1705 Marion is a builing with no units, this was corrected in 2011. In 2010 it was reported with 3 units.
~161 McCarrons: Restarted at the end of 2015. Units included in total.
Harriet Alexander Nature Center has not been included on this list until 2015. They used to share carts with WRC and received their own account with carts this year.
Keystone Communities was listed as Rosewood Estates (Roseville) until 2015.

Eureka Recycling
Composition Analysis Methodology

Eureka Recycling collects materials in a single sort collection system with all paper, cardboard, metal and plastic, steel, aluminum and glass containers combined by residents into one cart. Each year we conduct an annual composition study of the single sort material to determine the percentage each material represents in the overall composition.

(651) 222-SORT (7678)
www.eurekarecycling.org

Our mission is to reduce waste today through innovative resource management and to reach a waste-free tomorrow by demonstrating that waste is preventable, not inevitable.

Composition by Commodity of Each Recycling Stream

During the composition study we weigh each truck before and after to determine the weight of the material. Each truck has a stored weight that is updated regularly for accuracy. This process allows us to determine the initial weight of the material set out by residents during the period being analyzed.

The composition study starts with Eureka Recycling storing all of the materials collected in the city during a one-week period. These materials are stored in a separate bunker from all other materials at the facility. We sort the material separately from all other recycling at the facility.

The sorted materials are then baled or put into a hopper and transported with a forklift to the truck scale to be weighed. Finally, we weigh the total amount of each sorted material grade including the non-recyclable material (residual) to establish the percentage of the total tonnage that each material type represents in the overall composition.

Participation Trend Analysis Methodology

Eureka Recycling conducts an annual participation study in which both set-out and participation rates are analyzed and documented.

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The **set-out rate** is the average number of households that set materials out for recycling collection on a given day. Not every household sets out their recycling each week. If they are out of town, forget or simply don't have very much in their cart they may not have a cart out for collection on their day. The Set-Out number is the average across all weeks reported of percentage of households that set-out material in any given week.

The **participation rate** is the number of households who set materials out for recycling collection at least once over the period of the study, which for this program is done quarterly. The participation rate is a better indication of overall recycling participation because it includes households that recycle at least once over the course of a quarter, recognizing that some households may not set-out recycling every week. It more accurately indicates how many households are participating in the recycling program overall, as opposed to the number of participants on a specific day.

Summary of Process

The study is done quarterly. Each time the truck tips a cart that collection is recorded for that specific address. Once per quarter Eureka Recycling runs a report of all tips and sorts by collection day. The percentage of all addresses in that route that register a tip in any given week is recorded as that week's set-out rate. Then all set-out rates recorded for that quarter are averaged to produce the citywide set-out rate for that quarter.

The report is then sorted by address. Each address will be repeated for each collection day they recorded as having been tipped. Duplicate addresses are removed. The remaining list of addresses represents all households that participated in recycling at least once within that quarter. This is the participation rate for that quarter.

Quarterly set-out and participations rates are averaged for the annual set-out and participation numbers.

City of Roseville
Outreach and Education Summary 2016

Roseville's recycling program continues to be a leader in the country. Outreach and education elements of the program are an important part to ensuring good participation and helping residents understand the benefits of recycling. In 2016, Eureka Recycling continued to support the efforts of the city of Roseville to make city events zero-waste. This was the fifth year we attended Night to Unite parties to talk about zero waste and to distribute educational materials. The Wild Rice Festival, and Earth Day celebration were also successful events—bringing Roseville residents' attention to zero-waste issues while diverting nearly 98% of event materials from the waste stream. These successes continue to show the City of Roseville's leadership and its commitment to zero waste and sustainability. In addition Eureka Recycling worked for the second year with city staff and with the Roseville Rotary to make the Taste of Rosefest a successful zero waste event as well. This year we worked with food and beverage vendors and the over 800 attendees to produce a diversion rate of over 95% with 540 pounds of material being recycled or composted.

Second Year of Roseville's Transition to Single Sort Recycling

Zero-Waste Hotline

There was a large spike in calls to our hotline in the first year of single stream in 2014. As residents have settled into the new system the number of calls, while still somewhat higher than the pre-single-sort levels, have come down a good deal.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Hotline Calls										
Curbside Calls	425	540	480	410	330	415	885	2476	1910	**1458**
Multi-family Calls	49	78	35	74	81	72	94	85	72	**62**
Total Calls	474	618	515	484	411	487	979	2561	1982	**1520**
Requests for Printed Materials										
Curbside	41	74	21	43	47	33	41	556	163	**52**

There were 41% few calls to the hotline from single family households then at the peak of the transition in 2014, 24% decrease from 2015. We also saw the continued decrease in requests for additional printed education. Over 90% less requests for additional printed materials education materials from the peak of the transition and a 68% reduction from 2015. These requests are returning to a similar volume of requests as pre-transition numbers.

Curbside Program

Guide to Recycling

The 2016 guide to recycling provided all of the information needed for each household to participate in the single sort program. Many residents appreciated this additional information and chose to call the Zero-Waste Hotline to learn more.

This year's guide promoted the new Story of a Cereal Box video. More information on that new video can be found below in the Special Outreach and Education Section.

Direct Education

Our experience has shown that the absolute best place to educate residents about their zero-waste recycling program is right at the curb. Eureka Recycling and the City of Roseville share a value that all the material that can be recycled should be and material that cannot be recycled should not be collected. Taking non-recyclable items on a ride in a recycling truck and through a processing facility not only wastes the fuel and energy to transport and process the material, but also leaves the residents with the mistaken impression that the material can be recycled.

Eureka Recycling drivers educate residents at the curb using educational tags for specific problems. In 2016, drivers left approximately 447 educational tags in recyclers' bins. By simplifying the program to a single sort process, using carts provided to the household, and by adding additional plastics we eliminated many of the issues that generated tags in the past.

The most common reason residents received a tag in 2016 were:

1. Repeatedly having excess recycling placed next to cart while having a small or medium sized cart. The tag recommended that the resident call the hotline to request a larger, or even a second cart.
2. Cardboard not been broken down to a size that will fit in the cart. To collect extra cardboard the driver tips the cart and then puts the extra cardboard into the cart and tips it again. Cardboard too big for the cart is difficult for the driver to collect.
3. Placing cart too far from the curb or backwards with the handle facing the street. This makes it hard for the material to fall in the truck and causes litter.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Driver Tags	9,540	10,156	7,367	13,565	13,010	50,061	9,736	20,341	1,833	995	447
Postcards	650	822	451	742	559	1,136	951	7,576	0	0	0
Personalized Letters	30	51	0	3	10	41	179	20	151	80	4

We work with our drivers to ensure they take every opportunity to provide additional education to residents. The value of this approach is that begins a conversation with residents and eliminates confusion. All of Eureka Recycling's tags encourage residents to call our hotline where zero-waste educators are available to clear up confusion about why certain items are not recyclable or to explain how residents' efforts at the curb have an important impact on the value of the material and the environmental benefits of recycling.

Sample Tags

Postcards

In the previous two-sort system of collection, if a resident did not have a blue bin to leave a tag in the driver would write up the address and our customer service staff would send a postcard with the same images and messaging to the home to inform them about the issue. In the new single-sort system every house now has a cart so the driver always has a place to leave a tag, which eliminates the need for postcards.

Letters

Personalized letters are another form of communication about programs and services. There are two types of personalized letters we send to residents:

1. Chronic problem letters provide detailed information and instructions about setting out recycling. These letters are used when previous letters have not been successful in correcting repeated problems. Drivers keep a daily record of the addresses that have received tags but still need further education. Addresses that have received tags for three consecutive collection weeks with no change in how they are recycling receive a personalized letter that encourages the resident to contact us so we can have a more in-depth conversation.
2. Letters to update service information for Special Pickup Instruction (SPI) customers. These letters are sent when SPI residents have changed the location of their recycling, or if it appears the resident has moved out of the home and no longer needs the service.

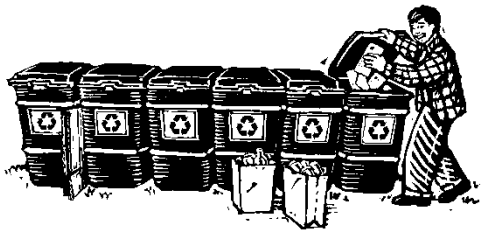
In 2016 Eureka Recycling sent only 4 personalized letters to residents. This is a decrease from the previous year but is still a bit higher than was seen in most pre-single sort years. When residents experience confusion around how to best set out their recycling a letter can help them understand the issue, while inviting them to call the hotline with additional questions or concerns. The most common issues that generated letters were cardboard not broken down, repeatedly having extra material outside the carts while using a smaller cart, and not having the cart out by 7 a.m.

Special Pickup Addresses

To ensure every resident has the opportunity to recycle, Eureka Recycling offers to collect recycling from locations other than the curb for residents who request special pickup service due to short- or long-term physical limitations. This service is provided free of charge to ensure that anyone who would like to recycle has the opportunity to do so by helping remove any physical barriers. Eleven residents added this service in 2016 for a total of 137 total residents.

Multifamily Zero-Waste Recycling Program

Eureka Recycling currently services a total of 6,169 units in Roseville's multifamily program.



In February 2016 Eureka Recycling mailed reports to all of Roseville's multifamily building managers, providing them with data on the tonnage recycled for their building(s), a comparison of the amount of tonnage recycled for the whole city's multifamily program, and the environmental benefits of the entire City's effort in recycling. This communication provides the building managers the tools to work with their residents to inspire and motivate them to increase their recycling rate.

One of the challenges with recycling in multifamily properties is turnover. Residents move in and out all the time and even property managers and caretakers turn over constantly. Not having a reliable contact at each property makes it difficult to manage problems that may arise or to communicate the successes to residents. This challenge is one of the reasons most cities do not include apartment and condo buildings in their residential recycling programs. Eureka Recycling's staff also updated building managers' contact information whenever possible. If it were not for the time Eureka Recycling staff takes each year to ensure correct and updated data, effective and timely communication would not be possible and the quality of the program would be in jeopardy.

Multifamily Educational Materials and Customer Service

Eureka Recycling constantly monitors the performance of each account to improve participation. Our drivers track issues so our staff can immediately follow up with suggestions to address any identified building needs and to provide educational materials for residents.

Eureka Recycling provided 267 pieces of recycling education (instructional posters, brochures, schedules, etc.) to building management and residents of existing and newly established multifamily accounts in 2016.

We continue to monitor the performance and service issues with each account to adjust service levels on an ongoing basis. We ensure that we are providing appropriate service levels to all buildings by working with our drivers and involved on-site contacts to add more carts as residents recycle more.

Special Education and Outreach

The Story of a Cereal Box Video
Many people have asked to come on a tour of our materials recovery facility (MRF) to see what happens to their material after it leaves their curb. While not everyone can do this we wanted to offer the next best thing. We created a 10 minute video that follows a cereal from the household that placed it in to their recycling all the way through the sorting process and finally to the end market that makes it into a new cereal box and the store that sells that new box.

Viewers can see the many types of machines and awesome people who make recycling work for Roseville. They can also the impact of problem materials like plastic bags, hoses, chords and other things that people try and recycle. The video can be seen on Eureka Recycling's website. Residents and community groups can even request a special screening of the video along with a questions and answer presentation so they can ask all the questions they have about their recycling program.

Outreach at Roseville Events
In 2016 Eureka Recycling and the City of Roseville partnered during three events to give residents an opportunity to learn about recycling, while also experiencing that waste is preventable. Eureka Recycling provided Zero-Waste Event Services, which included staff helping to monitor zero-waste stations and educate residents about recycling and zero-waste issues.

On April 23, 2016 at the Roseville Earth Day event Eureka Recycling and the City had a table where our staff shared information about the recycling program. We also had one of the recycling trucks on hand so kids could see the how recycling is collected up close.

Night to Unite
We again joined the City of Roseville at Night to Unite celebrations all over the city. Together, we recognized it as an opportunity to connect with Roseville residents on a night where the community gathers. The City and Eureka Recycling see this event as a great opportunity to bring resources to residents, while taking the time to build community and answer questions. At neighborhood gatherings Eureka Recycling staff distributed educational materials to help

individuals learn how to recycle more. Staff spent time answering recycling questions and talking to residents about the environmental and economic benefits of recycling. Residents were responsive to not only the recycling information, but also additional recycling bins and to have conversations around zero-waste.

Leading up to this event, Eureka Recycling once again supported the city's effort to encourage block party organizers to register their parties with the City by offering a free backyard composting bin to any registered neighborhood party that wanted one. Registering parties helps the City to retain the information about who the energized and engaged residents are. This makes it easier to develop stronger relationships with those residents and allows them to help get community feedback and to help disseminate information on important community initiatives to their neighbors. We also provided fact sheets about making neighborhood events zero-waste. This fact sheet is available on our composting website: http://bit.ly/1EBgK6n

Twin Cities Free Market

Residents of the City of Roseville have the opportunity to exchange reusable materials via the Twin Cities Free Market (www.twincitiesfreemarket.org). The Twin Cities Free Market is a great way for residents to give and get free, reusable items while keeping them out of the landfill or incinerator. In 2016, 99 Free Market users from Roseville listed over 6.36 tons (12,727 pounds) of usable items that were made up of mostly furniture, electronics, and appliances that were spared from the landfill or incinerator.

Appendix E - 2016 Roseville Customer Service Calls

Date Reported	List Address	Long Description	Notes
04-Jan-16	Autumn Place West, 2005	redump customer	sent driver back, resident had packed material too tightly.
13-Jan-16	Asbury Street North, 3077	Block Miss	sent driver back
14-Jan-16	Ruggles Street West, 1123	Miss	sent driver back
14-Jan-16	Lexington Avenue North, 2237	Miss	sent driver back
19-Jan-16	County Road C2 West, 1398	miss	collected on off-week recycling day
20-Jan-16	Transit Avenue West, 1485	Block Miss	sent driver back
21-Jan-16	Pascal Street North, 2446	Block Miss	sent driver back
21-Jan-16	Transit Avenue West, 1485	Miss	sent driver back
22-Jan-16	Eldridge Avenue West, 1804	miss	collected on off-week recycling day
23-Jan-16	Transit Avenue West, 1475	miss	collected on off-week recycling day
23-Jan-16	Aldine Street North, 2612	miss	collected on off-week recycling day
01-Feb-16	Lovell Lane North, 518-4	Block Miss	sent driver back
02-Feb-16	Lovell Avenue West, 510-2	miss	collected on off-week recycling day
2/4/2016	Eldridge, 700	Complaint	Cart placement complaint- driver leaves cart in the middle of her driveway. We spoke to the driver about not doing this.
10-Feb-16	Asbury Street North, 3077	SPI Miss	sent driver back
11-Feb-16	Troseth Road North, 2909	Miss	sent driver back
10-Mar-16	Lydia Avenue West, 1490	Miss	sent driver back
14-Mar-16	Ryan Avenue West, 1778	Miss	collected on off-week recycling day
14-Mar-16	Dale Street North, 2750	miss	collected on off-week recycling day
14-Mar-16	Minnesota Avenue West, 446	redump customer	sent driver back, resident had packed material too tightly.
17-Mar-16	County Road B2 West, 1505	Miss	sent driver back
17-Mar-16	Oakcrest Avenue West, 1770	SPI Miss	sent driver back
18-Mar-16	Ryan Avenue West, 1778	miss	collected on off-week recycling day
23-Mar-16	Pascal Street, 3033	Complaint	Resident reported that material spilled out of her cart when it was being tipped. She cleaned it up, just wanted to let us know. We spoke with the driver about the incident.
24-Mar-16	Terrace Drive West, 664	redump customer	sent driver back, resident had packed material too tightly.

Date Reported	List Address	Long Description	Notes
25-Mar-16	Highcrest Road North, 3082	Redump	sent driver back, was driver error
25-Mar-16	Roselawn Avenue West, 1951	SPI Miss	sent driver back
31-Mar-16	Giesmann Street North, 2010	Block Miss	sent driver back
31-Mar-16	Wheeler Avenue North, 2599	miss	collected on off-week recycling day
01-Apr-16	William Street North, 2001	Block Miss	sent driver back
4/8/2016	Acorn Road, 2265	Complaint	Resident reported that driver seemed to be speeding. GPS did not show excessive speed but we followed up with driver.
14-Apr-16	Sextant Avenue West, 1350	Miss	sent driver back
14-Apr-16	Simpson Street North, 2493	Miss	sent driver back
5/2/2016	Mackubin Street, 2737	Complaint	Property manager reported minor asphault damage near recycling carts and wanted to know why it was happening and prevent further damage. We investigated, it was from driver needing to turn the wheels to get to carts on hot days. We spoke with drivers on other ways to navigate, and property manager repaired the damage.
03-May-16	Owasso Hills Drive West, 527	Miss	sent driver back
03-May-16	Hamline Avenue North, 2932	redump customer	sent driver back, resident had packed material too tightly.
04-May-16	Asbury Street North, 2918	Miss	sent driver back
10-May-16	Rose Place West, 1118	Miss	sent driver back
12-May-16	Irene Street North, 2034	Miss	sent driver back
17-May-16	Churchill Street North, 3080	redump customer	sent driver back, resident had packed material too tightly.
19-May-16	Huron Street North, 2844	Miss	sent driver back
23-May-16	Ferris Lane North, 2232	Miss	sent driver back
23-May-16	Shryer avenue west, 1867	redump customer	sent driver back, resident had packed material too tightly.
23-May-16	Northview Street North, 2941	redump customer	sent driver back, resident had packed material too tightly.
27-May-16	Albert Street North, 2450	Miss	sent driver back
02-Jun-16	Asbury Street North, 2999	Miss	sent driver back
02-Jun-16	Griggs Street North, 2718	Miss	sent driver back
02-Jun-16	Rambler Road West, 1423	Miss	sent driver back
03-Jun-16	Woodbridge Street North, 2049	miss	collected on off-week recycling day
04-Jun-16	Hamline Avenue North, 1992	Miss	sent driver back
04-Jun-16	Gluek Lane South, 1877	Redump	sent driver back, was driver error
6/6/2016	County Road B2, 356	Complaint	Small hydraulic leak- driver caught it right away and cleaned it up.
06-Jun-16	Gluek Lane North, 1877	Redump	sent driver back, was driver error

Date Reported	List Address	Long Description	Notes
08-Jun-16	Transit Avenue West, 1543	Block Miss	sent driver back
08-Jun-16	County Road D West, 2418-4	Miss	collected on off-week recycling day
08-Jun-16	Rambler Road West, 1432	Miss	collected on off-week recycling day
08-Jun-16	Simpson Street North, 2475	Miss	sent driver back
10-Jun-16	Shryer Avenue West, 555	redump customer	sent driver back, resident had packed material too tightly.
13-Jun-16	Grandview Avenue West, 700	miss	collected on off-week recycling day
13-Jun-16	Woodhill Drive West, 540-75	redump customer	sent driver back, resident had packed material too tightly.
14-Jun-16	Woodhill Drive West, 570	Miss	sent driver back
22-Jun-16	Albert Street North, 244	Complaint	resident called and said there was some fluid leaking from one of our trucks we sent dayton back to clean up he cleaned up what he could (we did not do the spill dayton checked truck thourouly and resident also seen it was not our truck
23-Jun-16	Wheeler Street North, 2625	Miss	sent driver back
29-Jun-16	Asbury Street North, 2999	redump customer	sent driver back, resident had packed material too tightly.
30-Jun-16	Brenner Avenue West, 2523	Miss	sent driver back
05-Jul-16	Midland Hills Road North, 1953	redump customer	sent driver back, resident had packed material too tightly.
08-Jul-16	Colonial Drive, 1347	Redump	sent driver back, was driver error
09-Jul-16	Roselawn Avenue West, 1749	redump customer	sent driver back, resident had packed material too tightly.
13-Jul-16	Merrill Street North, 2835	Miss	sent driver back
19-Jul-16	County Road B2 West, 985	Miss	sent driver back
21-Jul-16	County Road B2 West, 1505	Miss	sent driver back
21-Jul-16	Sheldon Street North, 2483	redump customer	sent driver back, resident had packed material too tightly.
21-Jul-16	County Road B West, 202	SPI Miss	sent driver back
26-Jul-16	Galtier Street North, 2942	Miss	sent driver back
27-Jul-16	Fry Street North, 2545	redump customer	sent driver back, resident had packed material too tightly.
01-Aug-16	Fisk Street North, 2622	redump customer	sent driver back, resident had packed material too tightly.
03-Aug-16	Charlotte Street North, 2612	Miss	sent driver back
04-Aug-16	Galtier Circle North, 2499	Block Miss	sent driver back
04-Aug-16	Wheeler Avenue North, 2598	Block Miss	sent driver back
04-Aug-16	Wheeler Avenue North, 2544	Miss	sent driver back
04-Aug-16	Wheeler Avenue North, 2750	Miss	sent driver back
08-Aug-16	Galtier Circle North, 2475	Block Miss	sent driver back
08-Aug-16	Wheeler Street North, 1987	Miss	sent driver back

Date Reported	List Address	Long Description	Notes
11-Aug-16	Brenner Street West, 1863	Miss	sent driver back
12-Aug-16	Lexington Avenue North, 2237	Miss	sent driver back
12-Aug-16	Roselawn Avenue West, 1357	miss	collected on off-week recycling day
12-Aug-16	Eldridge Avenue West, 1706	redump customer	sent driver back, resident had packed material too tightly.
12-Aug-16	Merrill Street North, 1867	redump customer	sent driver back, resident had packed material too tightly.
24-Aug-16	Brenner Avenue West, 940	Miss	sent driver back
24-Aug-16	Pascal Street North, 3027	redump customer	sent driver back, resident had packed material too tightly.
29-Aug-16	Shryer Avenue West, 1852	Miss	sent driver back
06-Sep-16	Iona Lane West, 552	redump customer	sent driver back, resident had packed material too tightly.
06-Sep-16	Western Avenue North, 2748	redump customer	sent driver back, resident had packed material too tightly.
07-Sep-16	Heinel Drive West, 526	redump customer	sent driver back, resident had packed material too tightly.
09-Sep-16	Asbury Street North, 3033	Block Miss	sent driver back
09-Sep-16	Rambler Road West, 1423	Miss	sent driver back
09-Sep-16	Wheeler Street North, 2565	Miss	sent driver back
10-Sep-16	Roselawn Avenue West, 955	Miss	sent driver back
12-Sep-16	Asbury Street North, 3011	Miss	sent driver back
12-Sep-16	Lydia Avenue West, 1541	Miss	sent driver back
12-Sep-16	Asbury Street North, 3017	Miss	sent driver back
12-Sep-16	Asbury Street North, 2999	Miss	sent driver back
23-Sep-16	Lexington Avenue North, 2025	Miss	sent driver back
05-Oct-16	Victoria Street North, 2674	Miss	sent driver back
06-Oct-16	Manson Street North, 2695	Miss	sent driver back
06-Oct-16	Old Highway 8, 3207	redump customer	sent driver back, resident had packed material too tightly.
07-Oct-16	Roma Avenue West, 1020	Miss	sent driver back
10-Oct-16	Gluek Lane North, 1856	SPI Miss	sent driver back
14-Oct-16	Skillman Avenue West, 1345	Miss	sent driver back
14-Oct-16	County Road B West, 202	SPI Miss	sent driver back
19-Oct-16	County Road C2 West, 1309	Miss	sent driver back
10/20/2016	Autumn Street, 1162	Complaint	Resident complained about litter. Driver was removing plastic bags from his recycling cart and one blew into his yard. We educated resident that plastic bags should not be included with his curbside recycling, and spoke with the driver about making sure material isnt blowing into yards.
10-Nov-16	Snelling Curve North, 2580	Miss	sent driver back
12-Dec-16	Woodbridge Street North, 3050	redump customer	sent driver back, resident had packed material too tightly.