

2021

Falcon Heights Recycling Report

FALCON
HEIGTHS



Greg & Willie Tennis
Tennis Sanitation LLC.
1/31/2022

Prepared by: Angela Hamann



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January 31st, 2022



City of Falcon Heights
2077 Larpenteur Avenue West
Falcon Heights, MN 55113-5594

RE: LETTER OF PURPOSE

Dear City of Falcon Heights,

This 2020 Year-end recycling report has been prepared for the City of Falcon Heights.

The report contains summaries of recycling data for both single family and multi-family dwellings. Including but limited to: inquiries, composite study information, environmental impact report and a market report of recycling markets, along with a final summary of the report.

This year's report we have included six years of comparison data to help measure the success of the recycling program including participation.

The data in this report will assist us in developing a better understanding of the past, present and future progress of the City of Falcon Heights recycling program.

Sincerely,

Greg & Willie Tennis

Greg and Willie Tennis
Tennis Sanitation



RECYCLING DATA SUMMARY

In this report we have compiled annual data from both single family and multi-family dwellings (SEE APPENDIX A). This data includes:

- Net tonnage of all residential and multi-family dwellings combined (tan/black)
- Break-out of single family tonnage and set-out rates (yellow)
- Break-out of multi-family tonnage (blue)
- Separate measurement of weights for linens (APPENDIX A)
- Break-out of single family recycling materials by type and weight (yellow)
- Break-out of multi-family recycling materials by type and weight (blue)
- Break-out of combined tonnages (green)
- Inquiries tracked per month (bottom of APPENDIX A)

The data is compiled from recyclable materials collected from our drivers on a designated Falcon Heights route. Loads are weighed; weights are then compiled over a month's period of time. Weights are broken out based on a composite ratio of the entire load.



RECYCLING DATA (SINGLE FAMILY)

The Single-Family Data in APPENDIX A (yellow) was compiled from the single family homes after taking out the multi-family weights. From this data – we are able to illustrate the weight per home (in lbs.) per month. We also have monitored "participation" by route. The data from the routes is compiled from the Single-Family data spreadsheet which details each route and the total tons collected (APPENDIX E).

In analyzing the single-family data, we are able to provide the following observations:

2021 Average lbs. per household per month = 57.02 lbs. per month

2020 Average lbs. per household per month = 54.55 lbs.
 2019 Average lbs. per household per month = 46.16 lbs.
 2018 Average lbs. per household per month = 49.91 lbs.
 2017 Average lbs. per household per month = 57.61 lbs.
 2016 Average lbs. per household per month = 53.95 lbs.
 2015 Average lbs. per household per month = 52.10 lbs.
 2014 Average lbs. per household per month = 57.54 lbs.
 2013 Average lbs. per household per month = 54.86 lbs.
 2012 Average lbs. per household per month = 54.76 lbs.
 2011 Average lbs. per household per month = 54.82 lbs.



2021 Annual Net total tons collected for single family were 421.51 tons

2020 Annual total single family were 403.20 tons
 2019 Annual total single family were 341.19 tons
 2018 Annual total single family were 368.90 tons
 2017 Annual total single family were 381.96 tons
 2016 Annual total single family were 398.83 tons
 2015 Annual total single family were 385.12 tons
 2014 Annual total single family were 425.36 tons
 2013 Annual total single family were 405.54 tons
 2012 Annual total single family were 404.80 tons
 2011 Annual total single family were 405.26 tons



Other New Data Collected: Participation Percentage of Residents

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVRG
2021	97%	95%	96%	98%	98%	98%	99%	98%	97%	98%	97%	97%	97%
2020	99%	95%	97%	97%	99%	97%	98%	97%	98%	98%	98%	97%	97%
2019	95%	95%	98%	97%	98%	98%	97%	95%	95%	97%	97%	97%	97%
2018	95%	95%	97%	97%	98%	98%	97%	95%	95%	96%	97%	96%	96%
2017	96%	96%	96%	97%	97%	98%	98%	98%	96%	97%	97%	96%	97%
2016	97%	95%	95%	97%	97%	97%	97%	97%	98%	97%	96%	98%	97%
2015	94%	92%	95%	95%	96%	96%	96%	96%	95%	97%	96%	97%	95%
2014	94%	96%	93%	95%	96%	96%	95%	96%	96%	96%	93%	94%	95%
2013	94%	92%	95%	94%	97%	96%	97%	97%	96%	93%	95%	94%	94%

Additional Trends: Though the weight averages and total tonnage is down from last year's numbers the overall numbers are still similar in comparison to other cities which we service. There are many factors that can affect this number which may include the economy and residents local buying habits.

RECYCLING DATA (MULTI-FAMILY)

The data in APPENDIX A (Blue) is the actual data compiled from net total weight family homes after factoring-out the multi-family weights. From this data we are able to illustrate the weight per unit (in lbs.) per month. To assist us in providing accurate data, we compile weights on a quarterly basis. This weight is then used to provide us with a fair average of weight generated by each multi-family unit. Our drivers then documented the number of carts dumped at each location on a weekly basis (see APPENDIX D). These weights are then added at the end of each month to provide us with a net total. From the report we are able to calculate the weight per unit per month.

In analyzing the multi-family data, we are able to provide the following observations:

2021 Average lbs. per unit per month = 20.82 lbs. per month

2020 Average lbs. per unit per month = 18.87 lbs. per month
2019 Average lbs. per unit per month = 16.69 lbs. per month
2018 Average lbs. per unit per month = 16.69 lbs. per month
2017 Average lbs. per unit per month = 18.58 lbs. per month
2016 Average lbs. per unit per month = 16.45 lbs. per month
2015 Average lbs. per unit per month = 18.23 lbs. per month
2014 Average lbs. per unit per month = 17.82 lbs. per month
2013 Average lbs. per unit per month = 17.82 lbs. per month
2012 Average lbs. per unit per month = 16.49 lbs. per month
2011 Average lbs. per unit per month = 15.47 lbs. per month



2021 Annual Net total tons collected for multi-family was 87.92 tons

2020 Annual Net total tons collected for multi-family were 79.71 tons
2019 Annual Net total tons collected for multi-family were 72.78 tons
2018 Annual Net total tons collected for multi-family were 70.49 tons
2017 Annual Net total tons collected for multi-family were 78.48 tons
2016 Annual Net total tons collected for multi-family were 69.47 tons
2015 Annual Net total tons collected for multi-family were 77.00 tons
2014 Annual Net total tons collected for multi-family were 75.28 tons
2013 Annual Net total tons collected for multi-family were 75.28 tons
2012 Annual Net total tons collected for multi-family were 69.65 tons
2011 Annual Net total tons collected for multi-family were 65.17 tons



How are the weights determined for the multi-family data? We use one truck to collect all multi-family dwellings where we weigh full carts from each property to get a total weight. The total weight is then divided by the number of carts emptied to get an average weight per cart. This data is then entered into a multi-family spreadsheet. See APPENDIX D for an example of this report.

This data is significant because we are able to easily separate this data from the total tons collected on each day of collection. The remaining tonnage is then the actual tonnage which comes from the single-family homes.

MULTI-FAMILY INDIVIDUAL SUMMARY LETTER

From the data compiled over the twelve months we are able to provide each multi-housing property with an accurate summary report of their recycling volumes (APPENDIX B). We also provide them with some information on how their efforts help with the environment along with additional information to assist them in enhancing their recycling efforts.

ENVIRONMENTAL IMPACT ANALYSIS			TENNIS SANITATION				
1688 Arona		Total pounds		ESTIMATED TOTAL TONS RECYCLED:		3244	1.62
<p>Dear Property Manager,</p> <p>Below is a recap of your recycling efforts from last year. Please notice the amount of recycling materials your tenants recycled and the estimated resources you saved from each category.</p> <p>Our goal in providing you this information is to attempt to increase awareness and overall participation amongst your tenants. We have also enclosed a recycling brochure detailing the acceptable recycling materials.</p> <p>Also, please contact us if you would like further information on ways to enhance your recycling. You can contact us at 651-459-1887. Awesome job on recycling!!</p> <p>Thank you for recycling,</p> <p style="text-align: center;"><i>Greg & Willie Tennis</i></p> <p style="text-align: right;">2021</p>							
Recycling Type	MW total Tons	Units	Resource Saved	Calc/ Resource	Total Resources Saved		Type
Paper	1.19	tons	Trees	1 ton = 17 Trees	20.3		trees
Paper	1.19	tons	Electricity	1 ton = 601 Kw Hours	716		Kw hours of electnity
Paper	1.19	tons	Oil	1 ton = 1.7 barrels of oil	2.03		barrels of oil
Aluminum	0.05	tons	Ore	1 ton = 4 tons of ore	0.22		tons of ore
Aluminum	0.05	tons	Electricity	1 ton = 14,000 Kw Hours	758		Kw hours of electnity
Aluminum	0.05	tons	Oil	1 ton = 40 barrels of oil	2.17		barrels of oil
Tin/bi-metal	0.02	tons	Ore	1 ton = 1.49 tons of ore	0.03		tons of ore
Tin/bi-metal	0.02	tons	Electricity	1 ton = 642 Kw Hours	15		Kw hours of electnity
Tin/bi-metal	0.02	tons	Oil	1 ton = 1.8 barrels of oil	0.04		barrels of oil
Plastics	0.10	tons	Oil	1 ton = 6.3 barrels of oil	0.66		barrels of oil
Plastics	0.10	tons	Electricity	1 ton = 5,774 Kw Hours	0		Kw hours of electnity
Plastics	0.10	tons	Natural Gas	1 ton = 98,000,000 btu's	10,209,613		BTU's of fuel
Glass	0.25	tons	Sand	1 ton = 1,330 tons of sand	329		tons of sand
Glass	0.25	tons	Electricity	1 ton = 42 Kw Hours	10		Kw hours of electnity
Glass	0.25	tons	Oil	1 ton = .12 gallons of oil	0.03		barrels of oil
Glass	0.25	tons	Natural Gas	1 ton = 714,000 btu's	176,787		BTU's of fuel

Environmental Impact Summary

Resources	Amounts	Units Saved
Trees saved	20	Trees saved
Electricity saved	1,500	Kw Hours saved
Oil saved	5	Barrels of oil saved
Natural Gas saved	10,386,400	BTU's of natural gas saved

**Disclaimer: The above numbers represent conversions from industrial and recycling markets. These numbers are ESTIMATED resources saved. All calculations are taken from annual total tons from Falcon Heights Year-end Recycling Report.

INQUIRIES SUMMARY

Below are twelve months of data documenting the number of residents that called into our office. The most common calls were comprised of residents asking what additional items they could recycle. Other less common calls were to see if our driver could come back because they forgot to put out their materials in time and the occasional request of how to dispose of hazardous waste.

We are confident that our Customer Service Representatives resolved all inquiries to the resident's satisfaction. The amount of inquiries had increased from last year. Our team of CSRs and professional drivers are committed to providing the best service to the City of Falcon Heights – we feel this report is a direct result of our commitment.

TOTAL INQUIRIES FOR 2021

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
4	5	2	4	0	2	2	1	5	15	6	4	50
2020 Total Inquiries			33									
2019 Total Inquiries			27									
2018 Total Inquiries			19									
2017 Total Inquiries			40									
2016 Total Inquiries			71									
2015 Total Inquiries			68									
2014 Total Inquiries			37									
2013 Total Inquiries			81									
2012 Total Inquiries			91									
2011 Total Inquiries			94									



LINENS AND SHOES SUMMARY

We started a new partnership with Simple Recycling for our linen recycling as of March 2017. The 2020 year brought us many challenges, and linen recycling was one of them. Simple Recycling was shut down for multiple months due to the pandemic and not able to pick up linens from our location during that time. When Simple Recycling opened back up they had new regulations that they were able to collect the bagged material but not able to collect it divided by City.



2019 linens and shoes totaled	9,791 pounds
2018 linens and shoes totaled	1,185 pounds
2017 linens and shoes totaled	16,003 pounds
2016 linens and Shoes totaled	1,125 pounds
2015 linens and Shoes totaled	3,504 pounds
2014 Linens and shoes totaled	4,199 pounds
2013 Linens and shoes totaled	5,465 pounds
2012 Linens and shoes totaled	1,616 pounds
2011 Linens and shoes totaled	679 pounds

RECYCLING COMPOSITE STUDY

Over the years of the contract, we have done extensive recycling composite studies. We did this by keeping all loads from an entire week from the City of Falcon Heights and process it through our MRF (Material Recovery Facility). Once the material is unloaded from the trucks it is sorted into each category, as listed below. Each of the categories were then weighed and documented. The results of the composite study were then entered back into the monthly reports in which you receive monthly.

As of 2020, we have taken a look at all of the past data that we have collected and have decided to base our composite break-out off of the facility as a whole. We have come to this decision as all of the cities that we service, contracted or not, have had very similar ratios of material in their past composite studies.

Why do a composite study?

Having a good understanding of the recycling composition provides us with data that may assist us in adjusting the recycling program to fit the needs of the Residents. With ongoing changes in the economy, cultural and even changes in the home, we can develop more available markets, increase processing technologies to handle more items and enhance educational materials to instruct residents on proper recycling procedures.

Tennis Sanitation, L.L.C.

651-459-1887 *"Recycling is Everyone's Future"*

RE: COMPOSITE BREAK-OUT PERCENTAGE 11/30/2021

Tennis Sanitation is pleased to provide the following composite sample break-out detailing the percentage ratios of each type of recycling category.

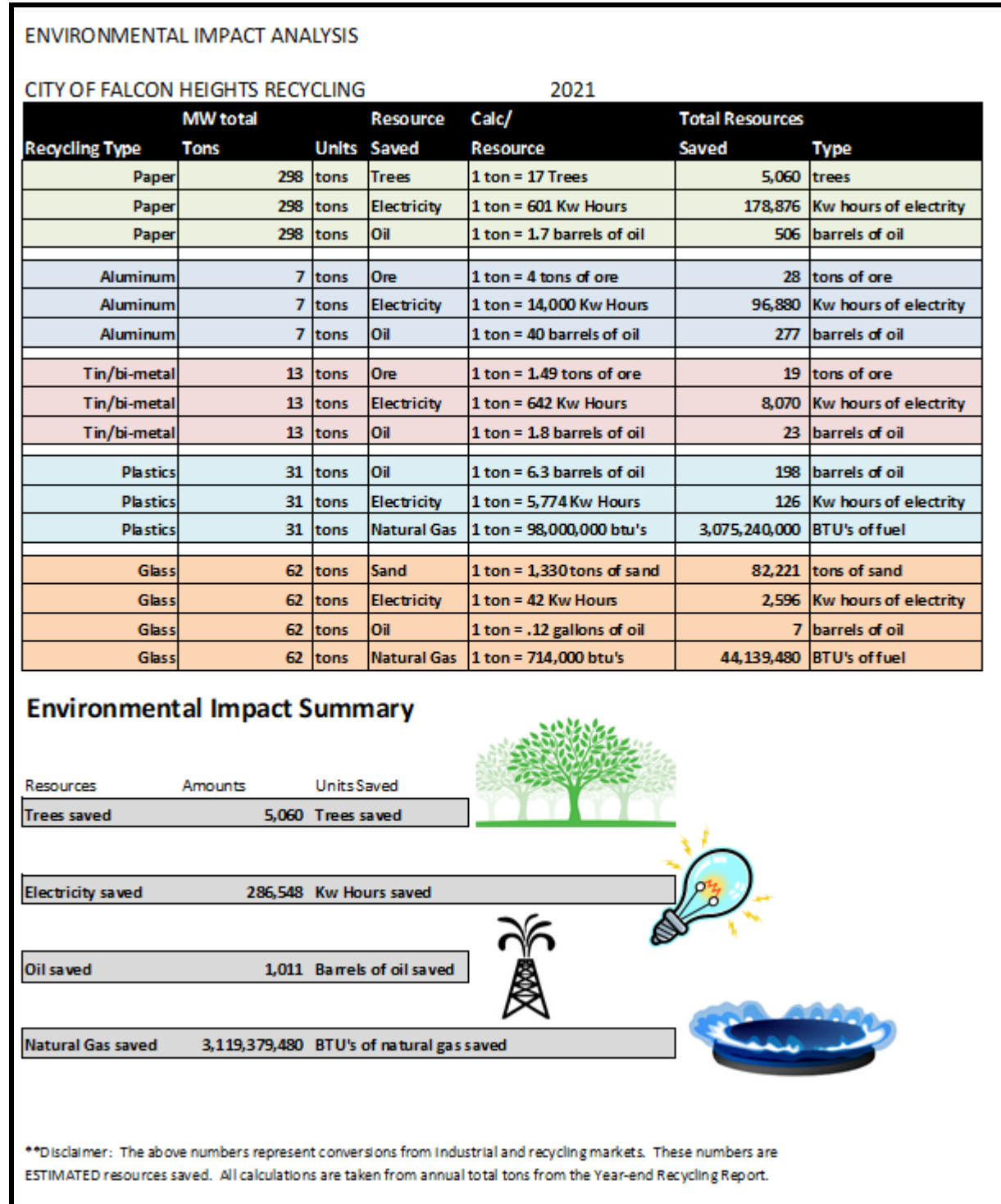
TYPE	Tennis Wide	DESCRIPTION
Cardboard:	29.17%	Includes all cardboard boxes.
Paper:	31.37%	Includes cardboard, paper, newspaper and junk mail
Scrap Metal:	2.26%	Metal pans and misc metal
Large Plastic:	0.82%	Toys, patio furniture and large containers
Z-Bale Plastic:	3.02%	Food and beverage containers
PET Plastic:	4.49%	Food and beverage containers
Tin:	1.57%	Includes all bi-metal and tin cans
NiHot Glass:	18.70%	Includes all clear, brown and green colors
Aluminum:	2.57%	Includes all aluminum cans
Linens:	0.08%	Reusable clothing and shoes
Milk Cartons:	0.18%	Beverage cartons
Residuals (Trash):	5.77%	Includes all residuals and trash
100.00%		Net total recycling for the month

Sincerely,
Angela Hamann
City Liaison, Commodity Sales & Reports
Tennis Sanitation
PO Box 62
720 4th St. St. Paul Park, MN 55071
D:651-313-5208
W:651-459-1887
F:651-459-7412

ENVIRONMENTAL IMPACT ANALYSIS

Using the detailed recycling data from this report, we are able to provide the City of Falcon Heights with some unique ways that the residents recycling efforts have made a difference. Over the years, recycling markets have been able to recycle more and more items out of the waste stream. They have also been able to determine what resources are saved by recycling various materials.

In this report we were able to convert the types of recycling materials into resources saved.



MARKET REPORT

The 2021 markets have seen their ups and downs but mostly up this past year. We continue seeing changes with regulations that have been influenced by China's markets even though we keep all of our recyclable materials in the United States, mostly in the Midwest. There is definitely a change in the materials that are getting recycled, less paper, more cardboard, with schools always on the ready for distance learning, more offices working from home and a whole lot more home deliveries. The metal markets have slowly been working their way back to where pricing was back in 2018. The paper and cardboard markets are back in a comfortable place but always room to grow. Plastic markets hit their rock bottom last year but, with the cost of crude oil is increasing, we are hopeful that the plastic market will follow suit. Lastly, the glass market, with only one processor in the area, the commodity has been at a plateau again this year. With the Ni-Hot machine, we installed a few years back; we can capture more glass than in previous years which helps get more material to the processor. The processor can reclaim at least 90% of the broken glass to be made into new food and beverage containers.

The outlook for 2022

Markets are stabilizing but will continue with the strict regulations on contaminants and clean material. With co-mingle curb side recycling it makes it easier to recycle but it is important to clean out your food containers, and make sure you are only placing items listed in your recycling brochure loosely into the recycling cart.



SUMMARY OF YEAR-END RECYCLING REPORT

The 2021 Falcon Heights Year-end Recycling Report provides up-to-date information from the City's recycling activities over the past year. Each section of this report reflects the various ways data was collected, entered and calculated to contribute in meeting our combined goals.

In the report we have illustrated the composition of recyclables and itemized volumes of recyclables from both single family and multi-family dwellings as they relate to each break-out of each separate commodity. We also provide information on how the City's recycling efforts will impact our environment.

This year, Falcon Heights's participation rate was 96% participation rate. Both single family tonnages as well as multi-family recycling volumes have remained steady and consistent with other Municipalities.

In 2022, we will maintain the comprehensive recycling program we offer with the additional types of plastics, metals and linens.

Together with the support of The City of Falcon Heights we will maintain these high standards of recycling for the single family and multi-family dwellings.



APPENDIX C - MONTHLY RECYCLING REPORT LETTER (EXAMPLE)

Tennis Sanitation, L.L.C.

651-459-1887

"Recycling is Everyone's Future"

December 2021 - RECYCLING REPORT

Dear City of Falcon Heights Recycling Coordinator,

Tennis Sanitation is pleased to provide the following monthly recycling report detailing the materials that were collected, processed and delivered to recycling markets from both single family and multi-family dwellings.

The Community of Falcon Heights Recycled:

TYPE	Single Family Weight (tons)	Multi-Family Weight (tons)	NET Total Wgt	UNIT	DESCRIPTION
Cardboard:	37.35%	14.97	2.95	17.92	tons Includes all cardboard boxes.
Paper:	33.07%	13.25	2.61	15.87	tons Includes cardboard, paper, newspaper, junk mail,
Scrap Metal:	1.59%	0.64	0.13	0.76	tons
Large Plastic:	0.55%	0.22	0.04	0.26	tons Toys and parts
Z-Bale Plastic:	2.30%	0.92	0.18	1.10	tons
PET Plastic:	3.33%	1.33	0.26	1.60	tons
Tin:	1.39%	0.56	0.11	0.67	tons Includes all bi-metal and tin cans
Chipped Glass:	14.67%	5.88	1.16	7.04	tons
Aluminum:	1.64%	0.66	0.13	0.79	tons Includes all aluminum cans
Linen	0.06%	0.02	0.00	0.03	tons Reusable Textiles and shoes
Milk Cartons:	0.19%	0.08	0.02	0.09	tons Beverage cartons
Residual	3.86%	1.55	0.31	1.85	
Total Tons:	100.00%	40.07	7.91	46.13	Tons Net total recycling for the month

Other fun facts:

TYPE	Single Family Weight (lbs)	Multi-Family Weight (lbs)	NET Calcs.	
Units:	1232	704	1936	Units collected per week
Wgt/home:	65.05	22.46	43.76	lbs Average pounds per unit collected per month

Average % of serviced accounts (SF)	85%	Average % of participation (SF)	96.94%
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This month's homes that did not participate in weekly recycling collection was 31 residents

Total inquiries for this month were:	4
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Summary of report: This month illustrates resident's recycling efforts for both SF and MF Dwellings. The above recycling break-out reflects the composite study based off of Tennis Recycle totals for 2020.

Great job on your recycling efforts.

Sincerely,

Angela Vaidich

City Liaison, Commodity Sales & Reports

Tennis Sanitation

PO Box 82

720 4th St St. Paul Park, MN 55071

