

2015

Oak Park Heights Recycling Report



Greg & Willie Tennis

Tennis Sanitation

2/3/2016

TENNIS RECYCLING



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TENNIS RECYCLING



February 3, 2016

Erick Johnson, City Administrator
City of Oak Park Heights
14168 Oak Park Blvd N
Oak Park Heights, MN 55082

RE: LETTER OF PURPOSE

Dear Oak Park Heights,

This 2015 Year-end recycling report has been prepared for Oak Park Heights.

The report contains summaries of recycling data for single family homes, composite study information, environmental impact report, market report of recycling markets, along with a final summary of the report.

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

Sincerely,

Greg & Willie Tennis

Greg and Willie Tennis
Tennis Sanitation



RECYCLING DATA SUMMARY

In this report we have compiled annual data from single family. This data includes:

- Break-out of single family tonnage
- Break-out of single family recycling materials by type and weight

The data is compiled from recyclable materials collected from our drivers on Oak Park Heights's 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.

2015 OAK PARK HEIGHTS RECYCLE TONNAGE DATA	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	2015	
MONTHLY DATA/RT	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	TYPE
Single Family	Percentage Break-out													
RECYCLED MATERIALS	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	TONS Description
Cardboard:	5.27	3.86	4.10	6.88	4.98	4.85	4.75	4.49	5.02	5.27	4.67	4.44	58.58	TONS
Paper:	15.34	11.23	11.94	20.03	14.48	14.10	13.82	13.07	14.60	15.34	13.60	12.92	170.47	TONS
Scrap Metal:	0.12	0.09	0.10	0.16	0.12	0.11	0.11	0.10	0.12	0.12	0.11	0.10	1.36	TONS
Large Plastic:	0.11	0.08	0.09	0.14	0.10	0.10	0.10	0.09	0.11	0.11	0.10	0.09	1.22	TONS
Plastic Bags:	0.18	0.13	0.14	0.23	0.17	0.16	0.16	0.15	0.17	0.18	0.16	0.15	1.98	TONS
Z-Bale Plastic:	0.92	0.67	0.72	1.20	0.87	0.85	0.83	0.79	0.88	0.92	0.82	0.78	10.25	TONS
PET Plastic:	1.36	1.00	1.06	1.78	1.29	1.25	1.23	1.16	1.30	1.36	1.21	1.15	15.15	TONS
Tin:	0.74	0.54	0.58	0.97	0.70	0.68	0.67	0.63	0.70	0.74	0.66	0.62	8.23	TONS
Colored Glass:	0.74	0.54	0.58	0.97	0.70	0.68	0.67	0.63	0.70	0.74	0.66	0.62	8.23	TONS
Clear Glass:	0.53	0.39	0.41	0.70	0.50	0.49	0.48	0.45	0.51	0.53	0.47	0.45	5.91	TONS
Chipped Glass:	4.00	2.92	3.11	5.22	3.77	3.67	3.60	3.41	3.80	4.00	3.54	3.37	44.41	TONS
Aluminum:	0.26	0.19	0.20	0.34	0.25	0.24	0.24	0.22	0.25	0.26	0.23	0.22	2.90	TONS
Milk Cartons:	0.03	0.02	0.02	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.34	TONS
TOTAL TONS	29.60	21.66	23.05	38.66	27.96	27.21	26.69	25.22	28.19	29.60	26.26	24.93	329.03	TONS
# of HOMES ON ROUTE	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100		
AVERAGE LBS / HOME /	53.82	39.38	41.91	70.30	50.84	49.47	48.53	45.85	51.25	53.82	47.75	45.33	49.85	Avg. Lbs. /Unit

RECYCLING DATA (SINGLE FAMILY)

The Data was compiled from the single family homes. From this data – we are able to illustrate the weight per home (in lbs.) per month.

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

- 2015 Average lbs. per household per month = 49.85 lbs. per month
- 2015 Annual Net total tons collected for single family were 329.03

Additional Trends: Tennis is confident that we are able to capture more recycling tonnage because we are providing a one-sort collection process that offers the residences the convenience of collecting additional recyclable materials and larger items such as corrugated cardboard boxes which otherwise may end up in the trash. Also, we are able to collect more types of plastics.



RECYCLING COMPOSITE STUDY

For the composite study we retained a load from the week and processed the load through our MRF. The sorting floor was cleared and the recycling was sorted into the categories (as listed below). All of the categories were then weighed and documented. The results of the composite study were then entered back into the monthly report.

Why do a composite study?

Having a good understanding of the recycling composition provides us with data that may assist us in adjusting our program to fit the needs of the Residents. With on-going 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"

December 15th, 2014

RE: COMPOSITE BREAK-OUT PERCENTAGE

Dear Recycling Coordinator,

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

Totals wgt of each type	% Ratio
Cardboard	21.36%
Paper	46.48%
Household Scrap Metal	0.39%
Big Plastic	0.48%
Plastic Bags	0.68%
Z-Bale Plastic	3.10%
PET Plastic	4.72%
Tin	2.84%
Colored Glass	2.45%
Clear Glass	1.60%
Chipped Glass	12.37%
Aluminum	2.26%
Linens	0.00%
Milk Cartons	0.27%
Residuals (Trash)	0.98%
	100%

The above percentage break-out of recycling material was based on the following sample study done in the last week in December. Our processing team had taken loads of recycling and had weighed the entire load then items were broken out into specific types as listed above and re-weighed to get the percentage data.

Please note that we have added some new categories when analyzing our composite.

The above composite numbers will be reflected in the City's updated reports.

Thank you for recycling.

Sincerely,

Willie Tennis
Tennis Sanitation

ENVIRONMENTAL IMPACT ANALYSIS

From the detailed recycling data from this report, we are able to provide the City of Oak Park 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.

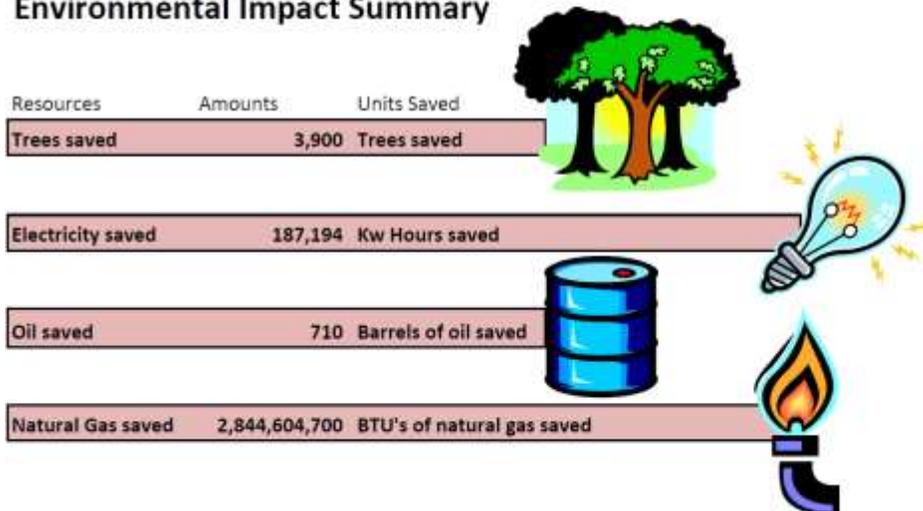
In this report we were able to convert the break-out of the composite of recycling materials and convert the tonnages into resources saved.

ENVIRONMENTAL IMPACT ANALYSIS

CITY OF OAK PARK HEIGHTS RECYCLING 2015

Recycling Type	MW total Tons	Units	Resource Saved	Calc/ Resource	Total Resources Saved	Type
Paper	229	tons	Trees	1 ton = 17 Trees	3,900	trees
Paper	229	tons	Electricity	1 ton = 601 Kw Hours	137,863	Kw hours of electricity
Paper	229	tons	Oil	1 ton = 1.7 barrels of oil	390	barrels of oil
Aluminum	3	tons	Ore	1 ton = 4 tons of ore	12	tons of ore
Aluminum	3	tons	Electricity	1 ton = 14,000 Kw Hours	40,600	Kw hours of electricity
Aluminum	3	tons	Oil	1 ton = 40 barrels of oil	116	barrels of oil
Tin/bi-metal	10	tons	Ore	1 ton = 1.49 tons of ore	14	tons of ore
Tin/bi-metal	10	tons	Electricity	1 ton = 642 Kw Hours	6,157	Kw hours of electricity
Tin/bi-metal	10	tons	Oil	1 ton = 1.8 barrels of oil	17	barrels of oil
Plastics	29	tons	Oil	1 ton = 6.3 barrels of oil	180	barrels of oil
Plastics	29	tons	Electricity	1 ton = 5,774 Kw Hours	114	Kw hours of electricity
Plastics	29	tons	Natural Gas	1 ton = 98,000,000 btu's	2,802,800,000	BTU's of fuel
Glass	59	tons	Sand	1 ton = 1,330 tons of sand	77,872	tons of sand
Glass	59	tons	Electricity	1 ton = 42 Kw Hours	2,459	Kw hours of electricity
Glass	59	tons	Oil	1 ton = .12 gallons of oil	7	barrels of oil
Glass	59	tons	Natural Gas	1 ton = 714,000 btu's	41,804,700	BTU's of fuel

Environmental Impact Summary



**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 the Year-end Recycling Report.

MARKET REPORT

2015 was a very challenging year for most commodities. Fiber, plastics, tin and aluminum took their largest drop in five years – which has been driven down by the lower costs in crude oil.

Glass market is somewhat limited because there is only one processor available to sort glass. Their newest technology sorts broken glass using computerized optical sorters and a complex but innovative blower system. 90% of the broken glass is now being processed into post-consumer food and beverage containers.

The outlook for 2016

Future markets are looking like they will remain weak. The markets project the values to be flat for 2016.



SUMMARY OF YEAR-END RECYCLING REPORT

The 2015 Oak Park Heights Year-end Recycling Report provides up-to-date information from the City's recycling activities over the past year.

In the report we have illustrated the composition of recyclables, itemized volumes of recyclables from single family homes 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, Oak Park Heights's average lbs. per month were 49.85 per home per month and total tonnage was 329.03.

In 2016, 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 Oak Park Heights we will maintain these high standards of recycling for the residents.

