Capital City Clean Up
Wiping out Graffiti!

City of Edmonton
Graffiti Vandalism Audit 2014

Prepared by: MGM Management
 April 2015 – EXECUTIVE SUMMARY

Capital City
Clean Up
DOING MY PART!

THE CITY OF
Edmonton

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Executive Summary

The City of Edmonton engaged MGM Management, a British Columbia consulting firm, to design and conduct a graffiti vandalism audit in selected neighbourhoods within the City. The first graffiti vandalism audit occurred in November of 2010, with repeat audits in 2011, October 2012, October 2013 and October 2014. This report presents the results for observations made in October 2014, during the fifth graffiti vandalism audit conducted in Edmonton.

MGM Management specializes in environmental auditing, and has conducted seven litter audits (2007, 2009, 2010, 2011, 2012, 2013 and 2014) and four previous graffiti vandalism audits for the City of Edmonton, as well as 26 environmental audits for other clients in Canada and the USA.

Graffiti vandalism is a public nuisance offense that causes damage to public and private property. Graffiti is different from litter as it is both a bylaw infraction and criminal act (mischief under the Criminal Code of Canada). During each of Edmonton's graffiti audits the consultant examined graffiti vandalism in the most active neighbourhoods where graffiti is documented in Edmonton. Edmonton has 367 designated neighbourhoods. It would be cost and time prohibitive to audit all 367 of them, therefore a sample of neighbourhoods was used for audit purposes.

Graffiti auditing for 2014 has been done in the same 20 Edmonton neighbourhoods which have been audited since 2010. The neighbourhoods represent those with the highest incidents of graffiti complaints from citizens. In 2012, five neighbourhoods were added to increase the sample size of the audit. These five neighbourhoods were selected on the basis of greatest change in complaints from 2012 compared to 2011 incident reports in the City's "POSSE" database. In 2013, these neighbourhoods were not sampled as it was recognized after the 2012 audit that these locations had insignificant levels of graffiti present.

In each of the chosen target neighbourhoods, a "hot spot sample area" and a "random sample area" were selected. Hot spot areas were those where significant reports of graffiti vandalism had been recorded in the City's data system. For each sample area the consultant selected an area of 4 city blocks by 4 city blocks representing a size of approximately 20-25 hectares. For comparison a "random" area, the same approximate size as the "hot spot" was selected in each of the 20 neighbourhoods being audited. These "random areas" were selected from areas within the neighbourhood where there had been fewer or no reports of graffiti.

During the 2014 graffiti audit, the audit crew observed graffiti vandalism at 352 locations where graffiti vandalism was present, a reduction from 395 locations in 2013, representing an 11% decrease in locations compared to 2013. In these locations, 1,071 graffiti tags were observed in the current audit, compared to 1,413 tags in 2013, a decrease of 24% over the previous year.

Table ES-1 Summary

	2014	2013	2012	2011	2010
Locations					
Total Locations where graffiti observed	352	395	438	543	646
Change from previous year	-10.9%	- 9.8%	-19.3%	-15.9%	
Change from 2012	-19.6%				
Change from 2011	-35.2%				
Change from 2010	-45.5%				
Graffiti Tags					
Graffiti tags observed in 20 neighbourhoods	1,071	1,413	1,116	1,133	1,978
Change from previous year	-24.2%	26.6%	-1.5%	-42.7%	
Change from 2012	-4.0%				
Change from 2011	-5.5%				
Change from 2010	-45.9%				

During the 2014 audit there were 11% fewer locations observed with graffiti present and 24% fewer tags observed, within the 20 original neighbourhoods examined, compared to the 2013.

Figure ES-1 Locations & Tag Summary
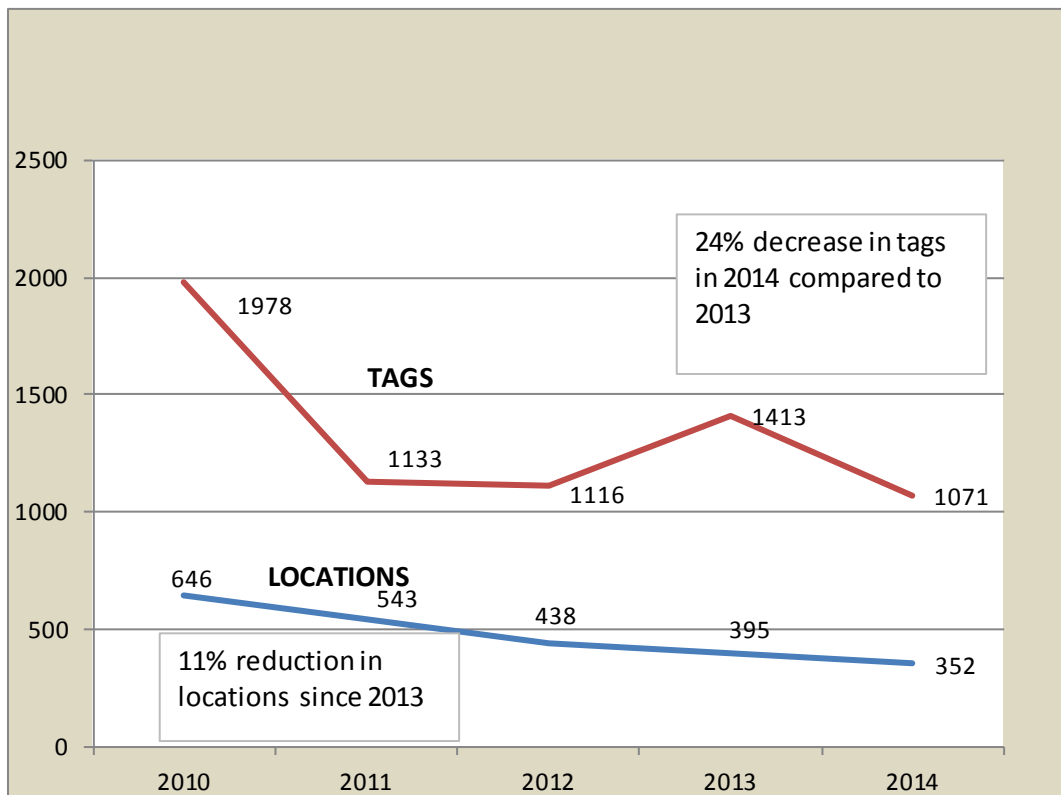
A significant observation of the current graffiti audit is that, in the Downtown neighbourhood, graffiti decreased from 325 tags in 2013 to 225 in 2014, a 31% decrease. There was also a significant decrease in the Strathcona neighbourhood where graffiti tags decreased from 203 tags in 2013 to 135 in 2014, a 33% decrease. Tags in Garneau also diminished from 120 tags in 2013 to 72 in 2014, a 40% decrease. In 2013 the largest contributors of tags came from those three neighbourhoods, which combined represented 46% of all graffiti observed.

The largest contributors of tags observed during the 2014 audit were from the Downtown, Strathcona and Boyle Street neighbourhoods, a result of the decrease in graffiti found in Garneau and an increase in the Boyle Street neighbourhood. Graffiti observed in these three neighbourhoods accounts for 42.8% of the total tags found in the 2014 audit with Downtown, Strathcona and Boyle Street representing 21%, 12.6% and 9.2% respectively.

The greatest increase in observed graffiti tags occurred in Beverly Heights (400% increase from 2 tags to 10); Ritchie with a 359% increase (from 17 to 78 tags) and in Queen Mary neighbourhood with a 96% increase (from 24 to 47 tags).

During the 2014 audit, the audit team traveled over 560 kilometres within Edmonton's 20 sample neighbourhoods, on streets, in alleys and in laneways recording graffiti observations. During the course of this audit over 1,200 photographs were taken recording the graffiti observed. A comprehensive database was created to archive and analyse the data collected. Paper records, electronic data records and digital photographic records were archived to preserve the data gathered.

The method used by the City of Edmonton, as developed by the consultant for this audit provides a repeatable and unbiased way of auditing neighbourhoods for graffiti vandalism. The neighbourhoods examined in this audit can be examined in the future to determine whether the amount of graffiti vandalism is increasing or decreasing.

During the 2014 graffiti vandalism audit the consultant calculated a Location Intensity Rating (LIR) to examine the amount and intensity of graffiti at each of the 352 locations. For comparison purposes these intensities (LIR) of graffiti are plotted on neighbourhood maps in Appendix B showing graffiti locations and LIRs for 2014 and 2013.

Consistent with observing fewer graffiti tags in 2014, was the behavior of the graffiti index in 2014 compared to previous years. The graffiti index is a measure of the amount of graffiti observed per geographic area (hectares). This index decreased in 2014 from a combined index of 1.243 in 2013 to 0.932 in 2014.

During the 2014 field work, auditors were accompanied by a City of Edmonton Municipal Enforcement Officer, from the Complaints and Investigations Section of the Community Standards Branch. The identification of taggers has been enhanced by having city staff participating in the audit, due to their skills as Municipal Enforcement Officers in reading tagger names.

During the 2014 audit the number of taggers observed was 400, compared to 424 taggers in 2013, 305 graffiti taggers in 2012 and 379 in 2011.

Most graffiti tags are small in size covering less than 0.185 sq.m (2 sq.ft.). In the current audit there were proportionately more small tags than in 2013 audit. In the 2014 audit 83% of the tags were small tags compared to 73% 2013. A similar proportion of medium sized tags (>2sq.ft. <9 sq.ft.) was seen in 2014 (11% in 2014 and 13% in 2013).

The graffiti observed in 2014 was predominantly "marker / plain" graffiti (92% in 2014 and 93% in 2013). This is graffiti that is textual or stylized in nature, and is in no way artistic in its design.

The removal of postal boxes by Canada Post Edmonton streets continues to provide a reduction of graffiti throughout the City. The consultant noted that the proportion of total graffiti on city assets (signs, ETS, park furniture etc.) has increased slightly in 2014, which may be a result of the removal of postal boxes.

Commercial waste bins, parking lot barricades, signs and posts continue to be common targets for taggers. Private residential and multi-family residential properties are often targets of graffiti vandals, especially on fences and garages in back alleys and laneways. In the 2014 audit the consultant observed that murals, throughout the City, were not generally defaced by graffiti tags. This reinforces previous observations that in general graffiti vandals avoid tagging murals.

Introduction & Background

Graffiti vandalism is a property vandalism crime that places a financial burden on public and private property owners. Graffiti vandalism defaces property, resulting in significant cleanup efforts and remediation costs in a large municipality like Edmonton.

The City of Edmonton's Capital City Clean Up (CCCU) program operates an active Graffiti Management Program (GMP). The Capital City Clean Up program provides support to property owners in understanding graffiti vandalism, removing graffiti, and engages the community in sharing the responsibility for graffiti vandalism prevention and removal.

Due to increased public concern and awareness, Community Standards Bylaw 14600, section 9, was amended effective April 1, 2008, requiring owners to remove graffiti vandalism from their properties upon notification. Community Standards bylaw enforcement allows for the issuing of a $250 ticket in the event of non-compliance. The City can also cause a forced cleaning to be implemented under the Municipal Government Act, with municipal assets conducting the cleanup. These costs are transferred back to the property owner by adding the cost to the tax roll for the specific property.

In 2008, in order to increase enforcement and removal, CCCU proactively created an inventory of graffiti vandalism in the City. In this inventory it was not possible to collect detailed information on the graffiti vandalism at each location. The inventory served as a starting point for graffiti enforcement in the spring of 2009. Subsequently, a second inventory was completed by City of Edmonton graffiti removal staff from November 1, 2009 to April 1, 2010.

Since 2008, information regarding graffiti has been gathered by the City through complaints and documentation from bylaw officers. This information has been entered into the City's "POSSE" data management system for investigation and follow-up. Staff determined that some graffiti data was inaccurate or incomplete causing difficulties in follow-up activities for bylaw officers to conduct enforcement. Data entered into the City's "POSSE" data management system formed the basis of designing the first graffiti audit in 2010, and has been used, as the source of data, in choosing which neighbourhoods would be sampled in graffiti vandalism audits. Information assembled on taggers and locations of graffiti is shared with the Edmonton Police Service to assist police in their investigations and to improve the success of charges laid for graffiti offences.

In October 2010, the City and MGM Management developed and implemented a method for auditing the graffiti vandalism in selected neighbourhoods in Edmonton. Using audit techniques the City is now able to compare the occurrence of graffiti offences in given neighbourhoods and has a new tool to compare graffiti vandalism intensity from one year to the next.

City bylaw enforcement staff have issued clean up notices to property owners based on the information gathered from the 2010, 2011, 2012 and 2013 Graffiti Vandalism Audits. This process has proven to be effective in identifying and reducing graffiti occurrences in Edmonton.

Commencing in mid-October 2014, the City conducted its fourth Graffiti Vandalism Audit. The original 20 neighbourhoods, examined in 2010, 2011 and 2013 were audited again in 2014.

By conducting graffiti audits Edmonton has developed a method for evaluating the occurrence and the intensity of graffiti vandalism in selected neighbourhoods. The results provide unbiased information about the street names (tagger names) of graffiti vandals while examining the types and size of graffiti vandalism and target properties where graffiti is placed.

This report describes how the 2014 graffiti audit was conducted and provides results based upon field audit observations.

The debate on graffiti street art versus graffiti vandalism has long been a contentious issue for Edmontonians. The City of Edmonton is committed to promoting safer, cleaner communities by reducing and preventing graffiti vandalism, while at the same time recognizing the artistic and cultural value street art can add when done tastefully, with permission and so that it does not contravene the Community Standards bylaw.

Audit Methodology

Before the 2010 audit was conducted, the City of Edmonton (COE) searched existing literature sources to determine what services were available to conduct graffiti vandalism audits. It became evident that methods for auditing graffiti vandalism were not readily available in Canada or elsewhere. City of Edmonton staff in cooperation with MGM Management, a B.C. based environmental consulting firm, designed a method for auditing graffiti vandalism. The baseline audit was carried out in early November 2010. Subsequently a repeat graffiti vandalism audit was done in late October/early November in 2011 and 2012, and again in October 2013 and 2014 to determine changes in graffiti behaviour as compared to the baseline work.

MGM Management has extensive experience designing and conducting environmental audits. MGM Management has completed over 30 environmental audits for municipal and provincial clients since 2002.

Edmonton's use of a standardized method of observing graffiti, as a periodic audit of portions of the city, has become a reliable way of examining whether the occurrence of graffiti vandalism is changing over time. This method was recently adopted by the City of Hamilton in Ontario, who after consultation with the City of Edmonton, chose to use the same methodology for auditing graffiti vandalism in that municipality.

In addition to this graffiti study, this firm has completed seven litter audits for the City of Edmonton, in 2007, 2009, 2010, 2011, 2012, 2013 and 2014.

City Graffiti Vandalism Observations

Graffiti vandalism occurrence data was plotted on a map to indicate where, in the city, complaints were observed over the period 2008 – 2010. The map below was then created to show where graffiti complaints and observations by City staff were documented. This data analysis ranked the number of complaints or observations of graffiti vandalism, by neighbourhood, resulting in neighbourhoods of interest.

Figure 1 – City Graffiti Observations (2008 - 2010)
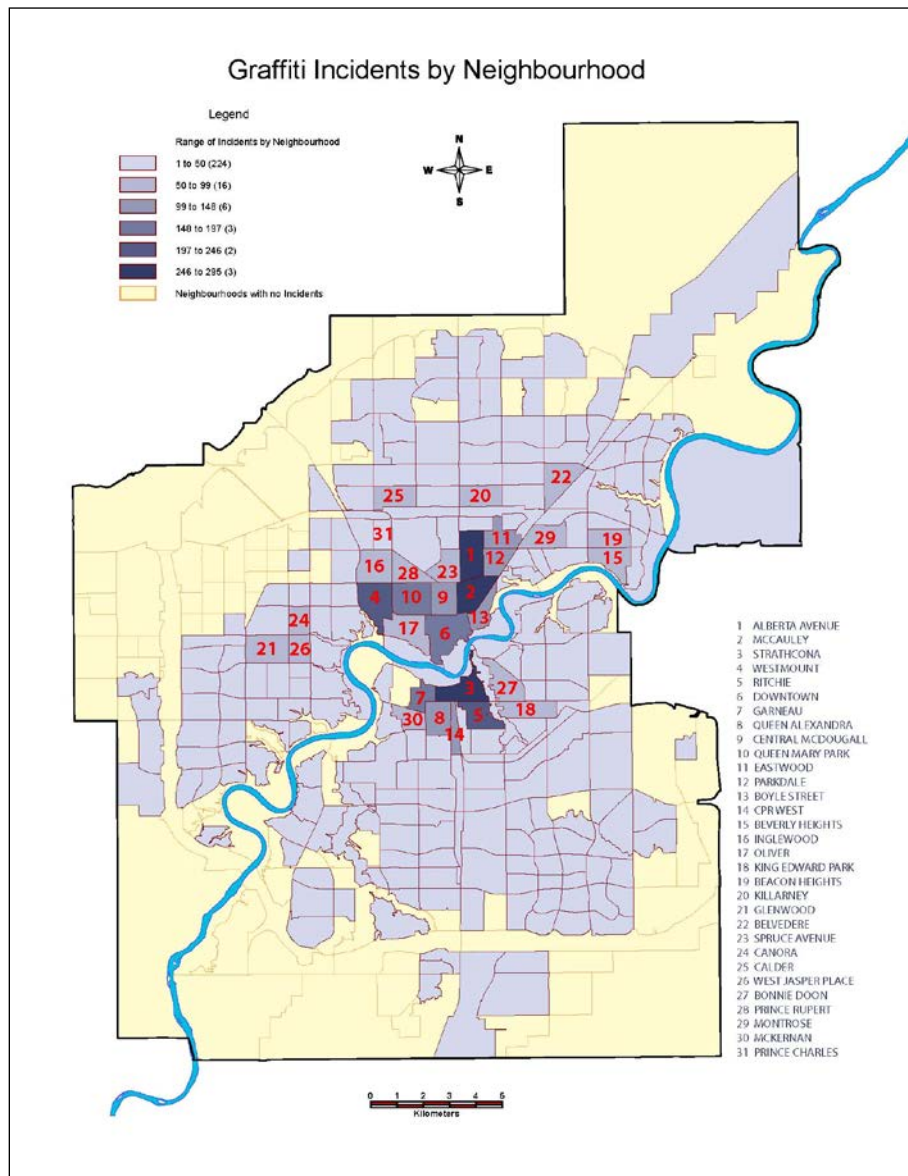
Choosing Neighbourhoods for Auditing

The City of Edmonton's graffiti data was used in 2010 to select the 20 original neighbourhoods that had the most significant reports of graffiti occurrences. The same neighbourhoods were audited in 2010, 2011, 2012, 2013 and for this audit in 2014.

Figure 2 – Hot Spot & Random Sample Areas

Sample Neighbourhoods 2014
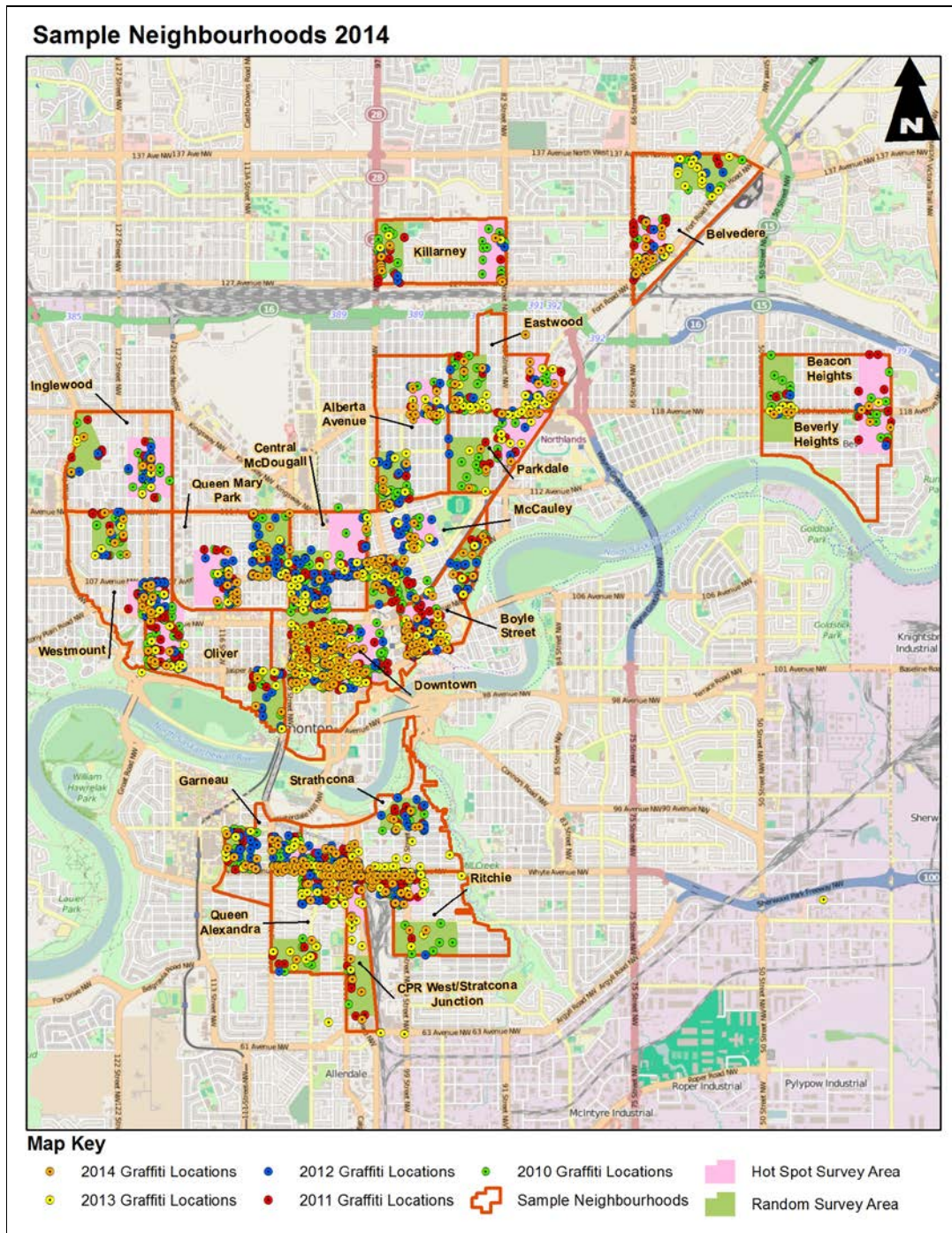
Selecting Hot Spot & Random Sample Areas

Upon considering reported graffiti vandalism data, the locations of complaints and bylaw enforcement observations were examined based upon available municipal addresses within neighbourhoods of interest. From this assessment, the consultant identified an area within each target neighbourhood as a "hot spot", meaning an area within each neighbourhood that historically had the largest occurrences of graffiti vandalism for that neighbourhood. For control purposes a second sample area within each neighbourhood was selected and termed a "random" sample area. These random areas were chosen to act as a control during the audit, regardless of whether or not there were documented graffiti vandalism activities in that part of the neighbourhood.

In order to keep neighbourhood sample size manageable, the consultant selected areas that were approximately 4 city blocks by 4 city blocks in size. This approximate size of 16 square city blocks was used for both "hot spot" and "random" sample areas. Using geospatial software techniques the exact geographical areas of each hot spot and random area were calculated, in hectares as presented in Table 1, below.

Table 1 – Area of Hot Spots & Random Sample (Hectares)

| Type	Neighbourhood	Area (Hectare)	Area - (Sq. Kilometre)	Type	Neighbourhood	Area (Hectare)	Area - (Sq. Kilometre)
Hot Spot	Alberta Avenue	22.630	0.226	Hot Spot	Inglewood	43.320	0.433
Random	Alberta Avenue	28.122	0.281	Random	Inglewood	23.952	0.240
Hot Spot	Beacon Heights	28.684	0.287	Hot Spot	Killarney	29.299	0.293
Random	Beacon Heights	28.751	0.288	Random	Killarney	23.275	0.233
Hot Spot	Belvedere	25.922	0.259	Hot Spot	McCauley	19.642	0.196
Random	Belvedere	34.713	0.347	Random	McCauley	31.754	0.318
Hot Spot	Beverley Heights	22.595	0.226	Hot Spot	Oliver	32.319	0.323
Random	Beverley Heights	16.177	0.162	Random	Oliver	28.786	0.288
Hot Spot	Boyle Street	34.843	0.348	Hot Spot	Parkdale	30.974	0.310
Random	Boyle Street	22.789	0.228	Random	Parkdale	29.567	0.296
Hot Spot	Central McDougall	40.769	0.408	Hot Spot	Queen Alexandra	24.777	0.248
Random	Central McDougall	37.056	0.371	Random	Queen Alexandra	26.733	0.267
Hot Spot	CPR West/Strathcona Junction	13.335	0.133	Hot Spot	Queen Mary Park	34.241	0.342
Random	CPR West/Strathcona Junction	26.033	0.260	Random	Queen Mary Park	40.592	0.406
Hot Spot	Downtown	50.673	0.507	Hot Spot	Ritchie	25.696	0.257
Random	Downtown	48.353	0.484	Random	Ritchie	34.079	0.341
Hot Spot	Eastwood	28.204	0.282	Hot Spot	Strathcona	23.828	0.238
Random	Eastwood	33.188	0.332	Random	Strathcona	21.288	0.213
Hot Spot	Garneau	16.279	0.163	Hot Spot	Westmount	21.045	0.210
Random	Garneau	20.389	0.204	Random	Westmount	24.678	0.247
				Average area Sample size		28.70 Hectare	0.287 Sq. Km

Sample areas were about 29 hectares (or just under 1/3 of a square kilometre in size) and proved to be a manageable size for field audit personnel. Due to the presence of alleys and laneways in some neighbourhoods and the shapes of some neighbourhoods, not all sample areas were square configurations.

Appendix A provides an overview map of the 20 neighbourhoods and the graffiti audit areas examined within those neighbourhoods.

Appendix B provides a sample of maps of graffiti observation locations in three of the original 20 neighbourhoods examined during the 2014 audit, and compared graffiti intensity to 2013 results.

Results of the Edmonton Audit

During the 2014 graffiti audit, the audit crew observed graffiti vandalism at 352 locations compared to 395 locations in 2013 and 438 locations in 2012. The audit found an 11% decrease between the number of locations found in 2014 compared to those in 2013. At these locations, 1,071 tags were observed compared to 1,413 tags documented in 2013, showing a decrease of 24% compared to 2013. In the same neighbourhoods in 2012 there were 1,116 tags, 1,133 in 2011 and 1,978 in 2010.

Figure 3 – Locations & Tag Count Summary
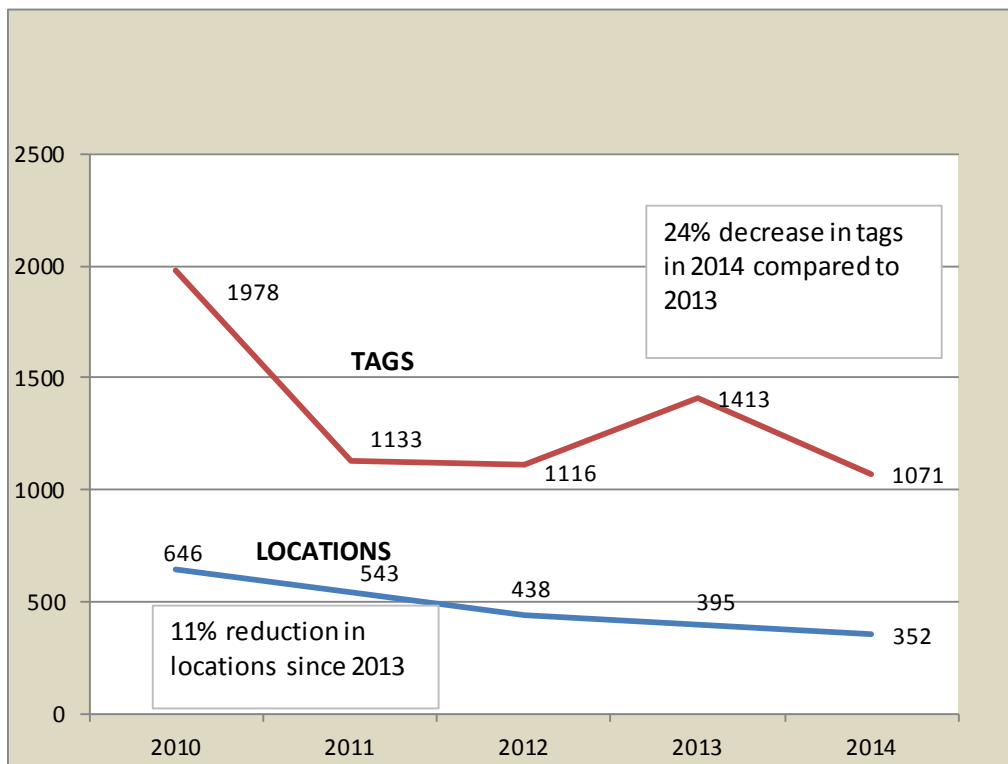
Neighbourhood Graffiti Index & Rankings

A graffiti index was determined for each overall neighbourhood examined and for each individual "hot spot" and "random" sample area. Table 7 presents the "graffiti index" for each sample area.

Table 2 – Neighbourhood Graffiti Index Results 2014

	Graffiti in Hot Spot 2014	Area Hot Spot (Ha)	Index Hot Spot 2014	Index Hot Spot 2013	Index Hot Spot 2012	Index Hot Spot 2011	Index Hot Spot 2010	Graffiti in Random 2014	Area Random (Ha)	Index Random 2014	Index Random 2013	Index Random 2012	Index Random 2011	Index Random 2010
Alberta Ave	25	22.63	1.105	0.972	1.061	0.354	0.930	8	28.122	0.284	0.605	1.458	0.462	1.740
Beacon Heights	2	28.68	0.070	0.209	0.070	0.279	0.310	0	28.751	0.000	0.243	0.104	0.139	0.590
Belvedere	47	25.92	1.813	0.964	1.080	1.505	0.690	0	34.713	0.000	0.893	0.375	0.173	0.320
Beverly Heights	6	22.60	0.266	0.000	0.044	0.310	0.270	4	16.177	0.247	0.124	0.371	0.000	0.370
Boyle Street	90	34.84	2.583	1.808	0.603	0.804	4.510	9	22.789	0.395	0.395	2.677	4.564	0.970
Central McDougall	7	40.77	0.172	0.343	1.030	0.687	1.350	16	37.056	0.432	0.783	1.403	1.565	2.190
CPR West/Strathcona Junction	57	13.33	4.275	3.225	1.200	1.350	1.420	9	26.033	0.346	0.653	0.038	0.307	0.150
Downtown	103	50.67	2.033	2.112	1.164	2.408	6.240	122	48.353	2.523	4.508	1.779	3.206	2.520
Eastwood	19	28.20	0.674	2.376	1.241	0.461	1.630	14	33.188	0.422	1.175	0.362	0.271	0.510
Garneau	57	16.28	3.501	6.266	3.563	0.614	4.610	15	20.389	0.736	0.883	2.060	0.981	2.600
Inglewood	4	43.32	0.092	0.185	0.439	0.508	1.130	3	23.952	0.125	0.083	0.209	0.292	0.290
Killarney	6	29.30	0.205	0.785	0.546	0.375	0.610	20	23.275	0.859	0.129	1.332	0.602	1.680
McCauley	12	19.64	0.611	0.356	1.578	0.204	0.660	31	31.754	0.976	1.732	1.071	1.134	1.980
Oliver	7	32.32	0.217	1.145	0.278	1.857	3.160	3	28.786	0.104	0.278	0.625	0.730	0.490
Parkdale	5	30.97	0.161	1.259	0.581	0.291	0.610	4	29.567	0.135	0.406	0.203	0.101	0.740
Queen Alexandra	77	24.78	3.108	4.480	0.646	1.493	1.740	2	26.733	0.075	0.337	0.037	0.262	0.970
Queen Mary Park	20	34.24	0.584	0.146	1.782	0.993	0.730	27	40.592	0.665	0.468	0.665	0.616	0.860
Ritchie	78	25.70	3.036	0.195	1.245	1.323	2.840	0	34.079	0.000	0.352	0.029	0.029	0.230
Strathcona	124	23.83	5.204	0.336	4.155	3.819	8.790	11	21.288	0.517	9.160	0.752	0.658	0.700
Westmount	18	21.05	0.855	0.336	2.613	1.330	3.560	9	24.678	0.365	0.000	0.851	0.689	1.740
Total	764	Average	1.528					307	Average	0.460				
Comparison - Original 20 neighbourhoods				1.375	1.188	0.928	1.978				1.160	0.731	0.679	0.956

The graffiti index is a way of examining the observations of graffiti in an indexed numerical comparison. Above in Table 7, we present the graffiti indexes for the "hot spot" and the "random areas." In Table 8, on the next page, the combined graffiti index for each neighbourhood is presented.

For the hot spot areas within each neighbourhood, the average graffiti index was slightly higher in 2014 at 1.528 compared to 1.375 in 2013. However, for the random sample areas the average graffiti index dropped significantly from 1.160 in 2013 to 0.46 in 2014, indicating significantly less graffiti activity in these sample areas during the current year.

Table 3 – Combined Neighbourhood Graffiti Index Results 2014

	Total Graffiti in Neigh	Total Area	2014 Combined Index	2013 Combined Index	2012 Combined index	2011 Combined Index	2010 Combined Index
		Ha					
Alberta Ave	33	50.8	0.650	0.768	1.281	0.414	1.380
Beacon Heights	2	57.4	0.035	0.226	0.087	0.209	0.450
Belvedere	47	60.6	0.775	0.924	0.676	0.742	0.480
Beverly Heights	10	38.8	0.258	0.052	0.181	0.181	0.310
Boyle Street	99	57.6	1.718	1.249	1.423	2.290	3.110
Central McDougall	23	77.8	0.296	0.553	1.208	1.105	1.750
CPR West/Strathcona Junction	66	39.4	1.676	1.524	0.432	0.660	0.580
Downtown	225	99.0	2.272	3.282	1.464	2.797	4.420
Eastwood	33	61.4	0.538	1.727	0.766	0.358	1.030
Garneau	72	36.7	1.964	3.273	2.727	0.818	3.490
Inglewood	7	67.3	0.104	0.149	0.357	0.431	0.830
Killarney	26	52.6	0.495	0.495	0.894	0.476	1.080
McCauley	43	51.4	0.837	1.206	1.265	0.778	1.480
Oliver	10	61.1	0.164	0.736	0.442	1.326	1.900
Parkdale	9	60.5	0.149	0.842	0.396	0.198	0.680
Queen Alexandra	79	51.5	1.534	2.330	0.330	0.854	1.340
Queen Mary Park	47	74.8	0.628	0.321	1.176	0.788	0.800
Ritchie	78	59.8	1.305	0.284	0.552	0.586	1.360
Strathcona	135	45.1	2.992	4.500	2.549	2.327	4.720
Westmount	27	45.7	0.591	0.416	1.662	0.984	2.580
Total	1,071	1,149	0.932				
			Average				
Comparison - Original 20 neighbourhoods				1.243	0.993	0.916	1.689

In examining Table 7 and Table 8 it is clear where the decreases in graffiti vandalism were observed in the 2014 audit. Significant reductions were noted in the Downtown neighbourhood, as well as reductions in 2014 in the Strathcona and Garneau neighbourhoods. This is significant as these three neighbourhoods have historically been the largest contributors to graffiti vandalism in the city. Two neighbourhoods also of note are Ritchie and the Boyle Street neighbourhood where the graffiti index increased in 2014 reversing a previous downward trends in graffiti observed since 2012.

When the graffiti index results for both the hot spots and the random sample areas are combined for all 20 neighbourhoods, the average combined graffiti index dropped from 1.243 in 2013 to the current audit index of 0.932. This indicates a 25% decrease in the combined graffiti index in 2014 compared to 2013, matching observations of 24% fewer tags observed in the current audit and confirming that the graffiti index method works well to compare graffiti data.

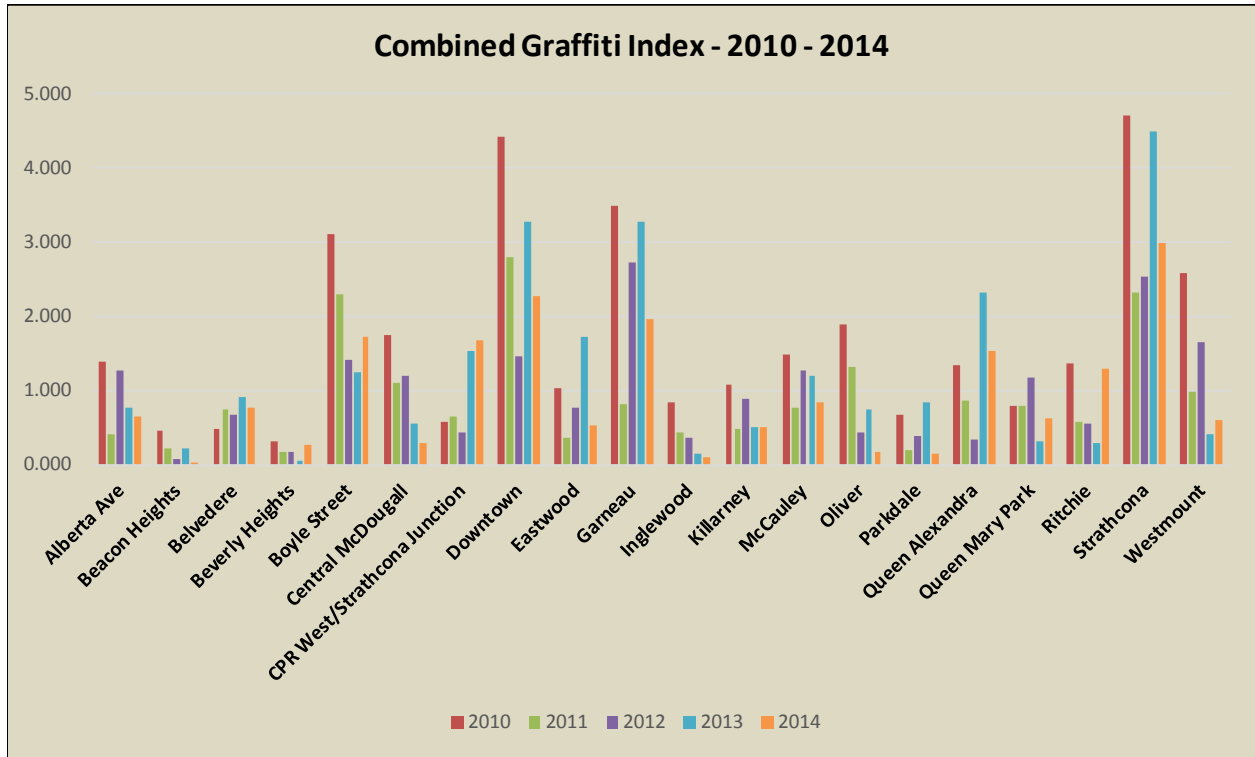**Figure 4 – Combined Graffiti Index Results - by Neighbourhood**

Combined Graffiti Index - 2010 - 2014

Table 4 – Graffiti Occurrence by Neighbourhood Sampled

2014					2013					2012		
Neighbourhood	**Locations**	**Graffiti Observed**	**% of total observed**		**Neighbourhood**	**Locations**	**Graffiti Observed**	**% of total observed**		**Neighbourhood**	**Graffiti Observed**	**% of total observed**
Downtown	62	225	21.0%		Downtown	90	325	23.0%		Downtown	145	13.0%
Strathcona	25	135	12.6%		Strathcona	23	203	14.4%		Strathcona	115	10.3%
Boyle Street	32	99	9.2%		Garneau	23	120	8.5%		Garneau	100	9.0%
Queen Alexandra	19	79	7.4%		Queen Alexandra	31	120	8.5%		Central McDougall	94	8.4%
Ritchie	26	78	7.3%	58%	Eastwood	24	106	7.5%	62%	Queen Mary Park	88	7.9%
Garneau	27	72	6.7%		Boyle Street	22	72	5.1%		Boyle Street	82	7.3%
CPR/Strathcona Junction	17	66	6.2%		McCauley	22	62	4.4%		Westmount	74	6.6%
Belvedere	13	47	4.4%		CPR/Strathcona Junction	16	60	4.2%		Alberta Ave.	65	5.8%
Queen Mary	24	47	4.4%		Belvedere	24	56	4.0%		McCauley	65	5.8%
McCauley	18	43	4.0%		Parkdale	16	51	3.6%		Eastwood	47	4.2%
Alberta Avenue	16	33	3.1%		Oliver	15	45	3.2%		Killarney	47	4.2%
Eastwood	13	33	3.1%		Central McDougall	23	43	3.0%		Belvedere	41	3.7%
Westmount	16	27	2.5%		Alberta Avenue	19	39	2.8%		Ritchie	32	2.9%
Killarney	8	26	2.4%		Killarney	5	26	1.8%		Oliver	27	2.4%
Central McDougall	7	23	2.1%		Queen Mary	12	24	1.7%		Inglewood	24	2.2%
Beverly Heights	6	10	0.9%		Westmount	10	19	1.3%		Parkdale	24	2.2%
Oliver	9	10	0.9%		Ritchie	6	17	1.2%		CPR West/ Strathcona Junction	17	1.5%
Parkdale	8	9	0.8%		Beacon Heights	5	13	0.92%		Queen Alexandra	17	1.5%
Inglewood	5	7	0.7%		Inglewood	7	10	0.71%		Beverly Heights	7	0.6%
Beacon Heights	1	2	0.2%		Beverly Heights	2	2	0.14%		Beacon Heights	5	0.4%
			0.0%									
	352	1,071	100.0%			395	1,413	100%		Tags in 20 neighbourhoods	1,116	100%
Change since 2013	**-11%**	**-24%**										

In 2014, the Downtown and the Strathcona neighbourhoods once again exhibited the most intensely tagged areas audited. This has been a consistent finding in all the graffiti audits conducted in Edmonton. Boyle Street was a significant source of graffiti in 2014, re-entering the list of top five most tagged neighbourhoods. The Queen Alexandra neighbourhood remained in the top five most tagged neighbourhoods once again in the current audit. The Ritchie neighbourhood exhibited a 359% increase in observed graffiti compared to 2013 and entered the top five neighbourhoods tagged in 2014. The last time Ritchie was found in the top five most tagged neighbourhoods was 2010.

These significant observations are:

- Downtown; graffiti decreased from 325 tags in 2013 to 225 in 2014, a 31% decrease.

- Strathcona; graffiti decreased from 203 tags in 2013 to 135 in 2014, a 33% decrease.

- Boyle Street; graffiti increased from 72 tags in 2013 to 99 in 2014, a 38% increase.

- Queen Alexandra; graffiti decreased from 120 tags in 2013 to 79 in 2014, a 34% decrease.

- Ritchie; graffiti increased from 17 tags in 2013 to 78 in 2014, a 359% increase.

- Beverly Heights; graffiti increase from 17 in 2013 to 78 in 2014, a 400% increase

- Garneau; graffiti decreased from 120 tags in 2013 to 72 in 2014, a 40% decrease.

Table 5 – Comparison of Graffiti 2014 vs. 2013 Neighbourhoods

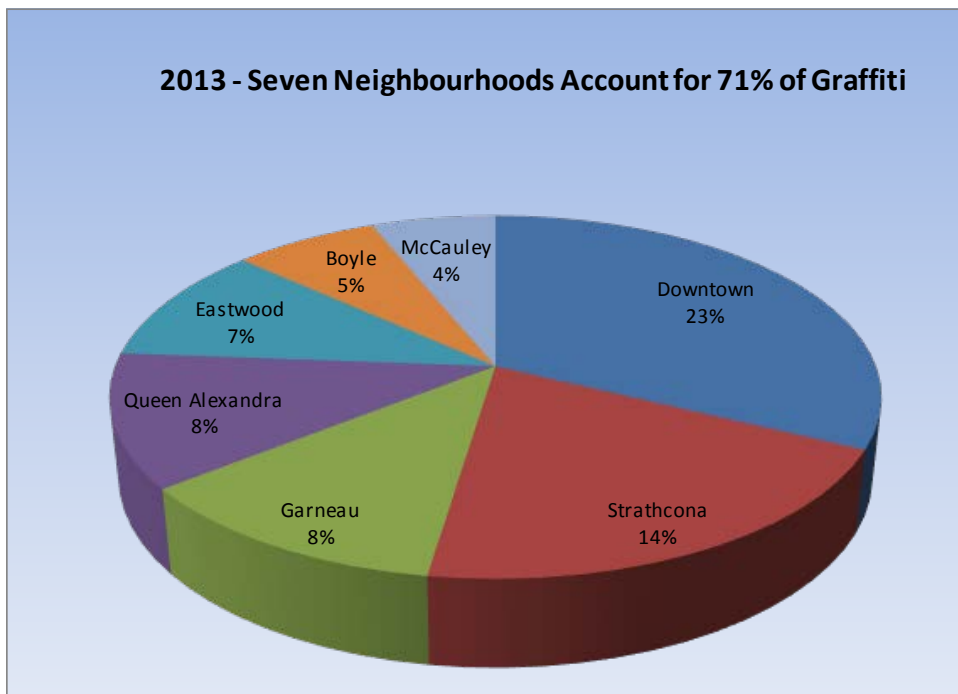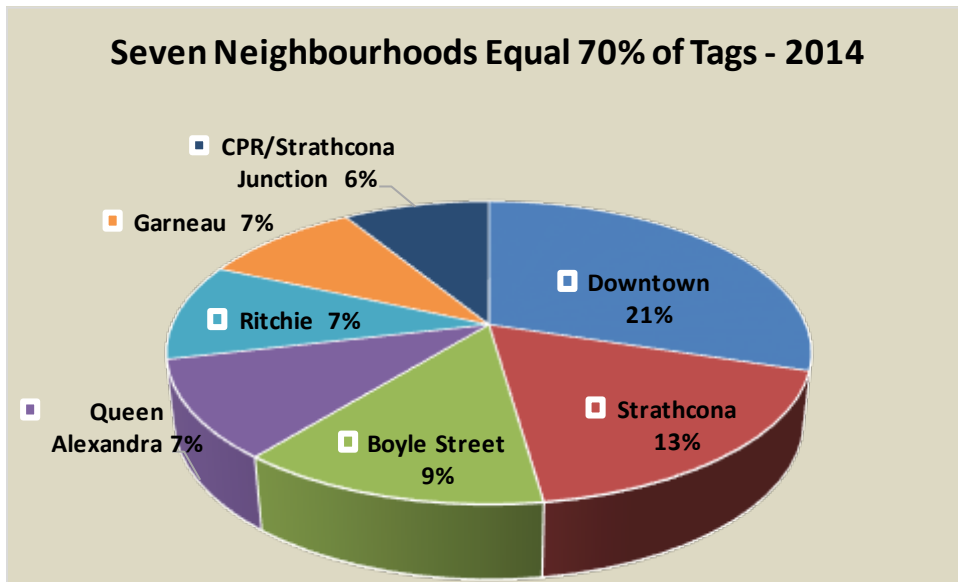| Neighbourhood	Graffiti Tags 2014	Change from 2013	Graffiti Tags 2013
Beverly Heights	10	400%	2
Ritchie	78	359%	17
Queen Mary	47	96%	24
Westmount	27	42%	19
Boyle Street	99	38%	72
CPR/Strathcona Junction	66	10%	60
Killarney	26	0%	26
Alberta Avenue	33	-15%	39
Belvedere	47	-16%	56
Inglewood	7	-30%	10
McCauley	43	-31%	62
Downtown	225	-31%	325
Strathcona	135	-33%	203
Queen Alexandra	79	-34%	120
Garneau	72	-40%	120
Central McDougall	23	-47%	43
Eastwood	33	-69%	106
Oliver	10	-78%	45
Parkdale	9	-82%	51
Beacon Heights	2	-85%	13
	1,071	-24%	1,413

In Table 10, above, we note changes in observed graffiti activity. As mentioned earlier, graffiti in the Ritchie neighbourhood, increased significantly from the current audit to the previous year, an increase of 359%.

Perhaps more notable were those neighbourhoods where graffiti activities decreased. Graffiti vandalism in the Downtown and Strathcona neighbourhoods were observed to have decreased by over 30% in 2014 compared to 2013 (-31% and -33% respectively), while the Garneau area saw a 40% decrease in observed tags in the current audit. The Eastwood neighbourhood had 69% fewer tags and the Oliver area was observed to have 78% fewer tags in in 2014 compared to the previous year.

In each of the graffiti vandalism audits unidentifiable (unknown) taggers are the largest single tagger group identified. When identifiable tags are examined, a relatively small number of individual taggers account for a significant amount of the graffiti in Edmonton. In 2014, 271 tags (25.3%) were unidentifiable (unknown) taggers, with 74.7% of tags being observed with readable tag names.

The number of taggers in the current audit was 400, compared to 424 taggers in 2013, 305 in 2012 and 379 in 2011.

Figure 5 – Seven Most Active Neighbourhoods

Seven Neighbourhoods Equal 70% of Tags - 2014

- CPR/Strathcona Junction 6%
- Garneau 7%
- Ritchie 7%
- Queen Alexandra 7%
- Boyle Street 9%
- Downtown 21%
- Strathcona 13%

2013 - Seven Neighbourhoods Account for 71% of Graffiti

- McCauley 4%
- Boyle 5%
- Eastwood 7%
- Queen Alexandra 8%
- Garneau 8%
- Downtown 23%
- Strathcona 14%

Size & Descriptor of Graffiti

In the 2014 audit the proportion of small tags increased to 83% compared to the 2013 audit where small tags represented 73%. Medium sized tags stayed proportionally similar in 2014 (11% compared to 13% in 2013). A relatively small number of large graffiti pieces (2%) were observed during the 2014 audit.

Table 6 – Graffiti Observed in 2014 is Mainly Small

		2014		2013	
Imperial	Metric	Count	% of Total	Count	% of Total
Small (>1sq.ft < 2 sq. ft.)	>0.9 sq.M. <0.185 sq.M	891	83%	1,036	73%
Med (>2sq.ft. <9 sq.ft.)	>0.185 sq.M<0.836 sq.M	120	11%	190	13%
x-Small (<1 sq.ft.)	<.009 sq. M	35	3%	119	8%
Large (>9 sq.ft.<20 sq.ft.)	>0.836 sq.M < 1.186 sq.M	22	2%	63	4%
x-Large (> 20 sq.ft)	> 1.186 sq.M	3	0.3%	5	0%
		1,071	100%	1,413	100%

Figure 6 – Sizes of Graffiti Observed 2014

Graffiti Size Analysis - 2014
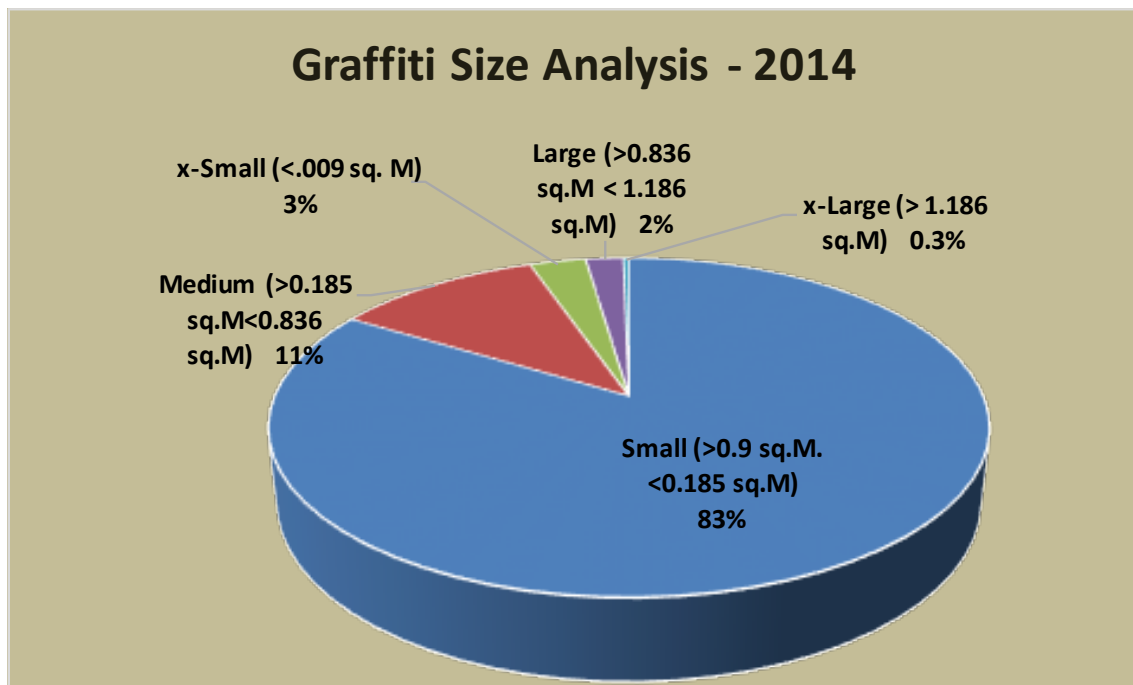
In regards to the artistic nature of graffiti vandalism observed throughout the 2014 audit, it was repeatedly observed that graffiti appeared to be scrawled quickly onto property, in a stylized design as free hand text and not completed with artistic merit. Of the 1,071 observations made in 2014 fully 93.9% was "text only", which is consistent with the observation made in 2013.

Table 7 – Summary of Graffiti Vandalism Observed in 2014

Descriptor of Graffiti Observed			
		2014	2013
	Count	% of Total	
Text only (1.)	1,006	93.9%	93.0%
Picture	40	3.7%	2.8%
Stencil (2.)	7	0.7%	1.6%
Splash/Slash (3.)	3	0.3%	1.3%
Vulgar Text	13	1.2%	1.2%
Vulgar Picture	1	0.1%	0.1%
Political	0	0.0%	0.0%
Hate motif	1	0.1%	0.0%
Racist	0	0.0%	0.0%
	1,071	100%	100%

1. Text only refers to no drawing, piece is
   stylized design or text only
2. Stencils are made with cut-outs & medium
3. Splash/ Slash is an undefined graffiti
   piece, or paint thrown onto property

The consultant found that over 90% of all graffiti is what is termed as marker or plain in nature, as compared to outline bubble-type graffiti or artistic drawings, a trend that has been observed in previous graffiti audits in Edmonton. Marker or plain graffiti tagging is textual in nature rather than being a picture or a drawing.

Table 8 – Graffiti Categories

Graffiti Category		2014	2013
Marker / Plain Graffiti	981	91.6%	93.3%
Artistic Tag	48	4.5%	4.0%
Outline Bubble Tag - No Fill	23	2.1%	1.0%
Outline Bubble Tag - One Color	9	0.8%	1.0%
Outline Bubble Tag - Two Colors	7	0.7%	0.5%
Outline Bubble - Multiple Colors	2	0.2%	0.2%
Etching	1	0.1%	0.0%
	1071	100.0%	100.0%

Figure 7 – Observed Graffiti is Not Artistic
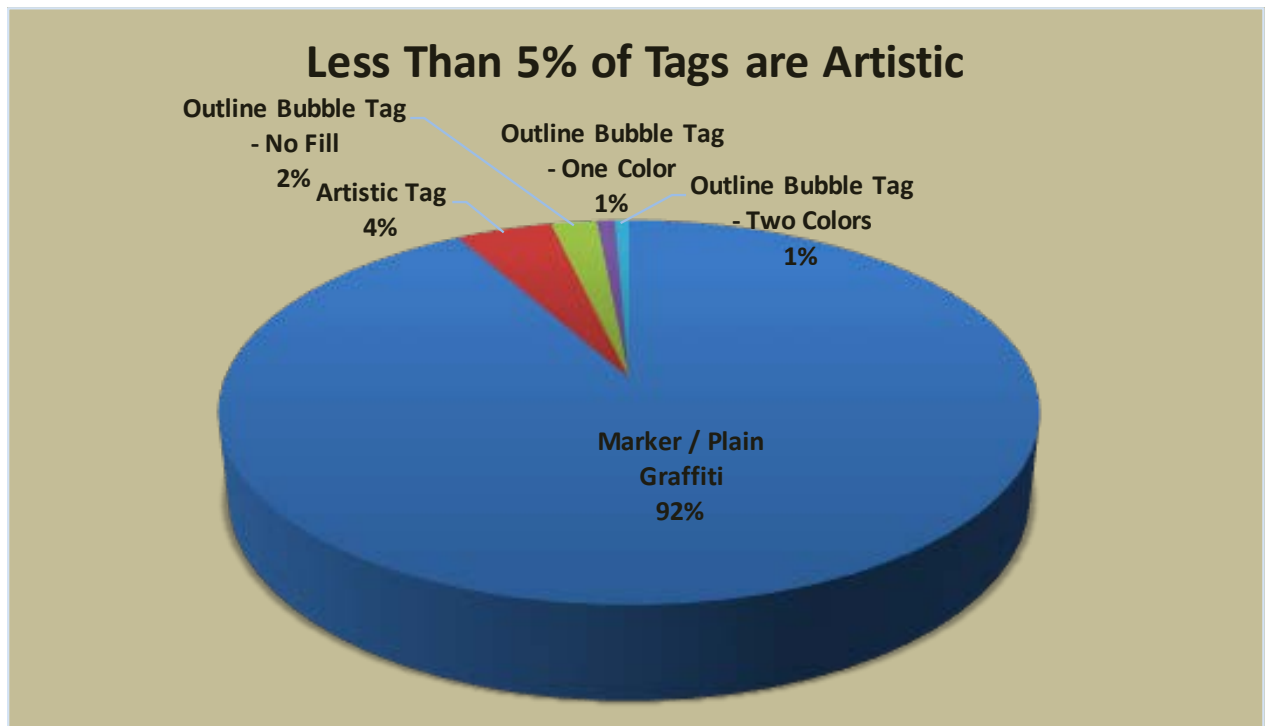
Target Properties & Categories

The audit team determined whether each item of graffiti was placed on City, non-municipal government or private property.

In 2014, the same proportion of graffiti was observed on private property as was noted in 2013. Both audits show 84% of graffiti vandalism tags on private property. Graffiti on City assets increased from 9% (124 tags in 2013), to 12% (129 tags in 2014).

The number of tags on government (Provincial and Federal) property continued to follow a decreasing trend first noted in 2013, moving from 7% of total tags (104 tags) in 2013, to just 4% of total graffiti tags (43 tags) in 2014. The consultants noted that, in the past, the majority of tags on government property were mainly on Canada Post (grey) boxes. A large number of these boxes have now been phased out of service, by this agency and removed from city streets. This is likely the main contributing factor for the continued decreasing trend in the number of tags on government property noted over the past two years.

The proportion of graffiti tags on private waste management bins increased in 2014, from 21% (295 tags) in 2013, to 27% (289 tags) in 2014. City disposal and recycling bins were observed to have fewer tags than private waste bins.

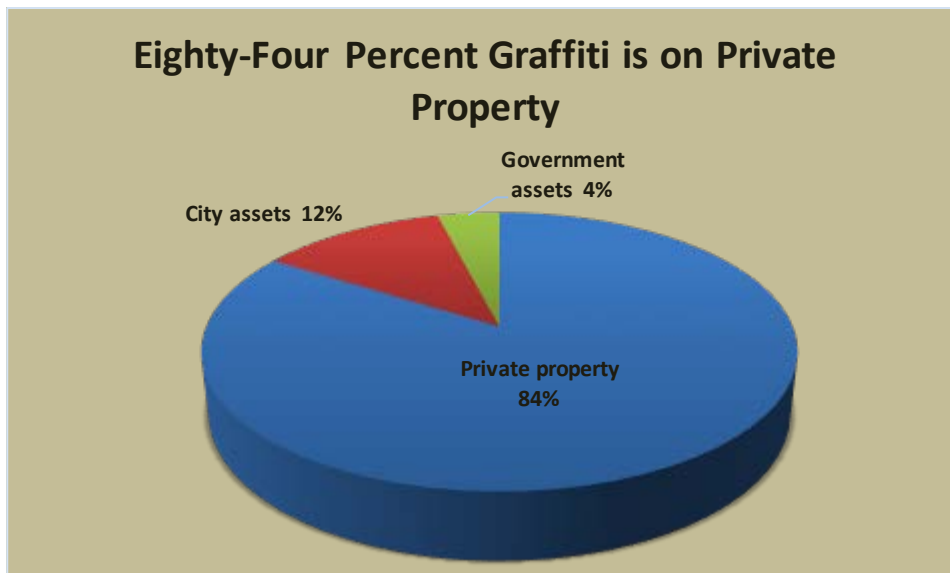## Figure 8 – Graffiti Tags by Property Ownership

Eighty-Four Percent Graffiti is on Private Property

Government assets 4%

City assets 12%

Private property 84%

Table 9 – Graffiti Targets & Category Results

	# of Observations	Property Owner	2014	2013
City of Edmonton	**129**	Waste Mangement Branch	58	45
12%		Transportation Dept.	1	17
Proportion of all graffiti 2014	12%	Public Works	8	5
Proportion of all graffiti 2013	9%	Other Street assets	7	4
Proportion of all graffiti 2012	10%	ETS	53	40
Proportion of all graffiti 2011	8%	Parks	2	13
		Other		
		Sub-total	129	124

	# of Observations	Property Owner	2014	2013
Other Government Property	**47**	Canada Post	36	97
4%		Gov't building		3
Proportion of all graffiti 2014	4%	Hospital	2	
Proportion of all graffiti 2013	7%	Schools	9	4
Proportion of all graffiti 2012	18%			
Proportion of all graffiti 2011	14%			
		Sub-total	47	104

	# of Observations	Property Owner		2013
Private Property	**895**			
84%		Commercial - Parking barricades	13	19
Proportion 2014	84%	- other commercial items	5	5
Proportion 2013	84%	- Disposl bin , small	2	
Proportion 2012	67%	- Doors	5	15
Proportion 2011	78%	- Equipment	0	
		- Fence	5	
		- Lights	0	
		- Garage doors	4	
		- Poles / posts/ parking	1	5
		- Signs	14	21
		- Utility boxes	4	4
		- Ventilation	3	4
		- Walls	24	47
		- Sea Can / Storage	9	8
		- Windows	3	
		- Community League	3	1
		- Vehicles/ Rolling Stock	6	
		Church - Barricades/Other	8	8
		- Walls	1	
		- Doors	0	

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	# of Observations	Property Owner	2014	2013
Private Property				
		EPCOR - Poles & Light Standards	47	37
		- Utility box	57	104
		- Other EPCOR asset	5	1
		TELUS - Pole	0	
		- Utility box	29	16
		- Booth & Other Asset	13	7
		Shaw - Utility box	1	
		Multi Family Dwelling - Barricades	1	2
		- Balcony/ or Other	3	5
		- Door	1	2
		- Fence	1	
		- Garage		
		- Garage Door		
		- Post / Pole		3
		- Shed/ Garbage container	1	7
		- Signs	4	8
		- Ventilation		2
		- Walls	8	21
		- Window		
		Newspaper - Boxes	20	16
		Private Waste Company-BFI (waste)	56	63
		Private Waste Comp.-BFI (recycle)	0	
		Private Waste Company-WMI	96	85
		Private Waste Company-TriLine	84	74
		Private Waste - Super Save	40	42
		Private Waste Company-310 Dump	5	4
		Private Waste Company-Think Pink	3	11
		Private Waste - Derrick	1	
		Private Waste - A & A	1	
		Private Waste - Other	6	
		Residence - Barricades		
		- Door		
		- Fence	9	24
		- Garage walls	9	22
		- Garage door	14	12
		- Garbage enclosure	9	5
		- Sheds/ Storage Cntr.	2	6
		- Walls		1
		- Other	1	
		Retail - Barricades	8	17
		- Door	69	73
		- Fence	7	12
		- Garage Door	1	2
		- Garbage enclosure/Shed	0	5
		- Gas meter	1	
		- Other	15	29
		- Parking lot	0	
		- Post / Pole	1	6
		- Signs	16	20
		- Storage can	4	25
		- Vehicles /Rolling Stock	6	22
		- Ventilation	7	6
		- Walls	123	238
		- Windows		13
		Graffiti (20 original neighbourhoods)	1,071	1,413

Location Intensity Rating (LIR)

Location Intensity Rating (LIR) is calculated as a method to indicate the relative intensity of a location within a neighbourhood. The LIR differs from the graffiti index in that the graffiti index measures the intensity of the amount of graffiti in the entire neighbourhood or hot/random area. The LIR measures the intensity of the graffiti observed at each individual location. It also includes factors other than just the amount of graffiti. The factors that form the LIR are described below.

The consultant added the LIR to the observations obtained in the 2011 to 2014 graffiti vandalism audits. The LIR is a rating based on observations of each "location" where these features make the graffiti more or less noticeable to both trained and untrained observers. It is based upon:

Size

- Score 1 for extra small, score 5 for extra large

Colour

- Score 1 for low colour, score 5 for vibrant colour

Complexity

- Score 1 marker plain text, score 5 for Outline Bubble multiple colours

Artistic

- Score 1 not drawn / splash / slash, score 5 artistic execution

Visibility

- Score 1 barely noticeable , score 5 could not miss it

Longevity

- Score 1 old, faded, nearly not visible, score 5 recent, not removed

Access

- Score 1 easy access, no likelihood of being caught, score 5 dangerous location

Surface

- Score 1 bad surface, does not take paint easily, score 5 ideal graffiti surface

Reoccurrence

- Score 1 none apparent, score 5 heavy reoccurrence

The maximum LIR possible at any location is a score of 45 (9 factors x 5 points = 45)

The consultant was requested to conduct a standard deviation analysis on the collected graffiti data. Standard deviation measures how widely values in a set of data are dispersed from the average (mean) value of the data set.

Standard deviation was calculated for the 2014 LIR data which yields 3.44. The average (mean) LIR was calculated as 18.2. Using standard statistical analysis principles, 68% of the LIR ratings fall within 1 standard deviation of the average LIR, which is a range from LIR ratings of 15 to 22, a finding similar to that found in 2013. Statistical analysis theory also determines that 95% of LIR ratings are therefore between 2 standard deviations, or between LIRs of 11 and 25.

In Table 18 below, this analysis shows that the average Location Intensity Rating is slightly lower in 2014, at 18.24 compared to 18.30 in 2013, but significantly lower than 2012 which averaged 21.22. It also reveals median intensity rating (middle of the data) has remained at 17 for the past two years compared to 21 in 2012, and 20 in 2011.

Table 10 – Location Intensity Rating Analysis (2012-2014)

2014 Std Deviation Analysis						
Average of all LIR	18.24	(mean)	68% of all LIR fall within 1 ST DEV			
Std deviation	3.44		14.8	to	21.7	
Median	17		95% within 2 ST DEV			
			11.4	to	25.1	
2013 Std Deviation Analysis						
Average of all LIR	18.30	(mean)	68% of all LIR fall within 1 ST DEV of 18.3			
Std deviation	3.24		15.1	to	21.5	
Median	17		95% within 2 ST DEV			
			11.8	to	24.8	
2012 Std Deviation Analysis						
Average of all LIR	21.22	(mean)	68% of all LIR fall within 1 ST DEV of 18.3			
Std deviation	2.65		18.6	to	23.9	
Median	21		95% within 2 ST DEV			
			15.9	to	26.5	
2011 Std Deviation Analysis						
Average of all LIR	20.04	(mean)	68% of all LIR fall within 1 ST DEV of 18.3			
Std deviation	2.58		17.5	to	22.6	
Median	20		95% within 2 ST DEV			
			14.9	to	25.2	

Table 11 – Location Intensity Index – Top 50 Sites

The top 50 Location Intensity Ratings listed below:

	Neighbourhood Name	Latitude	Longitude	Intensity Score	Street Num	Street Name
1	Strathcona	N53.51861	W-113.49536	33	10414	82 Ave
2	Strathcona	N53.52111	W-113.49620	33	10307	85 Ave
3	Boyle Street	N53.54288	W-113.48482	33	9670	Jasper Ave
4	CPR West / Strathcona Junction	N53.51749	W-113.49502	31	8122	103. St
5	Queen Alexandra	N53.51752	W-113.49831	29	10410	81 Ave
6	Alberta Avenue	N53.57088	W-113.48505	29	9320	118 Ave
7	CPR West / Strathcona Junction	N53.51741	W-113.49629	28	10331	82 Ave
8	Ritchie	N53.51744	W-113.49341	28	8135	82 Ave
9	Strathcona	N53.51857	W-113.49851	28	8220	104 St
10	Downtown	N53.54176	W-113.49815	28	10310	Jasper
11	Downtown	N53.54553	W-113.50195	28	10340	105 St
12	Belvedere	N53.58767	W-113.43927	28		64 St
13	Strathcona	N53.51854	W-113.49950	27	10466	82 Ave
14	CPR West / Strathcona Junction	N53.50808	W-113.49693	26	7127	104 St
15	Ritchie	N53.51750	W-113.48981	26	10021	82 Ave
16	Ritchie	N53.51751	W-113.49296	26	10139	82 Ave
17	Strathcona	N53.51862	W-113.49612	26	10025	83 Ave
18	Garneau	N53.52098	W-113.51090	26	8415	109 St
19	Killarney	N53.58787	W-113.49123	26	12901	97 St
20	CPR West / Strathcona Junction	N53.51760	W-113.49760	25		82 Ave
21	Strathcona	N53.51836	W-113.49912	25	10442	82 Ave
22	Strathcona	N53.51860	W-113.50285	25	10552	82 Ave
23	Downtown	N53.54389	W-113.49831	25	10236	103 St
24	Eastwood	N53.57224	W-113.45796	25		119 Ave
25	Eastwood	N53.57485	W-113.47533	25	8703	120 Ave
26	Queen Alexandra	N53.51758	W-113.49921	24	10431	82 Ave104 St
27	CPR West / Strathcona Junction	N53.51809	W-113.49641	24	10337	82 Ave
28	Boyle Street	N53.54591	W-113.48063	24	10230	95 St
29	Central McDougall	N53.54895	W-113.50778	24	10561	109 St
30	Queen Mary Park	N53.54927	W-113.51867	24	10560	114 St
31	Alberta Avenue	N53.55956	W-113.49071	24	9604	111 Ave
32	Alberta Avenue	N53.57056	W-113.48207	24	9104	118 Ave
33	Eastwood	N53.57082	W-113.47691	24	8812	118 Ave
34	Eastwood	N53.57902	W-113.46356	24		
35	Strathcona	N53.51859	W-113.49701	23	10352	82 Ave
36	Downtown	N53.54121	W-113.50471	23		
37	Downtown	N53.54147	W-113.50526	23	10702	Jasper Ave
38	Oliver	N53.54186	W-113.53433	23	10114	123 St
39	Downtown	N53.54203	W-113.49924	23	10165104	
40	Boyle Street	N53.54908	W-113.48459	23	10404	96 St
41	Westmount	N53.55021	W-113.53513	23	10621	124 St
42	Belvedere	N53.58772	W-113.44049	23		
43	Queen Alexandra	N53.51648	W-113.49847	22	8008	104 St
44	Ritchie	N53.51703	W-113.49213	22	10115	81 Ave
45	Ritchie	N53.51704	W-113.49274	22	10130	81 Ave
46	Boyle Street	N53.54385	W-113.48438	22	9647	102 Ave
47	Downtown	N53.54390	W-113.49906	22	10237	104 St
48	Queen Mary Park	N53.55463	W-113.50864	22	10830	109 St
49	Westmount	N53.55537	W-113.54207	22	10950	127 St
50	Eastwood	N53.57343	W-113.45799	22		120 Ave

Conclusions

The City of Edmonton's graffiti vandalism audit is an unbiased method of sampling graffiti vandalism in the City. Re-auditing the same neighbourhoods enables the City to document changes in the amount of graffiti observed in those areas.

During the 2014 graffiti audit, the audit crew observed graffiti at 352 locations where graffiti vandalism was present, a reduction from 395 in 2013 and 438 locations in 2012. In these locations, 1,071 graffiti tags were observed, a 24% decrease from 1,413 graffiti tags in 2013 and 1,116 in 2012.

The 2014 audit observed 11% fewer locations observed with graffiti, within the 20 original neighbourhoods examined than in 2013.

Downtown neighbourhood graffiti decreased from 325 tags in 2013 to 225 in 2014, a 31% decrease. There was also a decrease in the Strathcona neighbourhood where graffiti tags decreased from 203 tags in 2013 to 135 in 2014, a 33% decrease. Tags in Garneau also diminished from 120 tags in 2013 to 72 in 2014, a 40% decrease. In 2013 the largest contributors of tags came from those three neighbourhoods, which combined represented 46% of all graffiti observed.

The largest contributors of tags observed during the 2014 audit were from the Downtown, Strathcona and Boyle Street neighbourhoods, a result of the decrease in graffiti found in Garneau and an increase in the Boyle Street neighbourhood. Graffiti observed in these three neighbourhoods accounts for 42.8% of the total tags found in the 2014 audit with Downtown, Strathcona and Boyle Street representing 21%, 12.6% and 9.2% respectively.

The greatest increase in observed graffiti tags occurred in Beverly Heights (400% increase from 2 tags to 10); Ritchie with a 359% increase (from 17 to 78 tags) and in Queen Mary neighbourhood with a 96% increase (from 24 to 47 tags).

During the 2014 audit, the audit team traveled over 560 kilometres within Edmonton's 20 sample neighbourhoods, on streets, in alleys and in laneways recording graffiti observations. During the course of this audit over 1,200 photographs were taken recording the graffiti observed. A comprehensive database was created to archive and analyse the data collected. Paper records, electronic data records and digital photographic records were filed to preserve the data collected.

The consultant calculated a Location Intensity Rating (LIR) to examine the amount and intensity of graffiti at each of the 352 locations observed in 2014. For comparison purposes these intensities (LIR) of graffiti are plotted on neighbourhood maps in Appendix B showing graffiti locations and LIRs for 2014 and 2013.

Consistent with observing fewer graffiti tags in 2014, was the behavior of the graffiti index in 2014 compared to previous years. The graffiti index is a measure of the amount of graffiti observed per geographic area (Hectares). This index decreased from a combined index of 1.243 in 2013 to 0.932 in 2014.

During the 2014 field work, auditors were accompanied by a City of Edmonton Municipal Enforcement Officer from the Complaints and Investigations Section of the Community Standards Branch. The identification of taggers has been enhanced by having these staff participate in the audit due to their ability to read tagger names.

During the 2014 audit the number of taggers observed was 400, compared to 424 taggers 2013, and 305 graffiti taggers 2012.

Most graffiti tags are small in size covering less than 0.185 sq.m (2 sq.ft.). In the current audit there were proportionately more small tags in 2014 than in 2013; at 83% small tags in the current year compared to 73 % of the graffiti observed as small tags in 2013. A similar proportion of medium sized tags (>2sq.ft. <9 sq.ft.) were seen in 2014 (11% in 2014 and 13% in 2013).

92% of graffiti observed in 2014 was "marker / plain" graffiti (93% in 2013). This predominate style of graffiti found during the audit is textual or stylized in nature, and is in no way artistic in its design.

Commercial waste bins, parking lot barricades, signs and posts continue to be common targets for taggers. Private residential and multi-family residential properties are often targets of graffiti vandals, especially fences and garages in back alleys and laneways.

In the 2014 audit the consultant observed that murals, throughout the City, were not generally defaced by graffiti tags. This reinforces previous observations that graffiti vandals appear to avoid tagging murals.

APPENDIX A – Overview Audit Sample Locations

Sample Neighbourhoods 2014

Map Key

- ○ 2014 Graffiti Locations
- ○ 2013 Graffiti Locations
- ● 2012 Graffiti Locations
- ● 2011 Graffiti Locations
- ● 2010 Graffiti Locations
- ▱ Sample Neighbourhoods
- ▮ Hot Spot Survey Area
- ▮ Random Survey Area
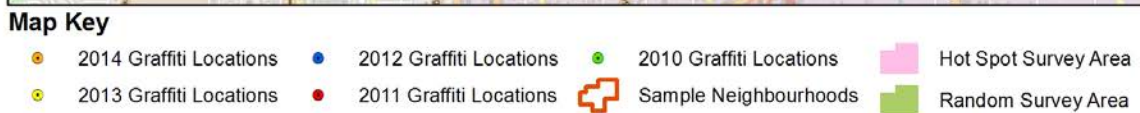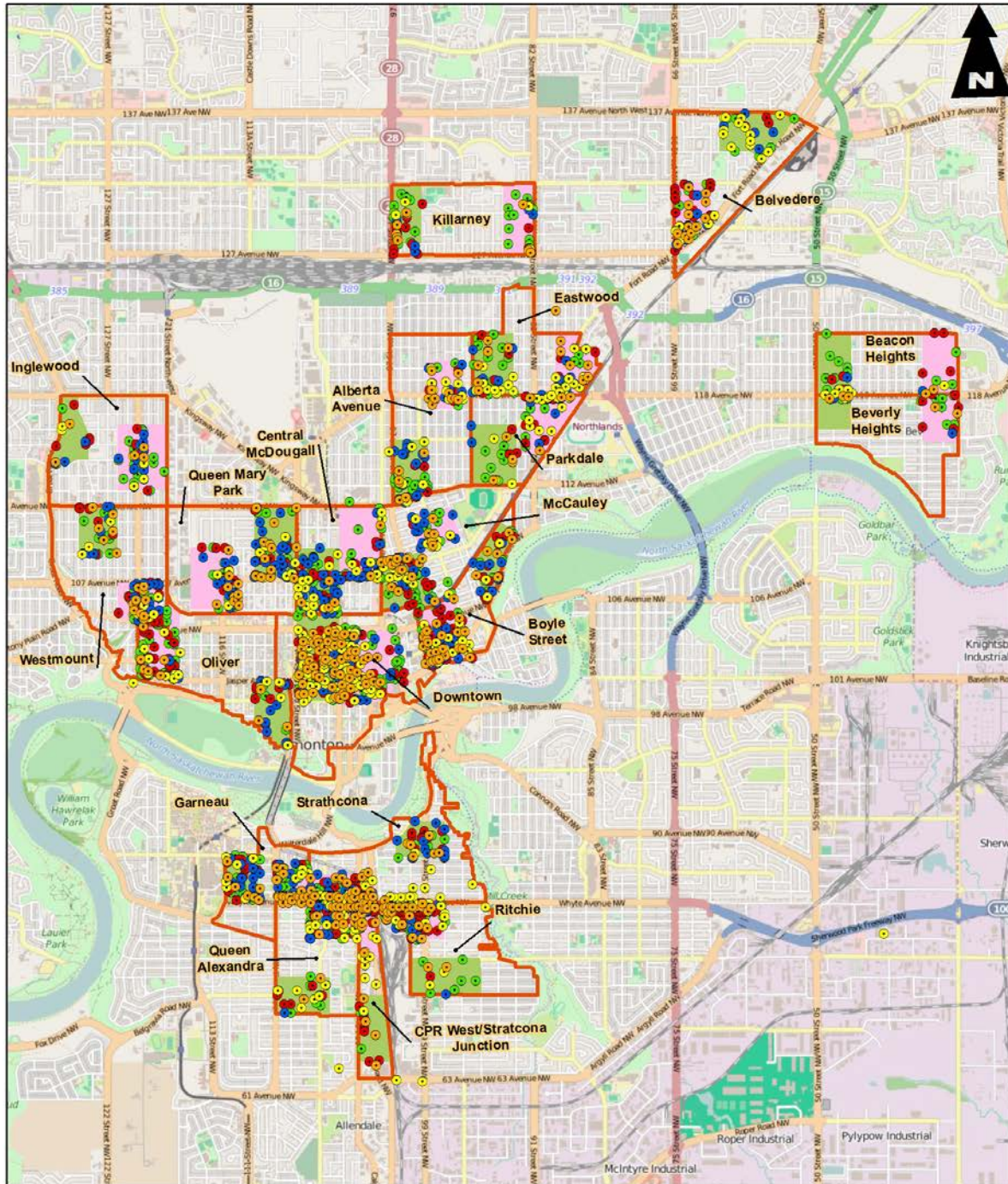
APPENDIX B - Graffiti Observation Locations (Examples)

Alberta Avenue Neighbourhood

City of Edmonton Graffiti Vandalism Audit - 2014

Queen Alexandra Neighbourhood

2014 Intensity
- 0 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 36

2013 Intensity
- 0 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 35

Neighbourhood Boundary

Hot Spot Survey Area
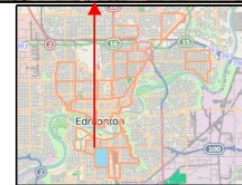
Random Survey Area

Strathcona Neighbourhood

2014 Intensity

- 0 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 36

2013 Intensity

- 0 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 35
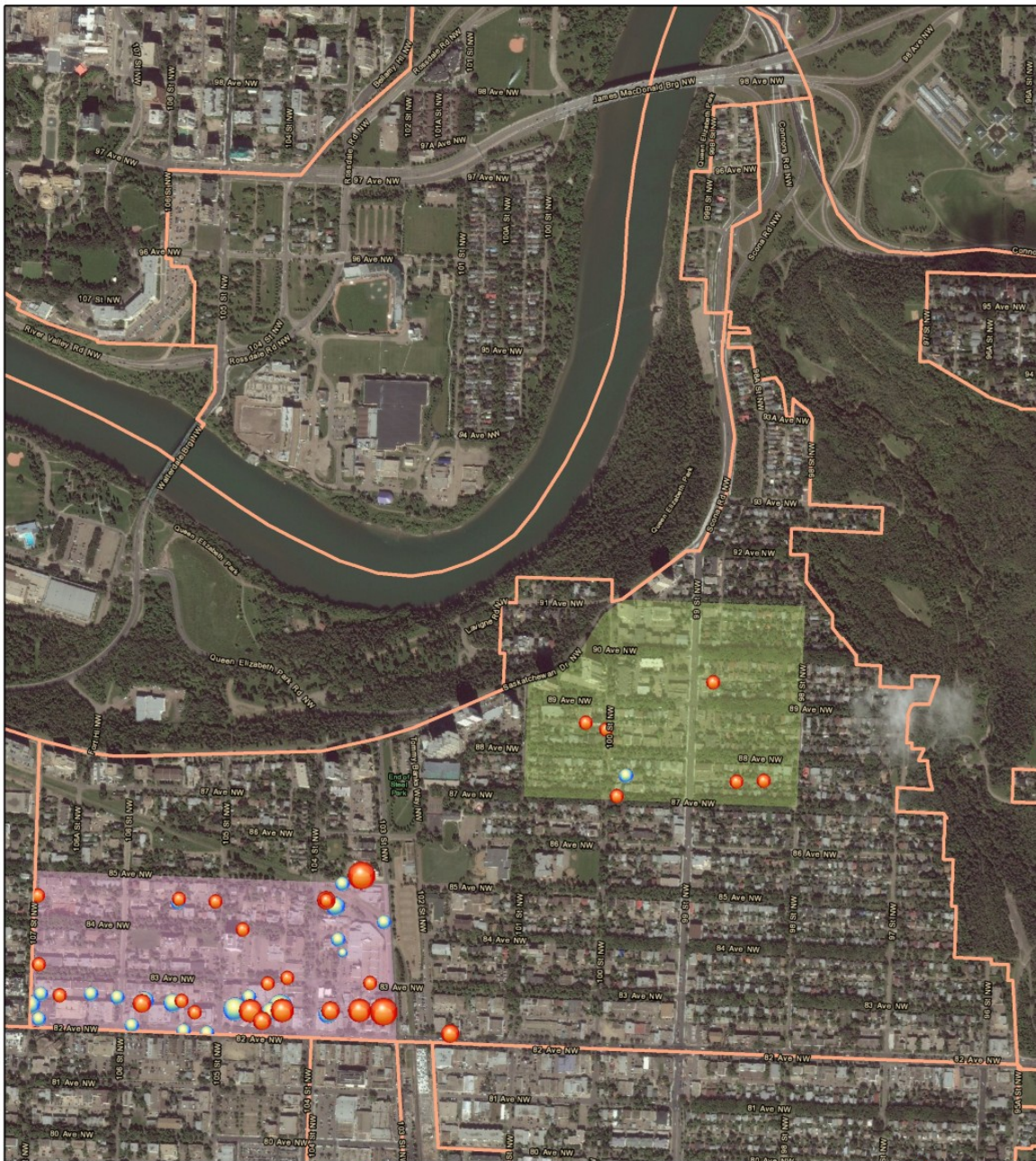
Neighbourhood Boundary

Hot Spot Survey Area

Random Survey Area

APPENDIX C – Glossary of Terms

Note: the terms and definitions listed below are general descriptions that reflect how this report uses the terminology. These definitions do not necessary reflect exactly how others working in this area may define the terms.

Term	Definition
Business Revitalization Zones (BRZ)	Defined areas in the city of Edmonton that have experienced economic decline that are being targeted for development and enhancements.
Community Standards Bylaw 14600, Section 9	City of Edmonton bylaw requiring property owners to remove graffiti from their property: 9 (2) in Community Standards Bylaw 14600, for the purpose of greater certainty a nuisance, in respect of a building, means a building showing signs of a serious disregard for general maintenance and upkeep, whether or not it is detrimental to the surrounding area, some examples of which include: (a.1) any graffiti displayed on the building that is visible from any surrounding property; reference (S.3, Bylaw 14752, February 13, 2008)
Crew	A group of taggers that operate together to do graffiti.
Crew Name	Symbol or letters, used by a graffiti crew, which is placed near their tag to identify their crew.
Geospatial mapping	Is the use of Geographical Information Software (GIS) for the management, analysis and display of geographical information. GIS is used to produce maps which can be used for the analysis of simple or complex problems
Graffiti Descriptor	Pre-determined categories used to classify the graffiti found during the audit: Text only, picture, stencil, splash/slash, vulgar text, vulgar picture, political hate, racist, or other distinguishing
Graffiti ID	Identification assigned to each piece of graffiti found at each graffiti location.
Graffiti Index	Way of expressing the observations of graffiti in an indexed numerical comparison of the data. (i.e. # observed divided by the area of the sample zone in Hectares)
Location ID -- Graffiti locations	Specific locations identified by the auditor where graffiti was found.
Graffiti Size	For the purposes of this report, the pre-defined categories used by the auditor to classify graffiti. Complete listing of styles listed in the report.

Term	Definition
Graffiti Style	For the purposes of this report, the pre-defined categories used by the auditor to classify graffiti. Complete listing of styles listed in the report.
Graffiti Vandalism	A public nuisance crime that causes damage to public and private property by applying paint, ink or chemicals to a surface.
Hot Spot	Term used to describe the 16 square block area within the target neighbourhoods that had the highest incidences of graffiti.
Mischief	Infraction/term, under Criminal Code of Canada, to describe the act of graffiti vandalism.
Location Intensity Rating (LIR)	Location Intensity Rating (LIR) - The LIR measures the intensity of graffiti at a specific LOCATION within a sample area. The LIR measures the intensity of the graffiti at each location where graffiti is found, and is specific to a location within a hot spot or random sample area .
Municipal Standards Act	The Alberta legislation which gives municipalities the authority to access and enforce clean up on private properties.
Posse	Database system used by the City of Edmonton to record and track Municipal Community Standard/Bylaw complaints on private property.
Random Area	An arbitrarily selected 16 square block area within the target neighbourhoods used as a comparison/control.
Street Name	Name used by graffiti taggers to identify themselves in the graffiti sub-culture.
Tag	An identifiable graffiti word or symbol repeatedly placed on property by a tagger.
Tagger	Name used to describe an individual that does graffiti vandalism.
Target Neighbourhoods	Neighbourhoods, identified through the City of Edmonton complaint tracking system "Posse", that were the focus for the graffiti audit.