



# City of Edmonton Graffiti Vandalism Audit 2011

## EXECUTIVE SUMMARY

Prepared by: MGM Management  
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## Acknowledgements

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- Elvie De Benedetto, Senior Program Planner, Capital City Clean Up, Community Services
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## Executive Summary

The City of Edmonton (COE) 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 conducted by the City was performed in November 2010, and then repeated the following year commencing in late October. This firm specializes in environmental auditing, and has conducted four litter audits (2007, 2009, 2010 and 2011) and one previous graffiti vandalism audit for the City of Edmonton, and more than 22 environmental audits for clients in Canada and the USA.

Graffiti vandalism is a public nuisance crime that causes damage to public and private property. Graffiti is different from litter as it is both a bylaw infraction and considered a criminal act (mischief under the Criminal Code of Canada and under local municipal bylaws). For both the 2010 audit and the 2011 audit the consultant examined graffiti in the most graffiti active neighbourhoods in Edmonton. Edmonton has 367 designated neighbourhoods. It would be cost and time prohibitive to audit all 367 neighbourhoods, therefore a sample of neighbourhoods was used for audit purposes.

Geospatial mapping (Arcview GIS – ESRI) was obtained from the City, which provided details of the spatial location of all streets, laneways and alleys for all of Edmonton. City graffiti data from 2008 – 2010, which recorded nearly 6,000 graffiti complaints and observations made by bylaw enforcement, was then used as the basis of choosing audit neighbourhoods. From this graffiti data the top 20 neighbourhoods in terms of recorded graffiti observations and complaints were chosen for this audit.

In each of the chosen target neighbourhoods a “hot spot” area and a “random area” were selected. Hot spot areas were those within a top 20 neighbourhood where significant reports of graffiti vandalism were recorded in the City’s data. The consultant selected an area of 4 city blocks by 4 city blocks for the size of each hot spot. Within that “hot spot” area all streets, laneways and alleys were audited. A “random” area, the same approximate size as the “hot spot,” was also selected. This random area acts as a comparison within the top 20 neighbourhoods where there have been less or no reports of graffiti. These were also kept to nominal sizes of between 30 and 50 hectares, which correspond to approximately 4 city blocks by 4 blocks.

During the 2011 graffiti audit 543 locations were examined recording 1,133 documented observations of graffiti. Within the 20 sample neighbourhoods, there were 16% fewer locations where graffiti was evident (543 compared to 646).

### Summary of Graffiti Audits - 2010 & 2011

	2011		2010
Total locations where graffiti observed*	543		646
Decrease from 2010	-16%		
Graffiti occurrences observed	1,133		1,978
Decrease from 2010	-43%		
* Note: Inside same 20 neighbourhoods examined, 2010 & 2011			

During the 2011 audit graffiti was observed at 16% fewer locations within the 20 neighbourhoods examined. Additionally, a 43% reduction in the amount of graffiti observed was recorded.

Comparing the 2011 graffiti index as compared to the 2010 graffiti index is revealing (Table 8 – Page 21). The graffiti index allows for comparisons of the relative intensity of graffiti vandalism in all sample areas. Hot spot sample area graffiti index values dropped 54% (2011 vs. 2010), random area indexes dropped 22%; and the combined graffiti index dropped 46% compared to 2010. These results confirm that graffiti vandalism tags in the sampled areas were significantly reduced between 2010 and the 2011 graffiti audits.

During the 2011 audit the audit team traveled over 700 kilometres within Edmonton's target neighbourhoods, on streets, in alleys and in laneways recording graffiti observations (compared to 685 kilometres in 2010). Five hundred and twenty-five photographs were taken recording graffiti, and a comprehensive database created to analyse the data collected. Paper records, electronic data records and digital photographic records have been 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. As repeated in 2011, these neighbourhoods can be examined in the future to determine whether the amount of graffiti vandalism is increasing or decreasing. The development of a "graffiti index" provides a tool for the City of Edmonton to compare graffiti intensity in one part of a neighbourhood to another, or to compare entire neighbourhoods with others.

In the 2011 graffiti vandalism audit the City created a Location Intensity Rating (LIR) approach to examine the amount and intensity of graffiti at a given observation location.

Seven of the 20 neighbourhoods audited accounted for 69% of all observed tags (66% in 2010). For the top seven neighbourhoods noted above, five of them were the same neighbourhoods as observed in 2010, those being: Downtown, Boyle Street, Strathcona, and Central McDougall and Oliver. These neighbourhoods remained in the top seven most tagged neighbourhoods, and were joined by Queen Mary Park and Belvedere in the most graffiti vandalized areas audited.

For the 2011 survey auditors were accompanied by a City of Edmonton, Municipal Enforcement Officer, from the Complaints and Investigations section of the Community Standards Branch. The number of taggers identified in the 2011 audit increased significantly, even with the drop in the total amount of graffiti recorded, due to the expert identification skills of the Municipal Enforcement Officers with experience in reading tagger names.

In 2010, the consultant recorded 141 graffiti vandals tagger names that represented 299 graffiti tags or 15.1% of the total graffiti observed. During the 2011 audit, with improved identification techniques, 379 taggers were recorded as representing 791 tags of the 1,133 total graffiti tags noted (69.8% positive identification). Unknown taggers, those being unidentifiable, represented a lower portion of the graffiti observed at 342 occurrences (30.2% of total observations)

A similar result in 2011 when compared to 2010 results was observed relating to the size of the graffiti observed, with 85% of the graffiti being small or extra small, that is, consisting of sizes less than 0.185 sq.M (2 sq.ft.).

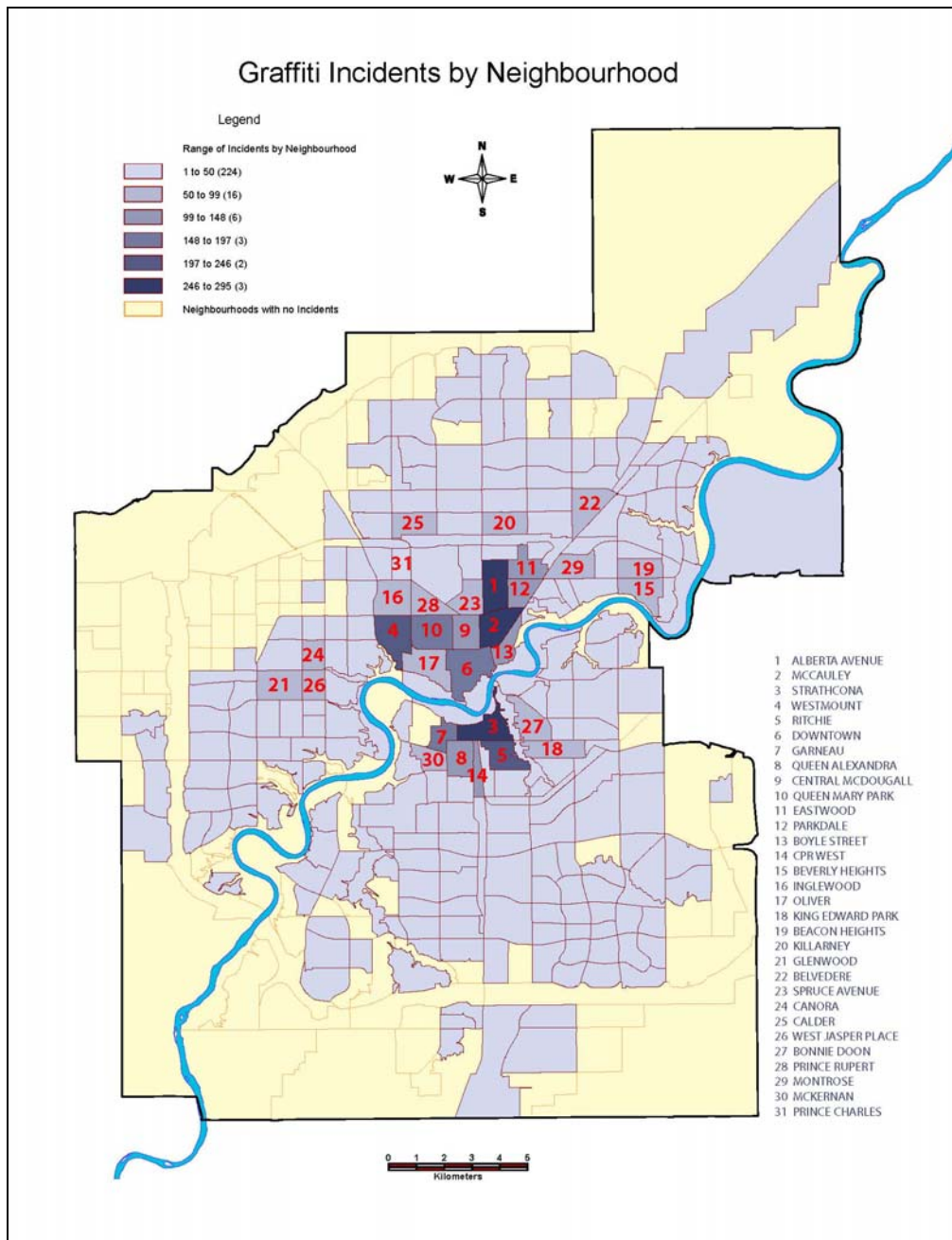
Seventy-nine percent of the graffiti observed during the 2011 audit was on private property (2010 – 77% private property). The next most targeted properties observed in the 2011 audit were Canada Post mail drop boxes, accounting for 13% of all graffiti observed. Commercial parking lot barricades, signs and posts were also noted to be common targets in 2011, as they were in the 2010 audit. Private residential and multi-family residential properties are often targets of graffiti vandals, especially in back alleys and laneways.

As noted in our 2010 audit report, certain walls with murals, such as the Salvation Army building were not defaced by graffiti tags. This observation was repeated for the 2011 audit in that this trend is continuing with graffiti vandals avoiding murals. The 2010 Graffiti Vandalism Audit provided a baseline from which the city can examine the occurrence of this form of vandalism in the future and measure the performance of its abatement efforts. The 2011 Graffiti Vandalism Audit adds to that body of understanding of the occurrence of graffiti vandalism in Edmonton.

## 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

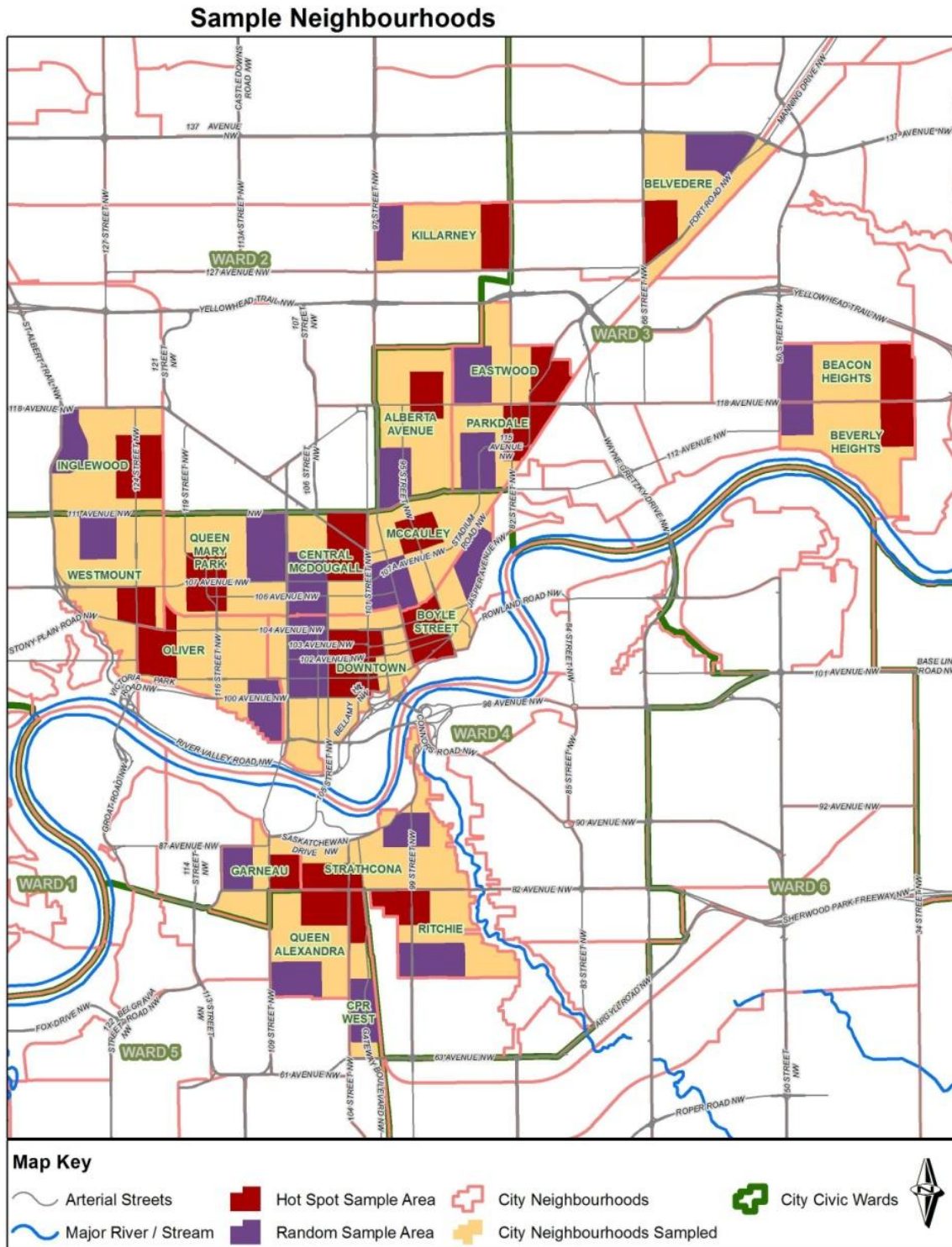
Once the City of Edmonton's Posse data was obtained it was analyzed to determine which neighbourhoods had been seen as the most significant ones from a reported graffiti perspective. The table below summarizes those findings, and the neighbourhoods selected for sampling.

**Table 1 - Top 20 Neighbourhoods with Graffiti Vandalism Observed (2010 & 2011 - City data)**

2011 GRAFFITI DATA REPORTS				2010 GRAFFITI DATA REPORTS					
		Reports	% of Total			Reports	% of Total		
1	STRATHCONA	338	8.7%		1	MCCAULEY	170	5.1%	
2	DOWNTOWN	216	5.6%		2	STRATHCONA	144	4.3%	
3	QUEEN ALEXANDRA	193	5.0%		3	WESTMOUNT	133	4.0%	
4	OLIVER	167	4.3%		4	ALBERTA AVE	129	3.9%	
5	WESTMOUNT	156	4.0%		5	GARNEAU	108	3.2%	
6	GARNEAU	145	3.7%		6	QUEEN MARY PARK	108	3.2%	
7	ALBERTA AVENUE	128	3.3%		7	RITCHIE	97	2.9%	
8	RITCHIE	125	3.2%		8	QUEEN ALEXANDRA	85	2.5%	
9	EASTWOOD	115	3.0%		9	DOWNTOWN	76	2.3%	
10	QUEEN MARY PARK	114	2.9%		10	CENTRAL MCDUGALL	75	2.2%	
11	BOYLE STREET	100	2.6%		11	PARKDALE	71	2.1%	
12	BELVEDERE	96	2.5%		12	BEVERLY HEIGHTS	62	1.9%	
13	MCCAULEY	91	2.3%		13	EASTWOOD	61	1.8%	
14	CPR WEST	74	1.9%		14	OLIVER	58	1.7%	
15	CENTRAL MCDUGALL	66	1.7%		15	INGLEWOOD	51	1.5%	
16	PARKDALE	66	1.7%		16	BEACON HEIGHTS	50	1.5%	
21	BONNIE DOON	65	1.7%		17	CPR WEST	50	1.5%	
17	BEVERLY HEIGHTS	52	1.3%	Top 20	18	BELVEDERE	47	1.4%	Top 20
18	KILLARNEY	50	1.3%	Equal	19	KILLARNEY	44	1.3%	Equal
22	FOREST HEIGHTS	50	1.3%	62.1%	20	BOYLE STREET	43	1.3%	49.6%
23	GLENWOOD	49	1.3%		21	CANORA	42	1.3%	
24	KING EDWARD PARK	41	1.1%		22	KING EDWARD PARK	42	1.3%	
19	INGLEWOOD	37	1.0%		23	LAGO LINDO	42	1.3%	
25	BRITANNIA YOUNGSTOWN	37	1.0%		24	MCKERNAN	40	1.2%	
26	KENILWORTH	37	1.0%	67.3%	25	CALDER	39	1.2%	55.7%
27	MONTROSE	31	0.8%		26	SPRUCE AVE	38	1.1%	
28	MCKERNAN	29	0.7%		27	MONTROSE	37	1.1%	
29	CANORA	25	0.6%		28	BONNIE DOON	33	1.0%	
20	BEACON HEIGHTS	24	0.6%		29	PLEASANTVIEW	26	0.8%	
30	STRATHEARN	23	0.6%	70.7%	30	PRINCE CHARLES	26	0.8%	60.5%
	Neighbourhoods shaded sampled 2011					Neighbourhoods shaded sampled 2010			
	Top 20 - 2011 documented reports	2,407	62.13%			Top 20 - 2010 documented reports	2,027	49.61%	
	Total POSSE reports 2011	3,874	of total reports			Total POSSE reports 2010	3,350	of total reports	
	Shaded Neighbourhoods sampled 2011					Shaded Neighbourhoods sampled 2010			
	Also sampled 2011, Inglewood & Beacon Heights								
	as per repeating sampling from 2010 audit								

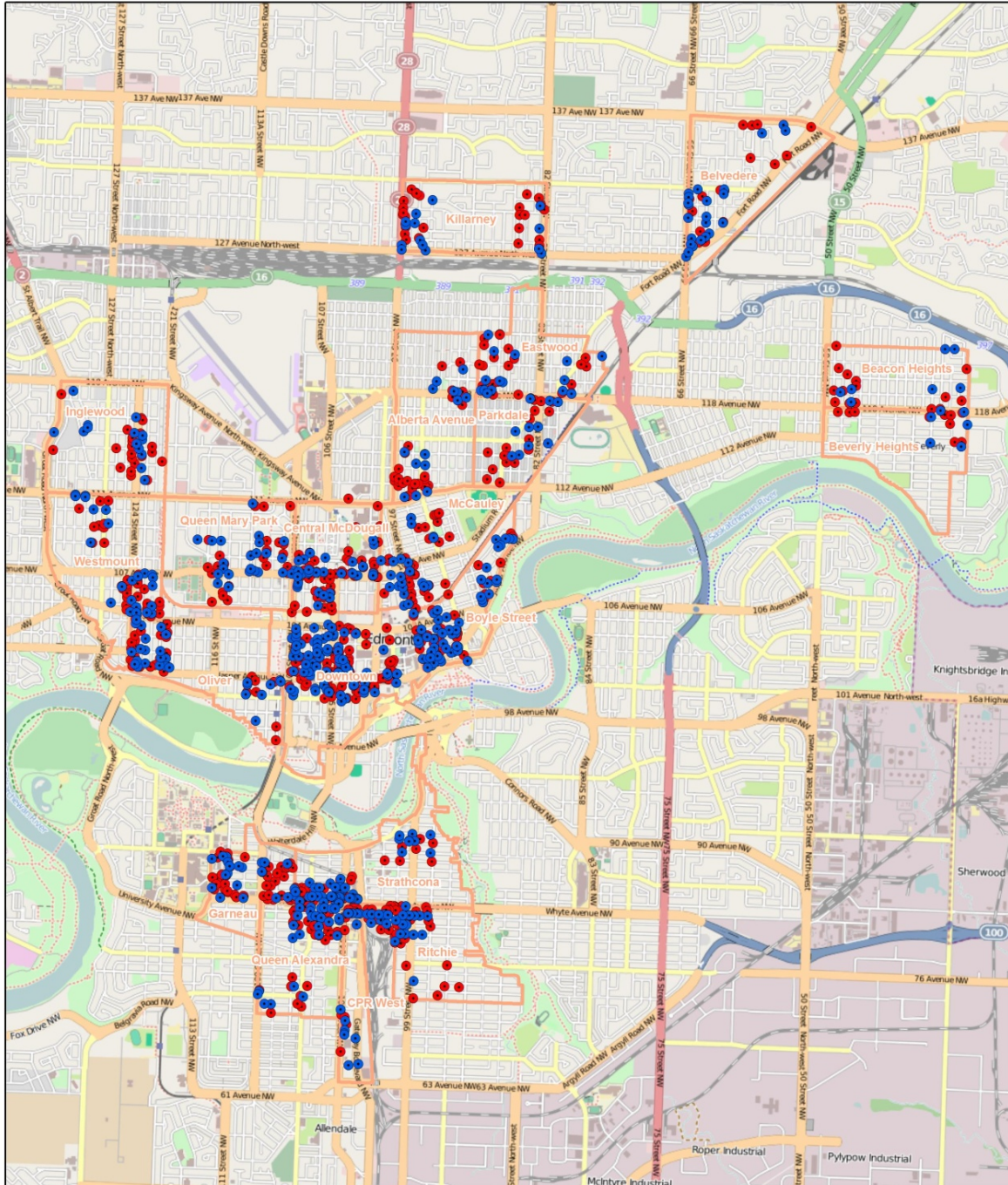
The map on the next page illustrates the locations of the twenty neighbourhoods selected for auditing.

Figure 2 - Hot Spot & Random Sample Areas 2010 & 2011



# Overview Audit Sample Locations

## Neighbourhood Overview Map



### Map Key

- 2011 Graffiti Locations
- 2010 Graffiti Locations
- ⊞ City Neighbourhoods



## Results of the Audit

### Neighbourhood Graffiti Index & Rankings

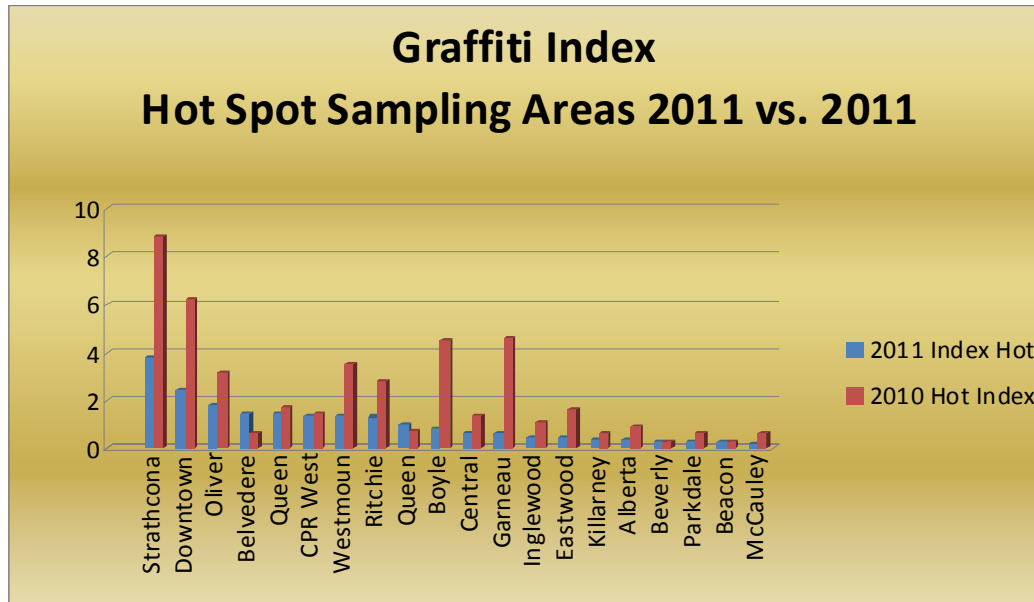
A graffiti index was determined for each overall neighbourhood examined and also for each individual “hot spot” sample and each “random” sample area. Table 4 presents the “graffiti index” for each sample area. The graffiti index dropped in all Hot Spots, except three in 2011 compared to 2010 results

**Table 2 – Neighbourhood Graffiti Index Results 2011**

Neighbourhood Graffiti Index (2011 vs. 2010)										
	2011 Graf in Hot	2011 Area Hot	2011 Index Hot	2010 Hot Index		2011 Graf in Random	2011 Area Random	2011 Index Rand	2010 Index	
		Ha					Ha			
Strathcona	91	23.828	3.819	8.790	Boyle Street	104	22.789	4.564	0.970	
Downtown	122	50.673	2.408	6.240	Downtown	155	48.353	3.206	2.520	
Oliver	60	32.319	1.857	3.160	Central McDougall	58	37.056	1.565	2.190	
Belvedere	39	25.922	1.505	0.690	McCauley	36	31.754	1.134	1.980	
Queen Alexandra	37	24.777	1.493	1.740	Garneau	20	20.389	0.981	2.600	
CPR West	18	13.335	1.350	1.420	Oliver	21	28.786	0.730	0.490	
Westmount	28	21.045	1.330	3.560	Westmount	17	24.678	0.689	1.740	
Ritchie	34	25.696	1.323	2.840	Strathcona	14	21.288	0.658	0.700	
Queen Mary Park	34	34.241	0.993	0.730	Queen Mary Park	25	40.592	0.616	0.860	
Boyle Street	28	34.843	0.804	4.510	Killarney	14	23.275	0.602	1.680	
Central McDougall	28	40.769	0.687	1.350	Alberta Ave	13	28.122	0.462	1.740	
Gameau	10	16.279	0.614	4.610	CPR West	8	26.033	0.307	0.150	
Inglewood	22	43.320	0.508	1.130	Inglewood	7	23.952	0.292	0.290	
Eastwood	13	28.204	0.461	1.630	Eastwood	9	33.188	0.271	0.510	
Killarney	11	29.299	0.375	0.610	Queen Alexandra	7	26.733	0.262	0.970	
Alberta Ave	8	22.630	0.354	0.930	Belvedere	6	34.713	0.173	0.320	
Beverly Heights	7	22.595	0.310	0.270	Beacon Heights	4	28.751	0.139	0.590	
Parkdale	9	30.974	0.291	0.610	Parkdale	3	29.567	0.101	0.740	
Beacon Heights	8	28.684	0.279	0.310	Ritchie	1	34.079	0.029	0.230	
McCauley	4	19.642	0.204	0.660	Beverly Heights	0	16.177	0.000	0.370	
		Average Index	1.048	2.290			Average Index	0.839	1.082	
			-54%					-22%		
	611	569.073				522	580.275			
	Observations	Area (Ha)				Observations	Area (Ha)			
			Shaded areas were a higher index in 2011, all others lower							
	2011 Total Graffiti in Neighbourhood	Total Area in Neighbourhood	2011 Combined Index	2010 Combined Index						
		Ha								
Downtown	277	99.0	2.797	4.420						
Strathcona	105	45.1	2.327	4.720						
Boyle Street	132	57.6	2.290	3.110						
Oliver	81	61.1	1.326	1.900						
Central McDougall	86	77.8	1.105	1.750						
Westmount	45	45.7	0.984	2.580						
Queen Alexandra	44	51.5	0.854	1.340						
Garneau	30	36.7	0.818	3.490						
Queen Mary Park	59	74.8	0.788	0.800						
McCauley	40	51.4	0.778	1.480						
Belvedere	45	60.6	0.742	0.480						
CPR West	26	39.4	0.660	0.580						
Ritchie	35	59.8	0.586	1.360						
Killarney	25	52.6	0.476	1.080						
Inglewood	29	67.3	0.431	0.830						
Alberta Ave	21	50.8	0.414	1.380						
Eastwood	22	61.4	0.358	1.030						
Beacon Heights	12	57.4	0.209	0.450						
Parkdale	12	60.5	0.198	0.680						
Beverly Heights	7	38.8	0.181	0.310						
		Average Index	0.916	1.689						
			-46%							
	1,133.00	1,149.35								
	Total Observa	Area (Ha)								
			Shaded areas were a higher index in 2011, all others lower							

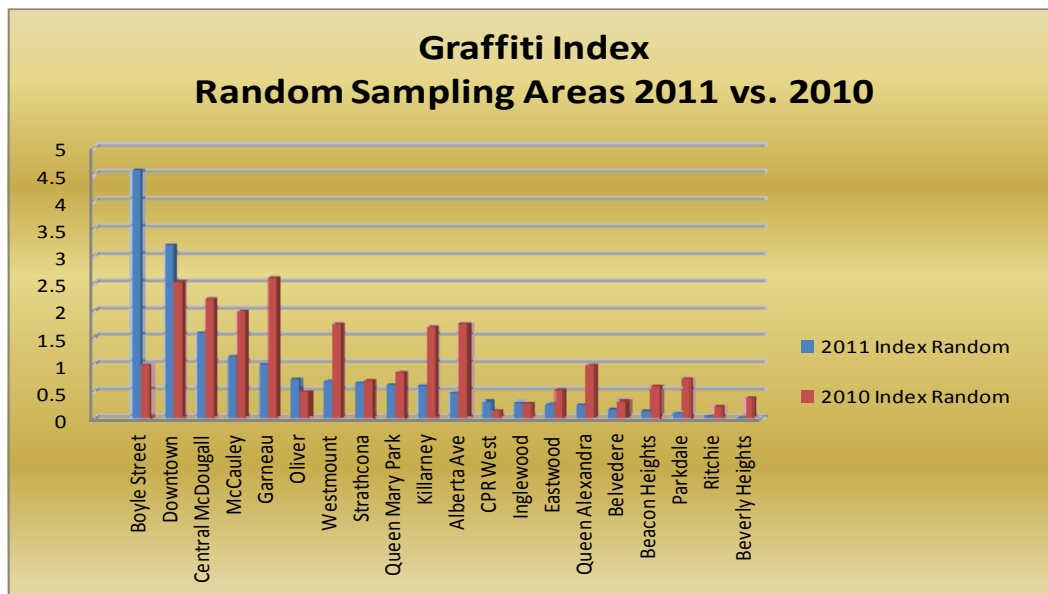
Comparing the 2011 graffiti index as compared to the 2010 graffiti index is revealing. The graffiti index allows for comparisons of the relative intensity of graffiti vandalism in all sample areas. Hot spot sample area index values dropped 54% (2011 vs. 2010), random area indexes dropped 22%; and the combined graffiti index dropped 46% compared to 2010. These results confirm that graffiti vandalism tags in the sampled areas were reduced significantly between 2010 and the 2011 graffiti audits.

**Figure 3 Graffiti Index - Hot Spot 2011 vs 2010**



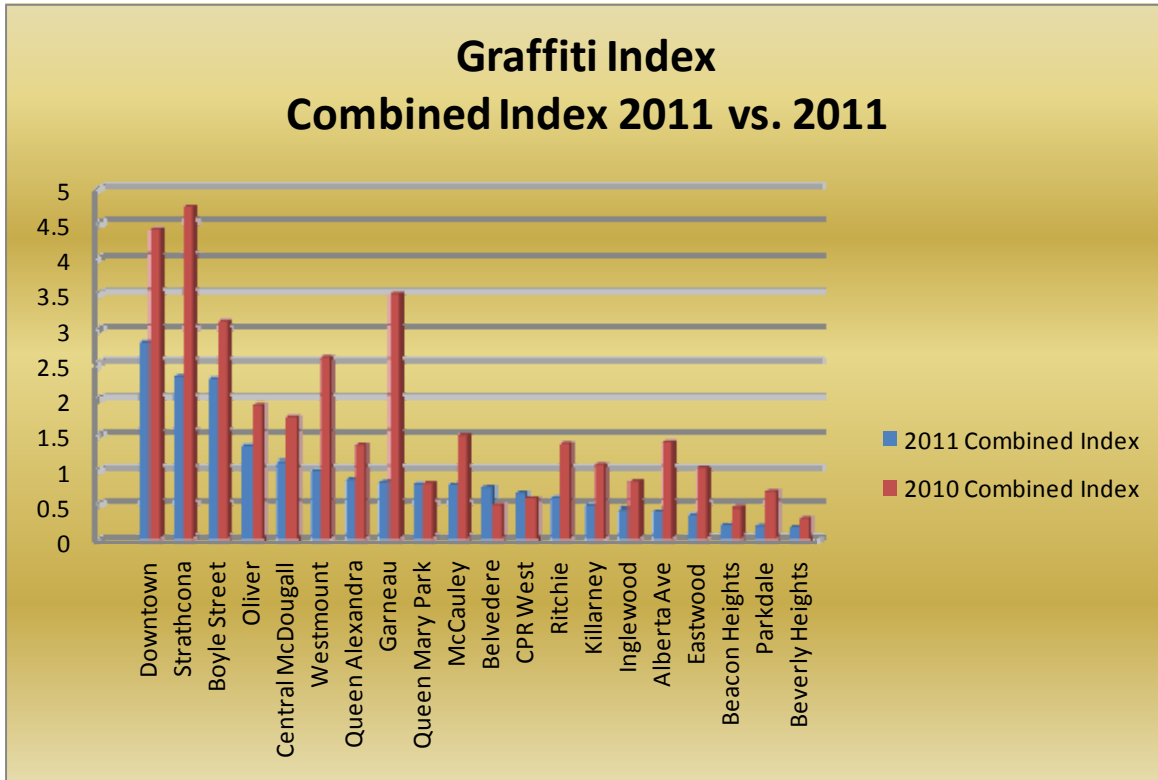
\* Only Belvedere, Queen Mary Park & Beverly Heights index higher in 2011 vs. 2010

**Figure 4 - Graffiti Index - Random Areas 2011 vs 2010**



\* Only Boyle St., Downtown & Oliver index higher in 2011 vs. 2010

Figure 5 - Graffiti Index - Combined Index 2011 vs 2010



\* Only Belvedere & CPR West had a higher combined index in 2011 vs. 2010

**Table 3 - Graffiti Occurrence by Neighbourhood Sampled**

<b>Graffiti Observed by Neighbourhoods</b>							
<b>2011 Data</b>				<b>2010 Data</b>			
Ranking	Neighborhood	Graffiti Observed	% of total Observed	Ranking	Neighborhood	Graffiti Observed	% of total Observed
1	Downtown	277	24.4%	1	Downtown	438	22.1%
2	Boyle Street	132	11.7%	2	Strathcona	200	10.1%
3	Strathcona	105	9.3%	3	Boyle Street	179	9.0%
4	Central McDougall	86	7.6%	4	Central McDougall	136	6.9%
5	Oliver	81	7.1%	5	Garneau	128	6.5%
6	Queen Mary Park	59	5.2%	6	Westmount	118	6.0%
7	Belvedere	45	4.0%	7	Oliver	116	5.9%
8	Westmount	45	4.0%	8	Ritchie	81	4.1%
9	Queen Alexandra	44	3.9%	9	McCauley	76	3.8%
10	McCauley	40	3.5%	10	Alberta Ave	70	3.5%
11	Ritchie	35	3.1%	11	Queen Alexandra	69	3.5%
12	Garneau	30	2.6%	12	Eastwood	63	3.2%
13	Inglewood	29	2.6%	13	Queen Mary Park	60	3.0%
14	CPR West	26	2.3%	14	Killarney	57	2.9%
15	Killarney	25	2.2%	15	Inglewood	56	2.8%
16	Eastwood	22	1.9%	16	Parkdale	41	2.1%
17	Alberta Avenue	21	1.9%	17	Belvedere	29	1.5%
18	Beacon Heights	12	1.1%	18	Beacon Heights	26	1.3%
19	Parkdale	12	1.1%	19	CPR West	23	1.2%
20	Beverly Heights	7	0.6%	20	Beverly Heights	12	0.6%
Total observations		<b>1,133</b>	100%	Total observations		<b>1,978</b>	100.0%
		845	Fewer tags observed vs. 2010				
		-43%	in 20 Neighbourhoods				
		379	Taggers	299	Taggers		

It is interesting to note that four of the five top neighbourhoods in terms of most graffiti vandalism occur in both the 2011 audit results and the 2010 audit findings. Oliver and Westmount neighbourhoods were close to the top of the list of most occurrences in both audits. The results of the audit in 2011 show a significant reduction in graffiti in Strathcona (-48% decrease), Downtown (-37%), Central McDougall (-37%) and in the Boyle Street neighbourhoods (-26%). The auditors observed multiple clean-up locations in these neighbourhoods, which are likely the result of City activities to notify those property owners to remove graffiti from their premises during the intervening year between audits.

Table 4 - Comparison of Graffiti 2011 vs 2010 by Neighbourhood

<b>Graffiti Comparison by Neighbourhoods</b>			
<b>Neighborhood</b>	<b>2011 Graffiti Observed</b>	<b>2010 Graffiti Observed</b>	<b>Change (+ / - %)</b>
Garneau	30	128	-77%
Parkdale	12	41	-71%
Alberta Avenue	21	70	-70%
Eastwood	22	63	-65%
Westmount	45	118	-62%
Ritchie	35	81	-57%
Killarney	25	57	-56%
Beacon Heights	12	26	-54%
Inglewood	29	56	-48%
Strathcona	105	200	-48%
McCauley	40	76	-47%
Beverly Heights	7	12	-42%
Central McDougall	86	136	-37%
Downtown	277	438	-37%
Queen Alexandra	44	69	-36%
Oliver	81	116	-30%
Boyle Street	132	179	-26%
Queen Mary Park	59	60	-2%
CPR West	26	23	13%
Belvedere	45	29	55%
<b>Total observations</b>	<b>1,133</b>	<b>1,978</b>	<b>-43%</b>

## Graffiti Vandals

In the 2010 Graffiti Vandalism Audit, it was noted that 10 taggers represent 45.5% of the 299 taggers were documented as being active in the 20 neighbourhoods in that graffiti audit.

In the 2011 the audit identified many more tagger names compared to 2010, due to the assistance of Municipal Enforcement Officers who accompanied the consultant and assisted in identifying tags

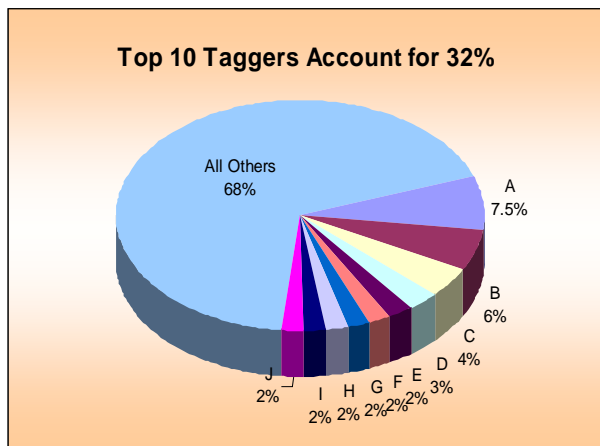
In 2010, the consultant identified 141 graffiti vandals or tagger names representing 299 graffiti tags or 15.1% of the total graffiti observed.

In 2011, owing to improved identification of tagger names, 379 graffiti vandal names were recorded representing 791 of the graffiti tags or 69.8% of all observed graffiti during the 2011 audit.

Unknown taggers, those being unidentifiable, represented a lower portion of the graffiti observed at 342 occurrences (30.2% of total observations).

**Figure 6 - Number of Taggers Responsible for Graffiti**

**2011 Top 10 Taggers (N=1133)**



**2010 Top 10 Taggers (N=1978)**

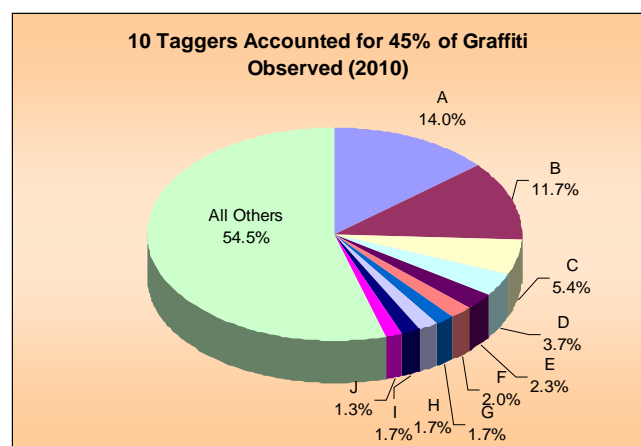
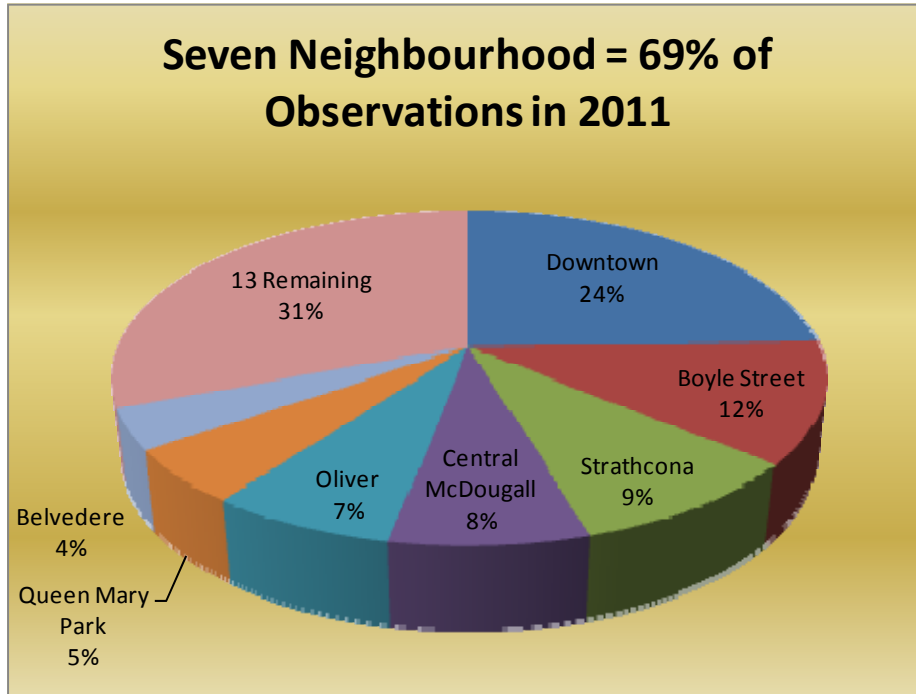
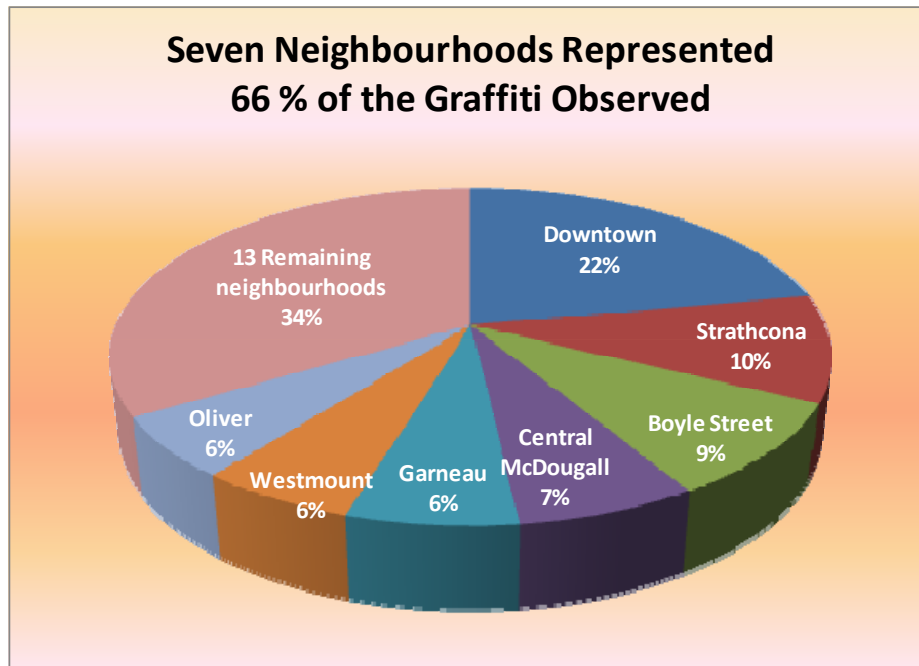


Figure 7 - Seven Most Active Neighbourhoods

2011 Seven Neighbourhoods Account for 69% of Graffiti



2010 Seven Neighbourhoods Account for 66% of Graffiti



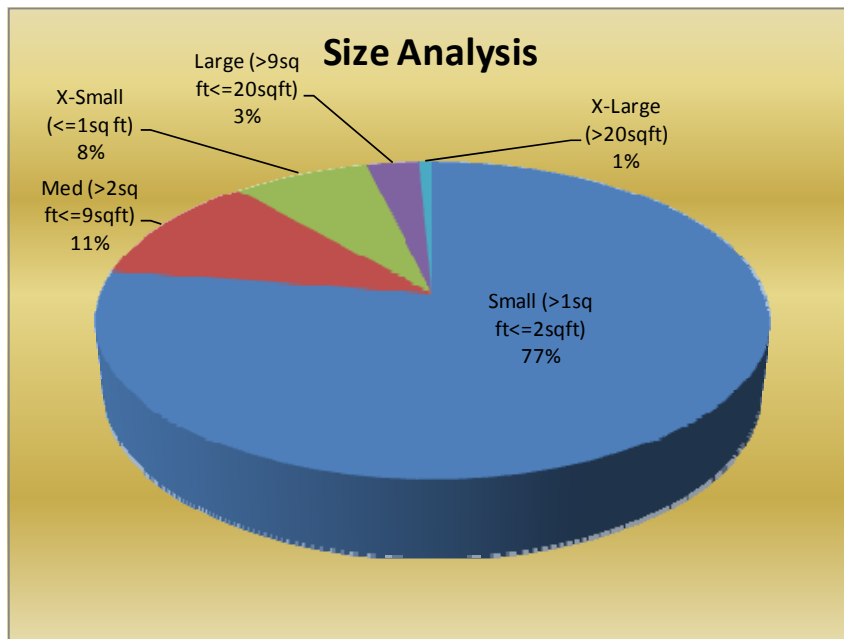
## Size & Descriptor of Graffiti

Eighty-five percent of the graffiti documented during the 2011 audit was “small” or “extra-small”, consisting of sizes less than 2 sq.ft. (0.185 sq.M.). Relatively few large graffiti pieces were observed during the audit. This observation is consistent with the 2010 graffiti audit which found that 79% of graffiti observed was “small” or “extra-small”.

**Table 5 - Graffiti Observed in 2011 is Small**

Size of Graffiti Observed	2011		2010	
	Count	% of Total	Count	% of Total
Small (>1sq ft<=2sqft)	876	77.3%	1,173	59%
Med (>2sq ft<=9sqft)	127	11.2%	273	14%
X-Small (<=1sq ft)	88	7.8%	385	19%
Large (>9sq ft<=20sqft)	34	3.0%	125	6%
X-Large (>20sqft)	8	0.7%	22	1%
	3,144	100.0%	1,978	100%

**Figure 8 - Sizes of Graffiti Observed 2011**



Graffiti vandalism is not artistic. Rather, graffiti vandalism is scrolled quickly on property and done usually as either a stylized design or as free hand text. Of the 1,133 observations made, 92% of the graffiti was categorized as “marker/plain” graffiti vandalism, which refers to that graffiti as having no drawing associated with it and where the piece was a stylized design or text element. This observation is consistent with the 2010 graffiti audit which found that 90% of graffiti observed was text only.

**Table 6 - Summary of Graffiti Vandalism Observed in 2011**

Descriptor of Graffiti Observed		
	Count	% of Total
Text Only <sup>1.</sup>	1,038	91.6%
Stencil <sup>2.</sup>	48	4.2%
Picture	33	2.9%
Splash/Slash <sup>3.</sup>	5	0.4%
Vulgar text	3	0.3%
Vulgar picture	0	0.0%
Political	0	0.0%
Hate motif	2	0.2%
Racist	2	0.2%
Religious	1	0.1%
Other distinguishing	1	0.1%
	1,133	100%
1. Text is no drawing, stylized design only		
2. Stencils, paint through cut-out medium		
3. Splash/ Slash - undefined graffiti, paint thrown		

## Target Properties & Categories

The audit team determined whether each item of graffiti was placed on City, government (other than municipal) or private property. The majority of graffiti vandalism observed was on private property (78%) with government property next at 14% followed by 8% of graffiti observed being on City assets.

Canada Post street distribution boxes are a significant graffiti vandalism target, representing 23% of all graffiti vandalism observed during the audit. Twenty-one per cent of all graffiti observed was documented on private waste management bins, primarily in alleys. City disposal and recycling bins were less targeted than private waste bins. It is likely that this corresponds to more private waste company bins being deployed, than City bins.

**Table 7 - Graffiti Targets & Category Results**

	# of Observations	Property Owner	2011		2010
<b>City of Edmonton</b>	<b>90</b>	Waste Mangement Branch	36	Bins	53
<b>8.0%</b>		Transportation Dept.	11	Signs	41
		Public Works	1	Hydrant	8
		Other Street assets	2		19
		ETS	37	Shelters, benches	20
		Parks	0	Benches	12
		Other	3	Other	11
			90		164
	# of Observations	Property Owner	2011		2010
<b>Other Government Property</b>	<b>155</b>	Canada Post	143	Postal Box	264
<b>13.7%</b>		Gov't building	0	Walls	8
		Hospital	2	Doors, walls	5
		School	10	Doors, fences	3
		University. Colleges		Walls	3
			155		283

	# of Observations	Property Owner	2011		2010
<b>Private Property</b>	<b>886</b>		<b>886</b>		<b>1,531</b>
78.3%		Commercial - Parking barricades	13	Parking	406
		- Boxes, curbs	2	Barricades	27
		- Disposal bin, small	30	Bins	4
		- Doors	27	Doors	107
		- Equipment	0	Equipment	4
		- Fence	10	Fences	21
		- Lights	1	Lights	16
		- Garage doors	5		
		- Poles / posts	9		
		- Signs	26		
		- Utility boxes	6		
		- Ventilation	16	Ventilation	22
		- Walls	67	Walls	92
		- Windows	2	Windows	15
		- Community League	5		
		- Vehicles/ Rolling	0	Vehicles	
		Church - Garbage cans	2		
		- Walls	2		
		- Parking lots	1		
		EPCOR - Pole	31	Poles	48
		- Utility box	75	Utility boxes	93
		TELUS - Pole	14		
		- Utility box	10	Utility boxes	14
		Multi Family Dwelling - Barricades	7	Barricades	
		- Balcony	1		
		- Door	5		
		- Garage	1		
		- Garage Door	2		
		- Post / Pole	3		
		- Shed	5		
		- Signs	4		
		- Ventilation	3		
		- Walls	23		
		Newspaper - Boxes	22	News boxes	18
		Private Waste Company-BFI (waste)	49	BFI	70
		Private Waste Comp.-BFI (recycle)	10		
		Private Waste Company-WMI	59		
		Private Waste Company-WSI	11	WSI	78
		Private Waste - Super Save	42	Super Save	24
		Private Waste Company-Other	65	Other bins	94
		Other		Other	8
		Residence - Barricades	3	Barricades	8
		- Bins		Bins	17
		- Door	1	Doors	15
		- Fence	20	Fences	14
		- Garage	13	Garage	
		- Garage door	10	Garage Door	70
		- Garbage enclosure/Shed	2	Enclosure	
		- Sheds		Sheds	27
		- Walls	4	Walls	34
		- Windows		Windows	3
		Retail - Barricades	6		
		- Door	46		54
		- Fence	3		
		- Garage Door	5		
		- Garbage enclosure/Shed	1		
		- Gas meter	1		
		- Other	12		
		- Parking lot	3		
		- Post / Pole	2		
		- Signs	14		
		- Storage can	3		
		- Vehicles /Rolling Stock	4		4
		- Ventilation	1		
		- Walls	57		55
		- Windows	9		
		Multi-Family Res. - Walls			34
		- Sheds			27
		- Doors			8
	1,131				1,978

## Location Intensity Rating (LIR)

A new feature of the 2011 graffiti vandalism audit was the design and implementation of a Location Intensity Rating (LIR). City staff asked whether a method to indicate the relative intensity of a location within a neighbourhood could be developed. The LIR differs from the graffiti index in that the graffiti index measures the intensity of amount of graffiti in the entire neighbourhood or hot/random area. The LIR measure the intensity of the graffiti at each location where graffiti is found. It also includes other factors other than just the amount of graffiti.

The consultant added the LIR to the observations obtained in the 2011 graffiti vandalism audit. 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, can't 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)

Appendix I sets out how the results of LIR's were calculated for this audit. While the table of LIR is of interest the best way to observe the LIR's is by examining the scores as presented on a map. By examining the individual neighbourhood maps (Appendix B) the reader can see where the most intensive locations were observed. The relative size of the location markers on the maps in Appendix B, related to the scores of the LIR's calculated.

**Table 8 -Location Intensity Index - Top 50 Sites**

The top 50 Location Intensity Ratings listed below:

	<b>Neighbourhood</b>	<b>latitude</b>	<b>longitude</b>	<b>LIR Score</b>
1	Westmount	53.32819	113.3199	32
2	Downtown	53.32498	113.30125	31
3	Downtown	53.32337	113.29922	29
4	Downtown	53.32376	113.3010	29
5	Queen Alexandra	53.30885	113.29322	29
6	Ritchie	53.31024	113.29134	29
7	Central McDougall	53.32977	113.3012	28
8	McCauley	53.32869	113.29264	28
9	Queen Mary Park	53.33014	113.31278	28
10	Central McDougall	53.33218	113.3034	26
11	Downtown	53.32493	113.30005	26
12	Garneau	53.31278	113.30722	26
13	Boyle Street	53.32899	113.29008	25
14	CPR West	53.30261	113.29698	25
15	Killarney	53.35245	113.29474	25
16	Oliver	53.32689	113.31788	25
17	Parkdale	53.34202	113.2793	25
18	Strathcona	53.31122	113.29912	25
19	Strathcona	53.31180	113.29961	25
20	Westmount	53.33439	113.32453	25
21	Boyle Street	53.32600	113.29092	24
22	Downtown	53.32318	113.29962	24
23	Downtown	53.32393	113.29734	24
24	Downtown	53.32393	113.29734	24
25	Garneau	53.31102	113.30559	24
26	Killarney	53.35129	113.28094	24
27	Oliver	53.32543	113.31785	24
28	Oliver	53.32588	113.31844	24
29	Oliver	53.32773	113.3210	24
30	Oliver	53.32341	113.30947	24
31	Queen Alexandra	53.30967	113.3001	24
32	Strathcona	53.31122	113.29983	24
33	Strathcona	53.31122	113.30136	24
34	Westmount	53.32892	113.32156	24
35	Westmount	53.33357	113.32423	24
36	Belvedere	53.35188	113.26533	23
37	Boyle Street	53.32754	113.28846	23
38	Boyle Street	53.33342	113.28432	23
39	Boyle Street	53.33317	113.28332	23
40	Boyle Street	53.33094	113.28568	23
41	Boyle Street	53.32990	113.28566	23
42	Central McDougall	53.33105	113.3019	23
43	Central McDougall	53.33102	113.30007	23
44	Downtown	53.32466	113.29882	23
45	Downtown	53.32423	113.29838	23
46	Downtown	53.32592	113.3032	23
47	Downtown	53.32392	113.3024	23
48	Downtown	53.32417	113.30147	23
49	Downtown	53.32492	113.30466	23
50	Garneau	53.31092	113.31137	23

## Conclusions

The City of Edmonton's graffiti vandalism audit was successful in developing an unbiased method of sampling graffiti vandalism in the city, and in re-auditing the same neighbourhoods to document changes in the amount of graffiti compared to the 2010 audit.

During the 2011 graffiti audit 543 locations were examined recording 1,133 documented observations of graffiti. Within the 20 sample neighbourhoods, there were 16% fewer locations where graffiti was evident (543 compared to 646).

### Summary of Graffiti Audits - 2010 & 2011

	2011		2010
Total locations where graffiti observed*	543		646
Decrease from 2010	-16%		
Graffiti occurrences observed	1,133		1,978
Decrease from 2010	-43%		
* Note: Inside same 20 neighbourhoods examined, 2010 & 2011			

During the 2011 audit graffiti was observed at 16% fewer locations within the 20 neighbourhoods examined. Additionally, a 43% reduction in the amount of graffiti observed was recorded. The number of taggers recorded rose dramatically in 2011, even with the drop in the total amount of graffiti recorded, due to the expert identification skills of the Municipal Enforcement Officers that assisted in the current audit. In 2010, the consultant recorded 299 taggers that could be identified by their tagger symbol or name (~15% positive identification). In 2011, owing to improved identification of tagger names, 379 graffiti vandal names were recorded representing 791 of the graffiti tags or 69.8% of all observed graffiti during the 2011 audit.

The method developed by the City of Edmonton, and the consultant for this audit was proven to be repeatable and unbiased allowing the return to these neighbourhoods to determine the amount reduction of graffiti vandalism observed. Using a "neighbourhood graffiti index" provided a tool to compare one part of a neighbourhood to another, or to compare entire neighbourhoods with others, and compare the decrease in the intensity of graffiti on a neighbourhood basis within the sample areas.

Four of the five top neighbourhoods in terms of most graffiti vandalism occur in both the 2011 audit results and the 2010 audit findings. Oliver and Westmount neighbourhoods were close to the top of the list of most occurrences in both audits. The results of the audit in 2011 show a significant reduction in graffiti in Strathcona (-48% decrease), Downtown (-37%), Central McDougal (-37%) and in the Boyle Street neighbourhoods (-26%). The auditors observed multiple clean-up locations in these

neighbourhoods, which are likely the result of City activities to notify those property owners to remove graffiti from their premises during the intervening year between audits.

The top 20 taggers in 2011 accounted for 45% of all identifiable tags recorded. The 2011 audit results confirmed the observation made in the baseline audit that most graffiti in Edmonton is small. That is, it consists of sizes less than 2 sq.ft. ( 0.185 sq.M. ). Over ninety –two percent of the graffiti observed markers that were of a textual nature.

Seventy-eight percent of the graffiti vandalism observed during the audit was placed on private property. Commercial parking lot barricades, signs and posts are common targets. Commercial and retail walls, doors and windows, especially in back alleys are prime graffiti targets. Private waste company garbage and recycling bins are very common targets, likely because their placement in alleys allows graffiti vandals easy access and less likelihood of detection during their graffiti offence.

## APPENDIX F - 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 1a) 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;
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
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.
Graffiti Size	For the purposes of this report, the pre-defined sizes 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 spare 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 <u>sample area</u> . The LIR measures the intensity of the graffiti at <u>each location</u> 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 spare 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. Often the same as their name as their "tag."
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.