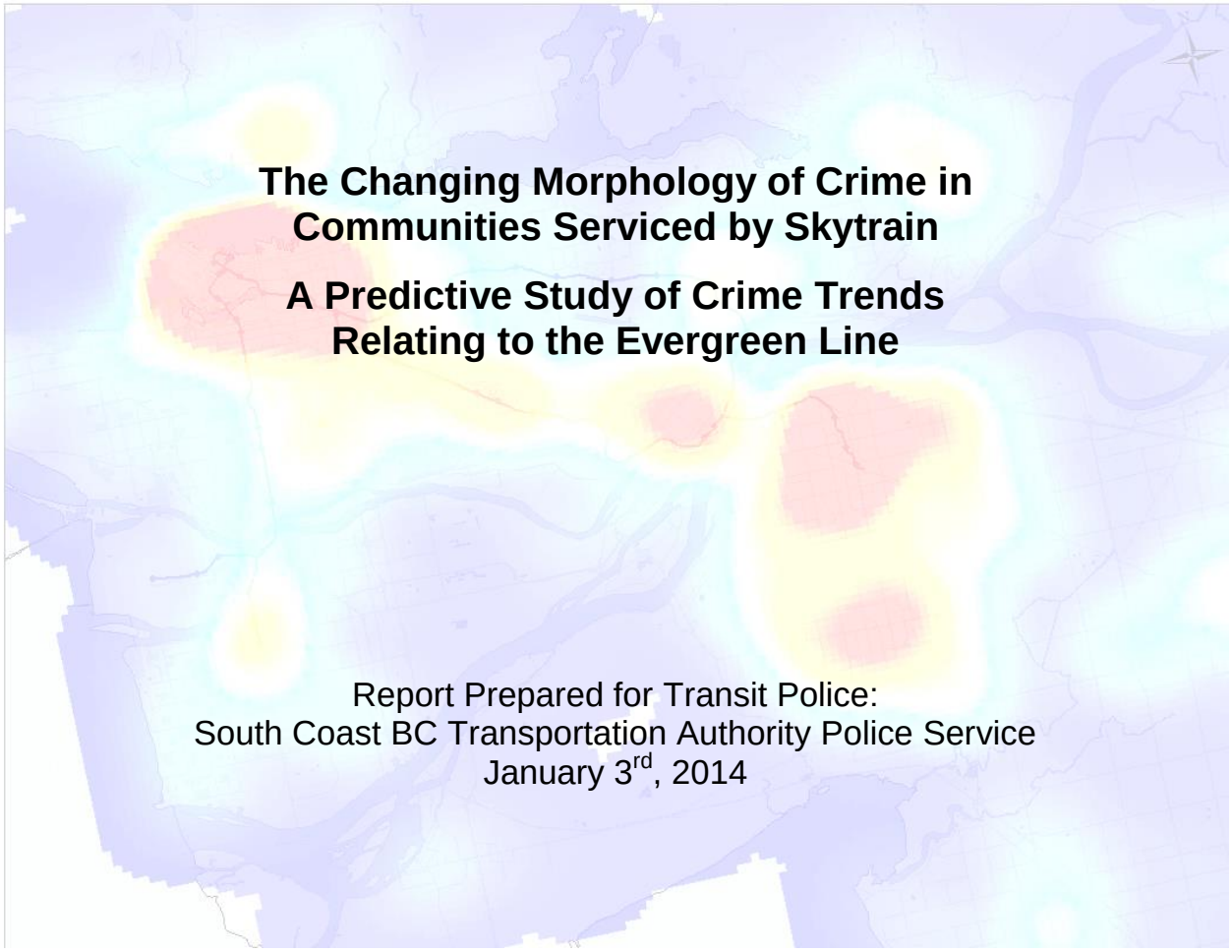

The Changing Morphology of Crime in Communities Serviced by Skytrain

A Predictive Study of Crime Trends Relating to the Evergreen Line

Report Prepared for Transit Police:
South Coast BC Transportation Authority Police Service
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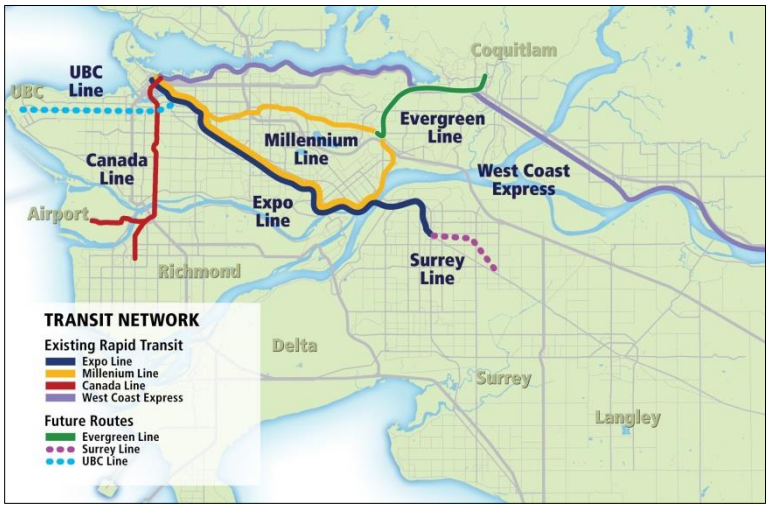
Executive Summary

With an expected opening date of summer 2016, the much anticipated Evergreen Line will effectively change the Lower Mainland's transportation network by bridging the cities of Coquitlam and Port Moody with the existing Skytrain lines. Ridership on the Evergreen Line is expected to reach 70,000 passengers per day by 2021. Similar to the Canada Line, the Evergreen Line will effectively replace a pre-existing B-Line express bus route and will undoubtedly change the landscape of the region. The demand and need for a new light-rail system in the area has been apparent for many years as the Cities of Coquitlam and Port Moody have hoped and planned to have their communities serviced by a light-rail system providing them seamless direct access to the rest of the existing Skytrain network. Although the majority of people have embraced the idea of a new convenient method of rapid transportation, many have assumed that the presence of new Skytrain stations would also bring with it new crime problems. While several studies have been conducted in the past with regards to crime patterns in the areas surrounding Skytrain stations, a proper "before and after" analysis with regards to the impact a new line has on a community has never been possible – until now. The first part in this series of studies examined crime rates and distributions across the Lower Mainland in years prior to and following the introduction of the Canada Line. This Canada Line Study was the first of its kind in that it provided a true "before and after" comparison of crime trends as they related to areas surrounding new Skytrain stations. As was the case with the Canada Line, the Evergreen Line is not expected to have a significant impact on crime rates in the Cities of Coquitlam and Port Moody.



Introduction

There is no doubt that safety and security on the Lower Mainland (LMD) Skytrain system has always been – and will continue to be – a hot topic of conversation. While the general public perception seems to be that the introduction of a new Skytrain line brings crime problems with it, these perceptions are not completely supported by research. This is not to say that these fears are completely unfounded – but rather that the levels of crime in and around Skytrain stations appear to be relative or comparable to the areas in which they are located.

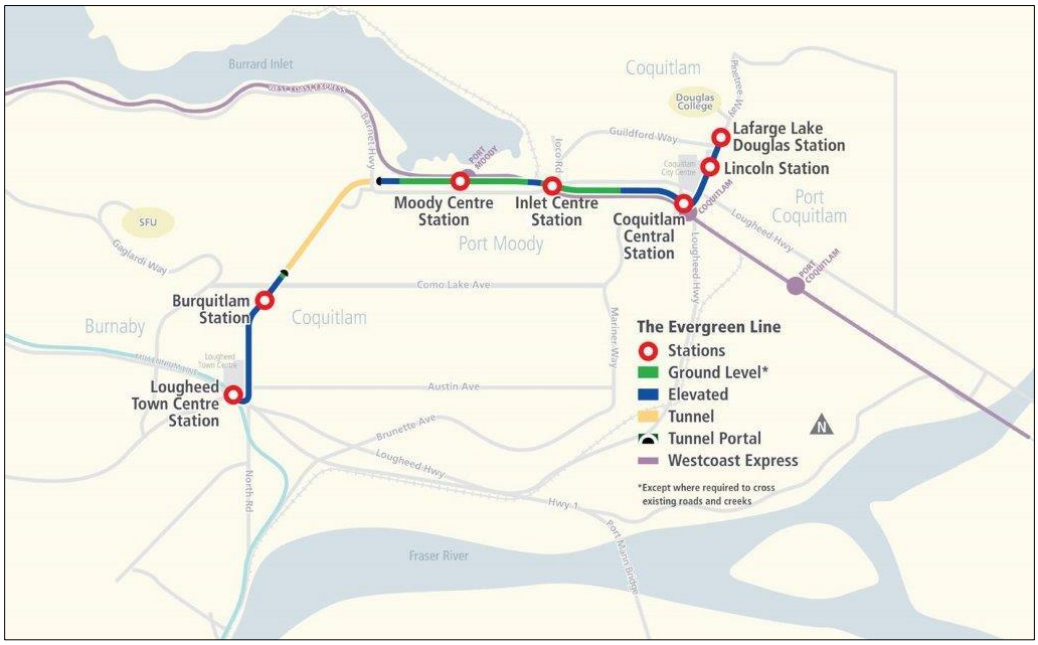
Although previous studies relating to the Lower Mainland Skytrain system have been conducted in the past, the methodology in this area has greatly improved. While most of the previous studies have been based on CAD (Computer Aided Dispatch or Calls for Service) data, the use of General Occurrence (GO) data is considered much more accurate in that it reflects the final outcome of the original call. For example, a CAD call may be generated as "Shots Fired" and turn out to be fireworks, meaning that the resulting GO would be coded as a "Suspicious Circumstance" or "Disturbance". Similarly, the investigation into a CAD call that was generated as a "Robbery" or "Sexual Assault" may be deemed unsubstantiated and would therefore result in an "Unfounded" GO. CAD calls are also generated based on the response location for the attending officers, however the true offence location is often different – which is the address reflected in the resulting GO file. Because of the strict and standardized quality control standards that accompany the PRIME records management system, GO data is considered to be much more accurate than the CAD data that had been used in past studies.

The adoption of the PRIME system has translated into easier access to structured data that is scored in a consistent manner across all LMD police agencies. Furthermore, GIS (mapping) capabilities and access to more accurate Skytrain GIS data has allowed for more precise analytical techniques to be used.

While previous studies have examined crime patterns as they related to pre-existing Skytrain stations, the common conclusion has consistently remained that it is impossible to

determine whether a causal relationship exists between light-rail systems and crime without a proper 'before and after' longitudinal comparison. The implementation of PRIME as a regional records management system has for the first time allowed for this type of analysis to be completed in an accurate manner. The first part in this series of studies examined crime rates and distributions across the Lower Mainland in years prior to and following the introduction of the Canada Line. Although some slight variances were experienced in certain crime categories relating to the geographical distribution of incidents in proximity to new light-rail stations, the launch of the Canada Line did not appear to increase the level of violent or property crime in the Cities of Vancouver or Richmond. Based on what has been experienced in relation to the Canada Line, the introduction of the Evergreen Line is not expected to have a significant impact on property and violent crime levels in Coquitlam and Port Moody.

Similar to what was seen with the Canada Line in Vancouver and Richmond, the communities of Port Moody and Coquitlam have experienced significant booms in commercial and residential density and developments, especially in neighbourhoods surrounding future Evergreen Line stations. This type of urban sprawl is undoubtedly one of the many factors that will change the morphology of crime in these communities newly serviced by Skytrain.



Summary of Previous Research

"Skytrain Security Perceptions"
Translink Listens Panel (2008)

There have been many discussions over the years regarding the public's conceptions and misconceptions when it comes to feelings of safety and security on the Skytrain. One of the most consistent and common themes seen by TransLink and Transit Police surveys has related to passengers' concerns regarding the presence of 'unsavoury' characters in and around Skytrain stations. In the Fall of 2008, 6000 participants from Translink's Online Advisory Panel responded to a survey on Skytrain Security Perceptions.

The main reasons associated with a feeling of security on Skytrain were:

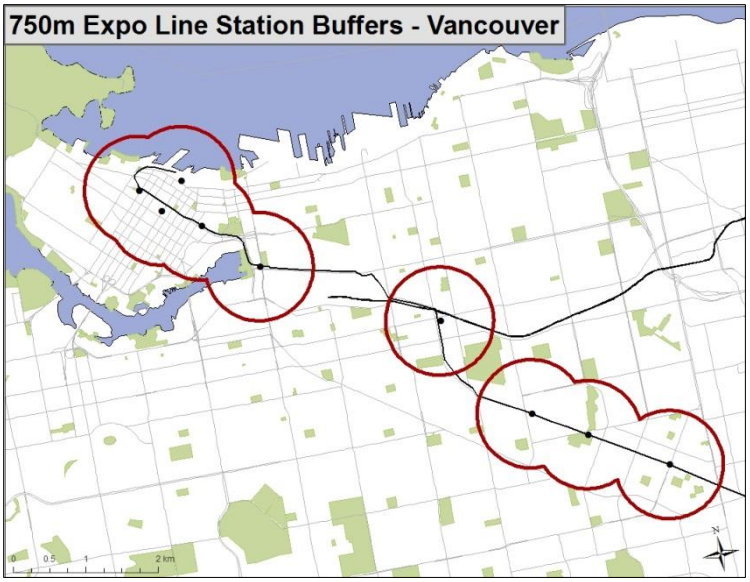
1) Lots of people around (53%)
2) No 'unsavoury people' (defined as loiterers, panhandlers, drug users, etc) (19%)
3) Visible security (18%)
4) Good 'sight lines' (12%)
5) Safe neighbourhoods (9%)

With regards to the stations where respondents felt the least secure (Surrey Central, New Westminster, Broadway and Main), riders stated that the inside of the stations and the surrounding neighbourhoods were equally unsafe, suggesting that this was a larger societal problem.

"Public Transit and Crime: A Routine Activities/Ecological Approach"
Jennifer Buckley (1996)

One of the most commonly quoted studies relating to crime rates around the LMD Skytrain is Jennifer Buckley's 1996 Master's Thesis called "Public Transit and Crime: A Routine Activities/Ecological Approach". Buckley's thesis was based on 4 months (May to August) of 1995 CAD data from the Vancouver Police Department (VPD) and concluded that 49% of VPD's Calls for Service occurred within 750m's of a Skytrain station. While at first glance this finding may seem alarming, a closer examination provides a more reasonable

perspective – as illustrated in the map below, a 750m buffer of Vancouver Expo Line Skytrain Stations encompasses the majority of the downtown core and is almost double the conventional walking distance to transit which is the measurement used by most urban planners. Most people would tend to agree that a causal relationship would rarely exist between the presence of a Skytrain station and a crime that occurred ¾'s of a kilometre away.



"Security, Safety & Rapid Transit: A Cross-Jurisdictional Review of Safety and Security"
Security Resource Group Inc. (2000)

Subsequent to its examination of crime rates as they relate to rapid transit projects, the Security Resource Group (SRG) concluded that "while there is a perception that crime increases where transit is introduced, there is no evidence to support a direct causal connection". The SRG study which was conducted in 2000 and based on data from local police departments (VPD, Burnaby RCMP & NWPS) "indicated that primary concentrations of crime activity occur away from the Skytrain system, usually in downtown cores".

One of the key findings of the SRG study was that "there is some public concern about the impact of Skytrain on crime, neighbourhoods and personal safety and security. According to studies gathered, the public is most fearful of nuisance behaviour, such as loitering,

unsavoury people and 'street people'. These are fears expressed about urban life in general".

"Tracking Crime Patterns: An Exploratory Data Analysis of Mass Transit Systems and Criminal Events"
Rob Tillyer (2003)

Similar to the Buckley's study which was based on VPD CAD data, Rob Tillyer's 2003 SFU Master's Thesis was based on Burnaby RCMP 2001 Calls for Service in the areas surrounding Burnaby Expo Line Stations. Tillyer was quick to point out that identifying a direct causal relationship between Skytrain stations and crime was not possible without a proper look at the "before and after". This being said, Tillyer did note that there were clusters of crime around stations built in commercial areas as opposed to those built in residential areas. The study concluded that it is not necessarily the addition of a Skytrain station that increases crime, but rather the type of environment in which a station is placed.

"Experts say light-rail won't bring crime"
Alex Bitter – Minnesota Daily (Nov 6th, 2013)

In a news article published by the Minnesota Daily in November 2013, author Alex Bitter writes about the Minneapolis Light-Rail System extension which is due to open in 2014. Bitter relates that although many locals have been concerned that the Green Line would increase crime rates in their neighbourhood, a survey conducted by Professor Yingling Fan of the University of Minnesota Humphrey School of Public Affairs suggests that these types of concerns appear to be unfounded. "Fan said studies in other cities around the country, including one that examined the effect of a rail line on crime rates in Los Angeles, have similarly rejected the perceived correlation between crime and rail transit systems. 'The consensus is that a light rail line has no significant impact on crime rates in the station neighbourhood' Fan said".

Interestingly, the introduction of the Green Line in Minneapolis is similar to the introduction of the Canada Line in Richmond / Vancouver and the Evergreen Line in Coquitlam / Port

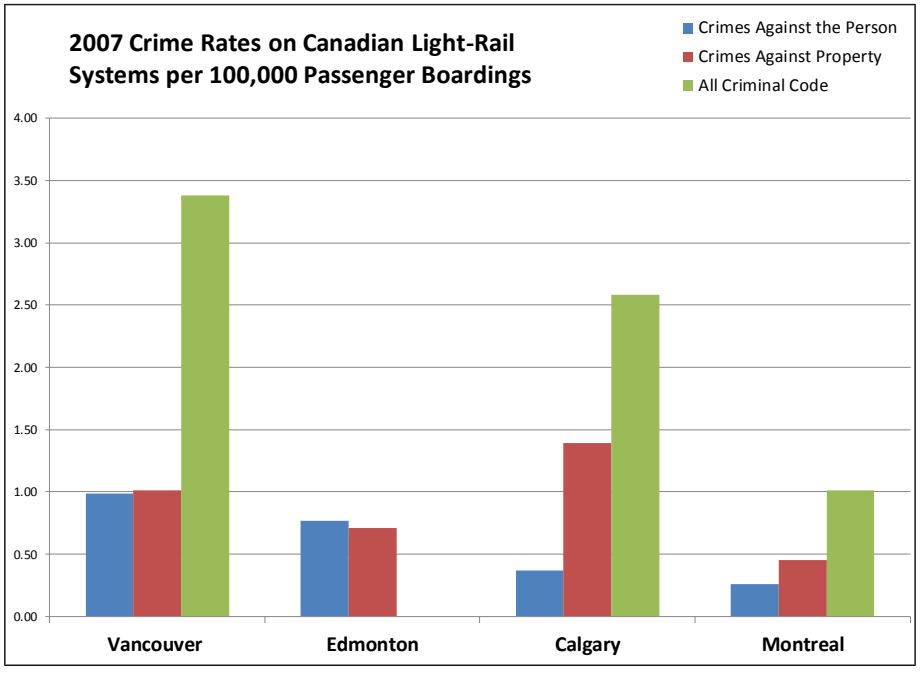
Moody in that the new light-rail line is simply replacing an existing high volume bus route along a major transportation corridor.

Canadian Light-Rail Systems – Crime Rate Comparison

In 2008, the Metro Vancouver Transit Police conducted an unofficial survey of light-rail systems in major Canadian cities prior to the opening of the Canada Line. Although research was available with regards to crime rates on American & European transit systems, it is more appropriate to compare the Metro Vancouver Skytrain System with other Canadian Light-Rail systems due to the fact that crimes are recorded in a consistent manner (UCR classifications) across the country and all agencies enforce the same penal code (Criminal Code of Canada) This is not the case in other countries who often have differing State laws.

While the below noted figures provide an overview & comparison of the Canadian Light-Rail Systems in 2007, one must keep in mind that each city and system is unique. Although the Metro Vancouver Skytrain system appeared to have the highest number of Criminal Code offences per 100,000 passenger boarding, the City of Vancouver itself also had the highest rate of Criminal Code offences per 100,000 residents (out of the 4 cities examined). Alternatively, while the Montreal metro system appeared to have the lowest rate of Criminal Code offences, the City of Montreal also had the lowest rate of Criminal Code offences city-wide.

2007 Canadian Light-Rail Systems								
City	**Agency**	**Officers**	**Status**	**Stations**	**Track Length**	**Daily Passengers**	**Turnstiles**	**Grade**
Vancouver	Transit Police	154	Police Officers	33	49.5 km	220,000	No	Above Ground
Edmonton	Edmonton Transit System Security	30	Peace Officers	10	12.59 km	42,000	No	Mixed
Calgary	Calgary Transit Security	69	Peace Officers	37	44.8 km	271,000	No	At Grade
Montreal	Service de Police de la Ville de Montreal	96	Police Officers	68	65.33 km	835,000	Yes	Undergro und



Rates per 100,000 Passenger Boardings				
	Vancouver	**Edmonton**	**Calgary**	**Montreal**
Crimes Against the Person	0.99	0.77	0.37	0.26
Crimes Against Property	1.01	0.71	1.39	0.45
All Criminal Code	3.38	n/a	2.58	1.01
Rate per 100,000 Population (census metropolitan area) *	**9,136**	**9,572**	**6,202**	**5,958**

** Statistics Canada: Statistics in Canada, 2007. Catalogue no 85-002-X, Vol 28, no 7.*

Commercial Developments along the Evergreen Line

The increased demand in commercial real estate in the areas surrounding the Skytrain corridor has been quite evident in the Lower Mainland, especially during the past 10 years as businesses and employers strive to provide the convenience of accessible transit to their employees. This type of urban sprawl has been notable in neighbourhoods along No 3 Road in Richmond, the Cambie Street corridor, the Olympic Village area, Sapperton, New Westminster and MetroTown stations.

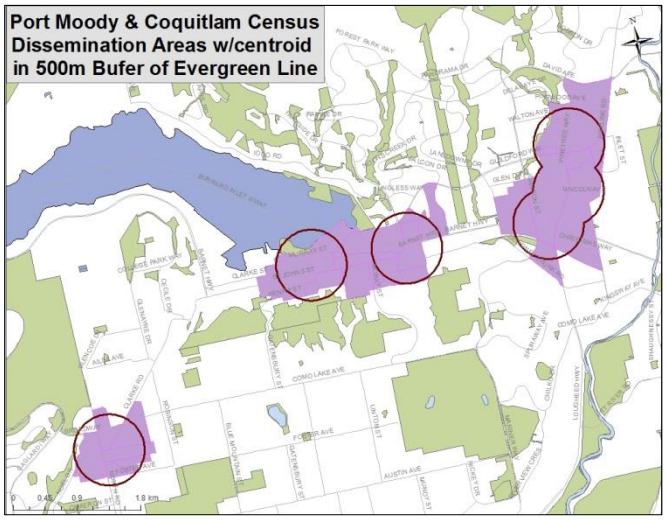
As seen in the 2001 Rapid Transit Index Study by Jones Lang LaSalle, “the direct vacancy rate for buildings within 0.5 km of a rapid transit station in 4.8% compared to the 12.3% direct vacancy rate of the rest of the market, and the average asking net rental rate is approximately 8% higher”. Not only is there a greater demand for commercial buildings near Skytrain stations, but clients are also willing to pay more for such spaces. “The implications of rapid transit proximity are evident across the Suburban and Vancouver Outlying office markets”.

Similarly, in its recent Rapid Transit Office Index (Q3, 2013), Jones Lang LaSalle noted that "the study reaffirms that tenants outside of Downtown Vancouver continue to gravitate towards office buildings within walking distance of rapid transit stations when evaluating their real estate requirements". Overall vacancies in buildings within 500 meters of a Skytrain station have increased while vacancies in office space that lacks convenient access to rapid transit declined.

Based on what has been seen along the Expo, Millennium and Canada Lines, it is expected that the introduction of the Evergreen Line to Port Moody and Coquitlam will follow the same pattern and continue to attract the development of new commercial spaces in the areas surrounding the new light rail stations.

Residential Developments Along the Evergreen Line

An examination of the population growth in the Lower Mainland was conducted with the use of census data for 2001, 2006 and 2011. LMD Census data was broken down to the Dissemination Area (DA) level and plotted onto a map. Those DA's whose 'centroid was contained within' the 500m Evergreen Line Buffer were isolated in order capture the DA's in the areas surrounding the Evergreen Line:



A closer look at census data reveals that while population counts have increased by 16% on average across the Lower Mainland between 2001 and 2011, the population in the areas surrounding future Evergreen Line stations in Coquitlam and Port Moody has increased by 51%. Neighbourhoods such as Klahanie, SuterBrook, and those in the Coquitlam Centre area have seen drastic growths in residential developments in the last few years. Furthermore, several new developments are currently under construction in the Burquitlam station neighbourhood. This level of density is reflected in the census data which reveals that while the Lower Mainland experienced on average a 21% increase in the number of dwellings in the region over the past 10 years, neighbourhoods surrounding the future Evergreen Line stations have seen a 52% growth in the number of dwellings during the same period. The level of growth in residential developments in the areas surrounding future transit stations along the Evergreen Line corridor is very similar to growth seen in areas along the Canada Line.

Area Surrounding Evergreen Line		
	Population	Dwellings
2011	22,771	10,980
2006	17,153	8,343
2001	15,122	7,210

Lower Mainland		
	Population	Dwellings
2011	2,313,328	949,565
2006	2,116,581	870,990
2001	1,986,965	786,277

Methodology

Data Source

This study is based on data unloaded from PRIME and includes data from all Lower Mainland Police Agencies (note: data was queried & unloaded based on geographical location rather than by specific agency).

The PRIME data was accessed and analysed using the CRIME System (Consolidated Records Intelligence Mining Environment) which facilitated access to multi-jurisdictional PRIME data in a format suitable for geographical and statistical analysis.

Because it is a Supplementary Police Agency, Transit Police files are generated in PRIME based on a Virtual Addressing System. This addressing system is required in order to avoid the creation or duplication of Jurisdictional Police files. This means that although the XY coordinates for Transit Police files are accurate, the Virtual Addresses and corresponding Districts, Atoms and Zones that appear in the address fields do not line up or match the Districts, Atoms and Zones of the Jurisdictional Police (ie: Transit Police's "district 2" does not correspond with VPD's "district 2"). For this reason, the only accurate way of plotting and measuring Transit Police PRIME data in conjunction with Jurisdictional Police data is to extract the data based on the municipality field (as opposed to the agency field), plot all the incidents on a map and measure geographically from there.

As a Supplementary Police Agency, Transit Police often responds to incidents where the Jurisdictional Police are also involved. The same situation arises when incidents occur near jurisdictional borders and multiple police agencies respond. The PRIME system is designed to avoid duplication or double-counting in instances such as these by creating only 1 primary file (that captures the appropriate UCR codes) for the lead agency while assisting agencies will have a related "assist" file.

Temporal Range

This study is based on data relating to incidents that occurred within the City of Port Moody from 2004 to 2012 (Port Moody PD began using PRIME in 2001) and data from incidents occurring in the City of Coquitlam from 2007 to 2012 (Coquitlam RCMP transitioned to PRIME in July 2006).

Lower Mainland wide data includes incidents that occurred from 2008 to 2012 (all LMD police agencies were using PRIME as of mid-2007).

Date ranges and temporal analyses are based on “incident start date” (as opposed to “reported date”).

Excluded Data

The following files were removed from the data set:

- Private Files (restricted & unable to unload from PRIME)
- Assistance (used with zzz-code only)
- Unfounded
- Unsubstantiated (used with zzz-code only)
- Information (used with zzz-code only)
- Cancelled Files

Primary versus Secondary UCRs

Because the current study examines specific crime type categories, data was pulled from PRIME browsing for each UCR type regardless of which UCR line contained it (ie: files containing Theft of Auto in the 2nd, 3rd or 4th UCR lines were still counted in the Theft of Auto category regardless of what the primary UCR was for that file).

For example, the use of this method means that the following file would be counted in 3 separate crime type categories:

UCR 1	Sexual Assault
UCR 2	Break & Enter
UCR 3	Weapons Possession

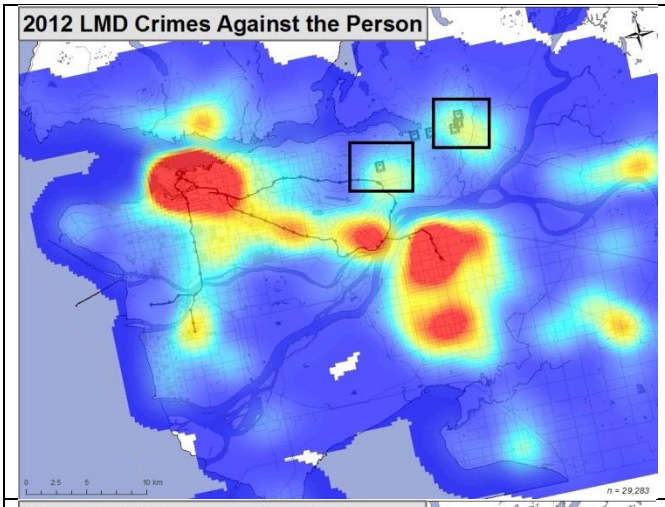
A file such as this would be counted in each of the following crime type categories: Sexual Assaults, a B&E's and Weapons Offences.

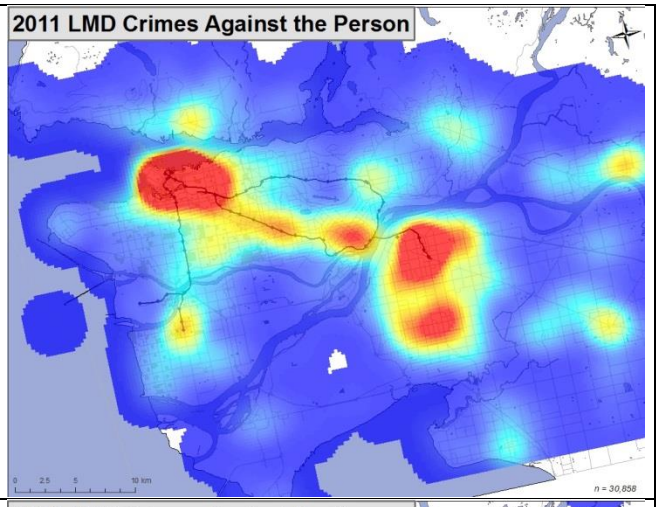
Lower Mainland Violent Crime – Crimes Against the Person

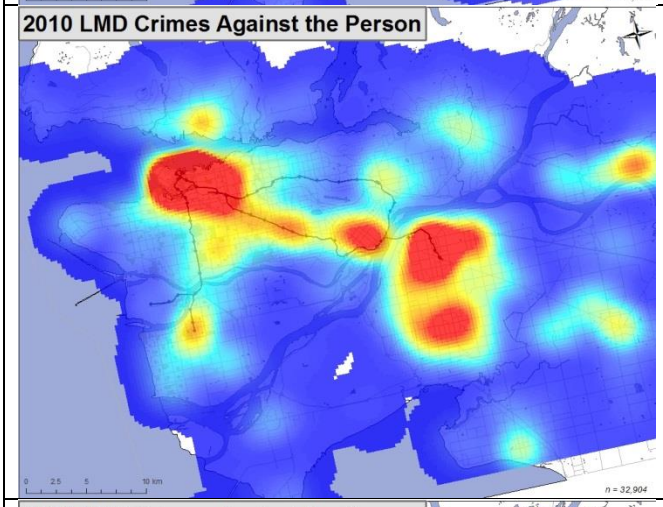
As discussed earlier, the implementation of a regional records management system has for the first time allowed for accurate multi-jurisdictional analysis of crime data. As of mid-2007, all LMD police agencies had successfully made the transition over to PRIME which has enabled the current study to provide a more accurate picture of crime trends across the region.

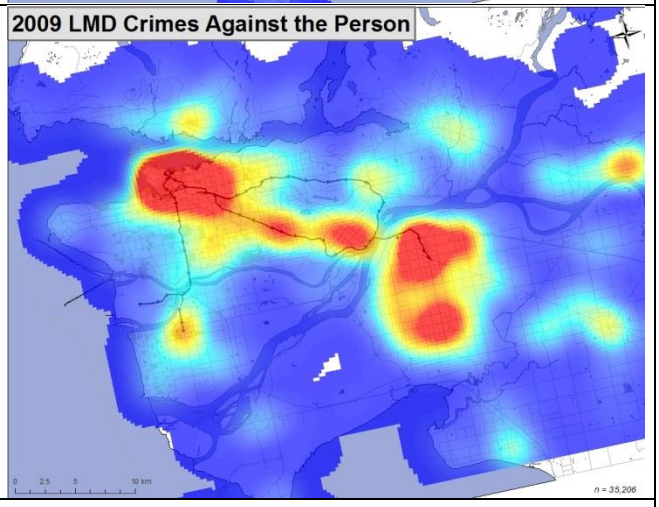
Despite public perception, violent crime has been on the decrease across the LMD over the past several years. As illustrated in the maps below, there has been no significant change in the distribution of violent crime across the region. Although the Canada Line opened in August 2009, the analysis of crime data indicates that the hotspots of violent crime in the areas surrounding these new light-rail stations pre-existed the introduction of new line. Similarly, concentrations in violent crime can already be seen in the areas surrounding future Coquitlam Evergreen Line stations as well (as highlighted in the first map).

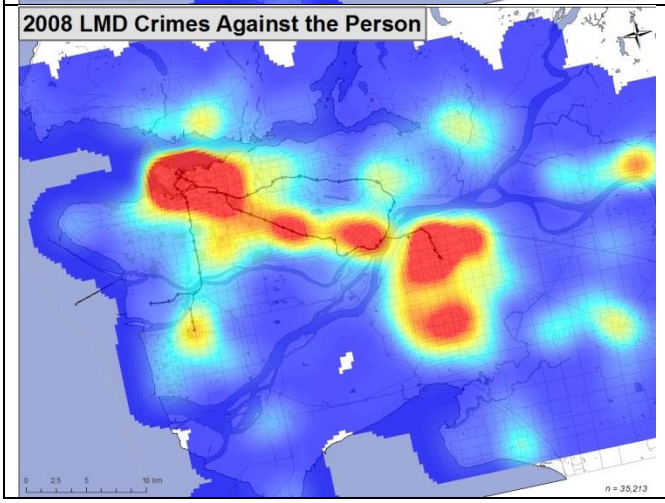
Although some have made the argument that the introduction of new Skytrain stations has caused increases in crime, a comparison of the maps below would contradict this theory. A more likely explanation would be that light rail networks are expanded into already densely populated areas which by nature experience higher concentrations of violent crime (ie: more offenders, more targets & more opportunities). In short: stations are built where the people are (where the demand is the highest) which in turn is where the crime happens to be.









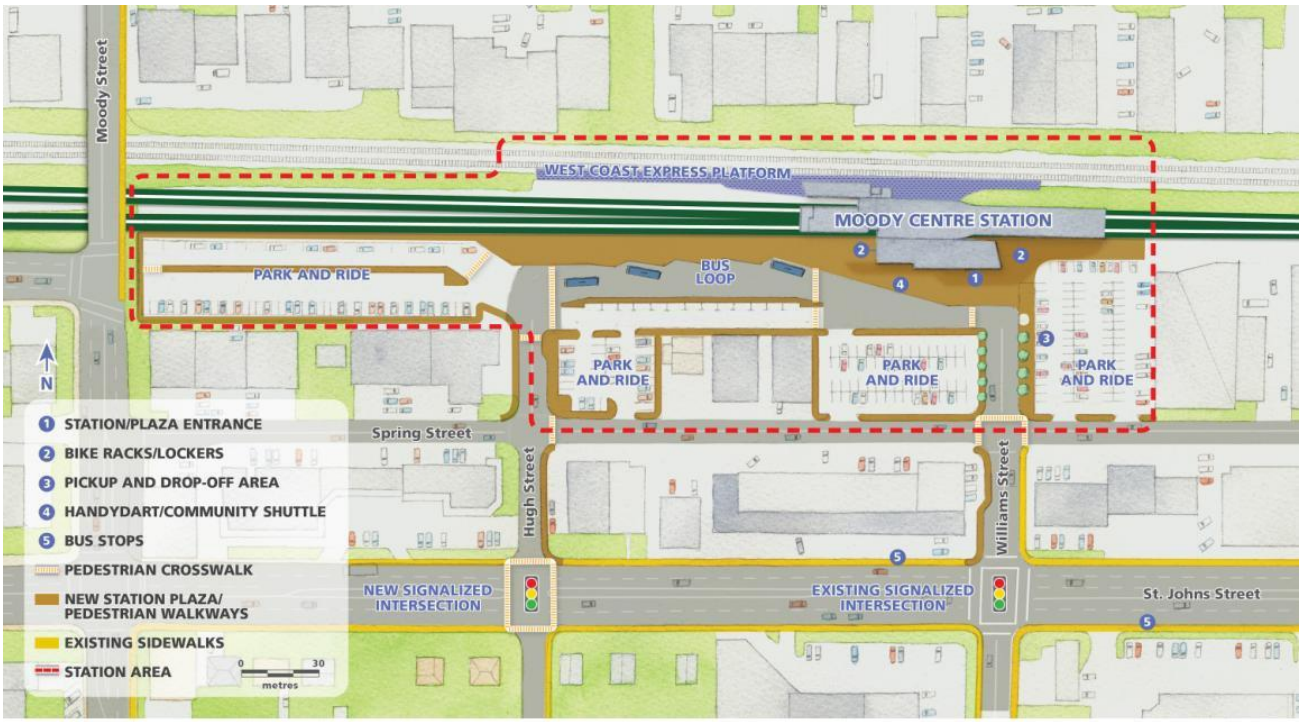


LMD Crimes Against the Person		
	LMD	**Change**
2012	29,283	-5%
2011	30,858	-6%
2010	32,904	-7%
2009	35,206	0%
2008	35,213	n/a

Port Moody Evergreen Line Stations

Moody Centre Station

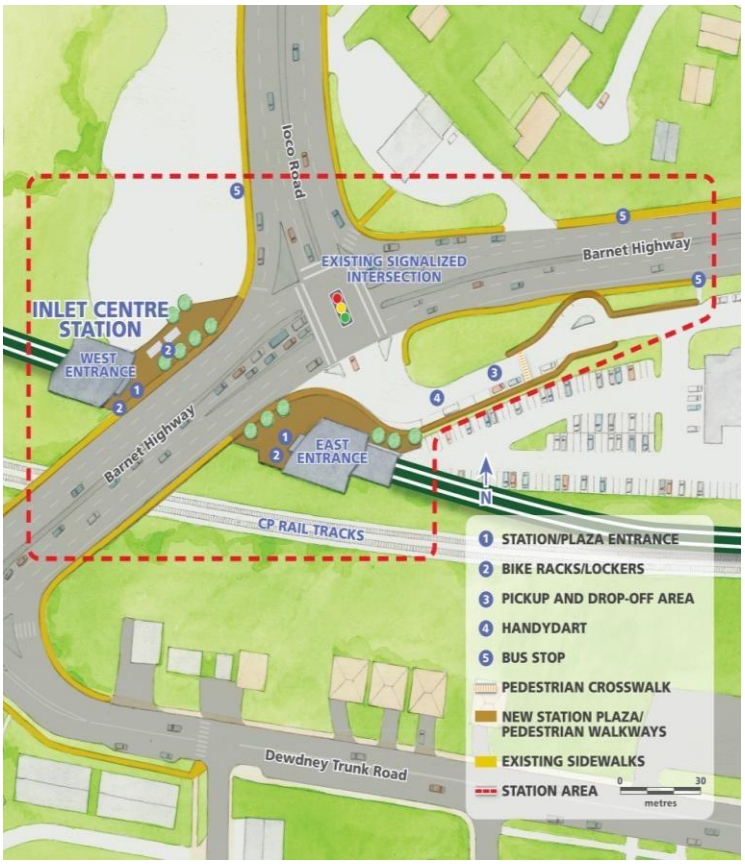
The Moody Centre Evergreen Line station is somewhat unique in that it is being built as an addition to the already existing Port Moody West Coast Express station and bus loop. Because this location is a pre-existing transit hub for the City of Port Moody, the addition of a new light-rail station is not expected to have as significant of an impact as some of the other stations along the corridor (although passenger and pedestrian volume will undoubtedly increase in the area). With its pre-existing bus loop and Park & Ride (both of which will be expanded), Moody Centre Station is a well-established commuter hub in the area which will provide passengers with direct access to local businesses, Rocky Point Park and the waterfront area.



http://www.evergreenline.gov.bc.ca/infosheets.htm

Inlet Centre Station

Located at the entrance to one of the busiest areas in Port Moody, Inlet Centre Station will provide direct access to many retail establishments in the SuterBrook and Newport Village areas while servicing the residents in the surrounding high-density developments. While it is impossible to predict the exact impact, due to its proximity to restaurants, bars and pubs (ie: Browns, Onyx, St. James's Well, The Golden Spike, etc), this station may experience occasional increases in night time activity related to liquor or intoxication related offences (such as Disturbances, Intoxicated in Public, etc).



http://www.evergreenline.gov.bc.ca/infosheets.htm

City of Port Moody Violent Crime – Crimes Against the Person

While decreases in violent crime were seen across the Lower Mainland, the City of Port Moody experienced similar reductions which were consistent with the regional trends. Because the Port Moody Police Department was one of the first agencies to transition over to PRIME, crime data for the City of Port Moody is accessible back to 2004, providing a more detailed picture of longitudinal crime trends in the city (note: although PMPD started using PRIME in 2001, due to possible quality control issues in the first couple of years, data was pulled starting in 2004 to ensure accuracy and consistency).

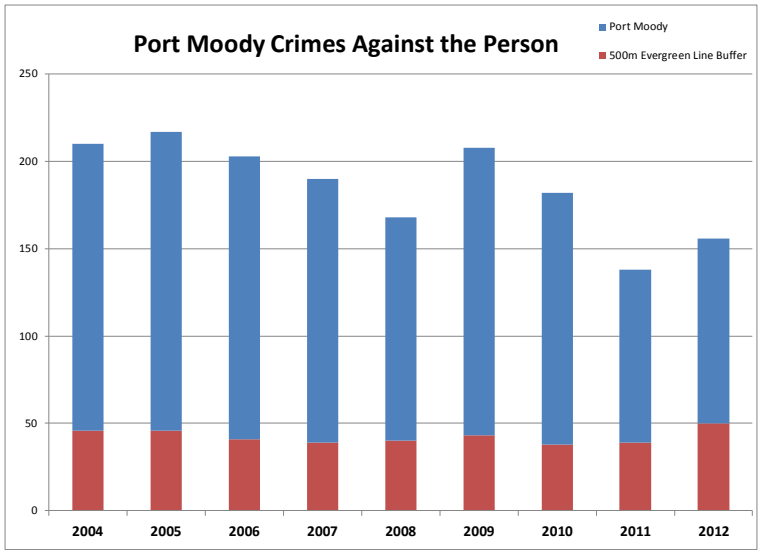
Overall, the City of Port Moody has experienced a slight decrease in violent crime over the past several years. While there has been a slight downwards trend in violent crime city wide, the areas surrounding the future Evergreen Line stations have not seen the same effect and a greater percentage of Port Moody's violent crime has been located in the areas surrounding future Skytrain stations.

On average, 23% of the violent crime in the City of Port Moody since 2004 has been located within a 500m buffer of future Evergreen Line Stations.

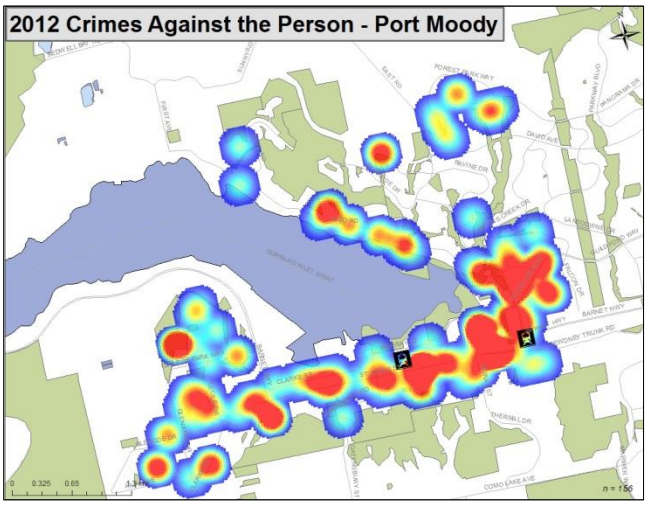
Crimes Against the Person		
	Port Moody	% Change
2012	156	13%
2011	138	-24%
2010	182	-13%
2009	208	24%
2008	168	-12%
2007	190	-6%
2006	203	-6%
2005	217	3%
2004	210	-

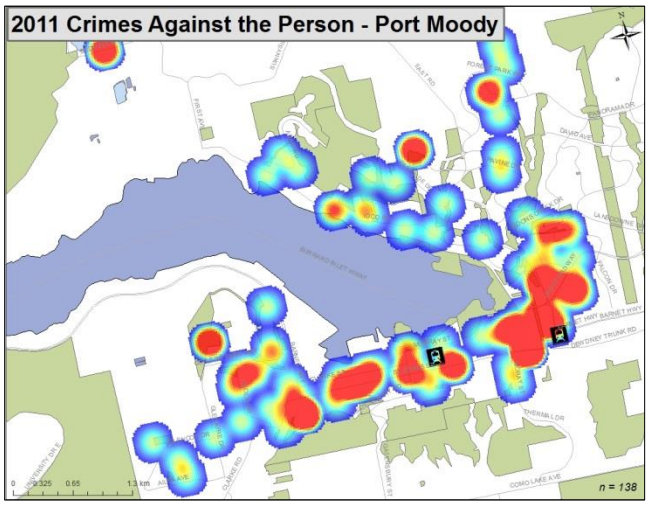
Crimes Against the Person			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	156	50	32%
2011	138	39	28%
2010	182	38	21%
2009	208	43	21%
2008	168	40	24%
2007	190	39	21%
2006	203	41	20%
2005	217	46	21%
2004	210	46	22%

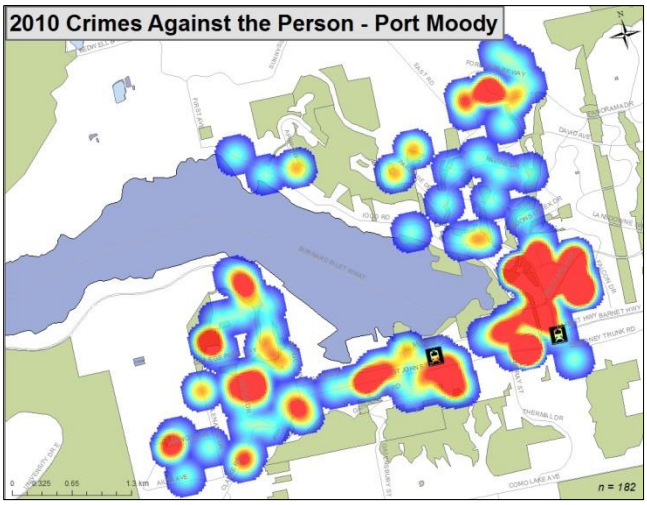
Crimes Against the Person		
	500m Evergreen Line Buffer	% Change
2012	50	28%
2011	39	3%
2010	38	-12%
2009	43	8%
2008	40	3%
2007	39	-5%
2006	41	-11%
2005	46	0%
2004	46	-

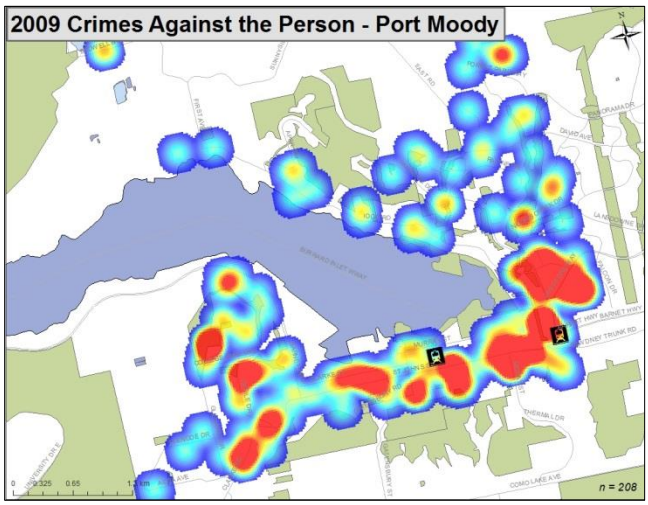


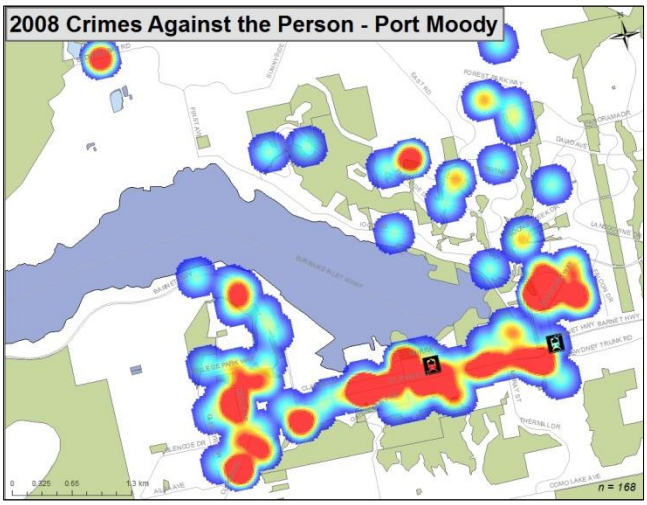
As illustrated in the maps below, violent crime in the City of Port Moody has historically been concentrated along St. John's corridor and the Newport Village area which are the main hubs in the city.

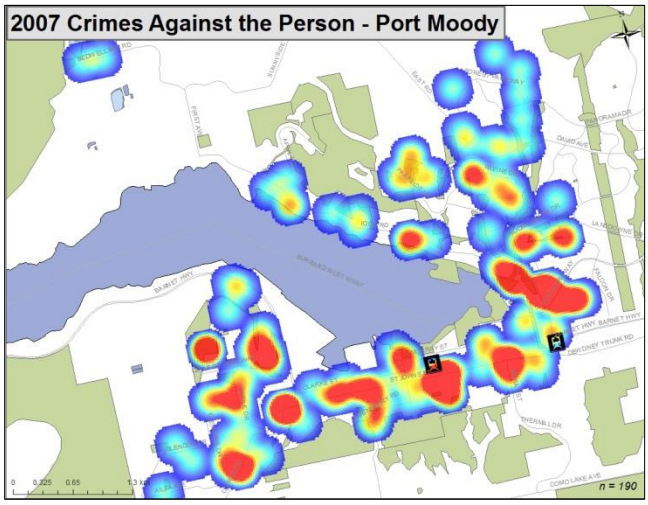


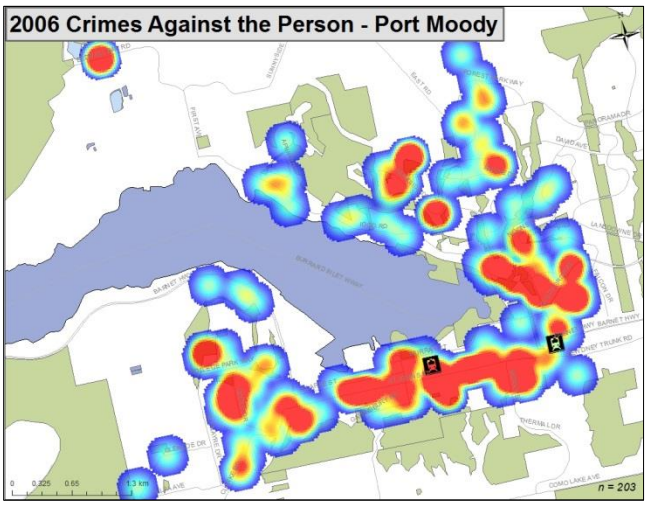


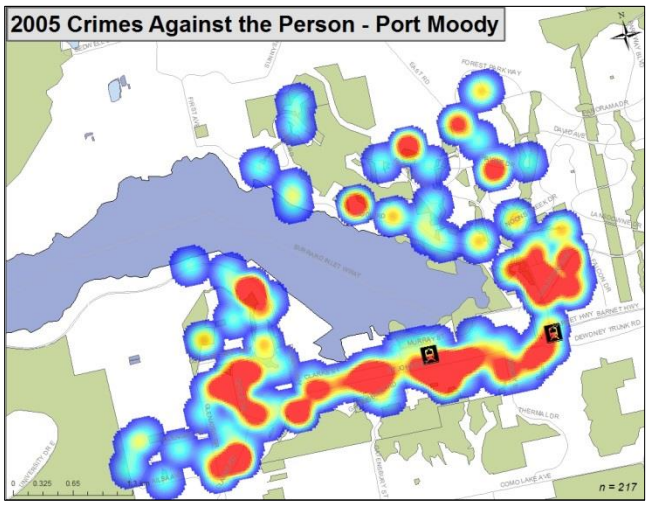

2010 Crimes Against the Person - Port Moody
n = 182

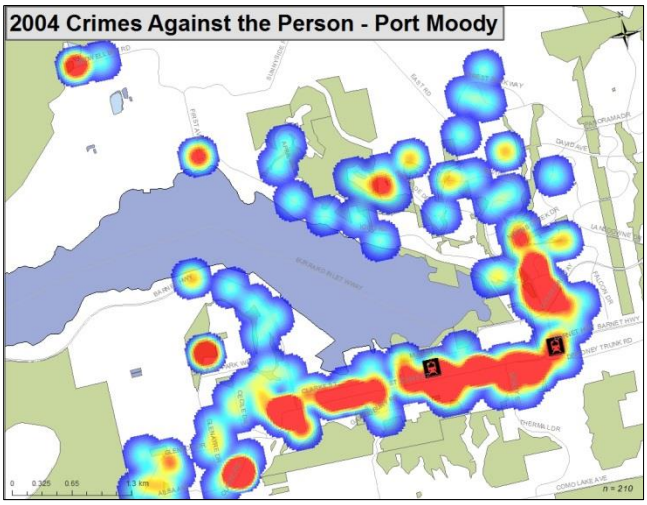

2009 Crimes Against the Person - Port Moody
n = 208


2008 Crimes Against the Person - Port Moody
n = 168


2007 Crimes Against the Person - Port Moody
n = 190


2006 Crimes Against the Person - Port Moody
n = 203


2005 Crimes Against the Person - Port Moody
n = 217



City of Port Moody Assaults

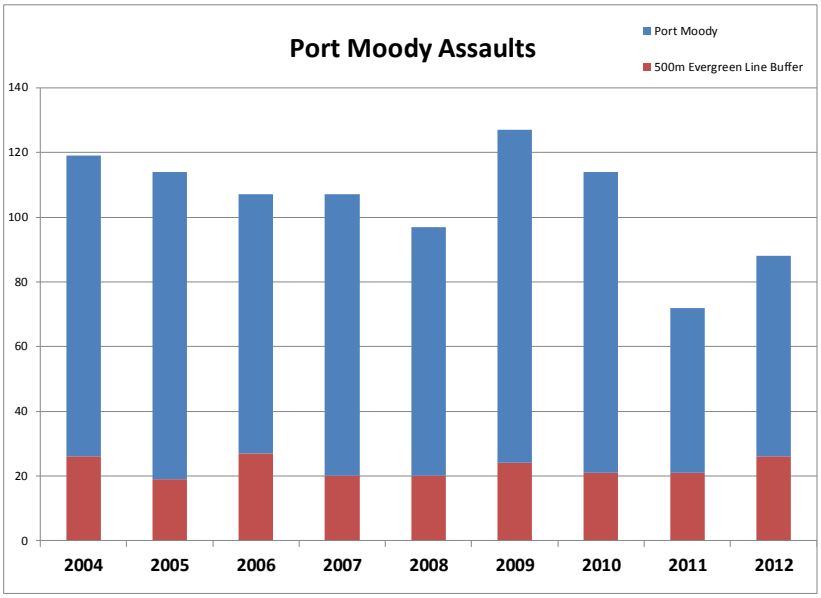
Assaults occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

1430-0 Assault – Common
1420-0 Assault w/Weapons or CBH
1410-0 Assault – Aggravated

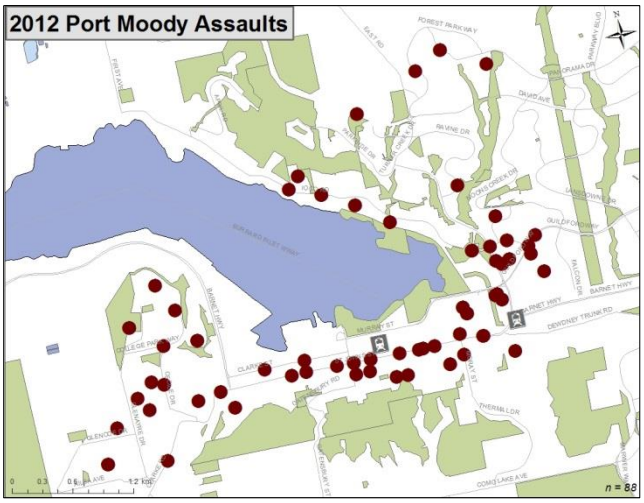
As seen in the below noted charts, the City of Port Moody has experienced a downward trend in reported assaults.

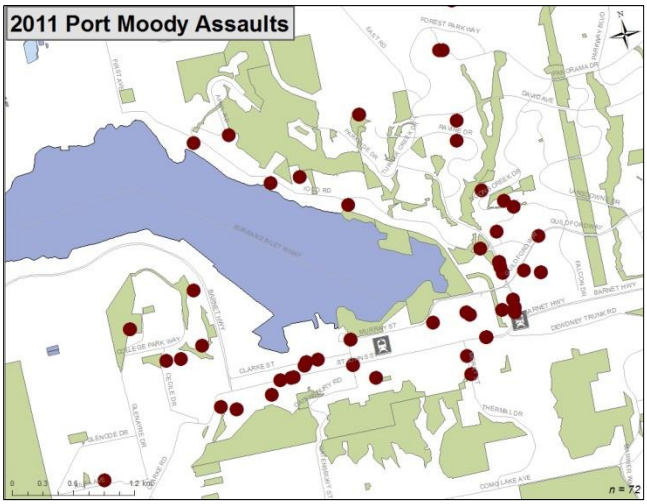
Despite this decline city-wide, the proportion of Assaults occurring in the areas located within 500m's of a future Evergreen Line Station has increased slightly over the years (averaging 22%). This is likely due to surges in urban growth and development in these neighbourhoods – ie: higher density neighbourhoods have translated into the congregation of more people (increased presence of offenders, targets & opportunities) despite the fact that the new Skytrain line has not yet been built.

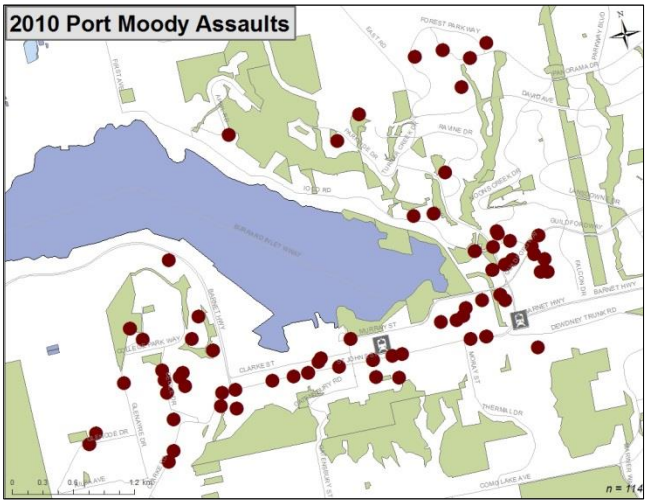
Assaults		
	Port Moody	**% Change**
2012	88	22%
2011	72	-37%
2010	114	-10%
2009	127	31%
2008	97	-9%
2007	107	0%
2006	107	-6%
2005	114	-4%
2004	119	-

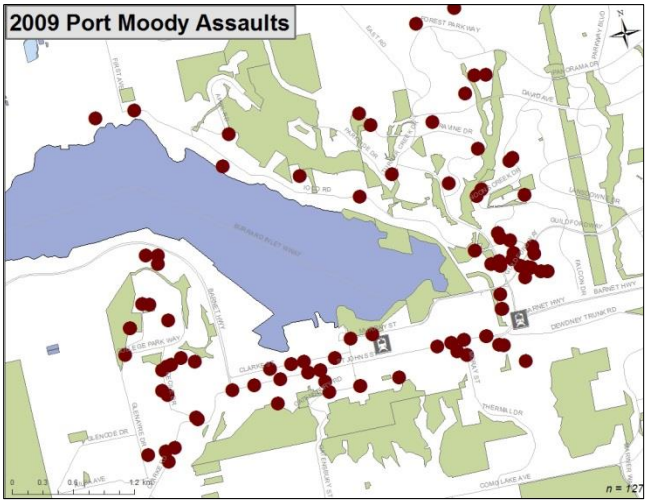


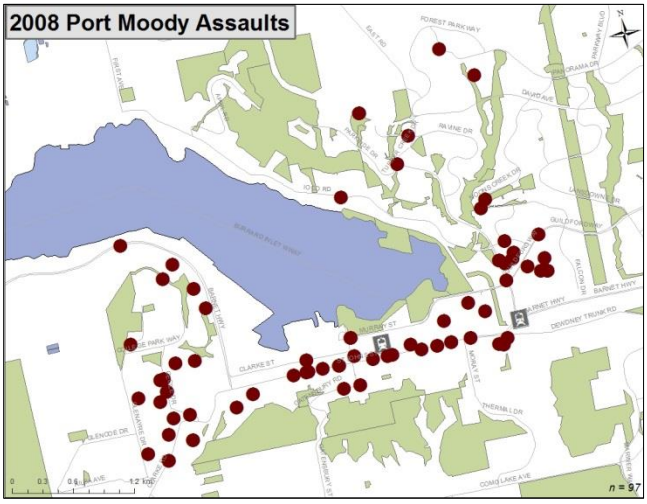
Assaults			
	Port Moody	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	88	26	30%
2011	72	21	29%
2010	114	21	18%
2009	127	24	19%
2008	97	20	21%
2007	107	20	19%
2006	107	27	25%
2005	114	19	17%
2004	119	26	22%

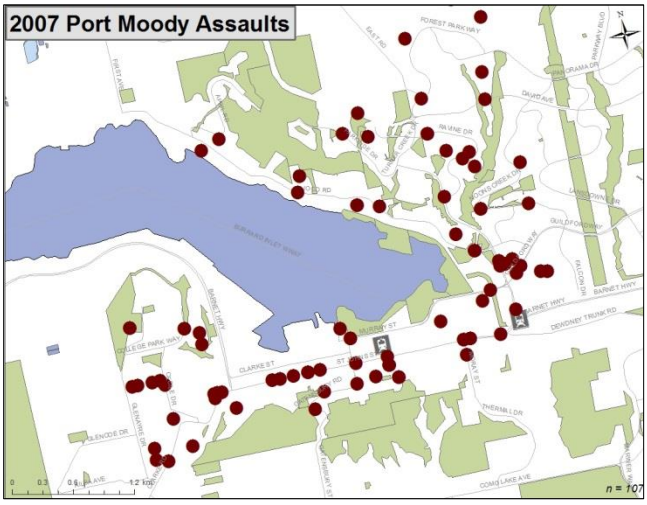

2012 Port Moody Assaults
n = 88

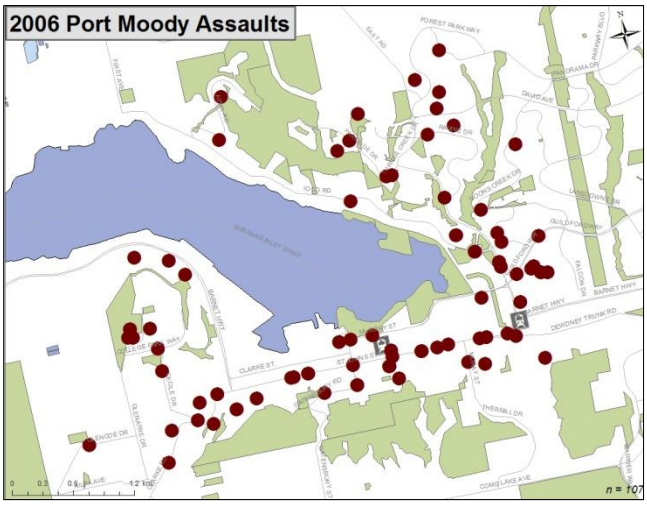

2011 Port Moody Assaults
n = 72

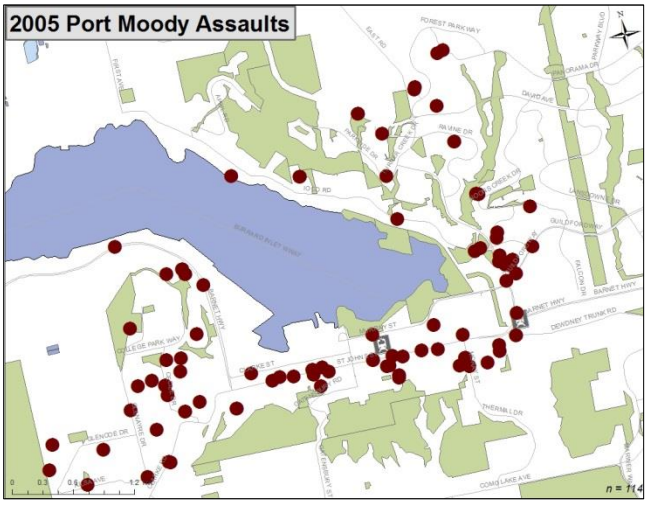

2010 Port Moody Assaults
n = 114

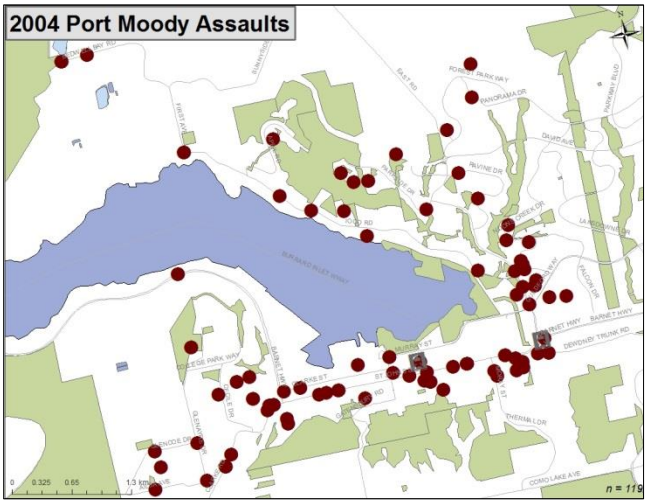

2009 Port Moody Assaults
n = 127


2008 Port Moody Assaults
n = 97


2007 Port Moody Assaults
n = 107







As illustrated in the maps above, the distribution of Assaults in the City of Port Moody has remained relatively stable over the years with a concentration along the St. John's corridor, Heritage Mountain and Newport Village areas.

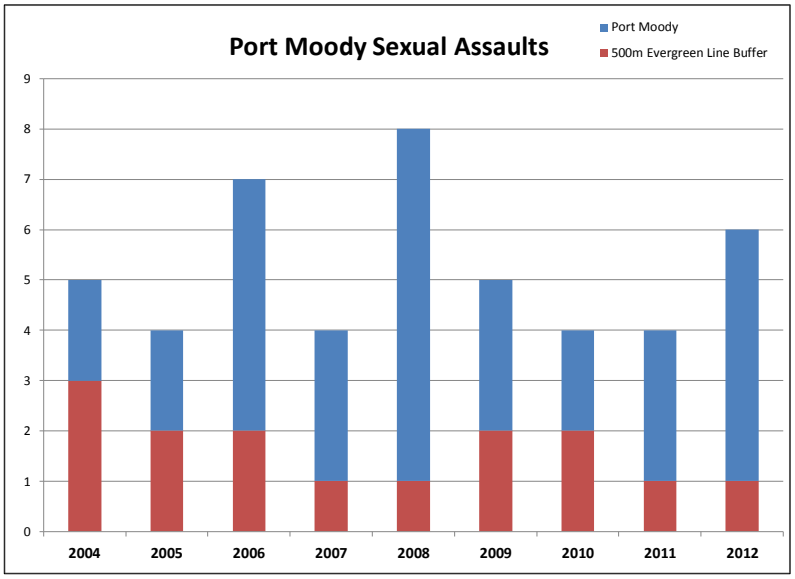
City of Port Moody Sexual Assaults

Sexual Assaults occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

1330-0 Sexual Assault
1320-0 Sexual Assault w/Weapon or Causing Bodily Harm
1310-0 Sexual Assault – Aggravated
1345-0 Sexual Interference

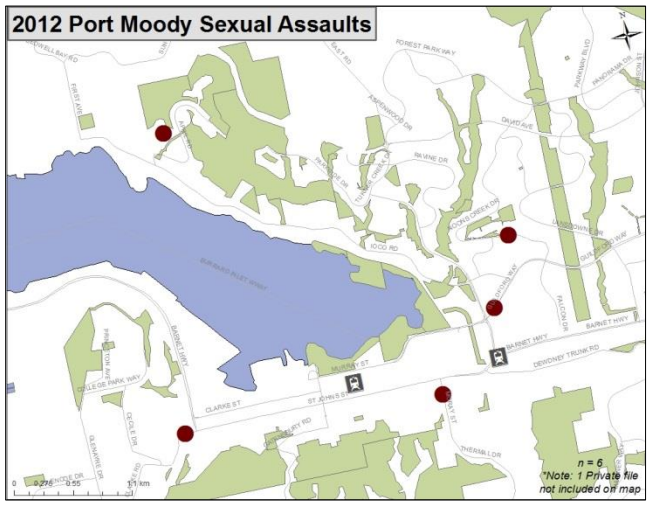
As seen in the below noted charts, although there has been some slight fluctuations over the years, the number of Sexual Assaults in Port Moody has remained relatively small. Over the past 9 years, there has been an average of 5 Sexual Assaults per year in the City of Port Moody.

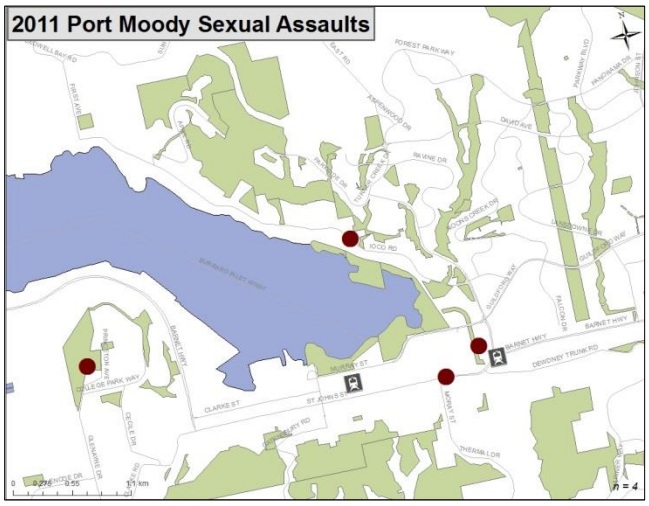
Port Moody Sexual Assaults	
2012	6
2011	4
2010	4
2009	5
2008	8
2007	4
2006	7
2005	4
2004	5

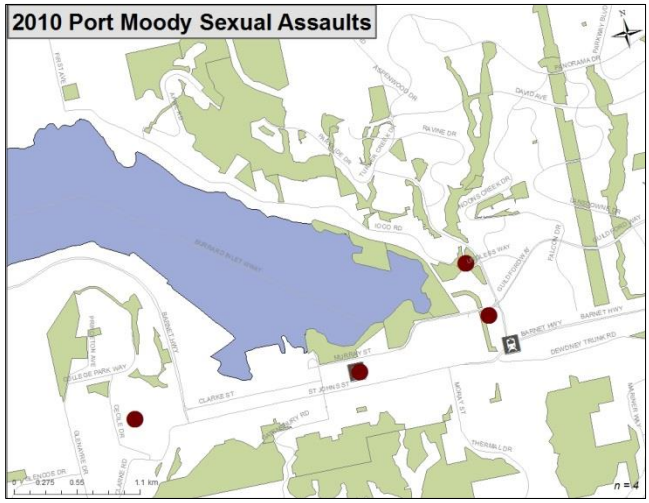


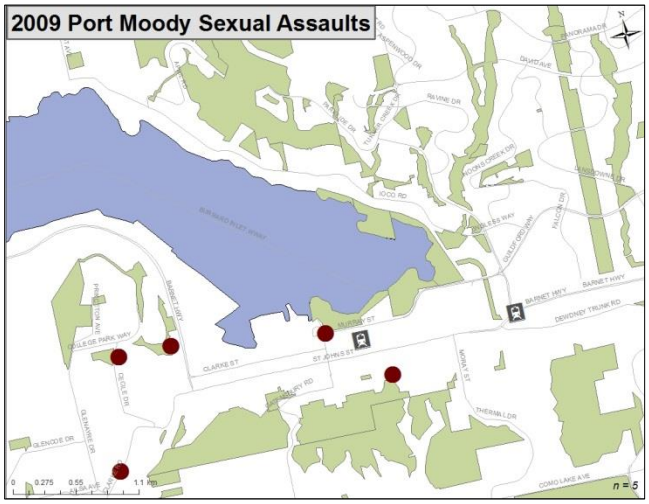
Sexual Assaults		
	Port Moody	**500m Evergreen Line Buffer**
2012	6	1
2011	4	1
2010	4	2
2009	5	2
2008	8	1
2007	4	1
2006	7	2
2005	4	2
2004	5	3

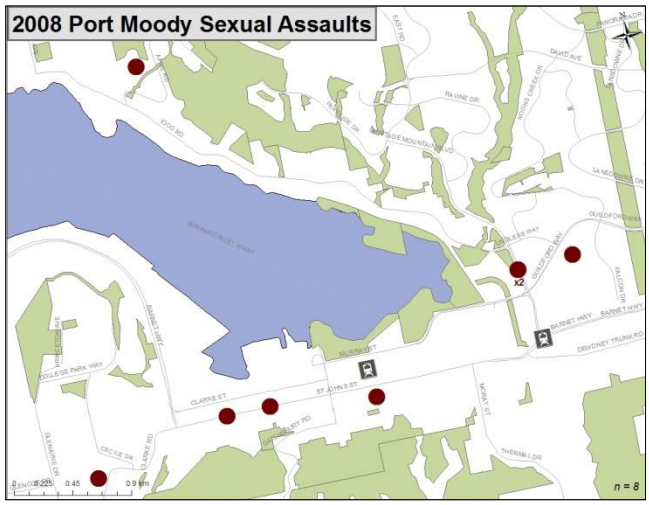
As seen in the maps below, Sexual Assaults have been scattered throughout the City of Port Moody over the years with an average of 1 or 2 incidents occurring in the vicinity of future Evergreen Line stations.

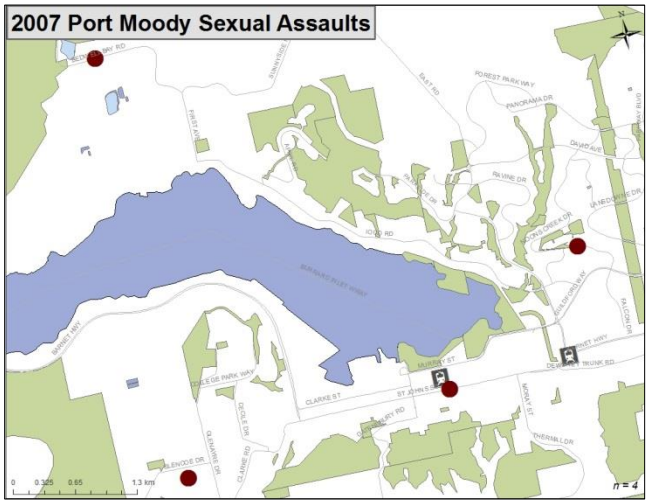


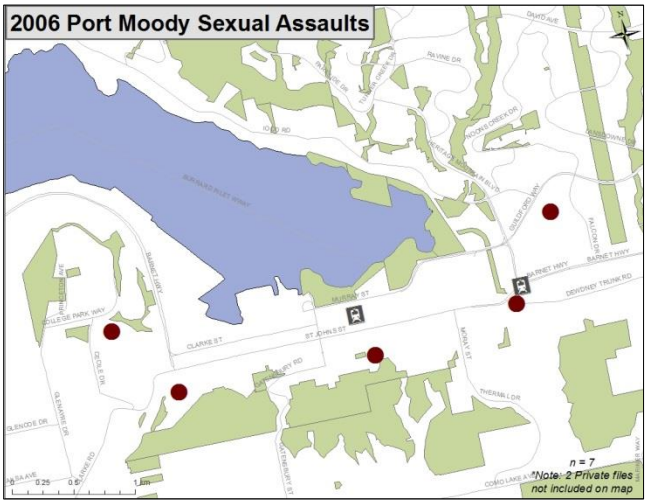


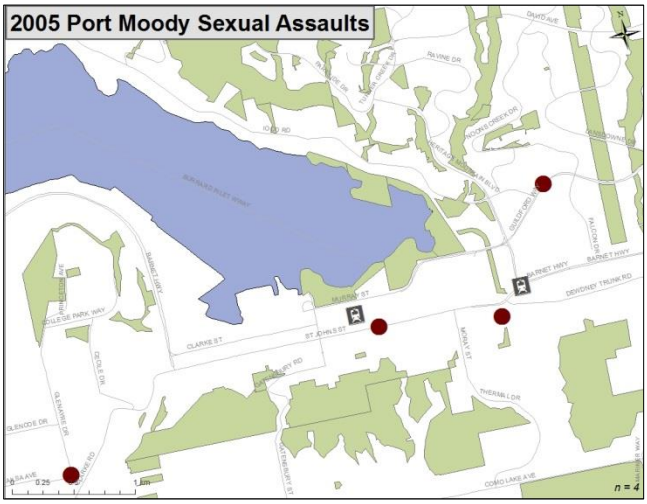


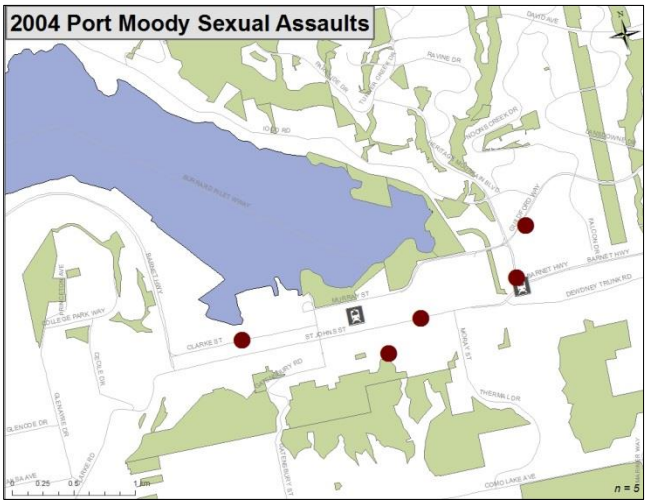












City of Port Moody Robberies

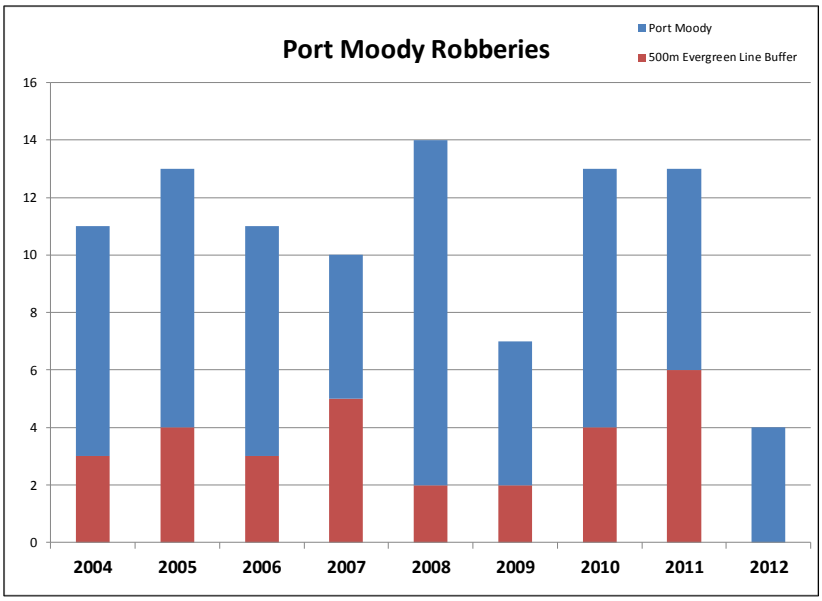
Robberies occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

1610-1 Robbery w/Firearm
1610-2 Robbery w/Other Offensive Weapon
1610-3 Robbery - Other

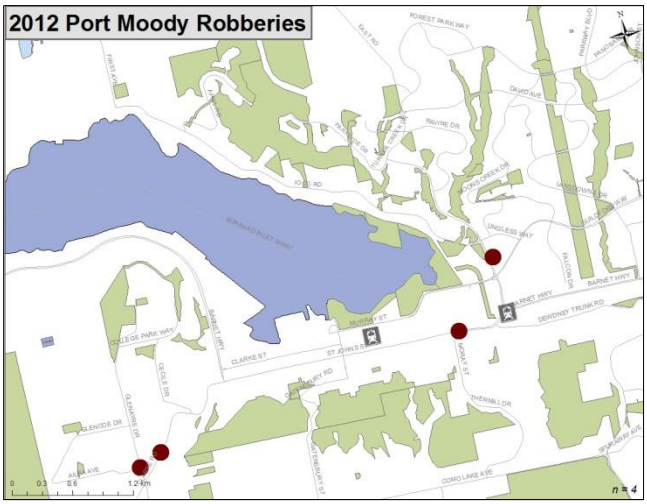
As seen in the charts below, the City of Port Moody has seen a relatively stable number of robberies over the past 9 years with the exception of 2012 and 2007 which saw notable

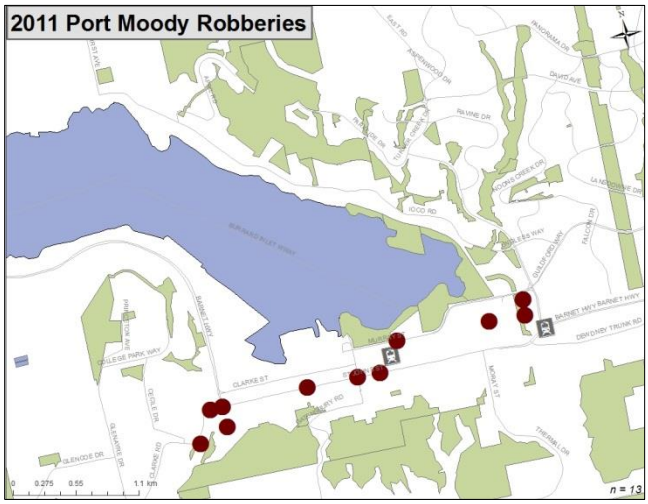
drops. The proportion of incidents occurring within the 500m buffers of future Evergreen Line stations has also remained relatively stable.

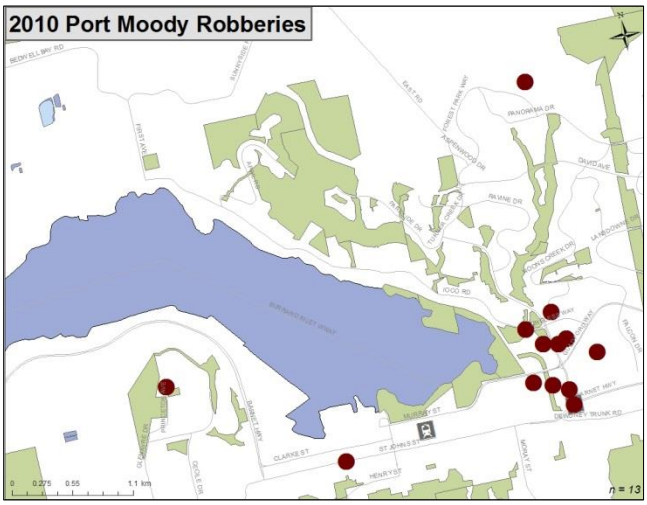
Robberies	
2012	4
2011	13
2010	13
2009	7
2008	14
2007	10
2006	11
2005	13
2004	11

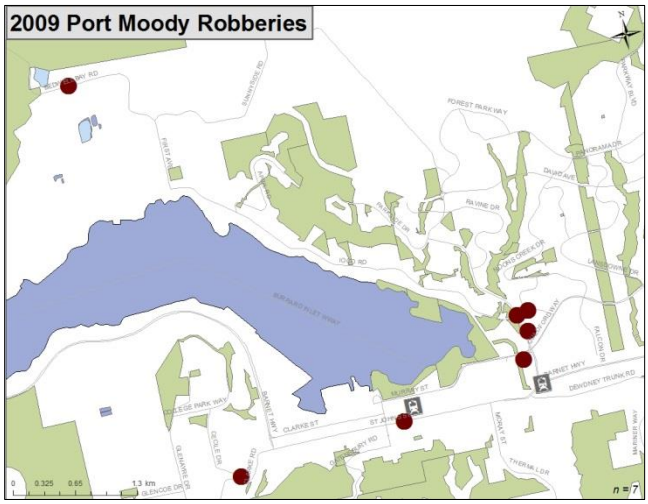


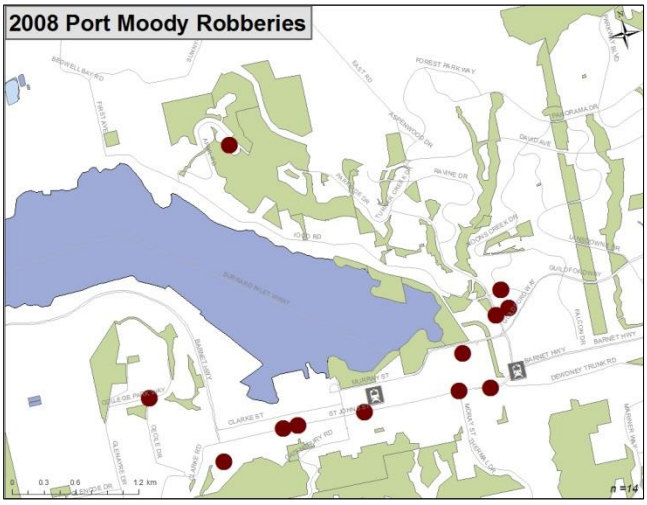
Robberies			
	Port Moody	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	4	0	0%
2011	13	6	46%
2010	13	4	31%
2009	7	2	29%
2008	14	2	14%
2007	10	5	50%
2006	11	3	27%
2005	13	4	31%
2004	11	3	27%

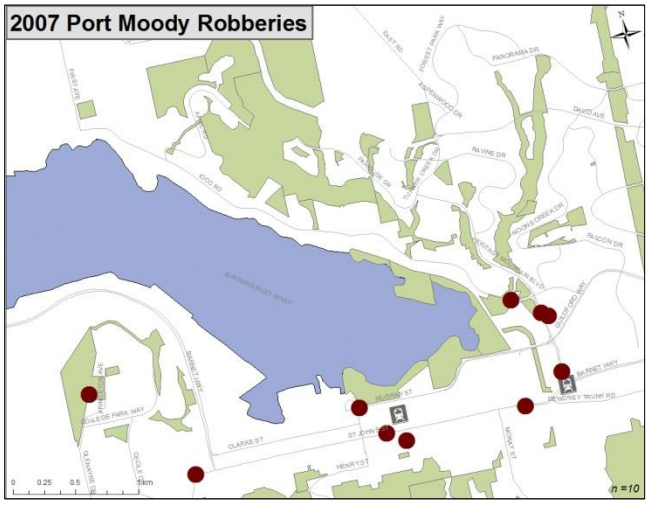

2012 Port Moody Robberies
n = 4

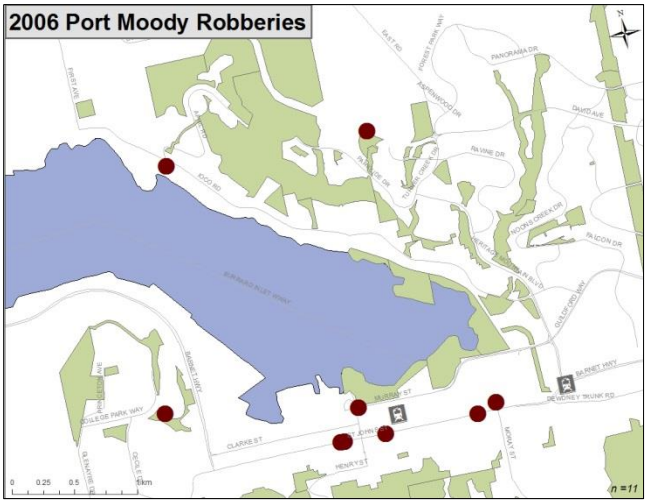

2011 Port Moody Robberies
n = 13

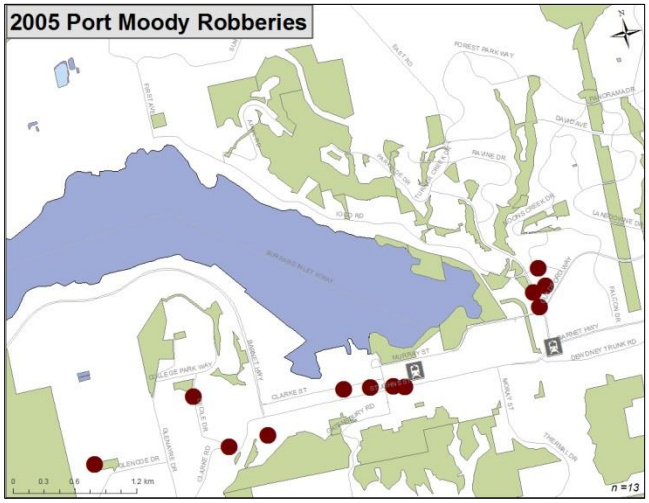

2010 Port Moody Robberies
n = 13

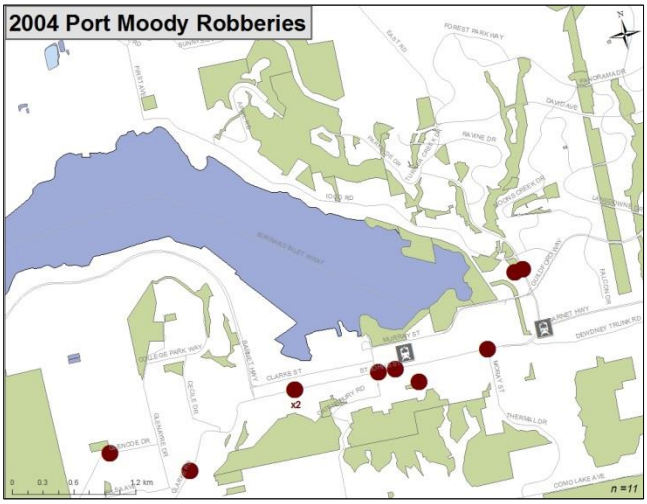

2009 Port Moody Robberies
n = 7


2008 Port Moody Robberies
n = 14


2007 Port Moody Robberies
n = 10





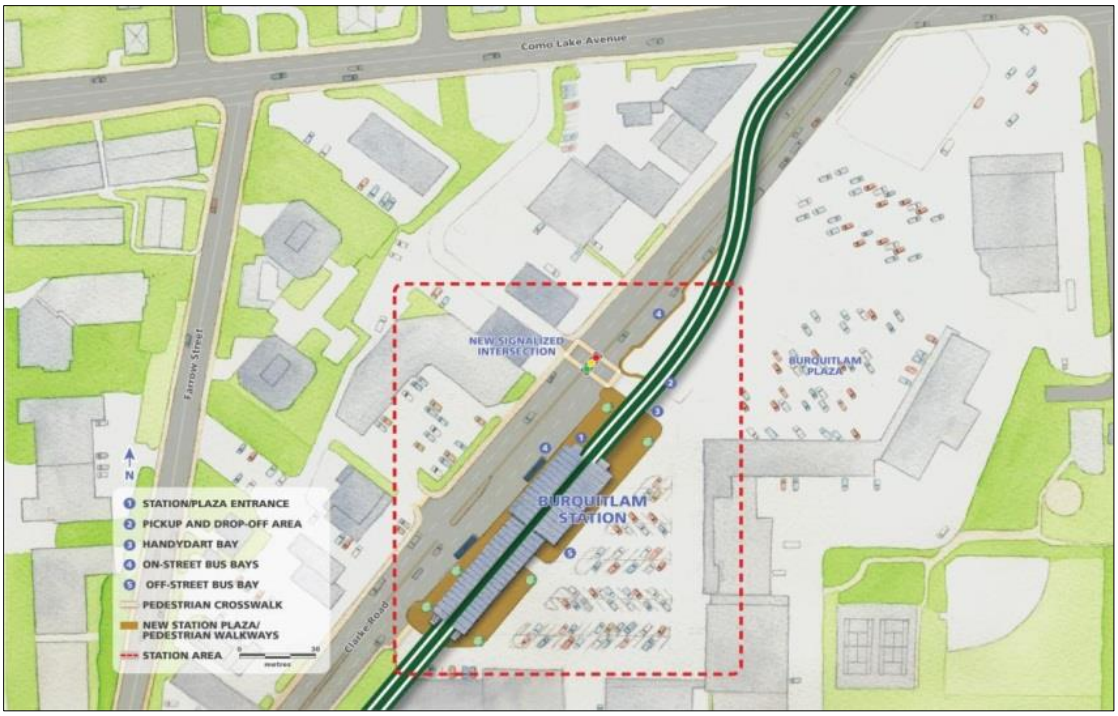


As illustrated by the maps above, the distribution of robberies across the City of Port Moody has remained somewhat consistent over the years with many robberies occurring along the St. John's corridor and Newport Village area.

Coquitlam Evergreen Line Stations

Burquitlam Station

The Burquitlam Station area has been a residential and commercial hub for many years. This area has historically been characterized by a mix of both low-rise and high-rise apartment buildings (with some lower income and student housing from nearby SFU) as well as several strip malls along Clarke Road. In recent years, the Burquitlam neighbourhood has received a bit of a face lift with the construction of new townhouses and condos. Part of the large Burquitlam Plaza is also currently under construction with a new mixed commercial-residential development being built at the corner of Clarke Rd and Como Lake Rd. As will be discussed in the current study, the Burquitlam area has historically been known to be a hot spot for both violent and property crime. Furthermore, previous research (including the Canada Line Study) has indicated that crime rates at new light rail stations tend to reflect the neighbourhoods in which they are built. It is therefore anticipated that the Burquitlam Station area will undoubtedly remain a hub of criminal activity worthy of monitoring.



http://www.evergreenline.gov.bc.ca/infosheets.htm

Coquitlam Central Station

The Coquitlam Central Station area is unique in that a new Skytrain station is being added to a substantial pre-existing transit hub. The Coquitlam Central Skytrain Station will be attached to what is currently the Coquitlam Centre Bus Loop and West Coast Express Station. This location is significant due to its proximity to Coquitlam Centre (the largest retail mall in the area) and the fact that the Coquitlam Centre bus loop has become the major connecting or transfer point for transit services between Vancouver/Burnaby/New Westminster and the Port Coquitlam/Pitt Meadows/Maple Ridge areas. While the new Skytrain station will undoubtedly increase the volume of pedestrian traffic in the area, the addition of a light-rail station is not expected to change the nature or type of activity in the area. Based on what has been experienced in similar environments along the Canada and Expo Lines (ie: other stations built in proximity to pre-existing malls or transit hubs), while a new Skytrain station may not change the type of crimes seen in the area, these types of incidents (such as Sexual Assaults, Robberies, Theft of Auto and Theft from Auto) may become more concentrated due to the increased availability of targets and mobility. For example, the expansion of the Park and Ride area attached to the station will surely create a target rich environment and increased opportunities for property crime offenders. Because of its location and design (ie: removed from the busy mall area), passengers at this station are likely to feel more isolated and vulnerable, especially at night. High visibility and increased patrols by Transit Security and Police would undoubtedly provide reassurance and improve passengers' sense of security in this particular location.

http://www.evergreenline.gov.bc.ca/infosheets.htm

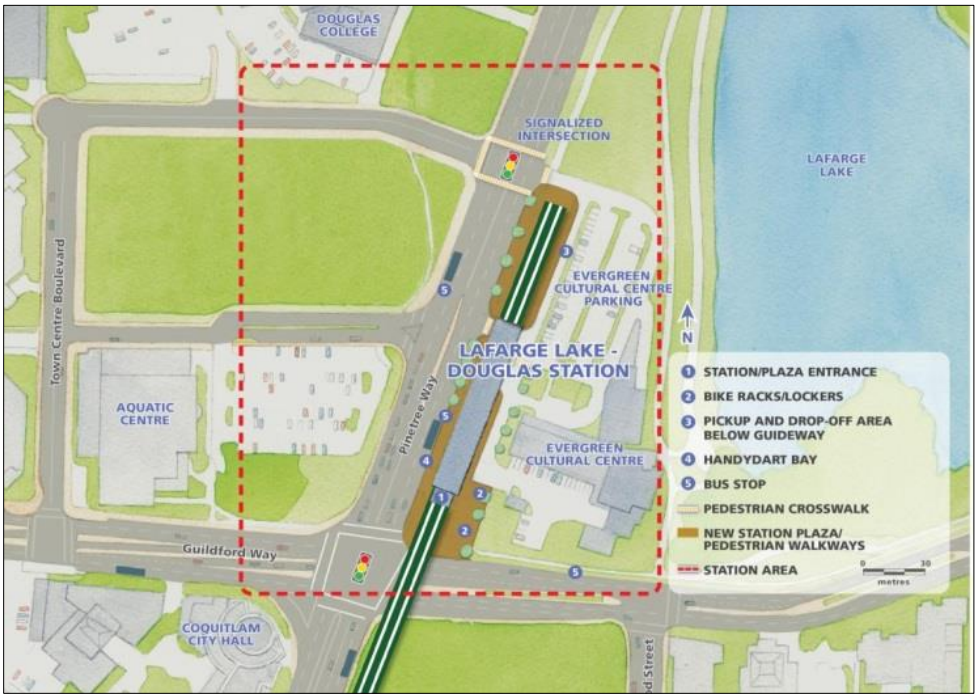
Lincoln Station

Situated a mere block and a half from the largest transit hub in the Coquitlam-Ridge Meadows area (Coquitlam Central Skytrain Station & Bus Loop), Lincoln Station will provide direct access to Coquitlam Centre Mall, Coquitlam Public Library, as well as several commercial and high rise developments that have sprouted in the area over the past few years. As illustrated in the following sections, Lincoln Station will be situated in what has been established as a pre-existing hot spot for both violent and property crime. The introduction of a new Skytrain station to the area is not expected to change the distribution of crime as activity at the station will undoubtedly reflect the nature of the environment in which it is placed.

http://www.evergreenline.gov.bc.ca/infosheets.htm

Lafarge Lake-Douglas Station

As the terminus station for the Evergreen Line, Lafarge Lake-Douglas Station will provide direct access for staff and students at nearby Douglas College, and those travelling to & fron the Aquatic Centre, City Hall, the Coquitlam RCMP Detachment, the Evergreen Cultural Centre and Lafarge Lake. Situated on the perimeter of pre-existing hot spots for both violent and property crime, crime rates at Lafarge Lake-Douglas Station are not anticipated to be as high as nearby Lincoln and Coquitlam Central Stations, however the station will undoubtedly see higher passenger volumes during rush hours as commuters from nearby schools & businesses as well as the residents of nearby Westwood Plateau pass through the area.



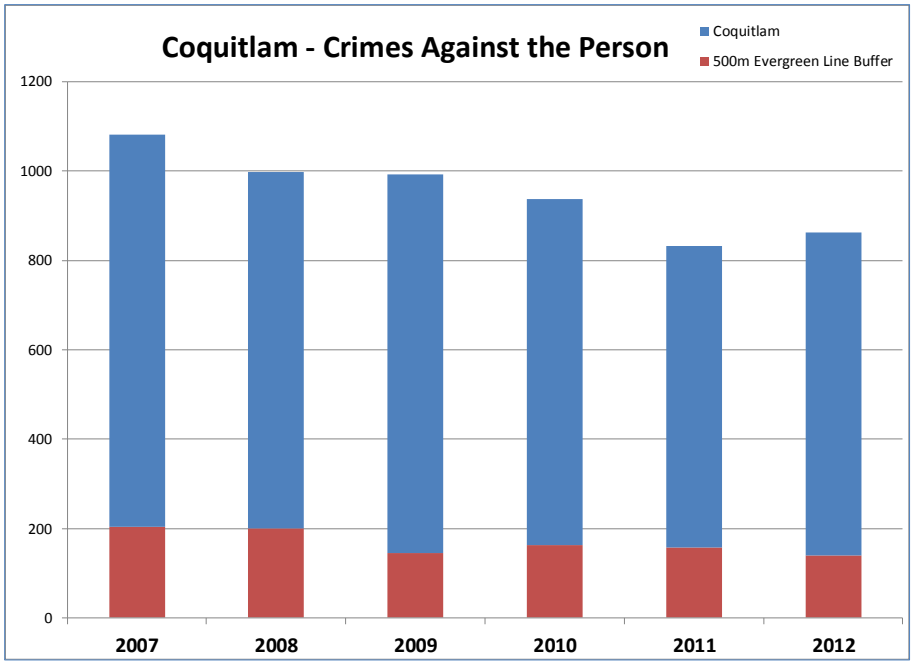
http://www.evergreenline.gov.bc.ca/infosheets.htm

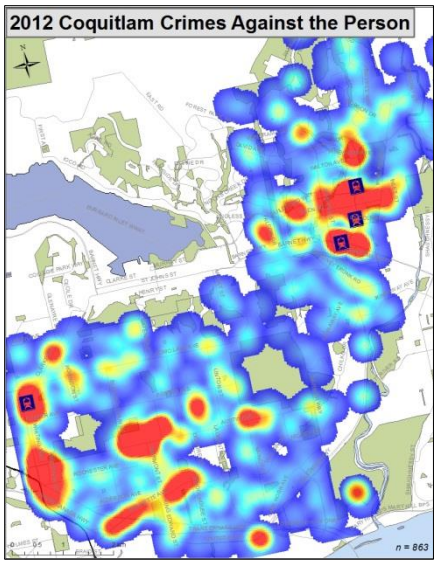
City of Coquitlam Violent Crime – Crimes Against the Person

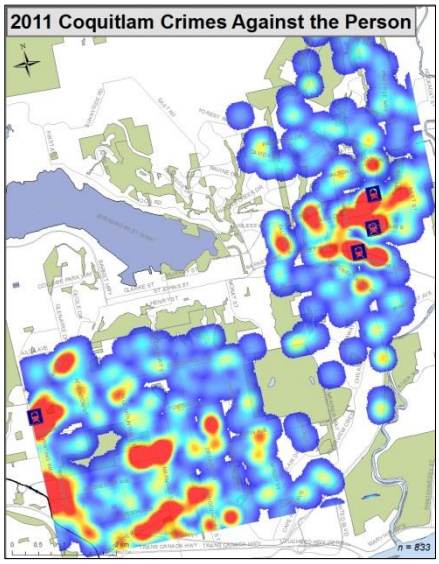
In following with the overall Lower Mainland trend, the City of Coquitlam also experienced a decline in violent crime in recent years. As seen in the below noted charts, this downwards trend was experienced not only city-wide, but also in the areas surrounding future Evergreen Line stations.

City of Coquitlam Crimes Against the Person		
	Coquitlam	% Change
2012	863	4%
2011	833	-11%
2010	938	-5%
2009	992	-1%
2008	998	-8%
2007	1,082	-

City of Coquitlam Crimes Against the Person			
	Coquitlam	500m Evergreen Line Buffer	% w/in Buffer
2012	863	140	16%
2011	833	157	19%
2010	938	162	17%
2009	992	145	15%
2008	998	200	20%
2007	1,082	203	19%




2012 Coquitlam Crimes Against the Person
n = 863


2011 Coquitlam Crimes Against the Person
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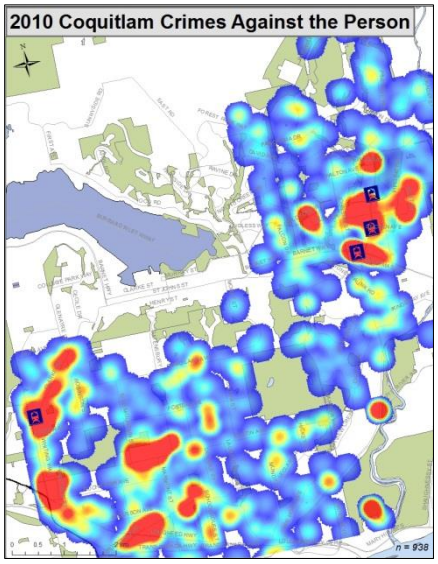
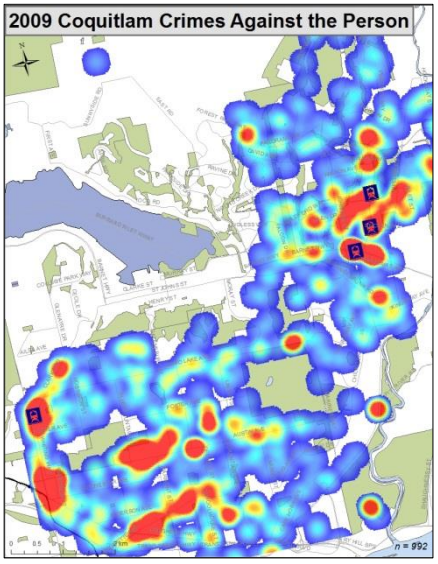

2010 Coquitlam Crimes Against the Person
n = 938


2009 Coquitlam Crimes Against the Person
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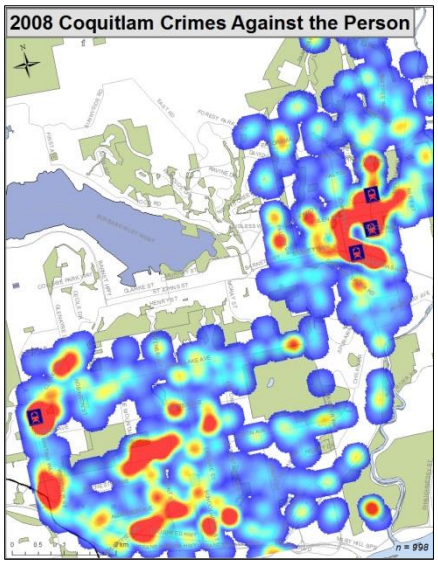
2008 Coquitlam Crimes Against the Person
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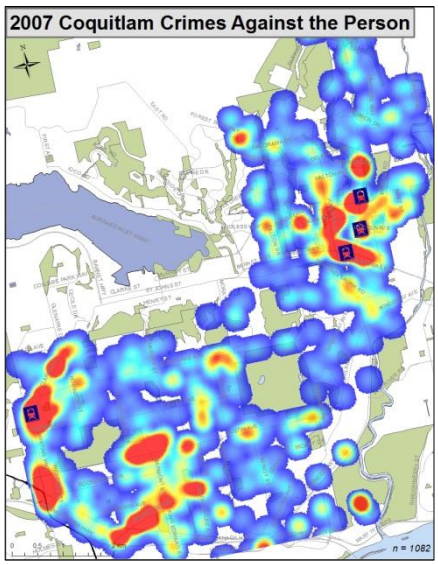

2007 Coquitlam Crimes Against the Person
n = 1082

As seen in the above comparison, the overall distribution of violent crime in the City of Coquitlam has remained relatively unchanged over the past 6 years with pre-existing hot spots being quite evident in the areas surrounding future Evergreen Line stations.

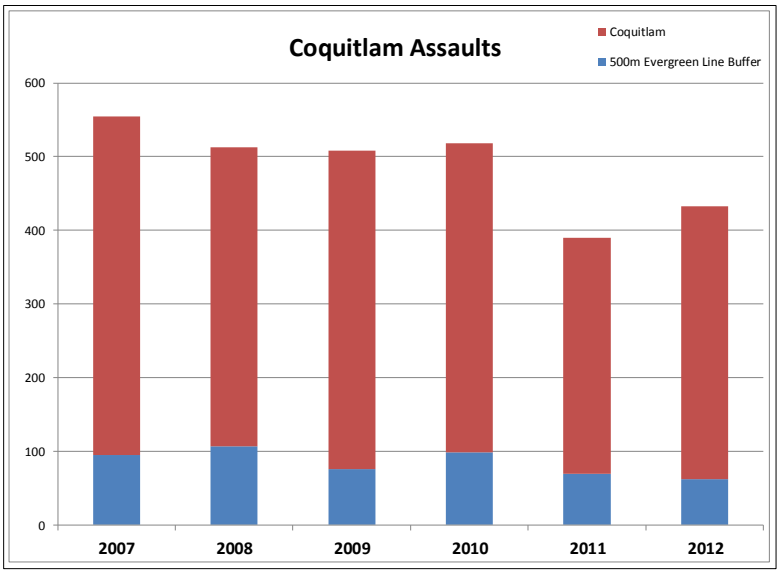
City of Coquitlam Assaults

Assaults occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

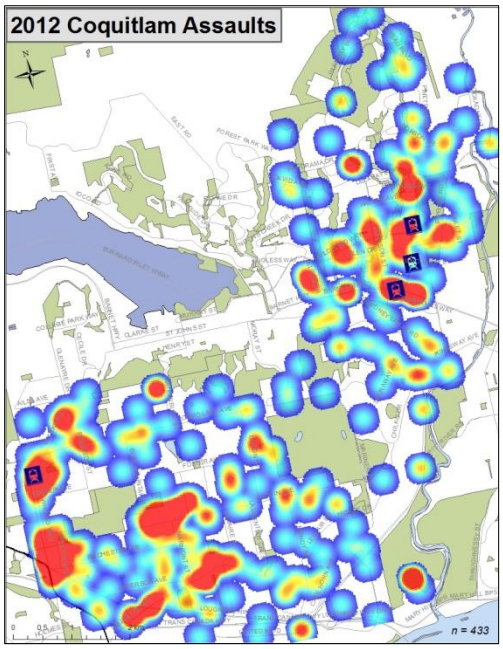
1430-0 Assault – Common
1420-0 Assault w/Weapons or CBH
1410-0 Assault – Aggravated

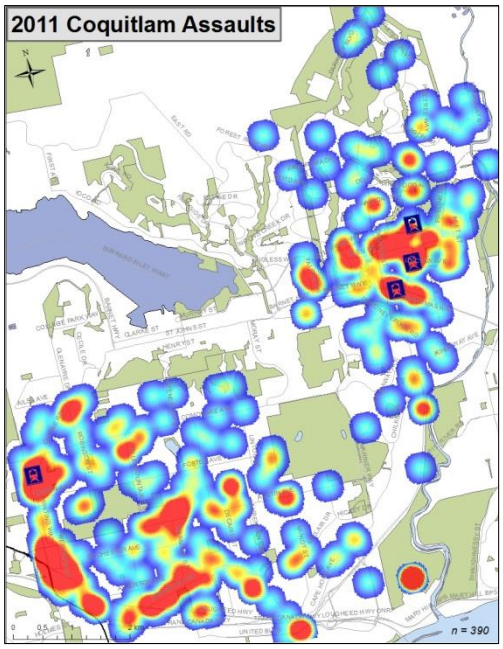
Overall, the City of Coquitlam experienced a decrease in number of Assaults over the past 6 years both city-wide as well as in the areas surrounding future Evergreen Line stations. The proportion of Assaults occurring in the areas near future Evergreen Line stations has also remained proportionate with an average of 17% of incidents occurring within the 500m buffers.

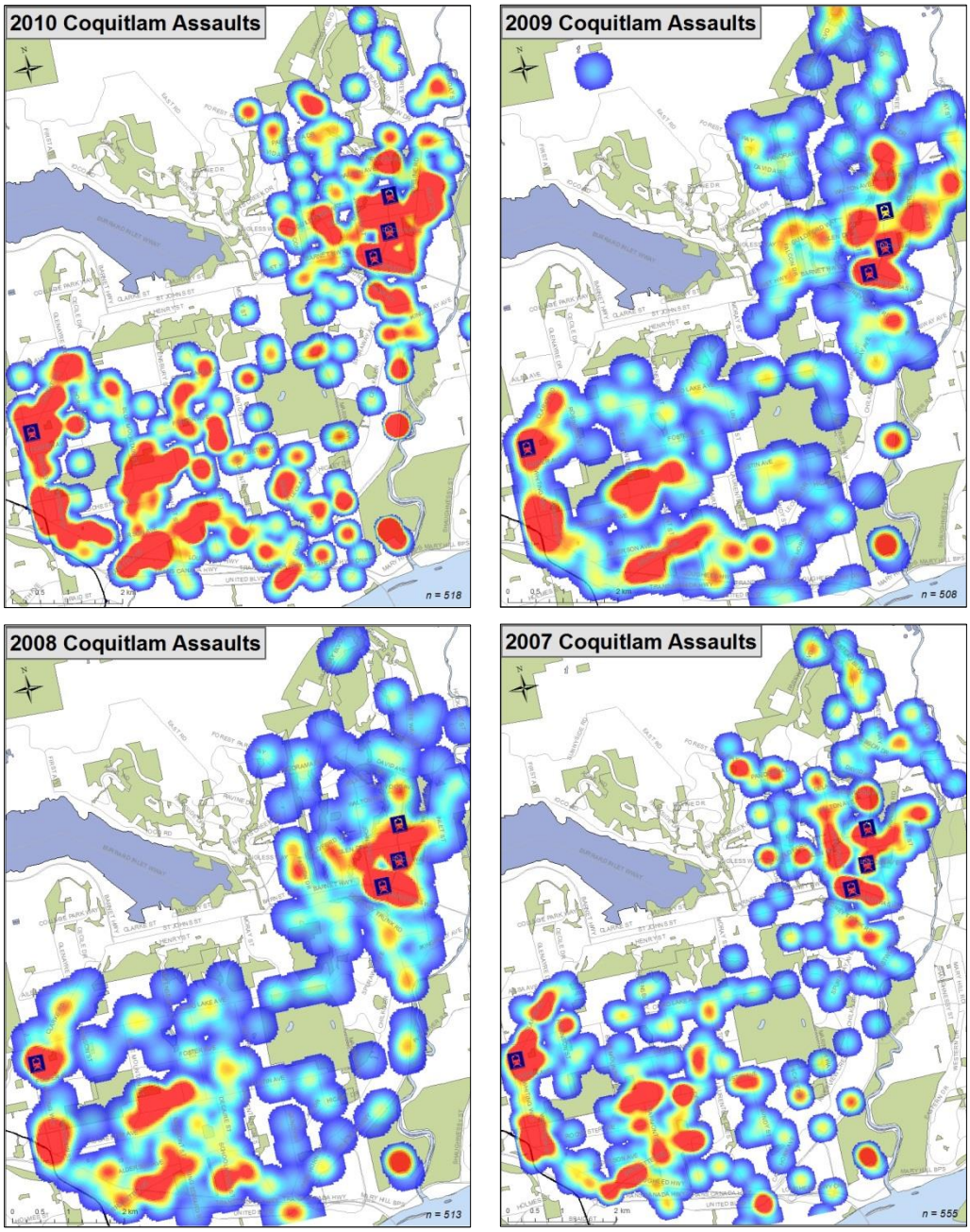
Assaults		
	Coquitlam	**% Change**
2012	433	11%
2011	390	-25%
2010	518	2%
2009	508	-1%
2008	513	-8%
2007	555	-



Assaults			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	433	62	14%
2011	390	69	18%
2010	518	98	19%
2009	508	76	15%
2008	513	107	21%
2007	555	95	17%







The distribution of Assaults throughout the City of Coquitlam has remained relatively constant over the past 6 years with obvious hot spots in the areas surrounding future Evergreen Line stations.

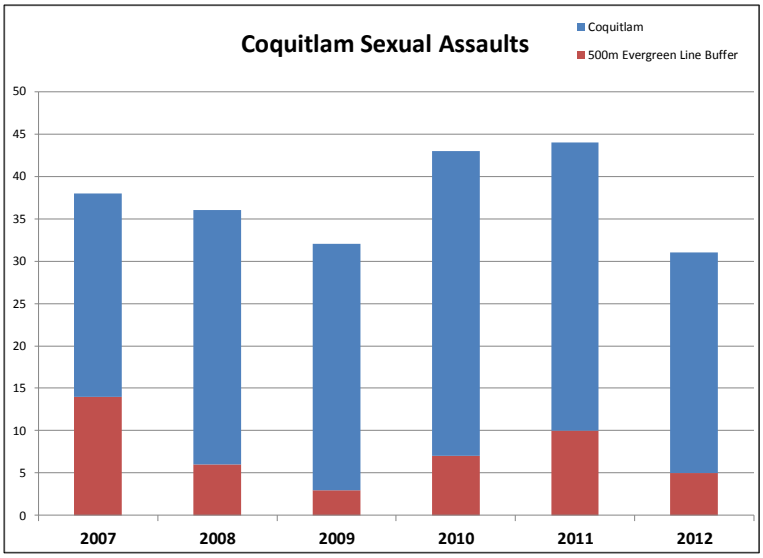
City of Coquitlam Sexual Assaults

Sexual Assaults occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

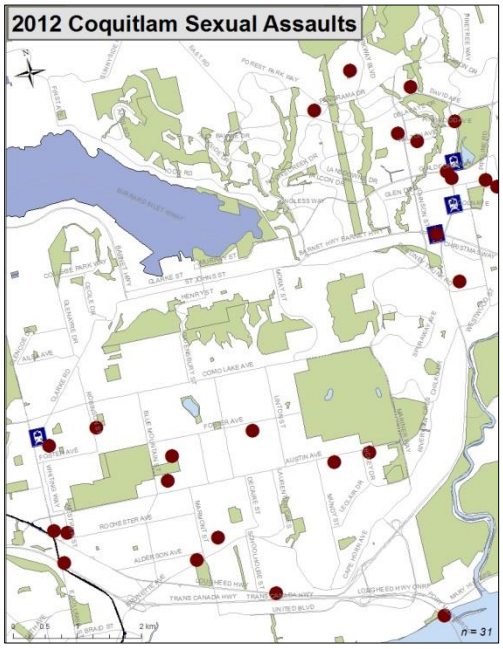
1330-0 Sexual Assault
1320-0 Sexual Assault w/Weapon or Causing Bodily Harm
1310-0 Sexual Assault – Aggravated
1345-0 Sexual Interference

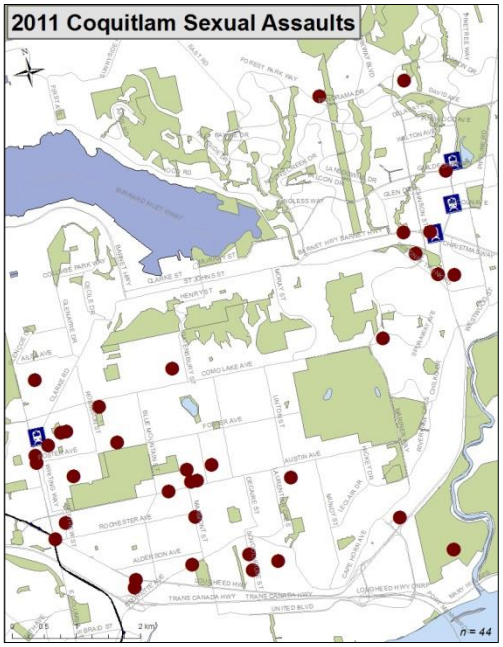
The number of Sexual Assaults in Coquitlam has remained relatively stable over the past 6 years with an average of 37 incidents annually and some variance in the relative proportion of incidents occurring in the areas surrounding future Evergreen Line stations.

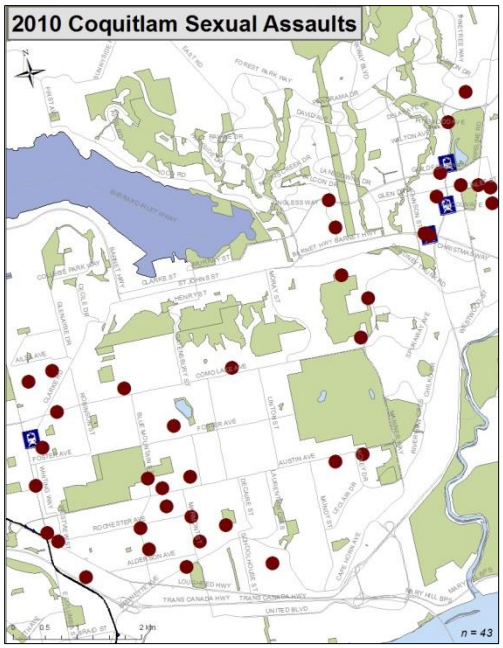
Sexual Assaults		
	Coquitlam	**% Change**
2012	31	-30%
2011	44	2%
2010	43	34%
2009	32	-11%
2008	36	-5%
2007	38	-

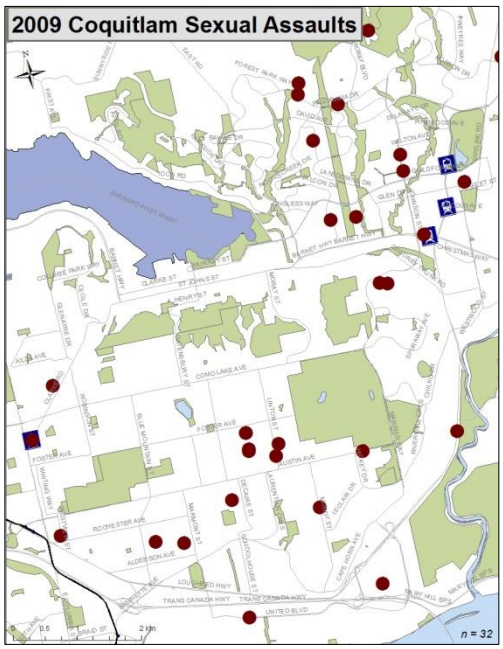


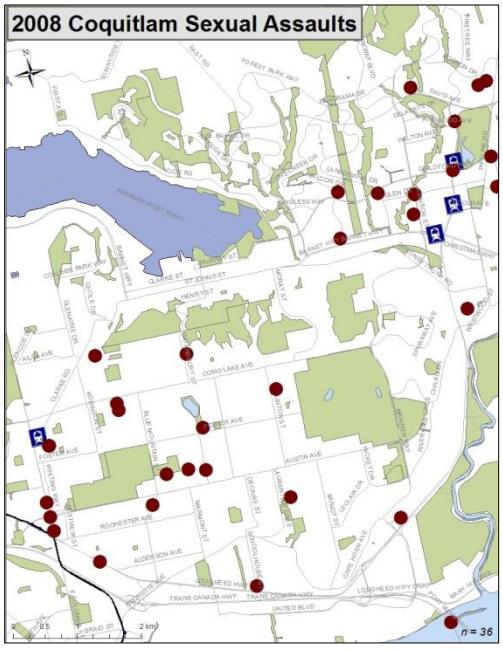
Sexual Assaults			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	31	5	16%
2011	44	10	23%
2010	43	7	16%
2009	32	3	9%
2008	36	6	17%
2007	38	14	37%

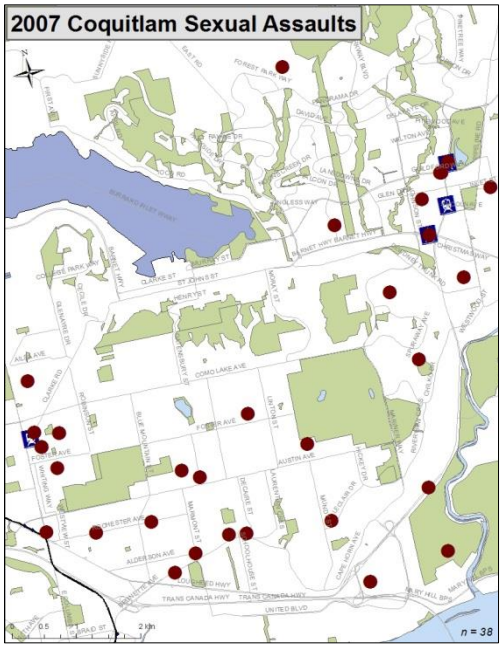












Sexual Assaults appear to be spread throughout the City of Coquitlam with relatively minor clustering in the Coquitlam Centre and Burquitlam areas.

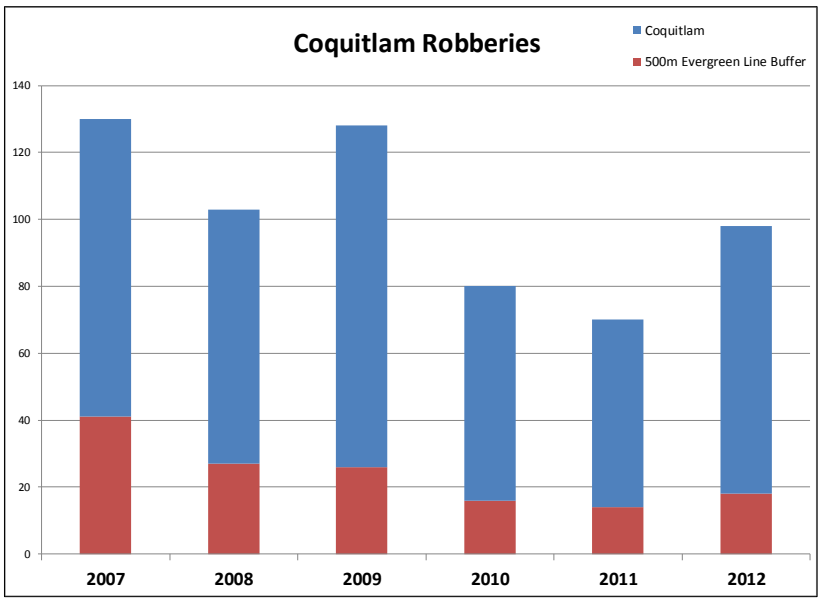
City of Coquitlam Robberies

Robberies occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

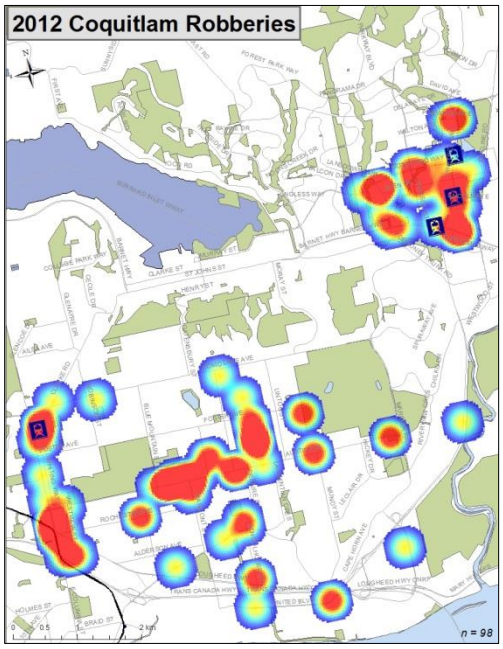
1610-1 Robbery w/Firearm
1610-2 Robbery w/Other Offensive Weapon
1610-3 Robbery – Other

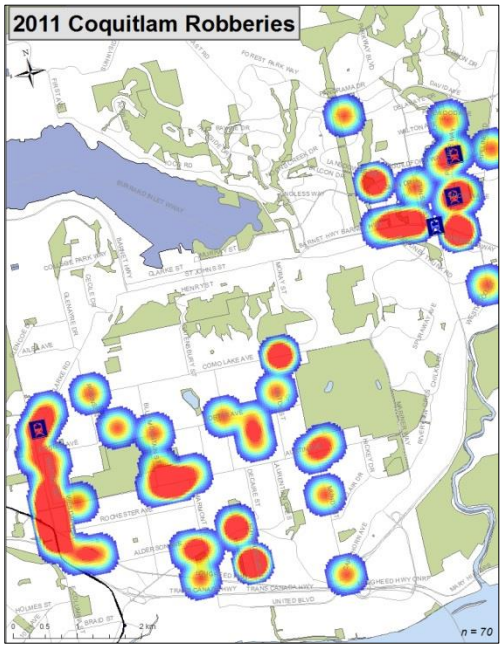
As seen in the charts below, the City of Coquitlam has seen a significant decrease in Robberies. This downwards trend has been experienced both city-wide as well as in the areas surrounding future Evergreen Line stations. A breakdown illustrates that the proportion of incidents occurring within 500m's of a future Evergreen Line station has remained relatively stable with an average of 23% of the city's Robberies occurring within this buffer.

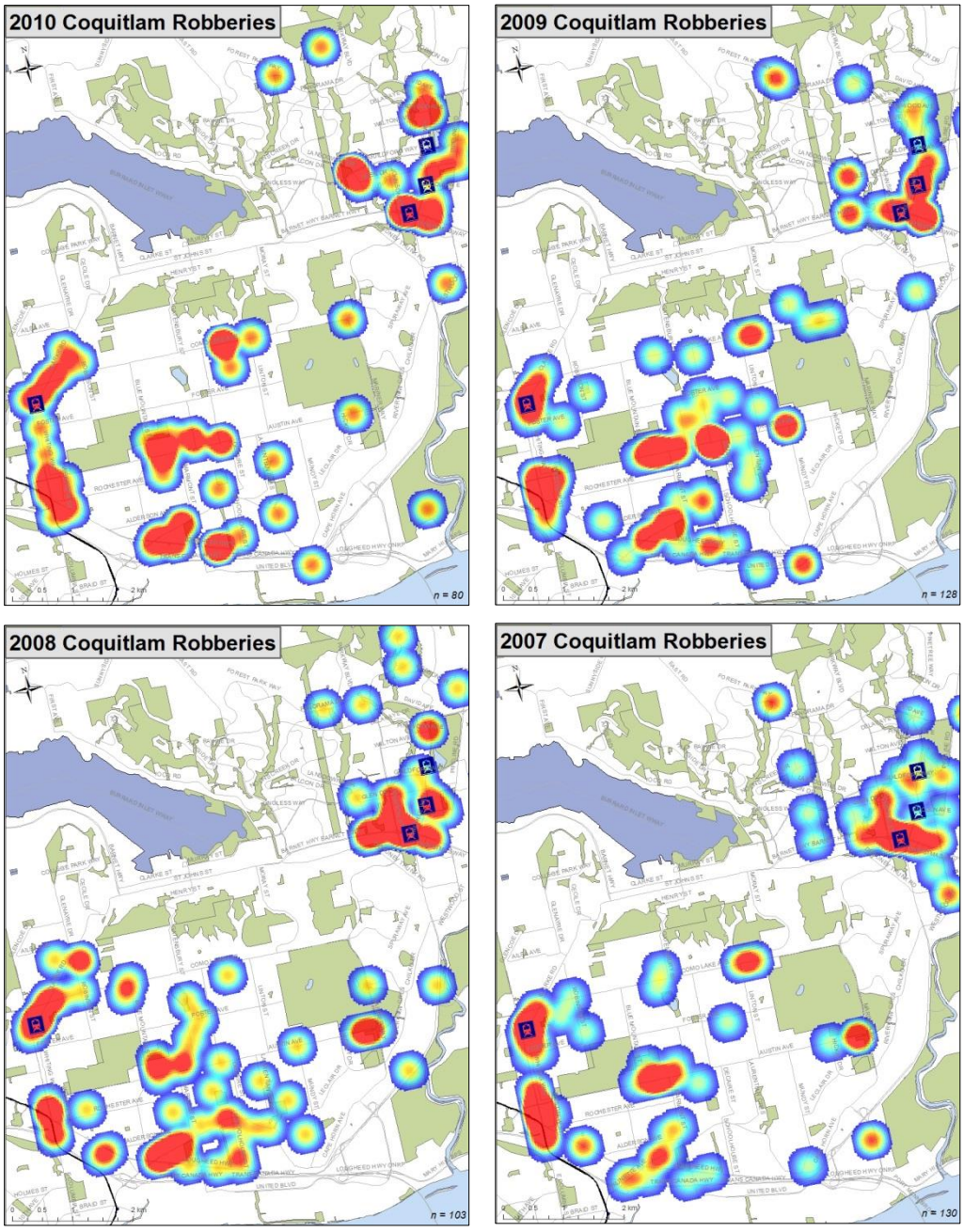
Robberies		
	Coquitlam	**% Change**
2012	98	40%
2011	70	-13%
2010	80	-38%
2009	128	24%
2008	103	-21%
2007	130	-



Robberies			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	98	18	18%
2011	70	14	20%
2010	80	16	20%
2009	128	26	20%
2008	103	27	26%
2007	130	41	32%





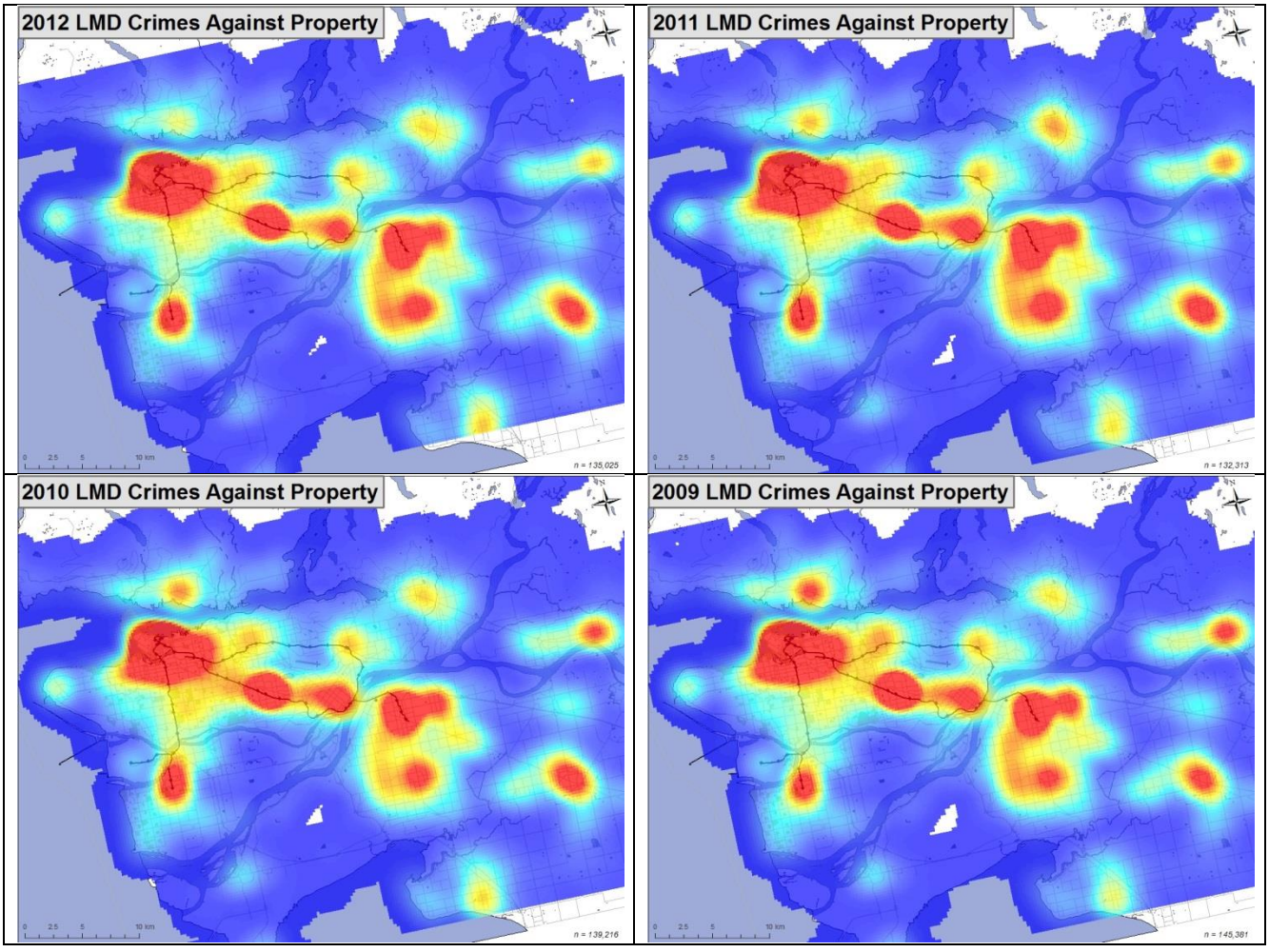


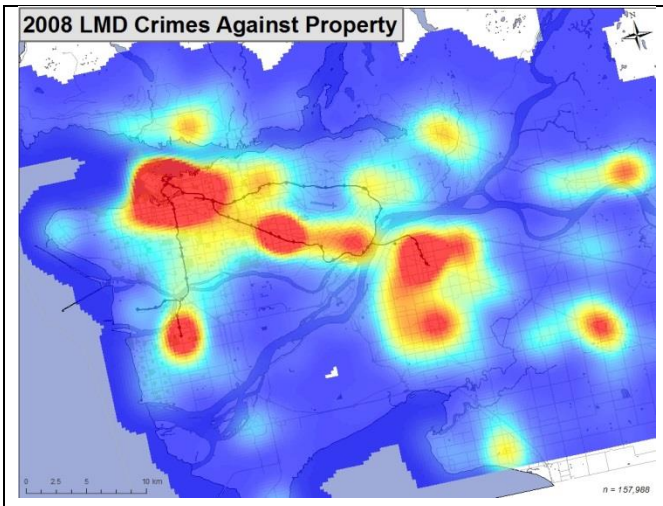
As illustrated, the distribution of Robberies in Coquitlam has remained relatively consistent over the years with obvious hot spots in the Coquitlam Centre area as well as along the North Road corridor from Lougheed up through Burquitlam. Similar to what was seen in Vancouver with the Canada Line, while the introduction of the new Skytrain line may not result in a higher number of Robberies city-wide, a greater proportion of incidents may shift to those areas in close proximity to stations. These types of strong-arming robberies have

garnered a great deal of media attention over the past few years and as such this crime type would be worthy of monitoring by law enforcement officials.

Lower Mainland Property Crime – Crimes Against Property

Despite a slight increase from 2011 to 2012, overall, property crime has been on a slight decline across the Lower Mainland over the past several years. As illustrated in the maps below, there has been no significant change in the distribution of property crime across the region in the past 5 years. Although the Canada Line opened in August 2009, the analysis of crime data indicates that the hotspots of violent crime in the areas surrounding these light-rail stations pre-existed the introduction of new line. Similarly, the Coquitlam Centre area which will be the future terminus of the Evergreen Line has also been an area of concentration for property crime in the region for several years.





LMD Crimes Against Property		
	LMD	**Change**
2012	135,025	2%
2011	132,313	-5%
2010	139,216	-4%
2009	145,381	-8%
2008	157,988	n/a

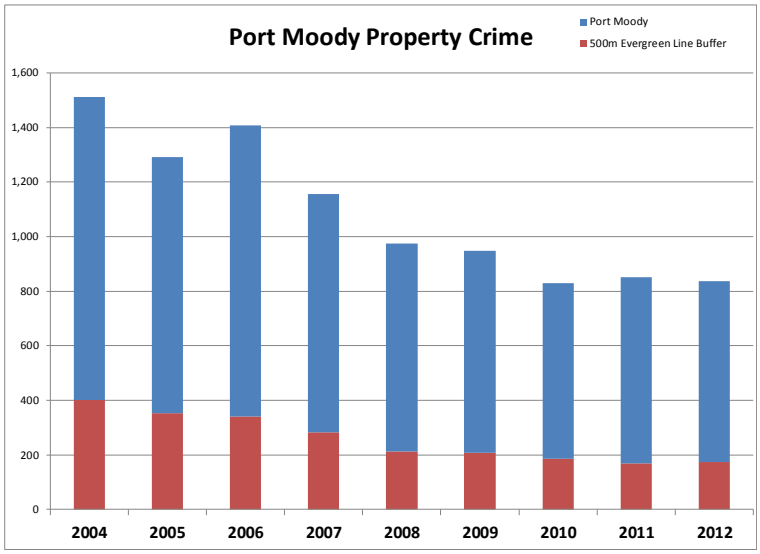
City of Port Moody Property Crime – Crimes Against Property

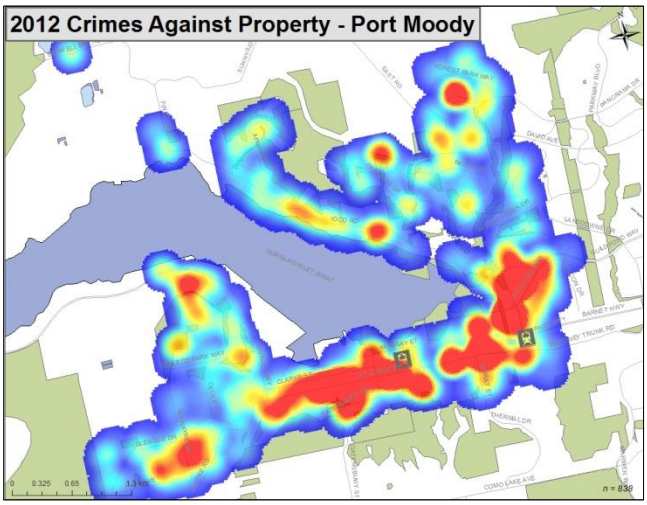
The City of Port Moody has seen a significant decrease in property crime over the past 9 years. As seen below, this downwards trend has been experienced both city-wide as well as in the areas surrounding future Evergreen Line stations, with the proportion of property crime located within 500m buffers of Evergreen Line stations decreasing slightly over time. On average, almost a quarter (23%) of property crime in the city has occurred within 500m's of one of the future Evergreen Line stations.

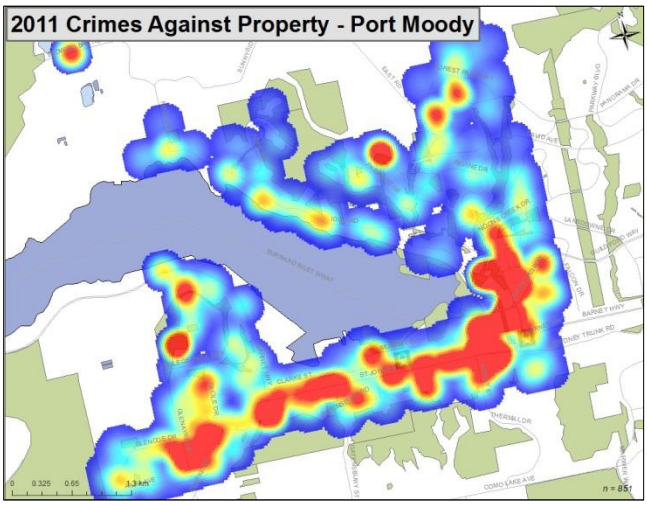
Crimes Against Property		
	Port Moody	% Change
2012	838	-2%
2011	851	3%
2010	830	-12%
2009	948	-3%
2008	974	-16%
2007	1,156	-18%
2006	1,408	9%
2005	1,291	-15%
2004	1,511	-

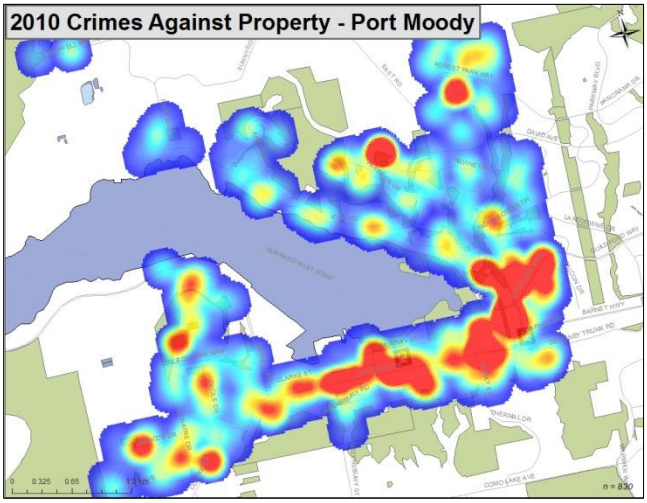
Crimes Against Property			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	838	175	21%
2011	851	168	20%
2010	830	187	23%
2009	948	207	22%
2008	974	212	22%
2007	1,156	283	24%
2006	1,408	342	24%
2005	1,291	353	27%
2004	1,511	401	27%

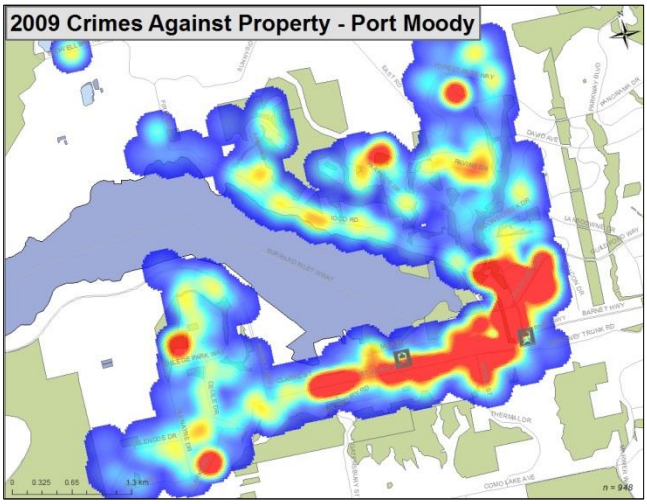
Crimes Against Property		
	500m Evergreen Line Buffer	% Change
2012	175	4%
2011	168	-10%
2010	187	-10%
2009	207	-2%
2008	212	-25%
2007	283	-17%
2006	342	-3%
2005	353	-12%
2004	401	-

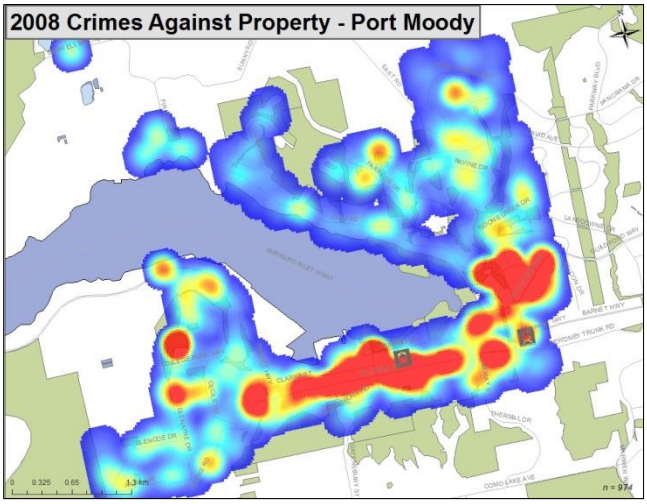


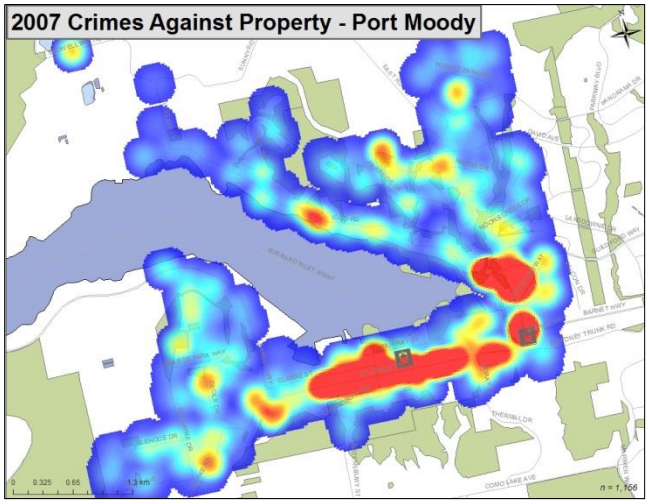

2012 Crimes Against Property - Port Moody

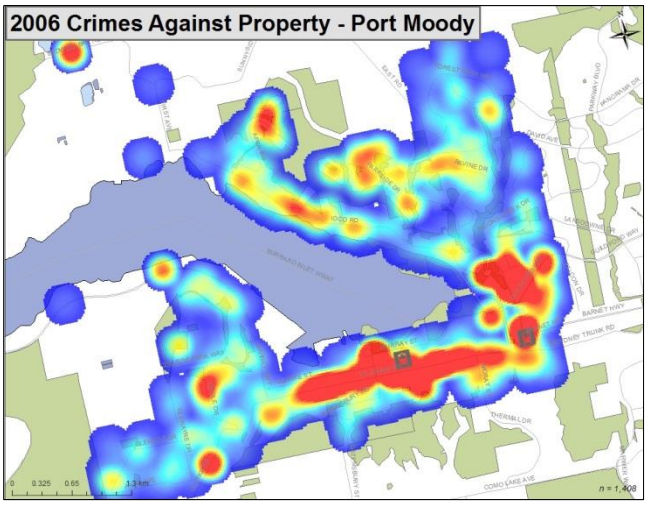

2011 Crimes Against Property - Port Moody

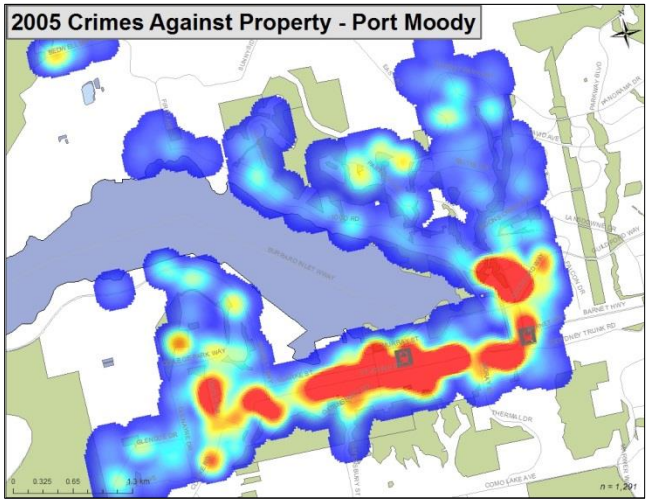

2010 Crimes Against Property - Port Moody

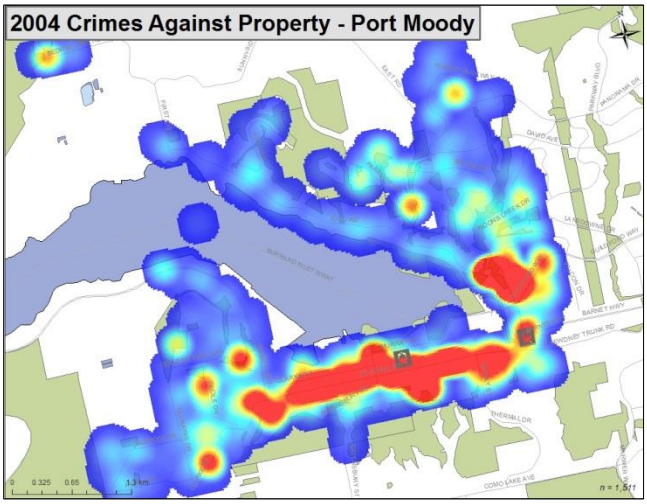

2009 Crimes Against Property - Port Moody


2008 Crimes Against Property - Port Moody


2007 Crimes Against Property - Port Moody







The distribution of property crime in the City of Port Moody has remained consistent over the past 9 years with notable hotspots along the St. John's corridor and Newport Village area. This is understandable in the sense that these are the main thoroughfares and most target rich environments in Port Moody that have experienced a great deal of commercial and residential development in recent years.

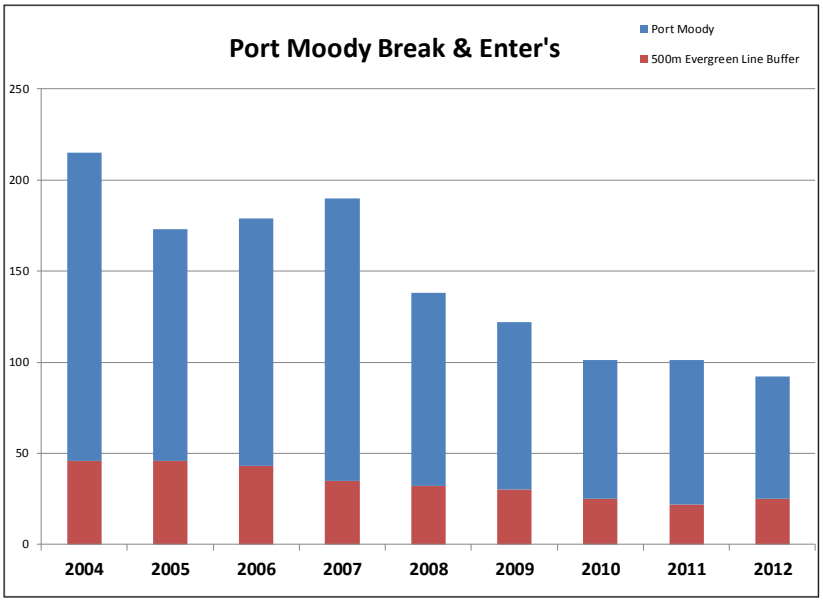
City of Port Moody Break & Enters

Break & Enters (B&E's) occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

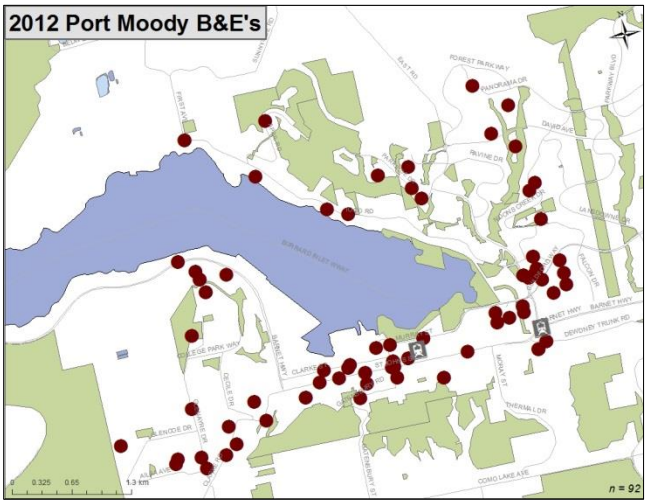
2120-1 Break & Enter – Business
2120-2 Break & Enter – Residence
2120-3 Break & Enter – Other
2120-4 Break & Enter – Seasonal Res

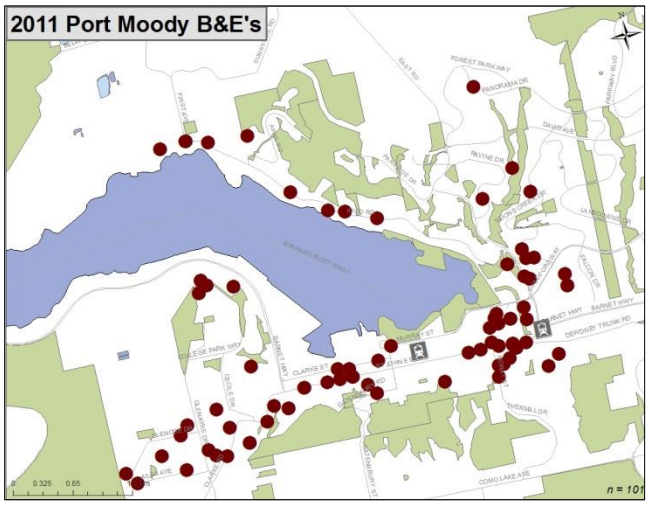
Port Moody has experienced a sharp decline in number of Break & Enters throughout the city with the number of incidents in 2012 being less than half what was seen in 2004. These drops have occurred despite the boom in residential developments and addition of numerous new high rise apartment buildings (ie: the creation of new targets).

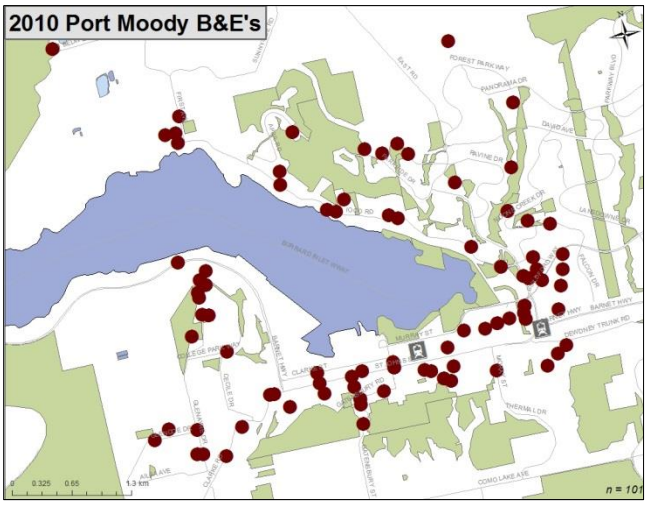
B & E's		
	Port Moody	% Change
2012	92	-9%
2011	101	0%
2010	101	-17%
2009	122	-12%
2008	138	-27%
2007	190	6%
2006	179	3%
2005	173	-20%
2004	215	-



Port Moody B & E's			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	92	25	27%
2011	101	22	22%
2010	101	25	25%
2009	122	30	25%
2008	138	32	23%
2007	190	35	18%
2006	179	43	24%
2005	173	46	27%
2004	215	46	21%






2010 Port Moody B&E's
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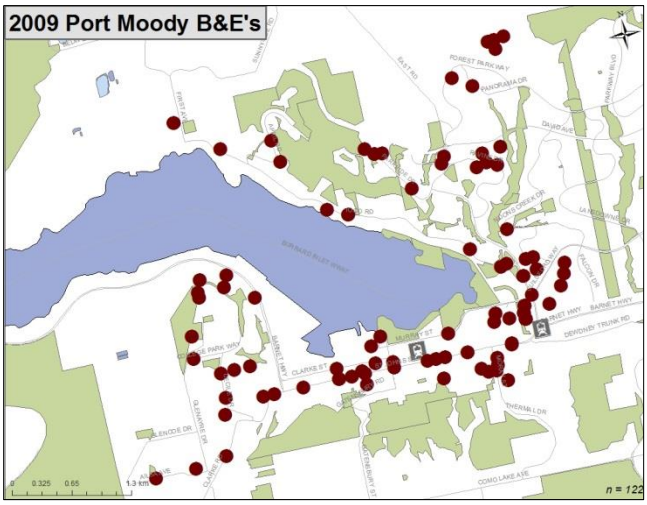
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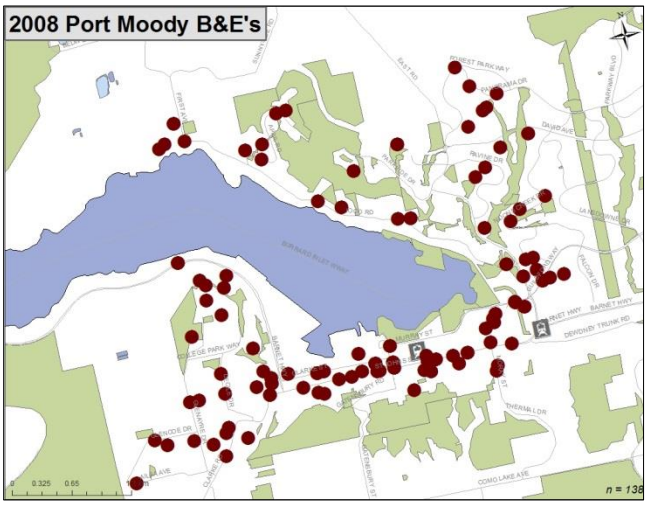
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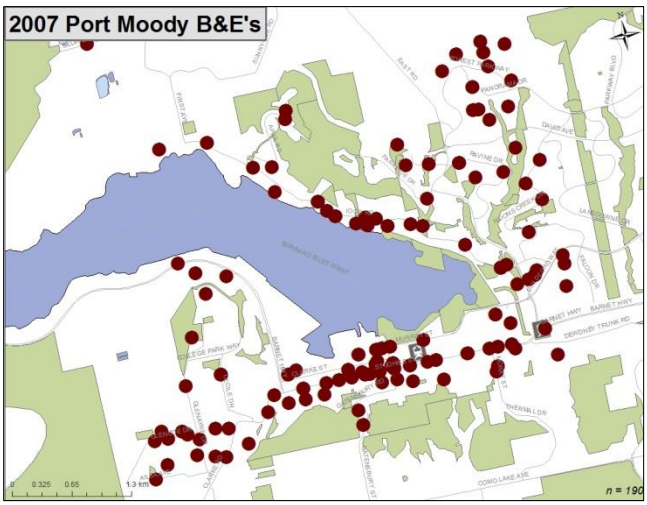
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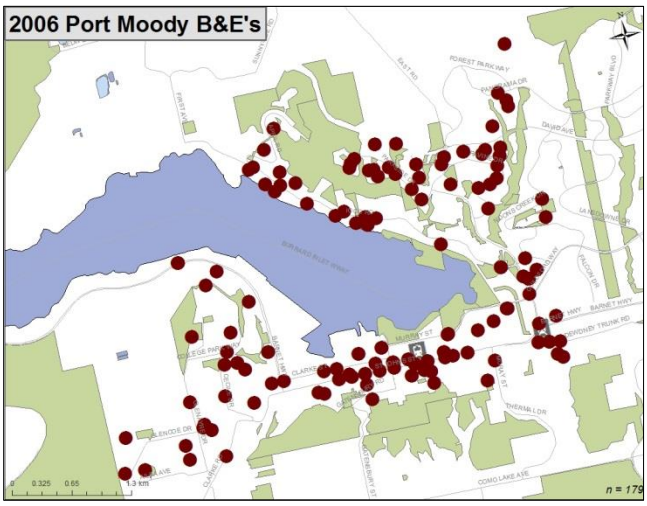
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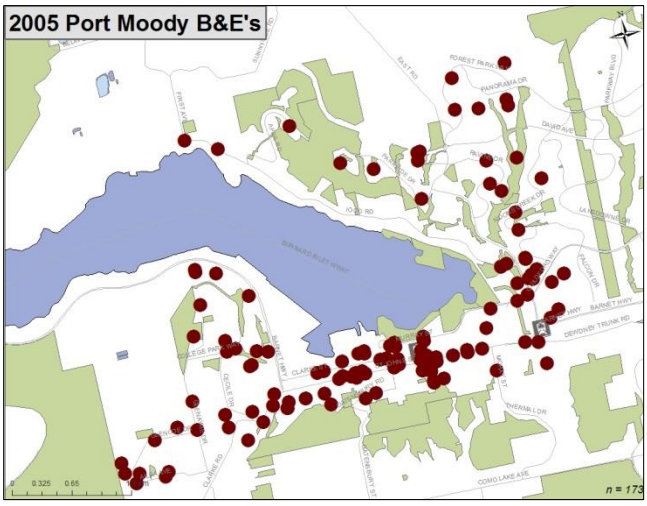
2005 Port Moody B&E's
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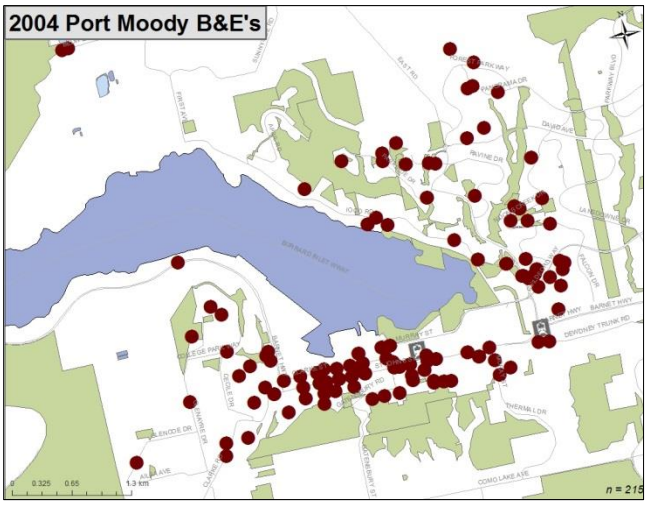


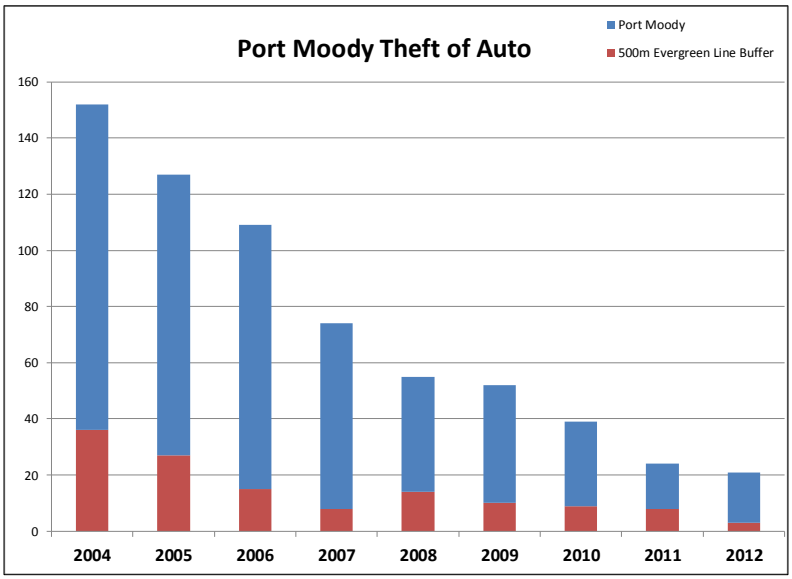
City of Port Moody Theft of Auto

Thefts of Auto (TOA) occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

2135-6 Theft of Auto Under (Previously 2141-1)
2135-1 Theft of Auto Over (Previously 2131-1)
2135-7 Theft of Truck Under (Previously 2141-2)
2135-2 Theft of Truck Over (Previously 2131-2)
2135-9 Theft Other Veh Under (Previously 2141-4)
2135-4 Theft Other Veh Over (Previously 2131-4)
2135-8 Theft Motorcycle Under (Previously 2141-3)
2141-3 Theft Motorcycle Over (Previously 2131-3)

The City of Port Moody has seen a drastic drop of Theft of Auto rates over the last 9 years. This decline in TOA's which is illustrated in the charts below is in line with both Lower Mainland and province-wide trends. While these drops in TOA's have been seen both city-wide as well as within the 500m buffer areas surrounding the future Evergreen Line, the proportion of TOA incidents occurring near the future Skytrain line has actually decreased.

Theft of Auto		
	Port Moody	% Change
2012	21	-13%
2011	24	-38%
2010	39	-25%
2009	52	-5%
2008	55	-26%
2007	74	-32%
2006	109	-14%
2005	127	-16%
2004	152	-



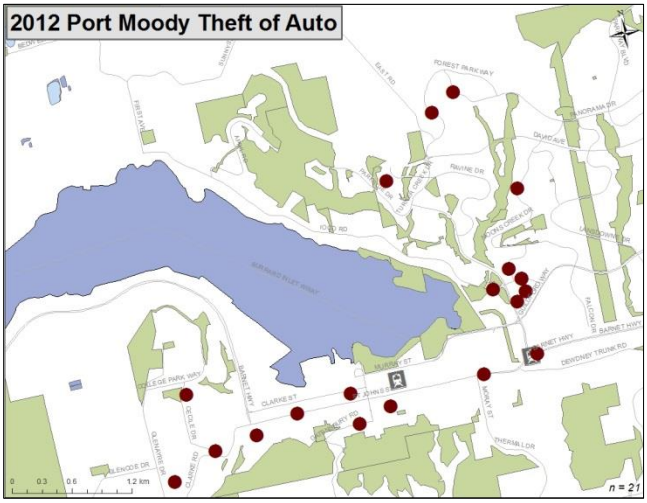
Theft of Auto			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	21	3	14%
2011	24	8	33%
2010	39	9	23%
2009	52	10	19%
2008	55	14	25%
2007	74	8	11%
2006	109	15	14%
2005	127	27	21%
2004	152	36	24%

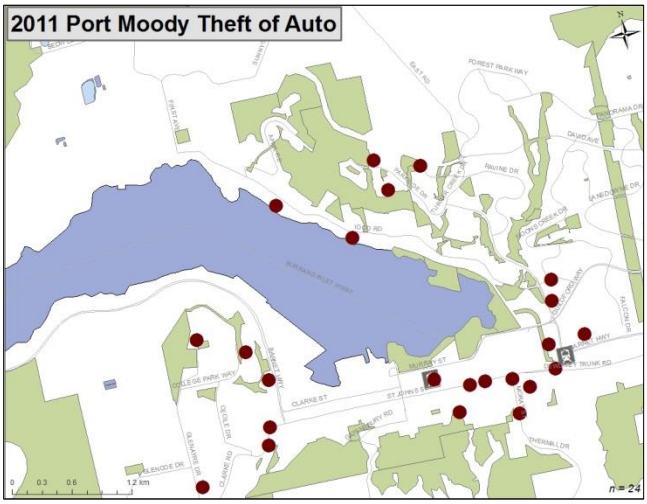
As discussed in the Canada Line Study, several factors have likely contributed to the sharp drop in TOA's in the past 9 years. These include strategies relating to awareness, prevention and enforcement. Over the years, many police agencies have implemented educational strategies in an effort to increase the public's awareness regarding the risks associated to leaving valuables visible in parked cars. Prevention strategies have also played a key role including the use of steering wheel clubs and alarm systems.

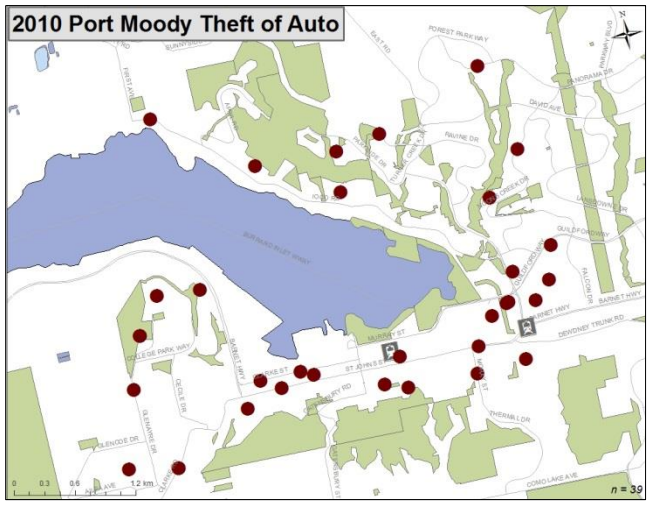
Furthermore, changes in design have made it more difficult for thieves to steal newer vehicles. As discussed in a recent Vancouver Sun Article:

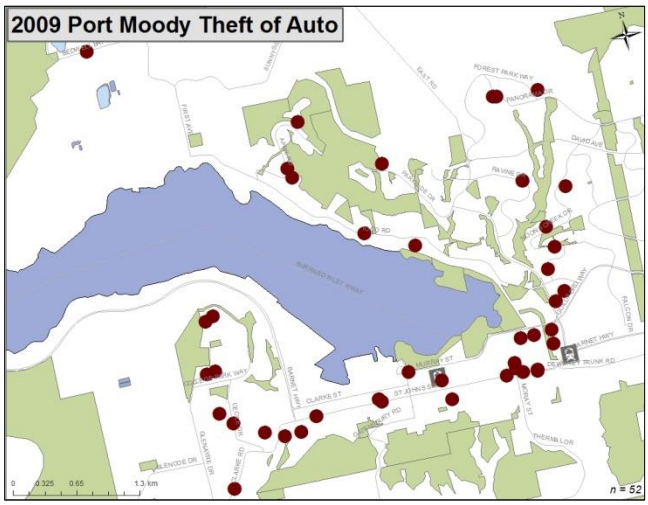
> "Immobilizers have been mandatory on all vehicles sold in Canada since 2007, but many manufacturers started including them before that.
>
> The trend to immobilizers explains why older cars, specifically those built in the late 1980s and early 1990s, are much more likely to be stolen in B.C. than recent models.
>
> And as the number of older cars on the road declines each year — as old vehicles wear out and head to the junk yard — so, too, do the available targets for car thieves."
>
> ** Source: "Why is auto crime down in B.C.?";*
> *Skelton, Chad, Vancouver Sun, September 27th, 2013.*

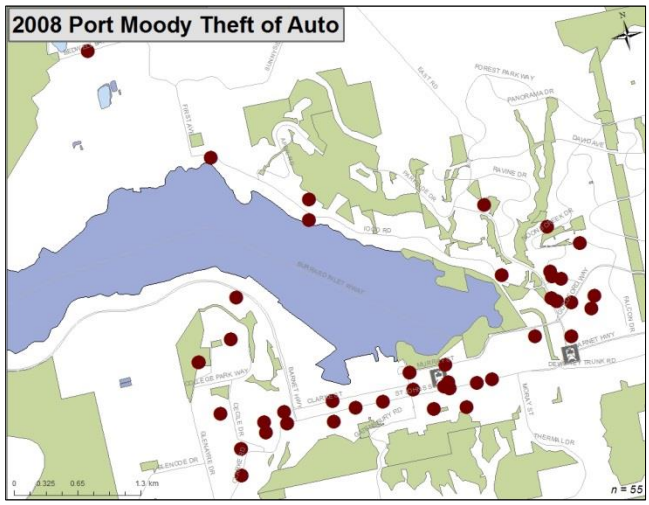
Enforcement initiatives which have also undoubtedly contributed to the declining TOA rates have included the Integrated Municipal Provincial Auto Crime Team's Bait Car Program, Crime Reduction and Chronic Offender Programs.

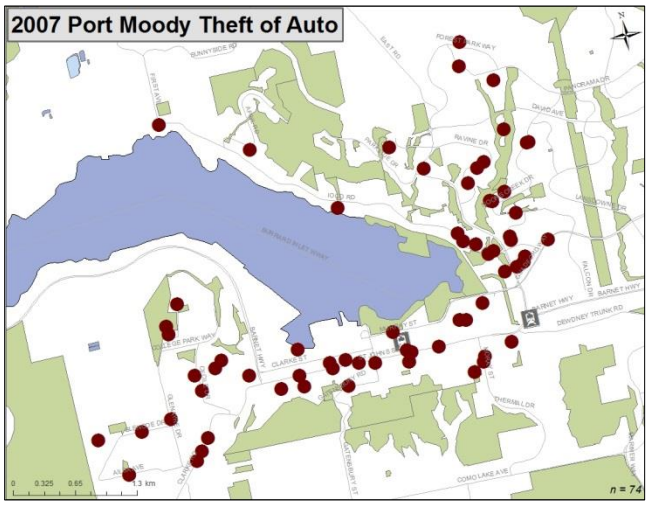


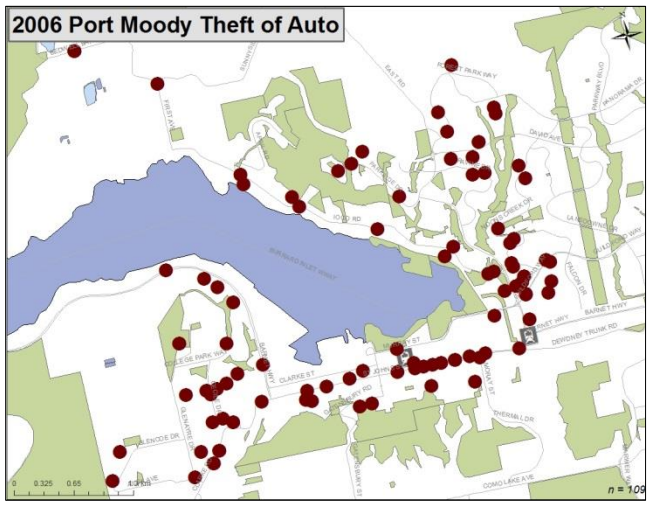












As seen in the maps above, while the overall volume of TOA's in the City of Port Moody is significantly lower, the geographical distribution of incidents has remained scattered

throughout the city covering the St. John's corridor, College Park area, Newport Village and Heritage Mountain.

City of Port Moody Theft from Auto

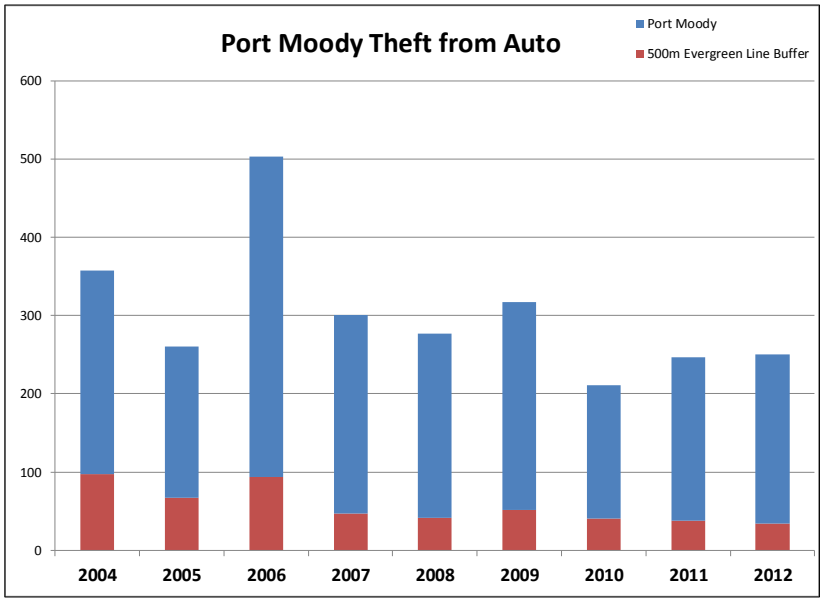
Thefts from Auto (TFA) incidents occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

2142-0 Theft from MV Under $5000

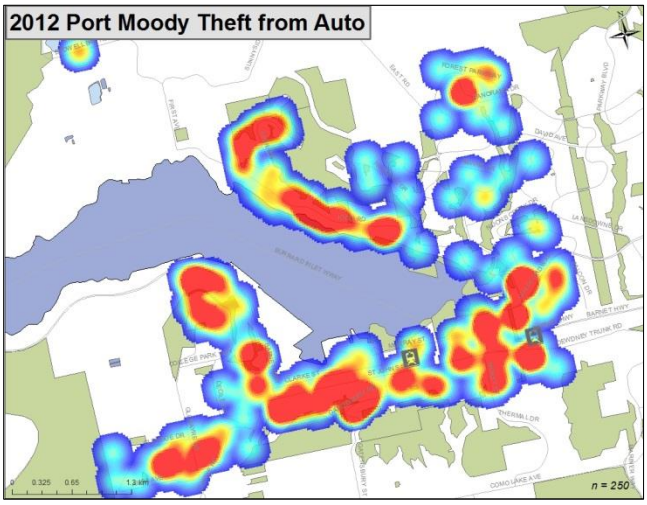
2132-0 Theft from MV Over $5000

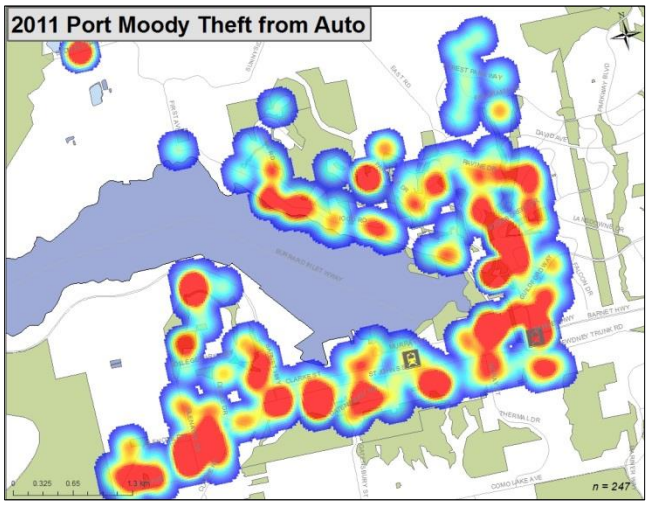
With the exception of 2006, there has been a steady downwards trend in TFA's in the City of Port Moody over the past 9 years. Not only were these drops seen city-wide, but also in the areas surrounding future Evergreen Line. In addition to these general decreases in TFA rates, the relative proportion of incidents occurring near the future Skytrain stations has also improved.

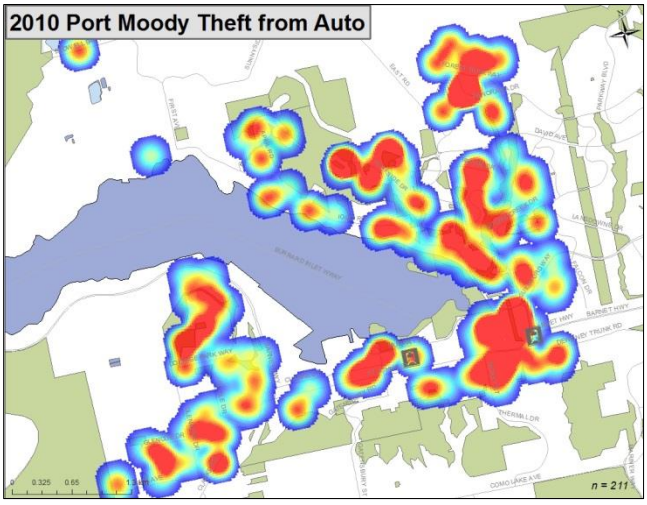
Theft from Auto		
	Port Moody	**% Change**
2012	250	1%
2011	247	17%
2010	211	-33%
2009	317	14%
2008	277	-8%
2007	301	-40%
2006	503	93%
2005	260	-27%
2004	357	-

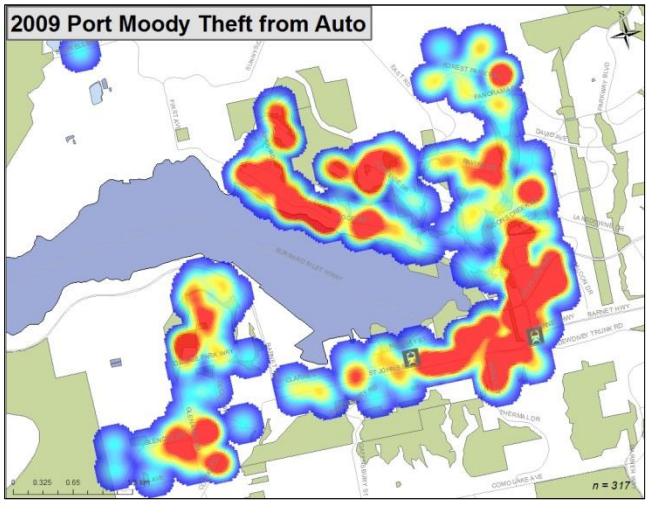


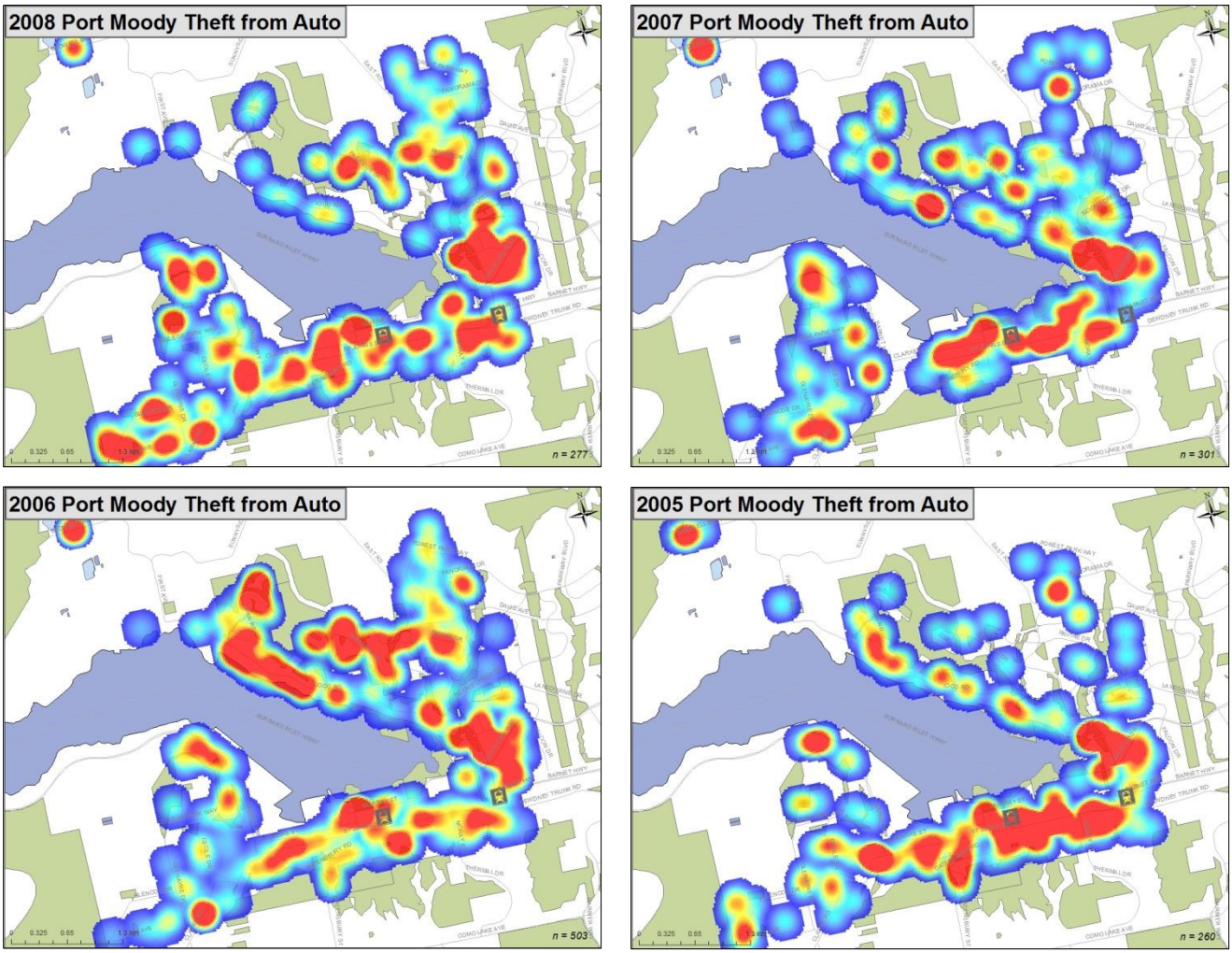
Theft from Auto			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	250	34	14%
2011	247	38	15%
2010	211	41	19%
2009	317	52	16%
2008	277	42	15%
2007	301	47	16%
2006	503	94	19%
2005	260	67	26%
2004	357	97	27%











Although the overall number of TFA's in the City of Port Moody in 2012 was 30% less when compared to 2004, the overall distribution of TFA incidents has remained relatively unchanged with the majority of the city being affected. The most evident hotspots being the St. John's corridor, Newport Village, Ioco Road and College Park areas.

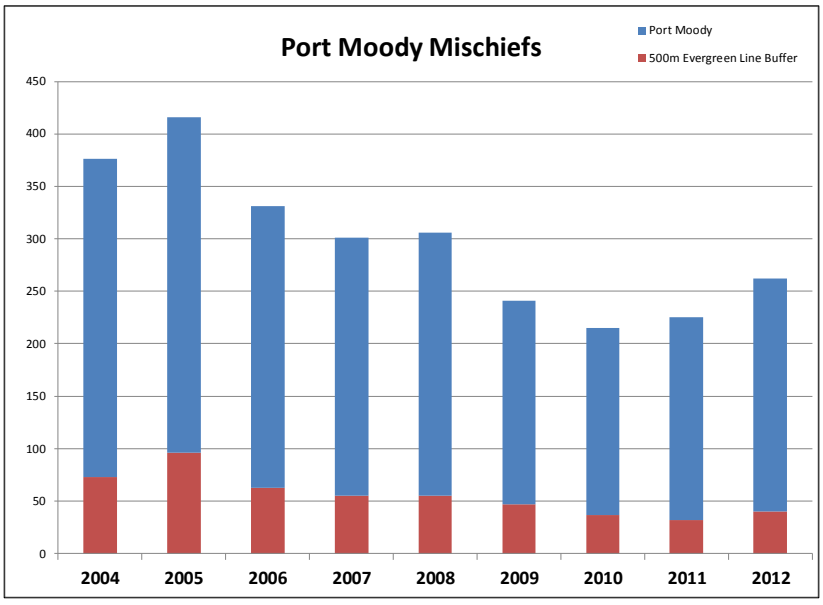
City of Port Moody Mischiefs

Mischief incidents occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

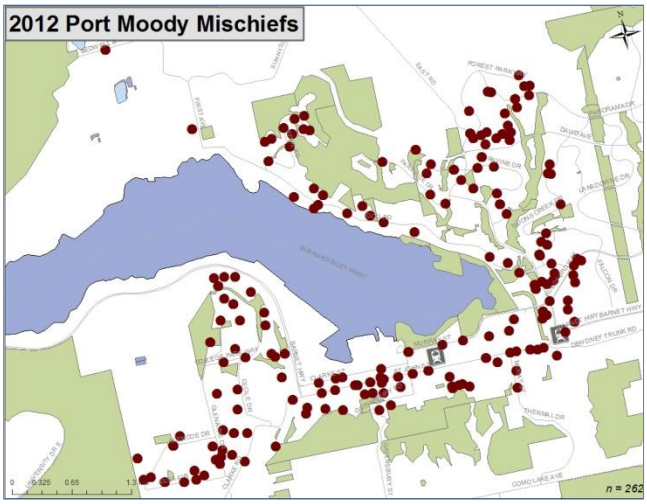
2170-4 Mischief $5000 or Under
2170-3 Mischief $5000 or Over

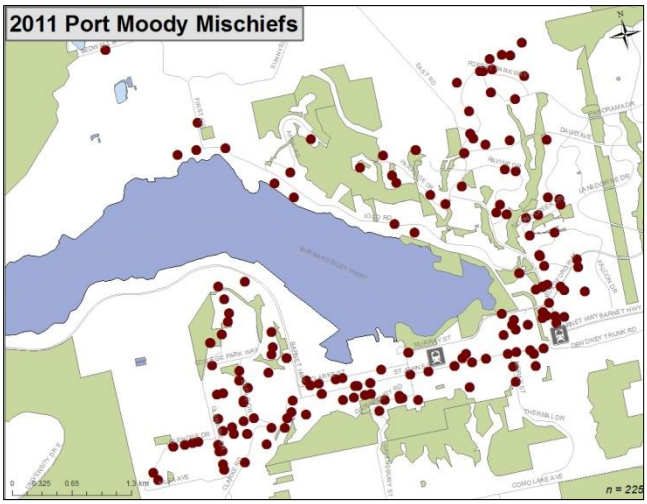
Overall, Port Moody has seen a steady decrease in the number of Mischiefs both city-wide as well as in the areas surrounding the future Evergreen Line stations. This particular crime type would be worthy of monitoring with a specific emphasis on the generation of graffiti related files along the Evergreen Line. Graffiti on Skytrain is a system-wide phenomenon throughout the Lower Mainland which is not unique to any particular area or line.

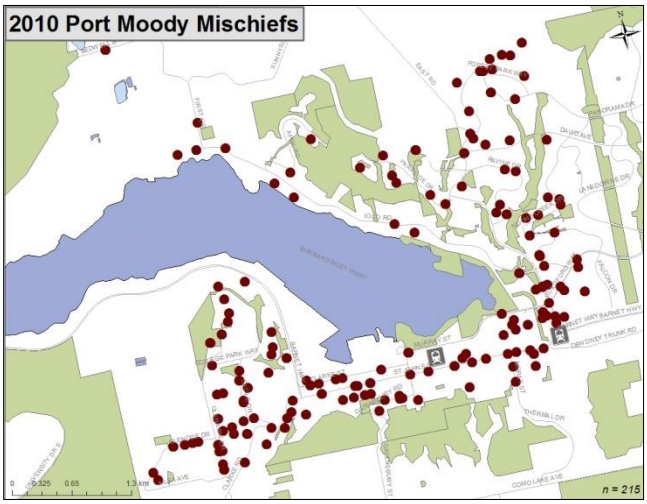
Mischiefs		
	Port Moody	% Change
2012	262	16%
2011	225	5%
2010	215	-11%
2009	241	-21%
2008	306	2%
2007	301	-9%
2006	331	-20%
2005	416	11%
2004	376	-

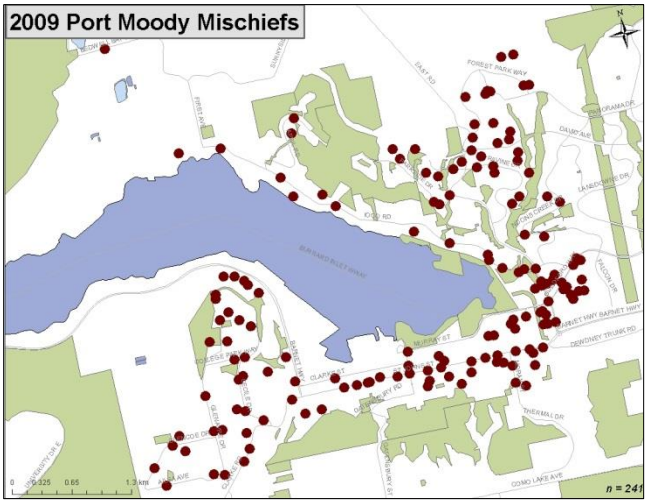


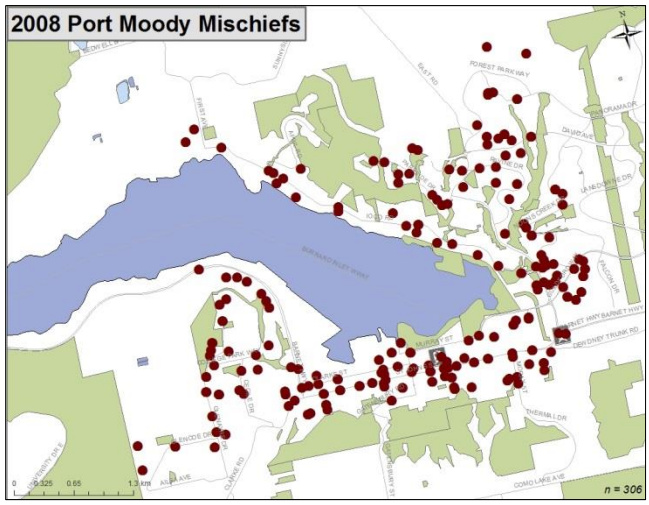
Mischiefs			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	262	40	15%
2011	225	32	14%
2010	215	37	17%
2009	241	47	20%
2008	306	55	18%
2007	301	55	18%
2006	331	63	19%
2005	416	96	23%
2004	376	73	19%

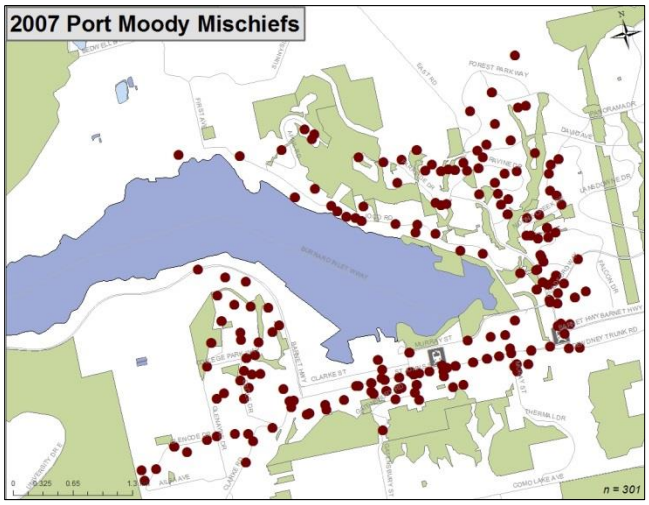


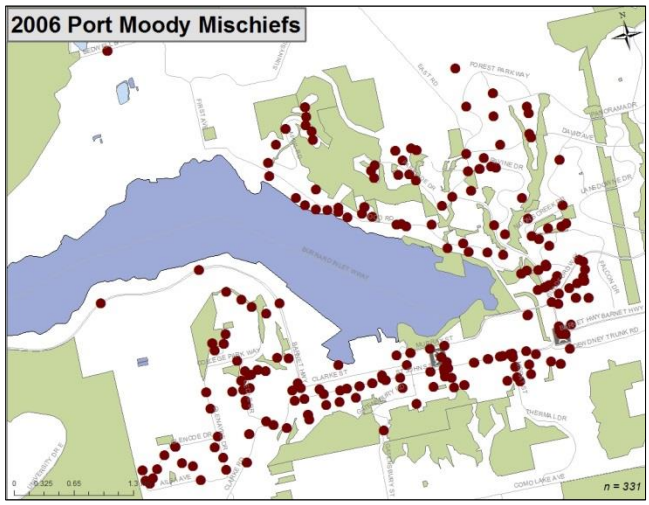


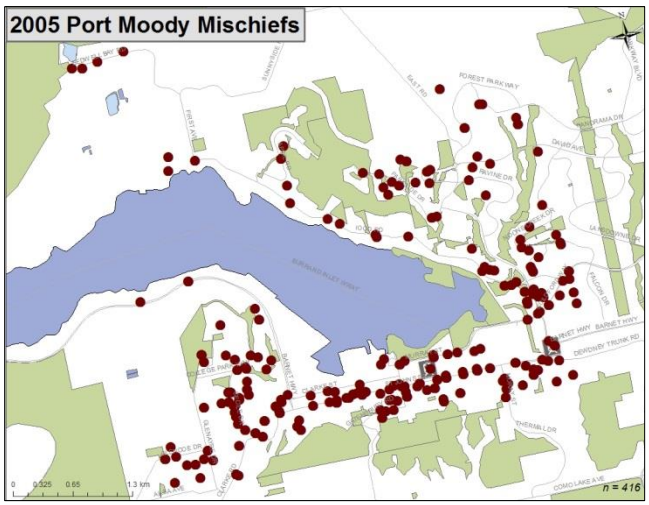


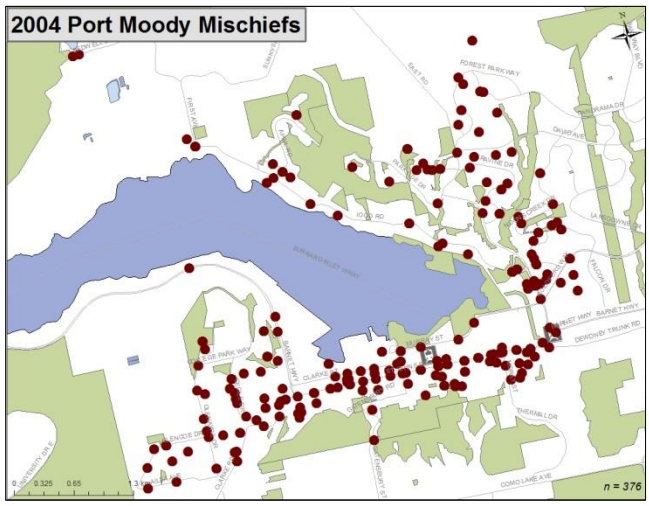












A comparison of maps from 2004 to 2012 shows that the distribution of Mischiefs in Port Moody has remained constant over the years and has been spread city-wide.

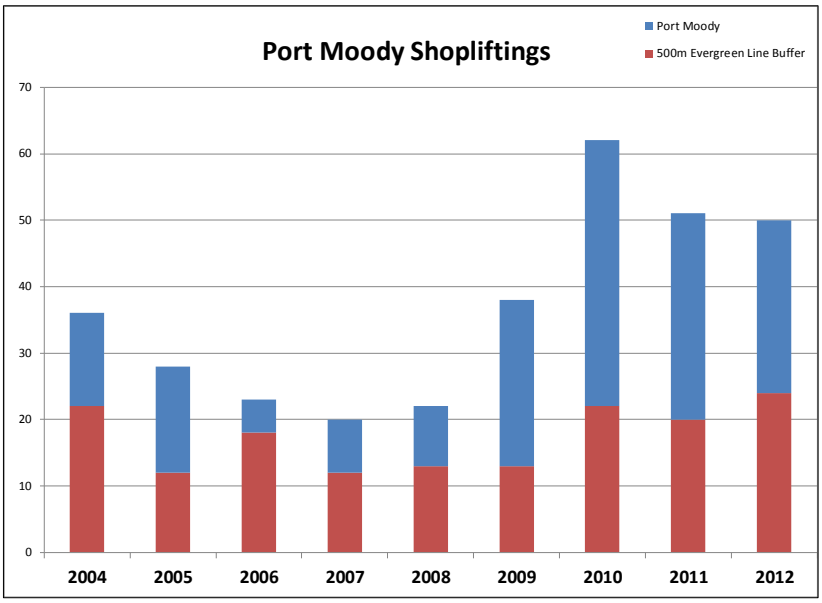
City of Port Moody Shoplifting

Shoplifting incidents occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

2143-0 Theft – Shoplifting Under $5000
2133-0 Theft – Shoplifting Over $5000

Despite a steady decrease in earlier years, the City of Port Moody has experienced a surge in Shoplifting incidents over the past 4 years. This is not all that surprising given the addition of new retail targets such as Shoppers Drug Mart, Thrifty's, and various stores in the SuterBrook area. The introduction of new targets to the city has undoubtedly provided new opportunities for offenders as the area has experienced surges in commercial developments.

Shopliftings		
	Port Moody	% Change
2012	50	-2%
2011	51	-18%
2010	62	63%
2009	38	73%
2008	22	10%
2007	20	-13%
2006	23	-18%
2005	28	-22%
2004	36	-



Shopliftings			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	50	24	48%
2011	51	20	39%
2010	62	22	35%
2009	38	13	34%
2008	22	13	59%
2007	20	12	60%
2006	23	18	78%
2005	28	12	43%
2004	36	22	61%

While Vancouver and Richmond have both experienced increases in Shopliftings over the past several years, the introduction of the Evergreen Line is not expected to have a

significant impact in relation to this crime type since Port Moody does not have any large shopping malls similar to those in Vancouver and Richmond.

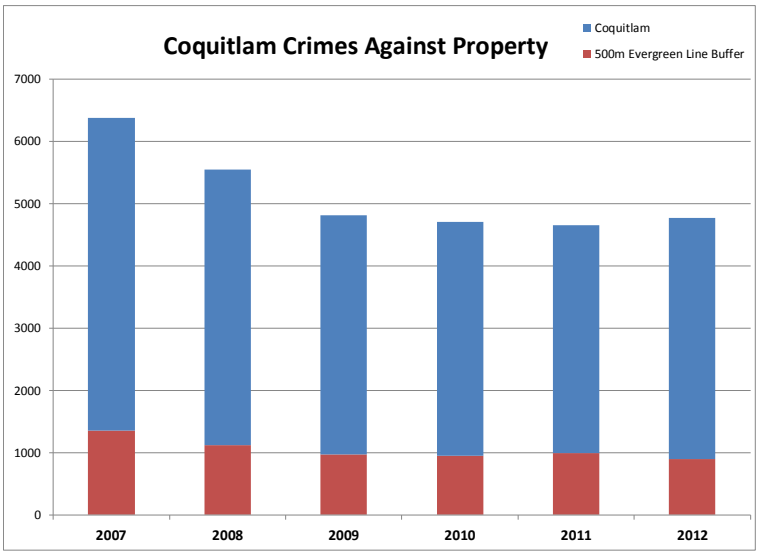
City of Coquitlam Property Crime – Crimes Against Property

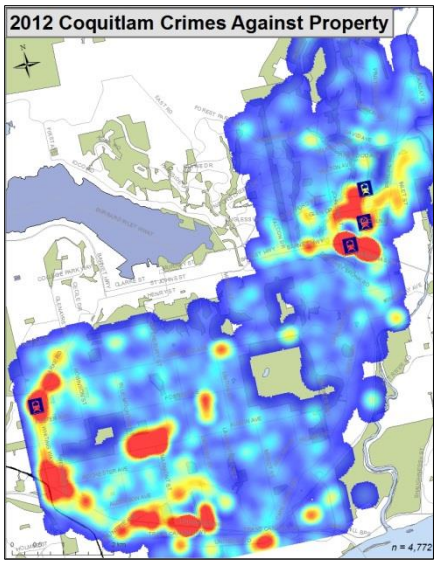
The City of Coquitlam has seen an overall decrease in property crime over the past few years. As seen below, this downwards trend has been experienced both city-wide as well as in the areas surrounding future Evergreen Line stations, with the proportion of property crime located within 500m buffers of Evergreen Line stations remaining proportional over time.

Crimes Against Property		
	Coquitlam	% Change
2012	4,772	3%
2011	4,653	-1%
2010	4,712	-2%
2009	4,811	-13%
2008	5,546	-13%
2007	6,382	-

Crimes Against Property			
	Coquitlam	500m Evergreen Line Buffer	% w/in Buffer
2012	4,772	896	19%
2011	4,653	990	21%
2010	4,712	946	20%
2009	4,811	971	20%
2008	5,546	1,119	20%
2007	6,382	1,353	21%

Crimes Against Property		
	500m Evergreen Line Buffer	% Change
2012	896	-9%
2011	990	5%
2010	946	-3%
2009	971	-13%
2008	1,119	-17%
2007	1,353	-




2012 Coquitlam Crimes Against Property
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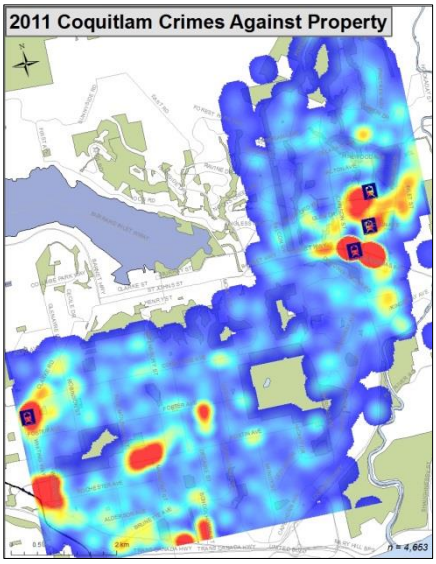
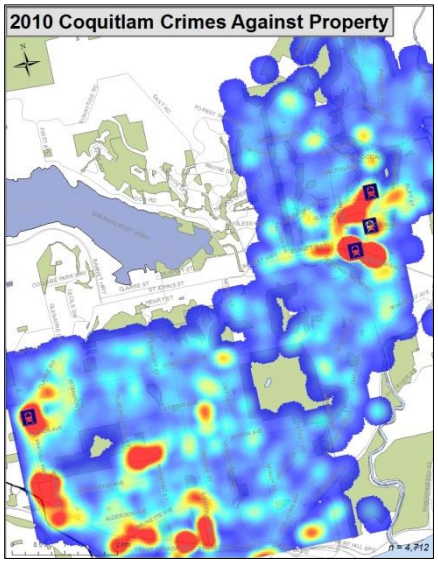
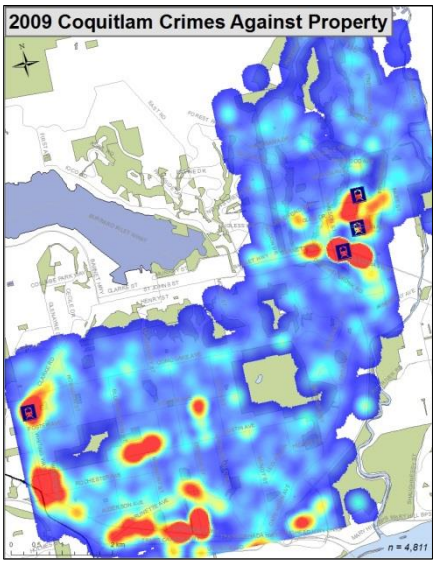
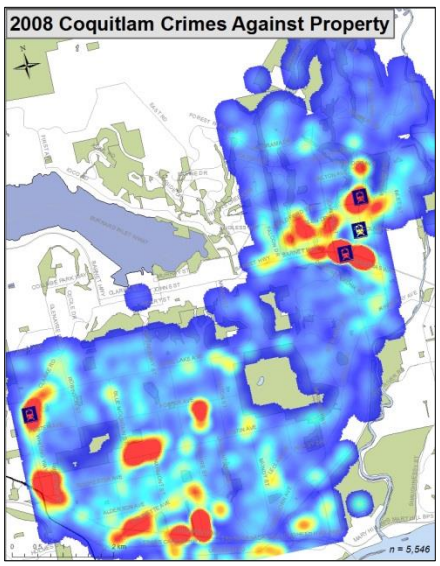
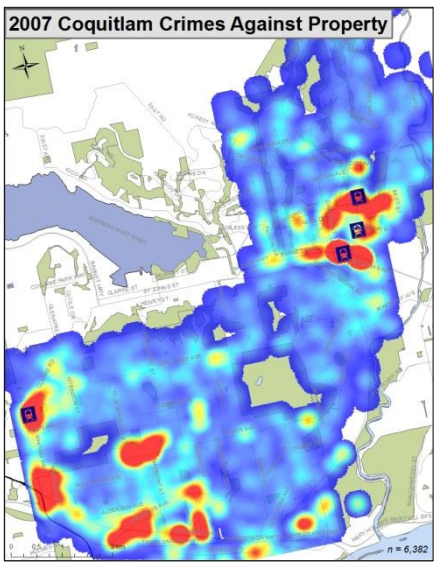

2011 Coquitlam Crimes Against Property
n = 4,653


2010 Coquitlam Crimes Against Property
n = 4,712


2009 Coquitlam Crimes Against Property
n = 4,811


2008 Coquitlam Crimes Against Property
n = 5,546


2007 Coquitlam Crimes Against Property
n = 6,382

The distribution of property crime in the City of Coquitlam has remained consistent over the past 6 years with notable hotspots in the Burquitlam and Coquitlam Centre areas. This is understandable in the sense that these are target rich environments that have experienced a great deal of commercial and residential development in recent years.

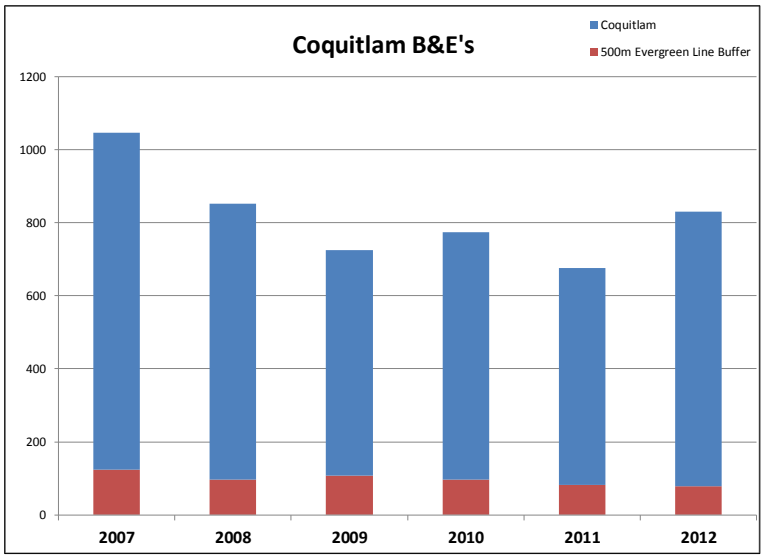
City of Coquitlam Break & Enter's

Break & Enters (B&E's) occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

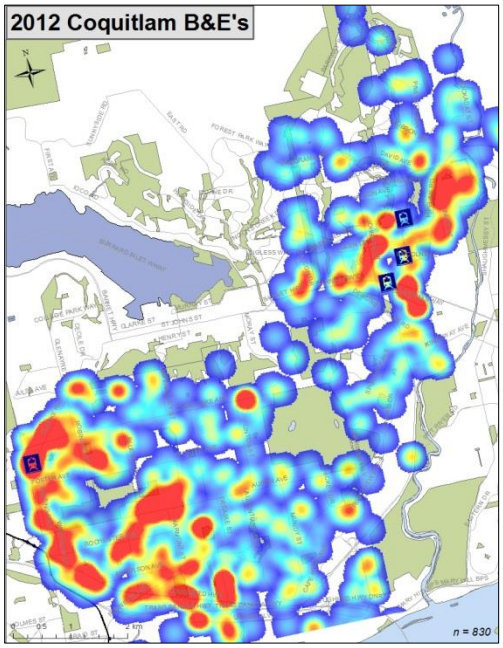
2120-1 Break & Enter – Business
2120-2 Break & Enter – Residence
2120-3 Break & Enter – Other
2120-4 Break & Enter – Seasonal Res

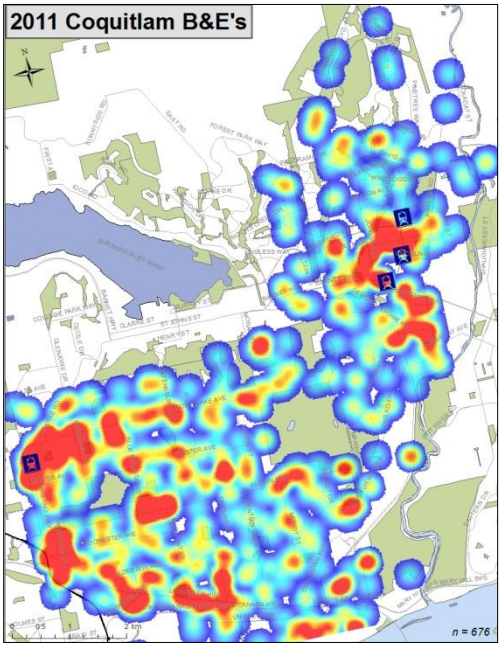
As illustrated below, Coquitlam has experienced a relatively steady decline in number of Break & Enters throughout the city over the past 6 years. Similar to what has been seen in Port Moody, these drops have occurred despite a boom in residential developments and addition of numerous new high rise apartment buildings (ie: the creation of new targets).

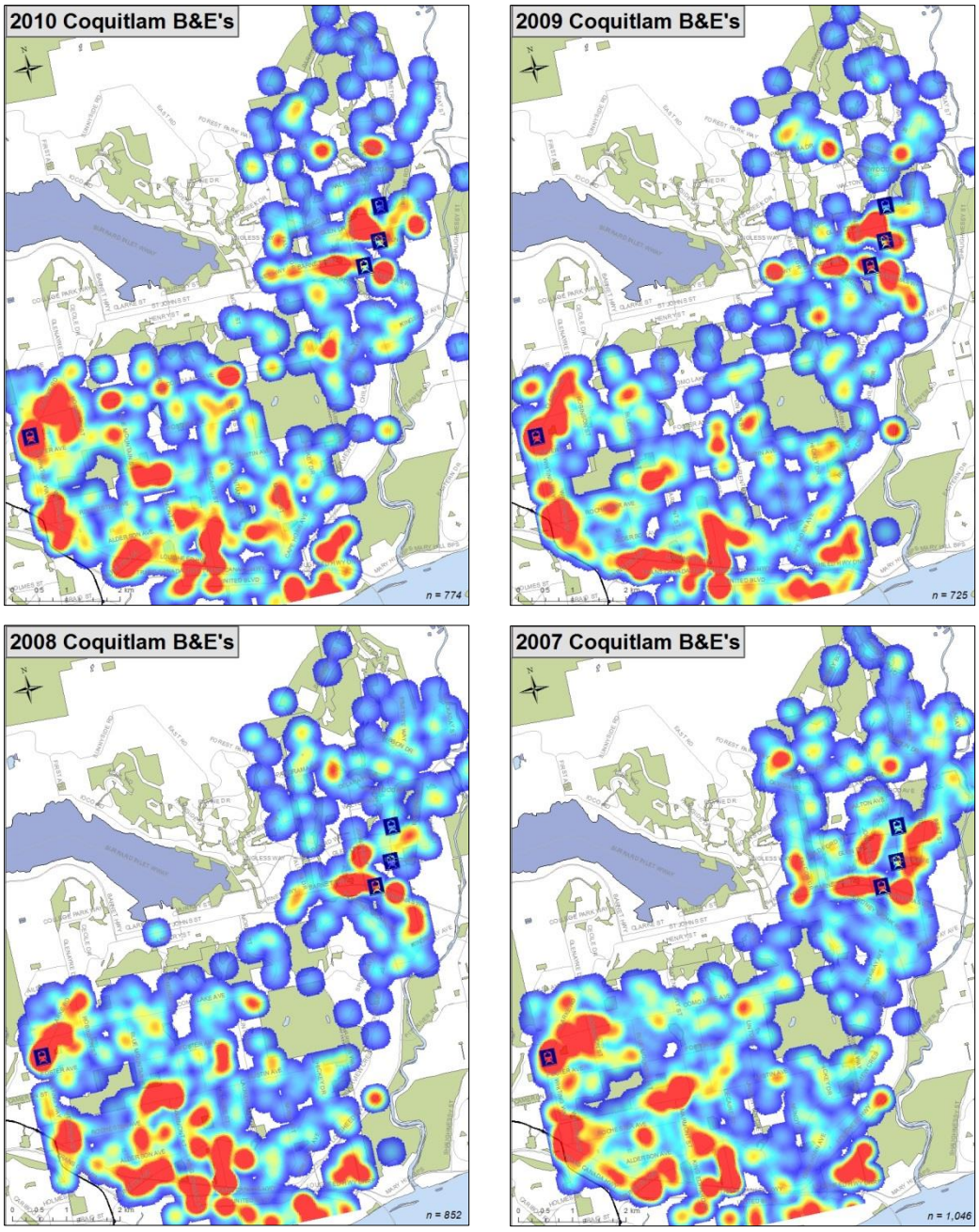
B & E's		
	Coquitlam	**% Change**
2012	830	23%
2011	676	-13%
2010	774	7%
2009	725	-15%
2008	852	-19%
2007	1,046	-



B & E's			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	830	79	10%
2011	676	82	12%
2010	774	97	13%
2009	725	107	15%
2008	852	96	11%
2007	1,046	123	12%







As seen in these density maps, the 3 future Coquitlam Evergreen Line stations will be built in areas with pre-existing Break & Enter hot spots – these areas (such as the Coquitlam Centre and Burquitlam neighbourhoods) have already seen concentrations in property crime even prior to the opening of the Evergreen Line. It is this type of residential density that by nature makes these areas such attractive target rich environments for criminals while at the same time being the most logical locations for planners to build new light-rail stations.

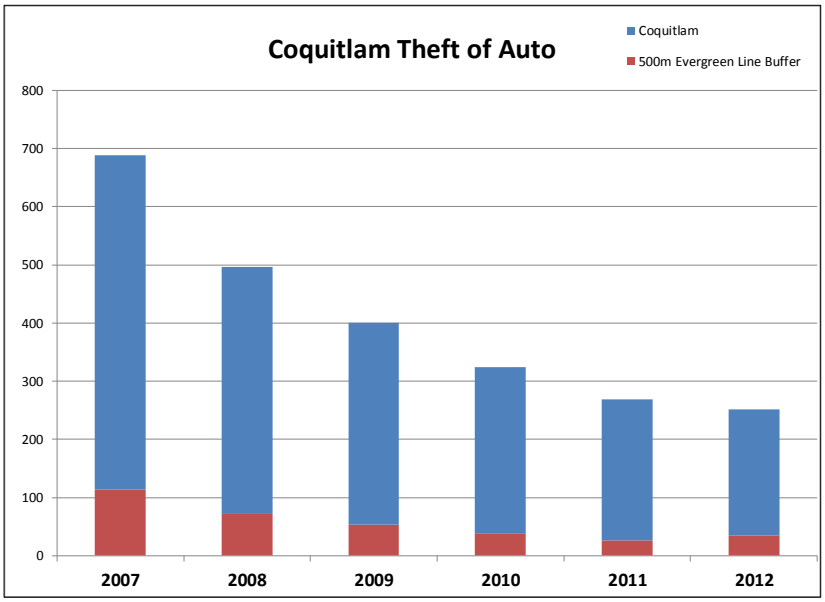
City of Coquitlam Theft of Auto

Thefts of Auto (TOA) occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

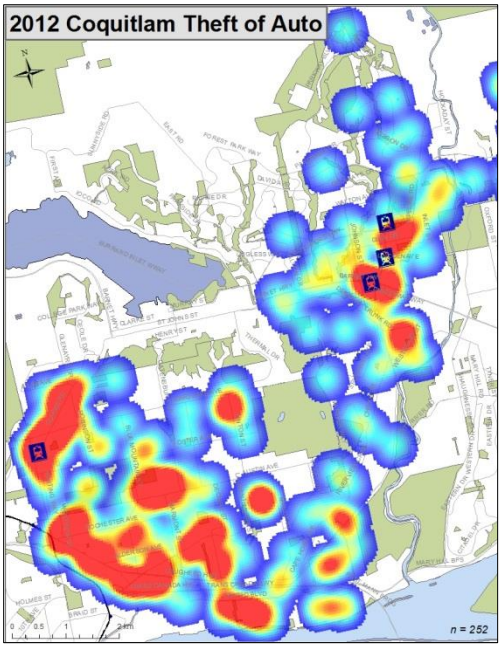
2135-6 Theft of Auto Under (Previously 2141-1)
2135-1 Theft of Auto Over (Previously 2131-1)
2135-7 Theft of Truck Under (Previously 2141-2)
2135-2 Theft of Truck Over (Previously 2131-2)
2135-9 Theft Other Veh Under (Previously 2141-4)
2135-4 Theft Other Veh Over (Previously 2131-4)
2135-8 Theft Motorcycle Under (Previously 2141-3)
2141-3 Theft Motorcycle Over (Previously 2131-3)

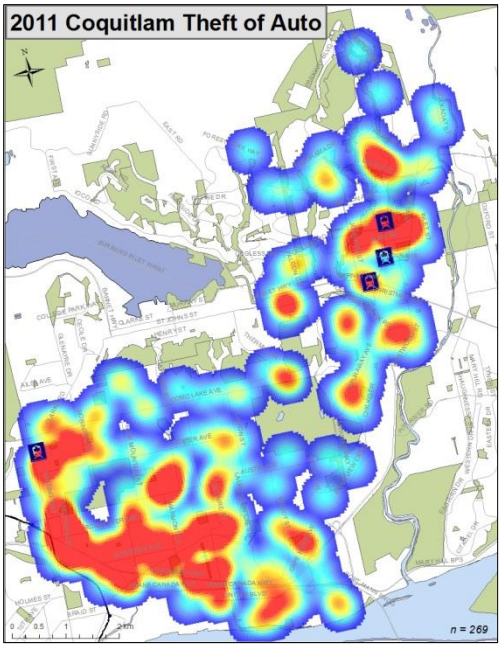
As discussed in the previous Port Moody TOA section, there are a multitude of factors that have greatly impacted TOA numbers across the province including changes in vehicle designs (alarms & immobilizers), educational strategies, Crime Reduction / Chronic Offender Programs and IMPACT's Bait Car Program (to name a few). As seen below, the City of Coquitlam has experienced a drastic decline in TOA's both city-wide and in the areas surrounding the Canada Line stations.

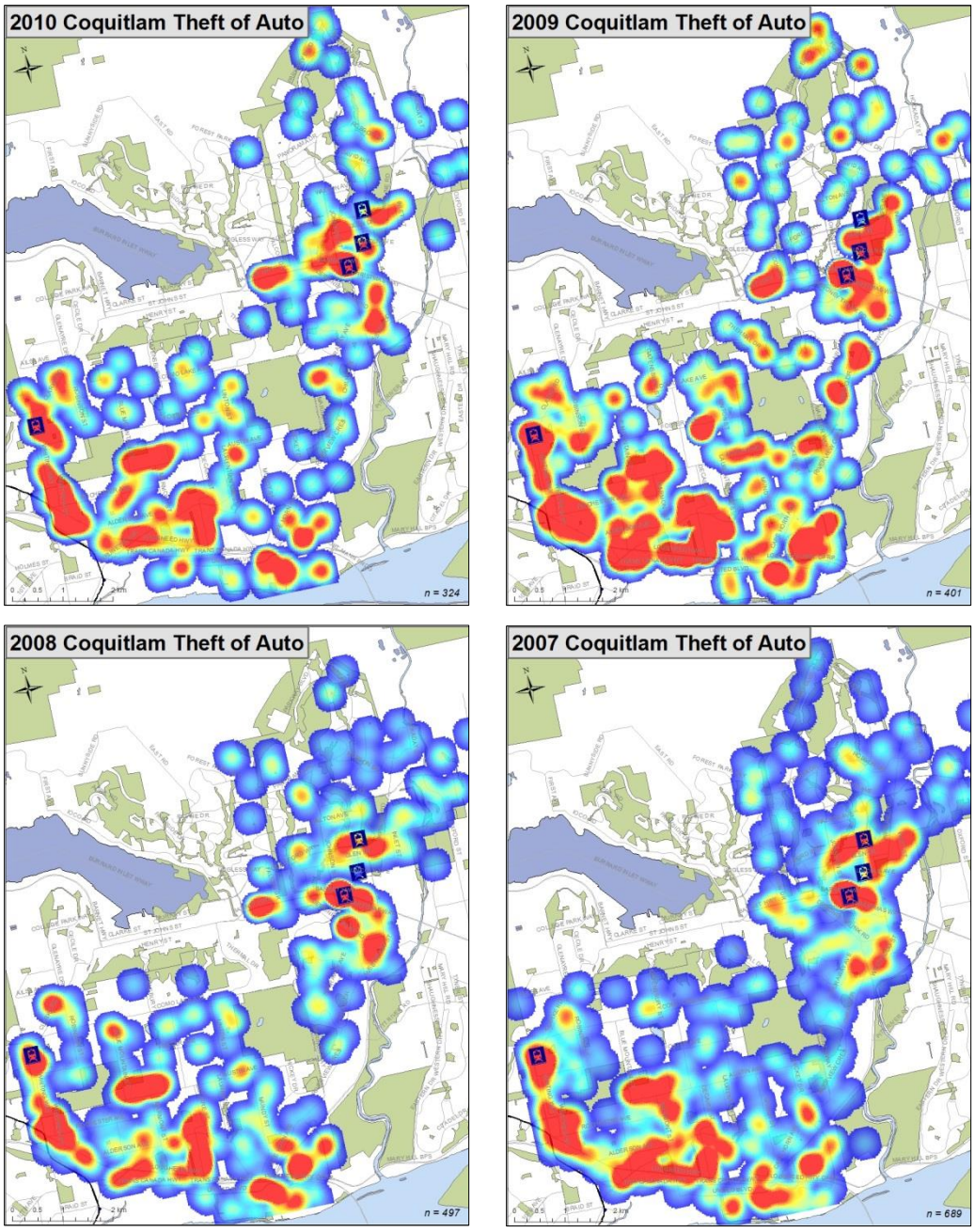
Theft of Auto		
	Coquitlam	**% Change**
2012	252	-6%
2011	269	-17%
2010	324	-19%
2009	401	-19%
2008	497	-28%
2007	689	-



Theft of Auto			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	252	35	14%
2011	269	26	10%
2010	324	38	12%
2009	401	53	13%
2008	497	72	14%
2007	689	114	17%







Despite the sharp drops in the number of TOA's in Coquitlam, the general distribution of incidents has not significantly changed over the past 6 years with obvious concentrations in the Burquitlam and Coquitlam Centre areas (amongst others).

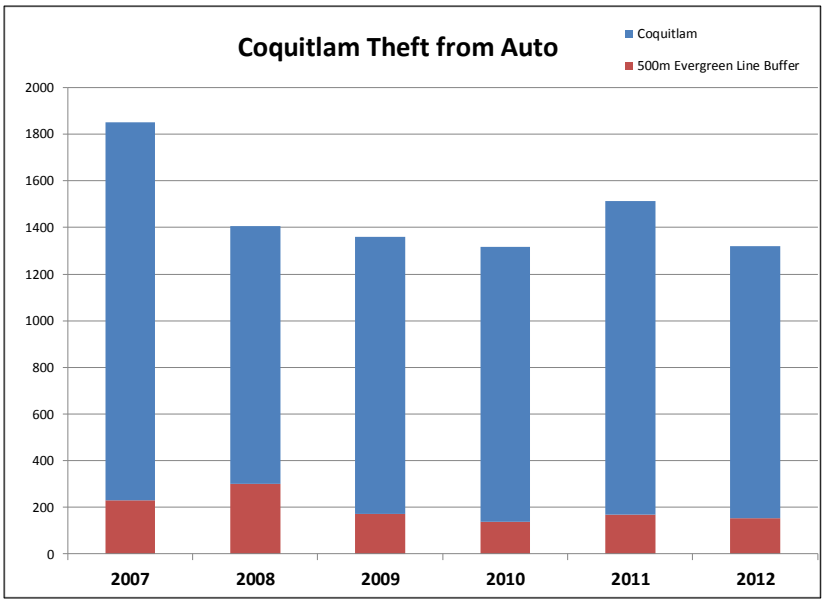
City of Coquitlam Theft from Auto

Thefts from Auto (TFA) occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

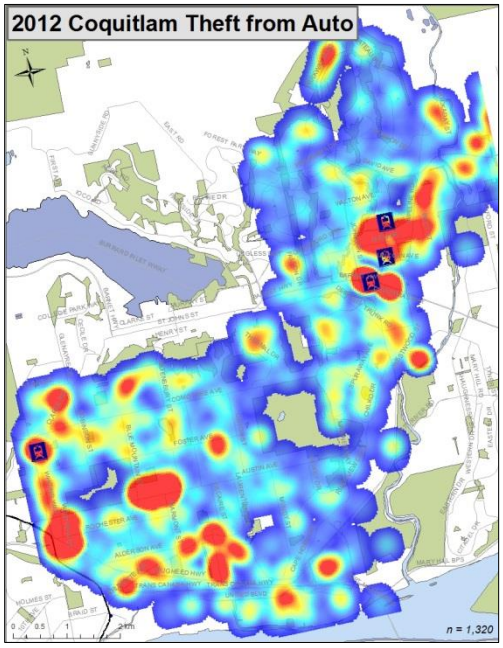
2142-0 Theft from MV Under $5000
2132-0 Theft from MV Over $5000

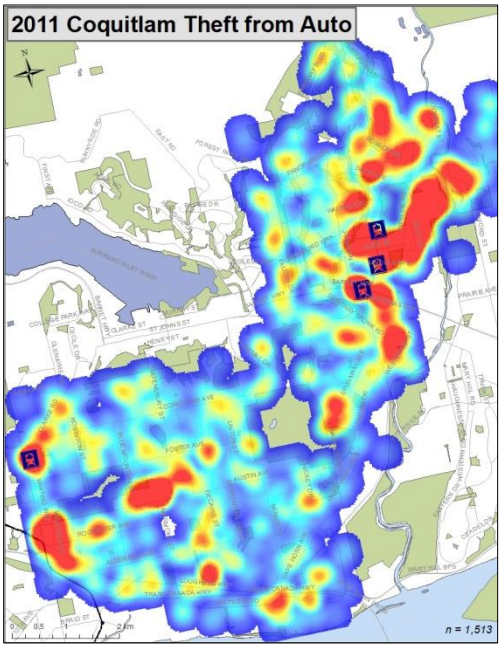
While not quite as drastic as the drops in Theft Of Auto, the City of Coquitlam has experienced decreases in its Theft from Auto rates as well. Overall, these declines have been seen both city-wide as well as in the areas surrounding future Evergreen Line stations.

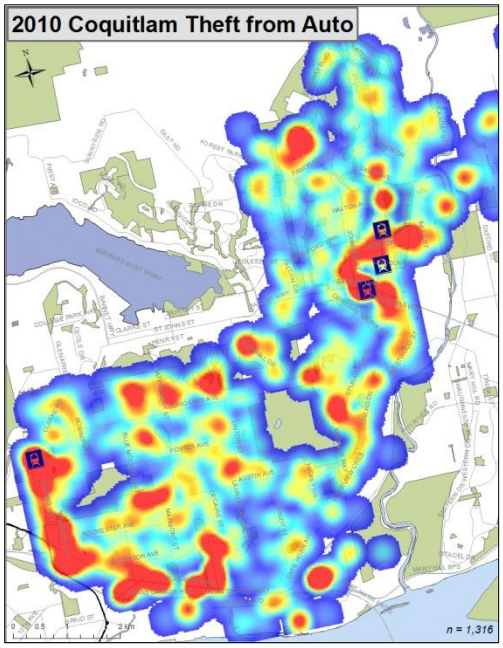
Theft from Auto		
	Coquitlam	**% Change**
2012	1,320	-13%
2011	1,513	15%
2010	1,316	-3%
2009	1,361	-3%
2008	1,406	-24%
2007	1,851	-

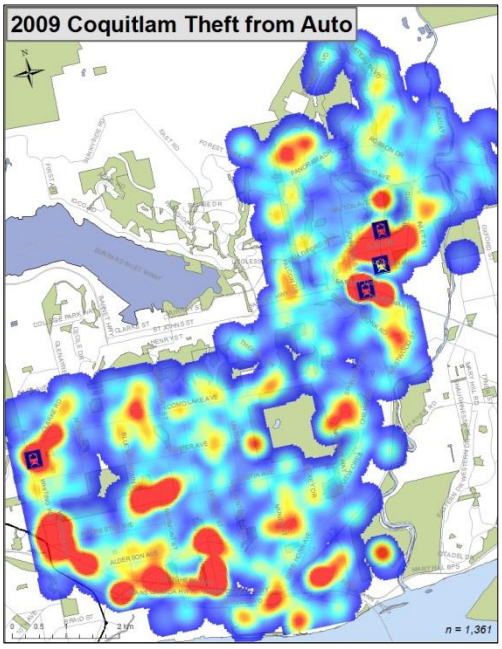


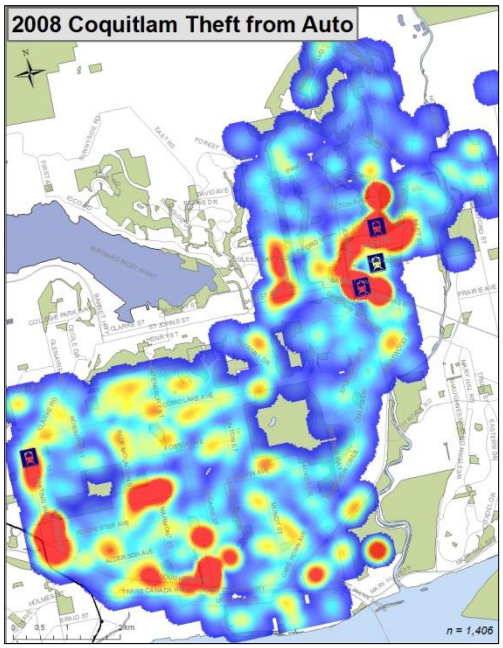
Theft from Auto			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	1,320	154	12%
2011	1,513	170	11%
2010	1,316	138	10%
2009	1,361	172	13%
2008	1,406	302	21%
2007	1,851	231	12%

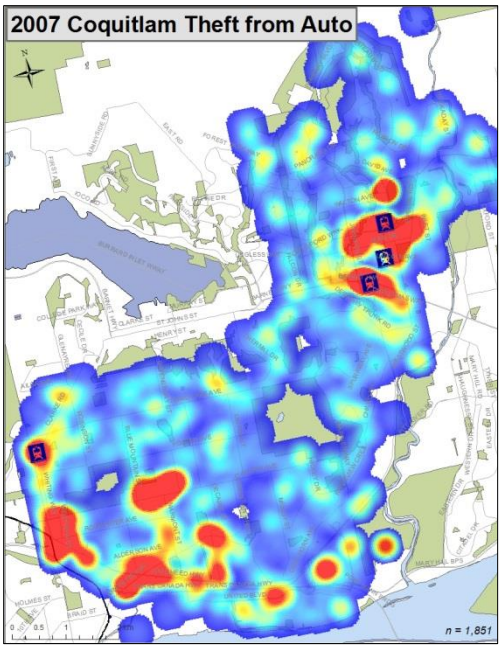

2012 Coquitlam Theft from Auto
n = 1,320


2011 Coquitlam Theft from Auto
n = 1,513


2010 Coquitlam Theft from Auto
n = 1,316


2009 Coquitlam Theft from Auto
n = 1,361





An examination of the distribution of TFA's in Coquitlam indicates a similar pattern to what has been seen with all other types of property crime – distinct concentrations in the Burquitlam and Coquitlam Centre areas.

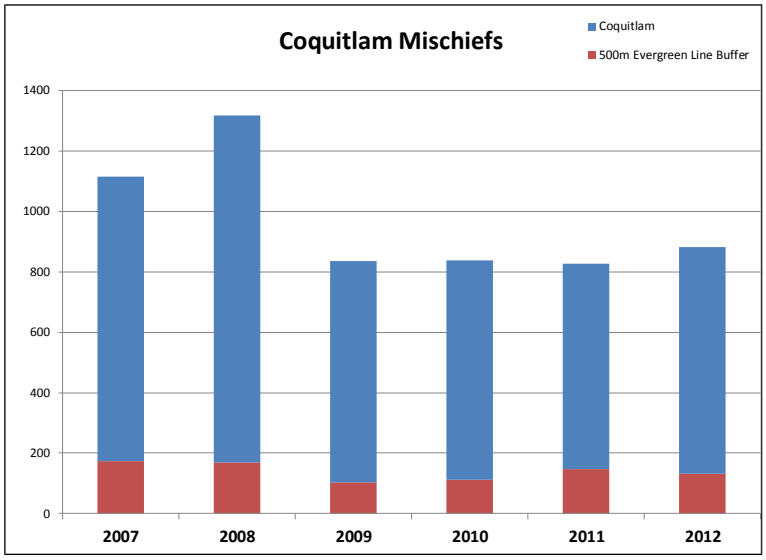
City of Coquitlam Mischiefs

Mischief incidents occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

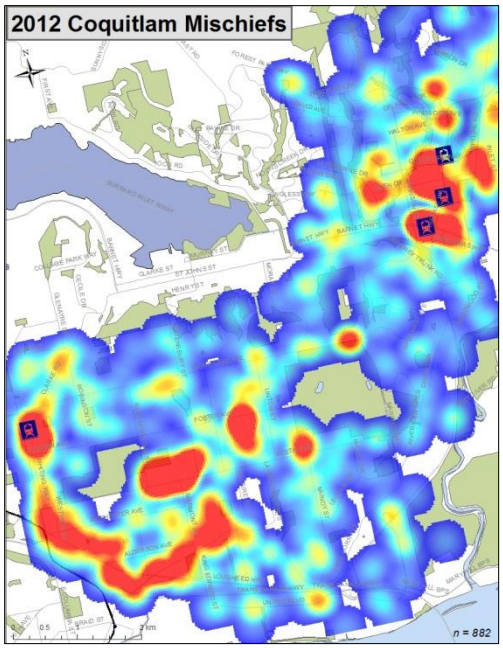
2170-4 Mischief $5000 or Under
2170-3 Mischief $5000 or Over

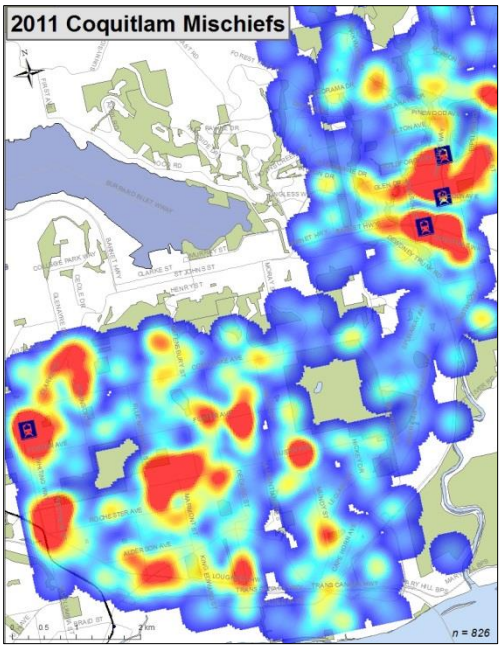
Following a noticeable drop from 2007 to 2009, the number of Mischiefs in Coquitlam has remained relatively stable over the past 4 years. This drop has been seen not only city-wide, but also in the buffer areas surrounding the locations of future Evergreen Line stations with the relative proportion of incidents occurring in these areas remaining stable.

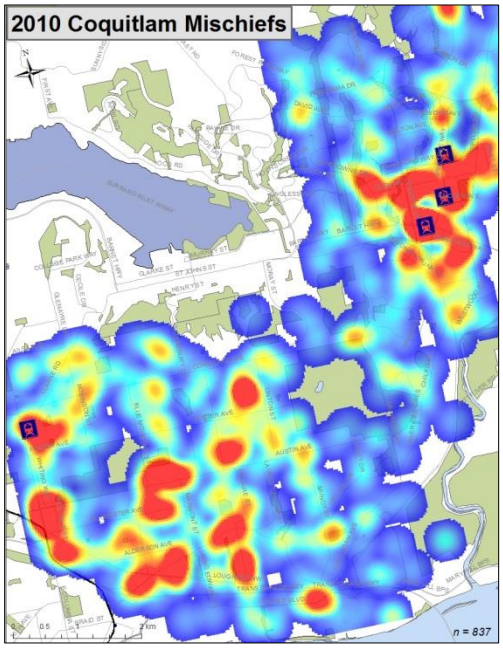
Mischiefs		
	Coquitlam	% Change
2012	882	7%
2011	826	-1%
2010	837	0%
2009	836	-37%
2008	1,318	18%
2007	1,116	-

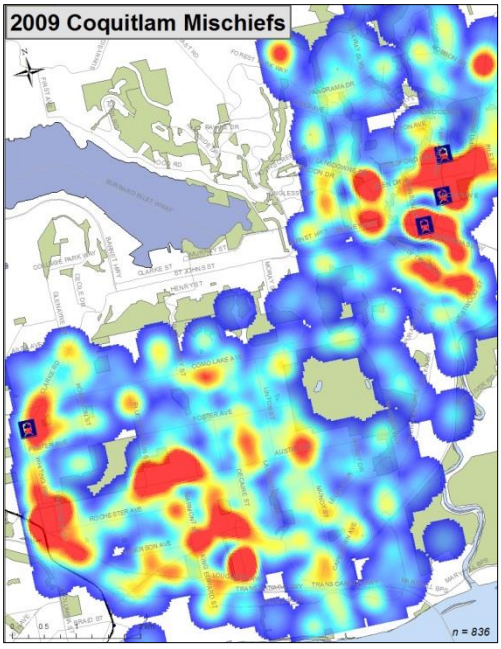


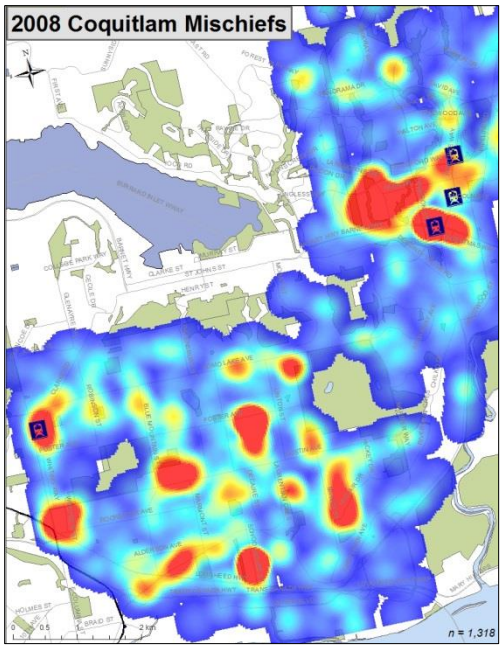
Mischiefs			
	Coquitlam	500m Evergreen Line Buffer	% w/in Buffer
2012	882	132	15%
2011	826	148	18%
2010	837	113	14%
2009	836	103	12%
2008	1,318	169	13%
2007	1,116	174	16%

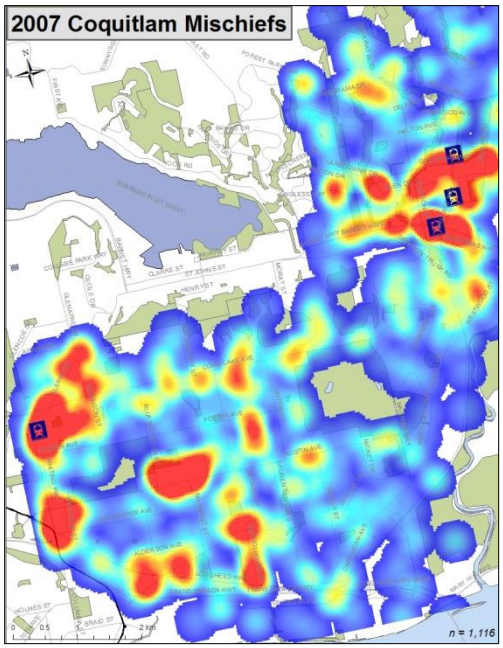

2012 Coquitlam Mischiefs
n = 882


2011 Coquitlam Mischiefs
n = 826


2010 Coquitlam Mischiefs
n = 837


2009 Coquitlam Mischiefs
n = 836





As mentioned in the Port Moody section relating to Mischiefs, this crime type would be worthy or monitoring in order to measure the impact the new Evergreen Line may have on graffiti reports which may increase the volume of Mischief files along the Skytrain corridor.

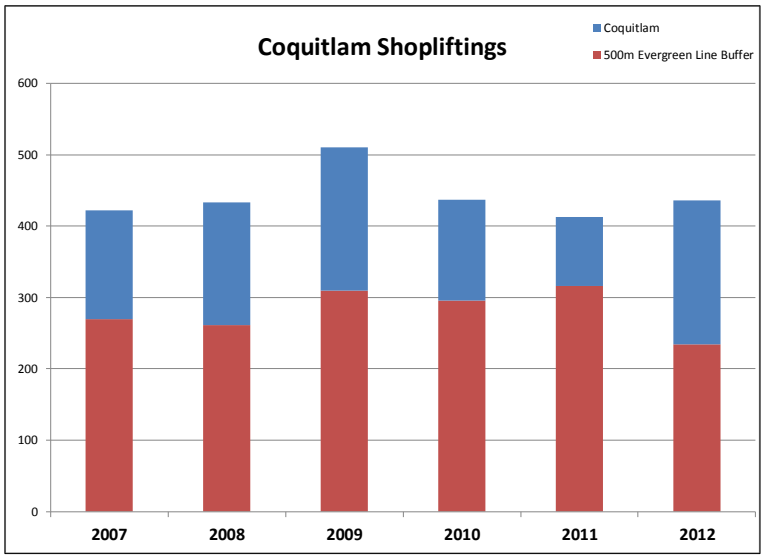
City of Coquitlam Shoplifting

Shoplifting incidents occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

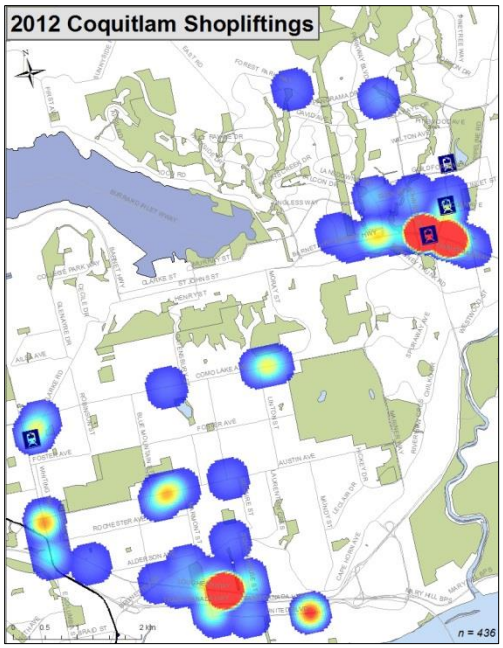
2143-0 Theft – Shoplifting Under $5000
2133-0 Theft – Shoplifting Over $5000

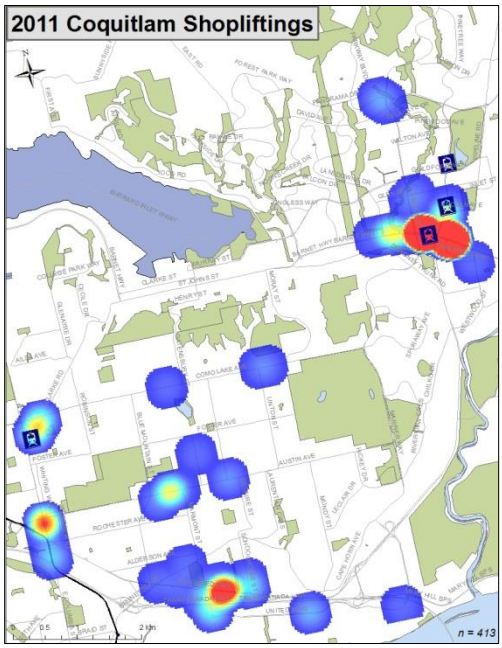
While the overall number of Shoplifting incidents has remained relatively stable over the past 6 years, the proportion of incidents occurring within 500m's of a future Evergreen Line station is quite staggering. In 2011, for example, 77% of all Shoplifting incidents in the City of Coquitlam occurred near one of the future stations. This is due to the proximity of the stations to large retail hubs such as Coquitlam Centre Mall (and surrounding retail businesses) and the Burquitlam Mall area.

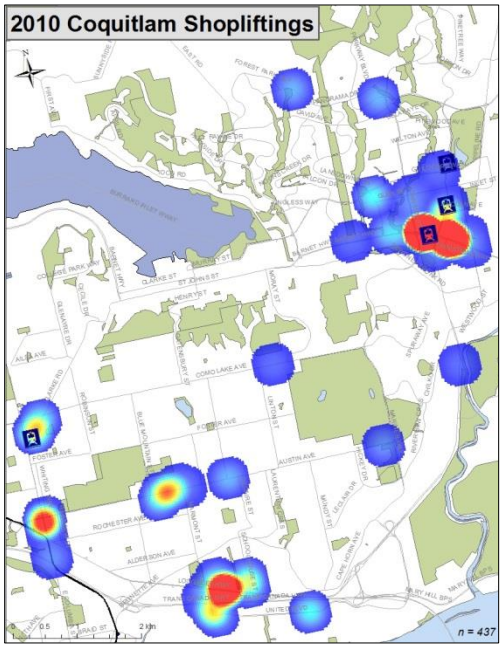
Shopliftings		
	Coquitlam	% Change
2012	436	6%
2011	413	-5%
2010	437	-14%
2009	510	18%
2008	433	3%
2007	422	-

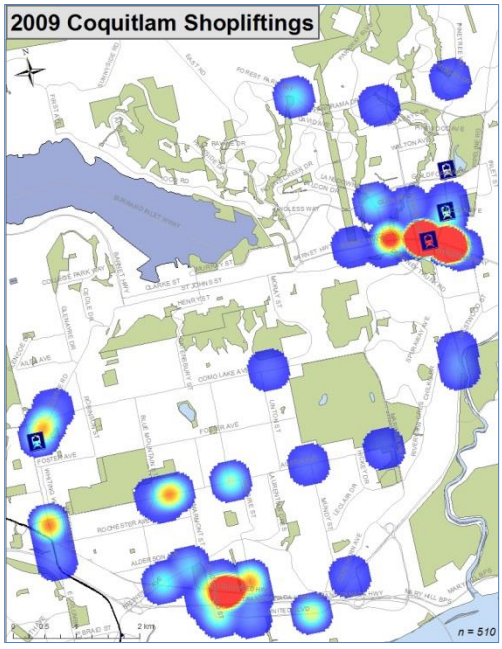


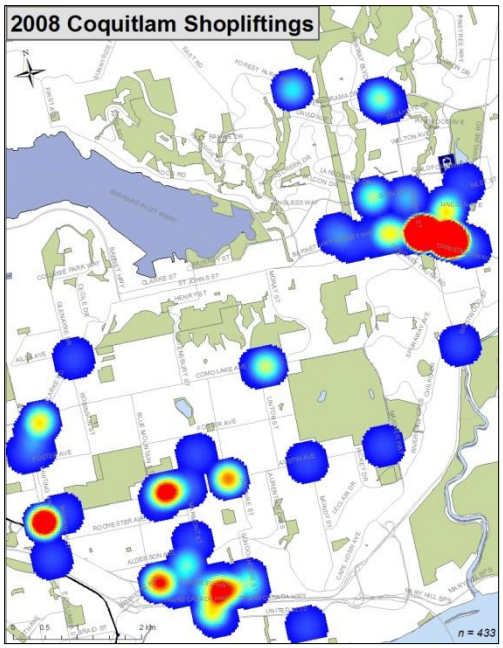
Shopliftings			
	Coquitlam	500m Evergreen Line Buffer	% w/in Buffer
2012	436	234	54%
2011	413	316	77%
2010	437	296	68%
2009	510	310	61%
2008	433	261	60%
2007	422	270	64%

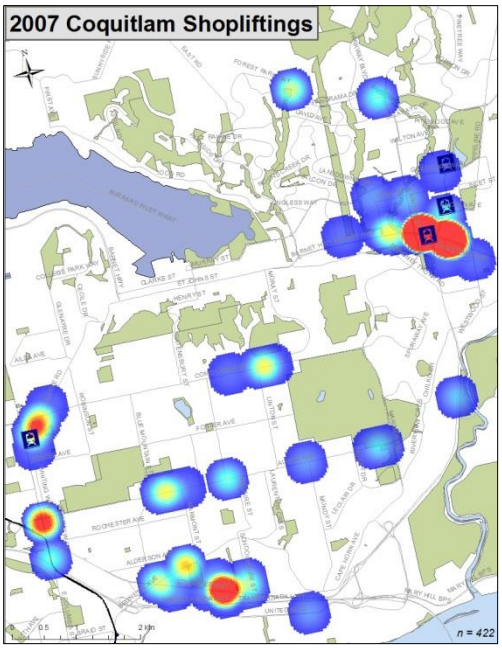

2012 Coquitlam Shopliftings
n = 436


2011 Coquitlam Shopliftings
n = 413


2010 Coquitlam Shopliftings
n = 437


2009 Coquitlam Shopliftings
n = 510


2008 Coquitlam Shopliftings
n = 433


2007 Coquitlam Shopliftings
n = 422

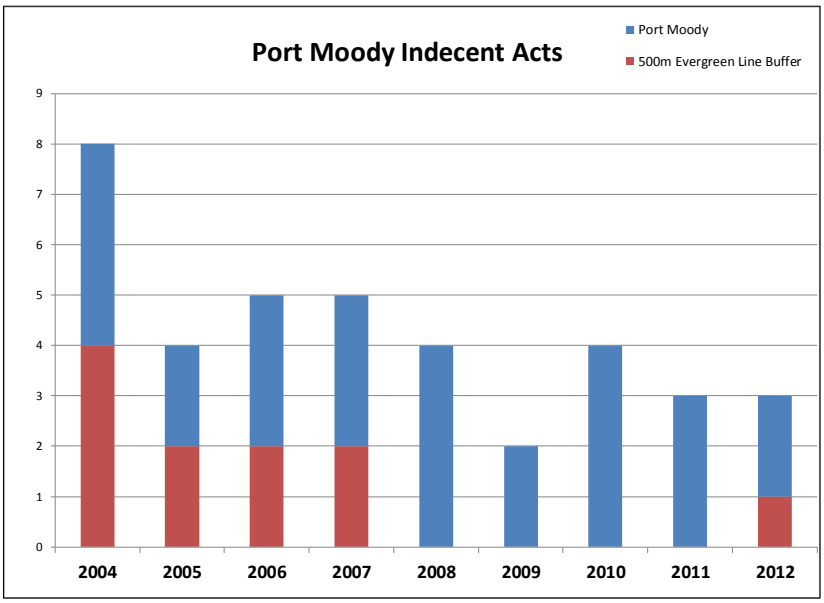
Other Types of Offences

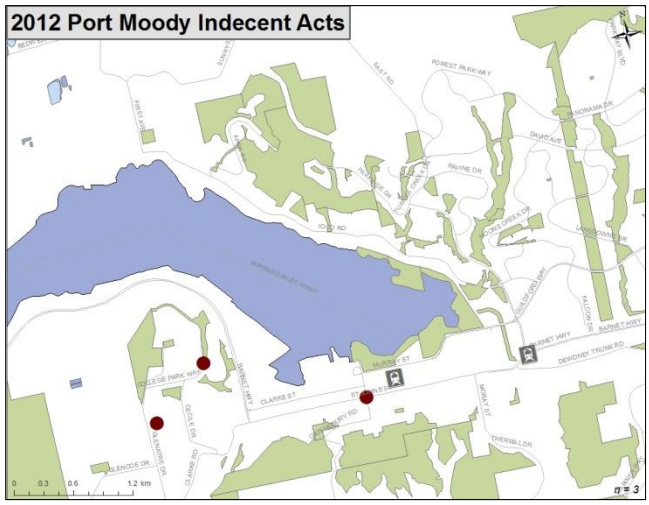
City of Port Moody Indecent Acts

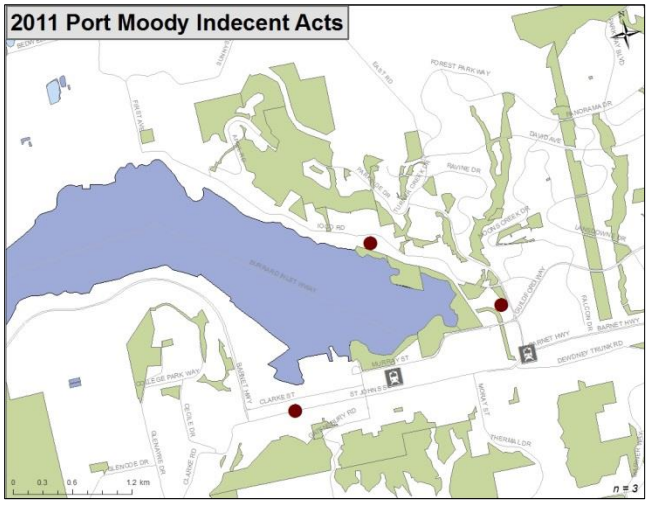
Indecent Acts occurring within the City of Port Moody were extracted from PRIME using the following UCR code: 3450-0 Indecent Act.

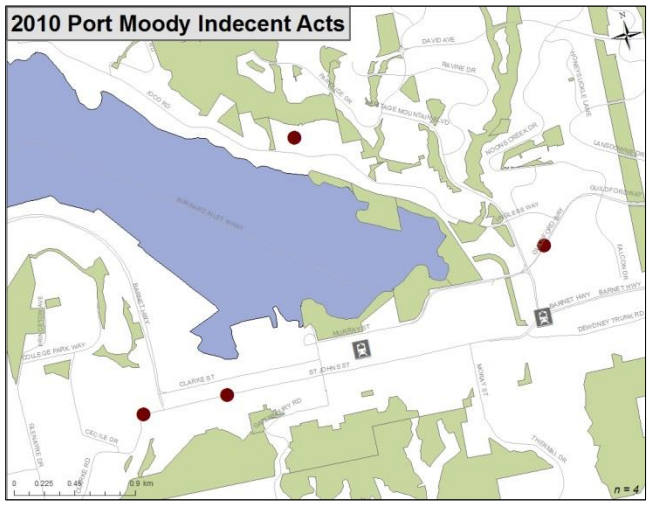
Aside from a notable spike in 2004, there have been a small number of Indecent Acts in the City of Port Moody over the past 9 years with an average of 4 incidents per year. A comparison of the below noted maps reveals no true pattern with regards to the distribution of incidents which do not appear to have historically occurred in close proximity to future Evergreen Line station areas.

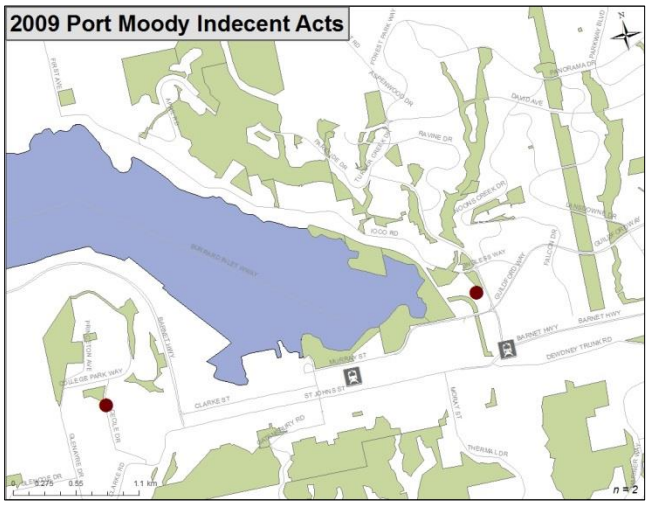
Indecent Acts		
	Port Moody	500m Evergreen Line Buffer
2012	3	1
2011	3	0
2010	4	0
2009	2	0
2008	4	0
2007	5	2
2006	5	2
2005	4	2
2004	8	4

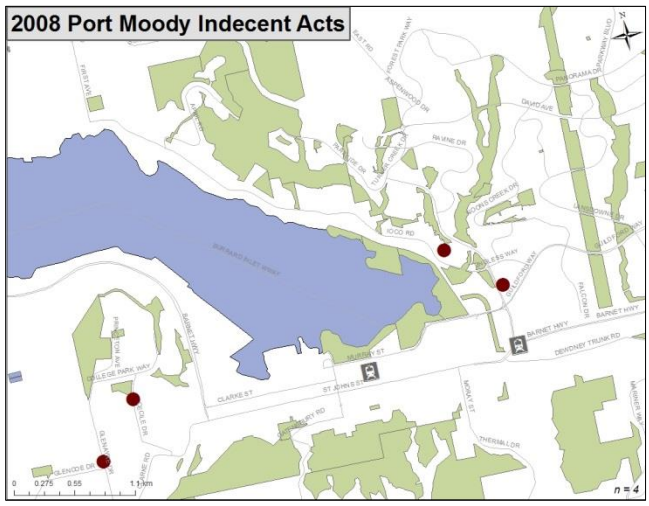


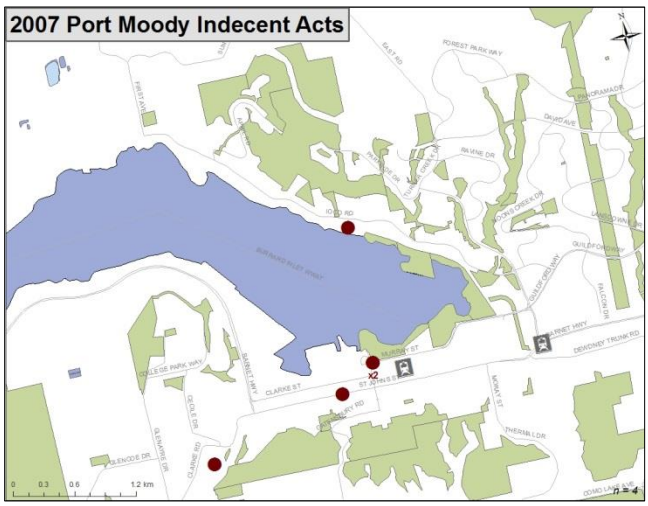

2012 Port Moody Indecent Acts
n = 3

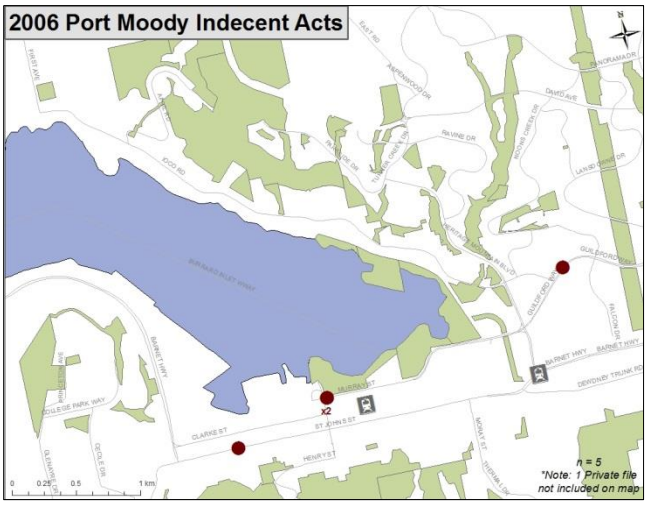

2011 Port Moody Indecent Acts
n = 3

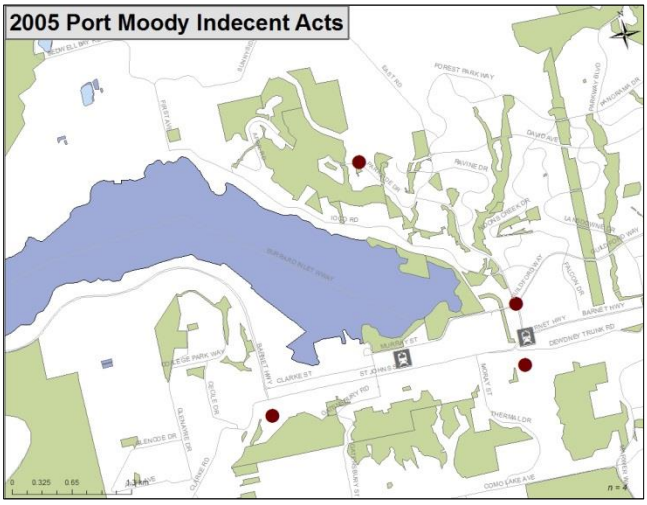

2010 Port Moody Indecent Acts
n = 4

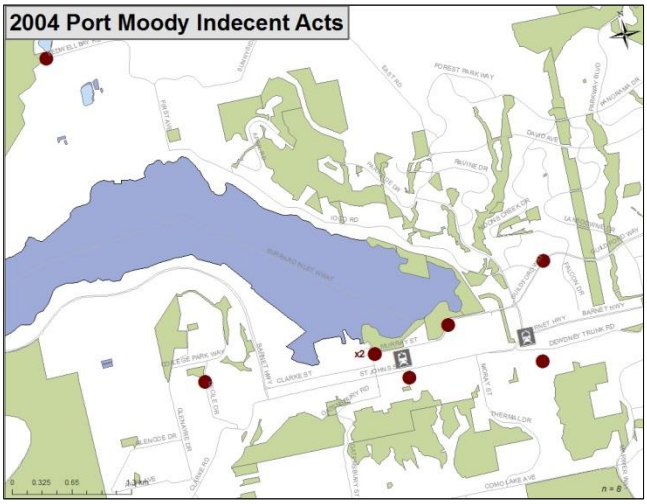

2009 Port Moody Indecent Acts
n = 2


2008 Port Moody Indecent Acts
n = 4


2007 Port Moody Indecent Acts
n = 4


2006 Port Moody Indecent Acts
x2
n = 5
*Note: 1 Private file not included on map


2005 Port Moody Indecent Acts

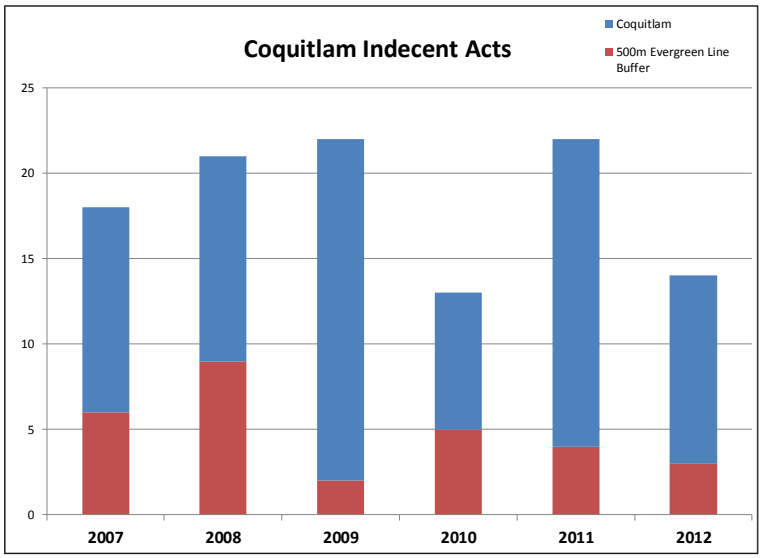

2004 Port Moody Indecent Acts
x2
n = 8

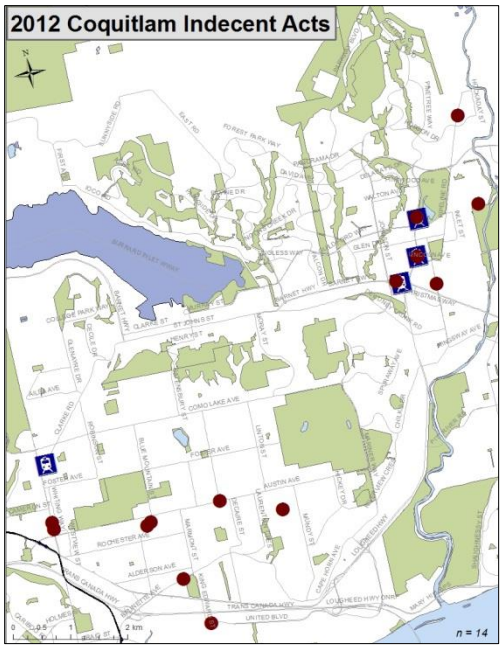
City of Coquitlam Indecent Acts

Indecent Acts occurring within the City of Coquitlam were extracted from PRIME using the following UCR code: 3450-0 Indecent Act.

Indecent Acts trends in Coquitlam appear to share some similarities with Port Moody in that the overall volume or number of incidents appears to have remained somewhat consistent over the past 6 years – however as illustrated in the maps below, the areas in which the future Evergreen Line stations are to be built in Coquitlam appear to have pre-existing clusters of Indecent Acts prior to the introduction of the new stations.

Indecent Acts			
	Coquitlam	**500m Evergreen Line Buffer**	**% w/in Buffer**
2012	14	3	21%
2011	22	4	18%
2010	13	5	38%
2009	22	2	9%
2008	21	9	43%
2007	18	6	33%




2012 Coquitlam Indecent Acts
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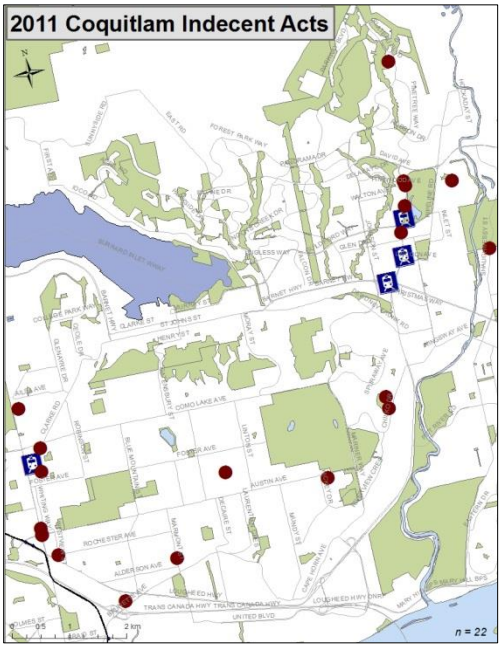
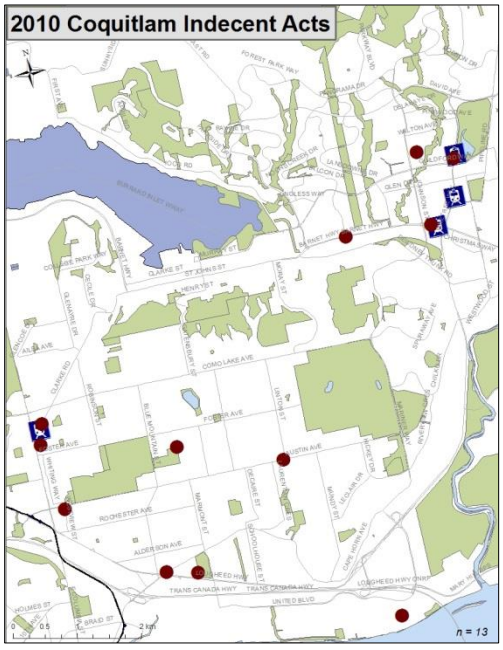
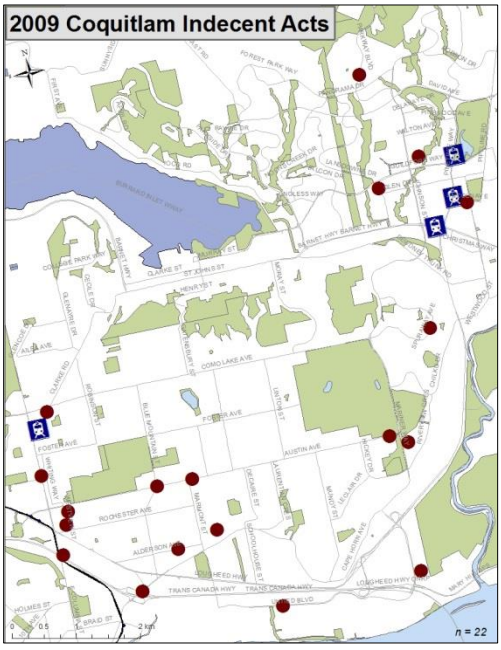
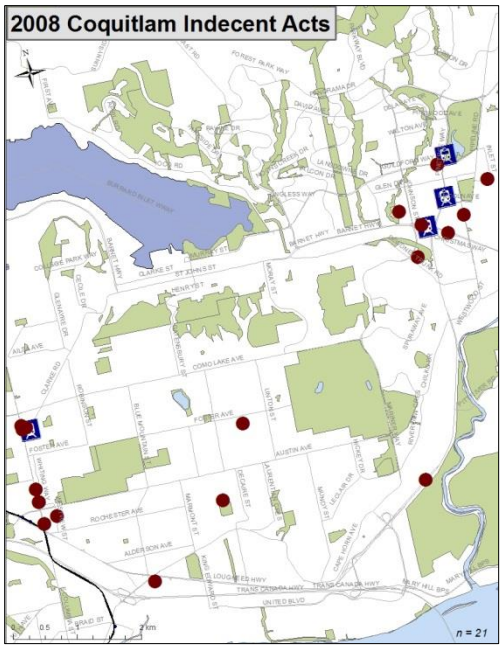
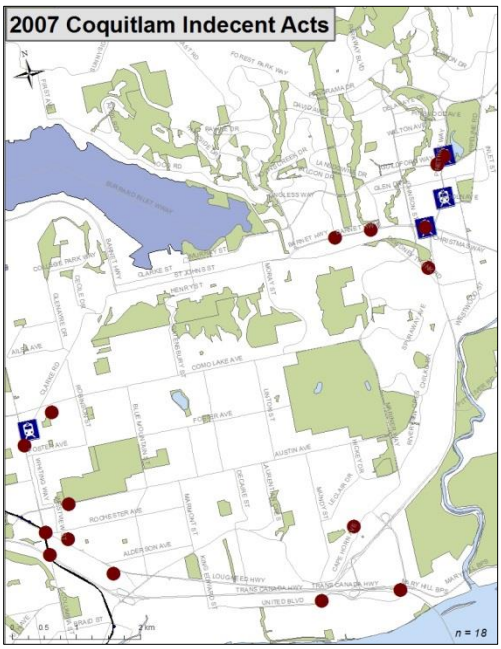

2011 Coquitlam Indecent Acts
n = 22


2010 Coquitlam Indecent Acts
n = 13


2009 Coquitlam Indecent Acts
n = 22





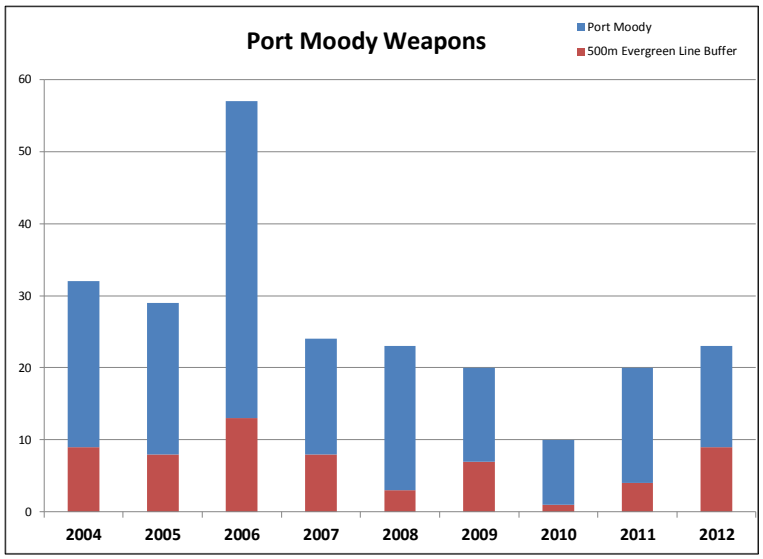
City of Port Moody Weapons

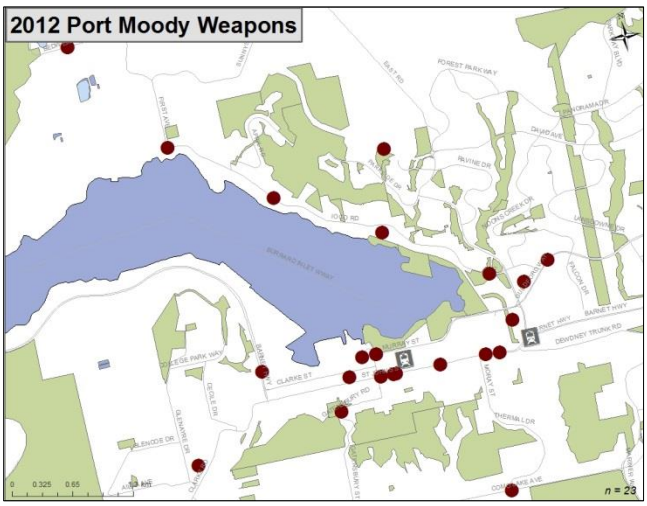
Weapons Offences occurring within the City of Port Moody were extracted from PRIME using the following UCR codes:

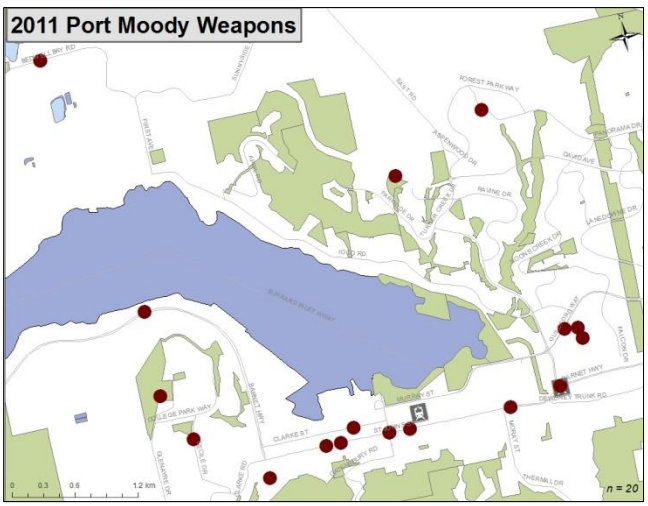
3375-0 Weapons – Possession
3370-0 Weapons Poss – Contrary to Order

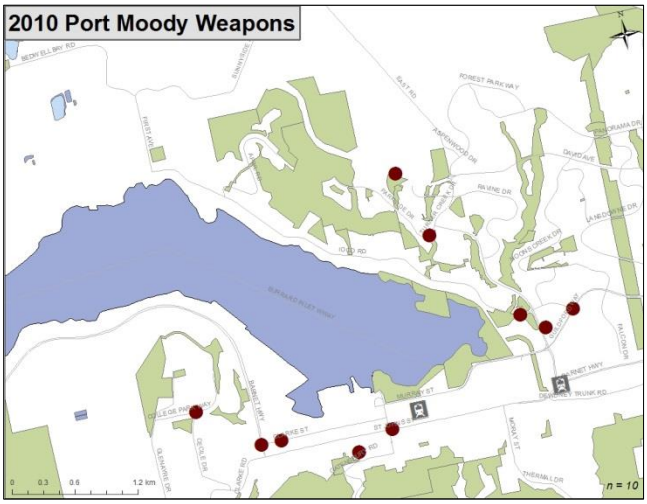
Aside from a notable spike in 2006, the overall number of Weapons files in Port Moody has decreased slightly over the past 9 years. In terms of geographic distribution, many incidents have been concentrated around the St. John's corridor as well as the Newport / SuterBrook Village areas – which also happens to be where the majority of bars & restaurants are located and where people are most likely to congregate.

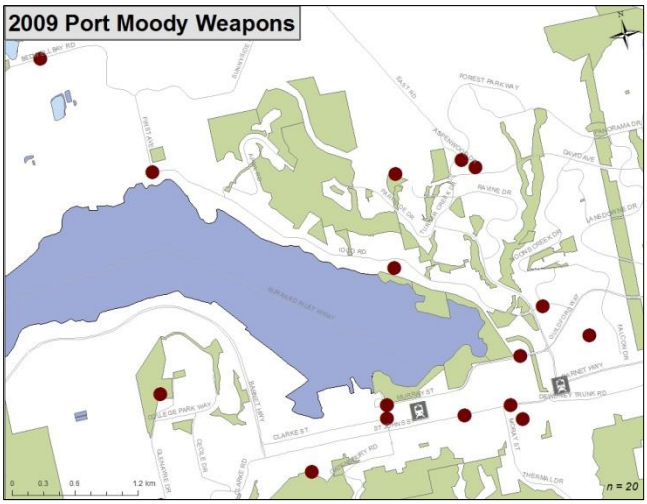
Weapons			
	Port Moody	500m Evergreen Line Buffer	% w/in Buffer
2012	23	9	39%
2011	20	4	20%
2010	10	1	10%
2009	20	7	35%
2008	23	3	13%
2007	24	8	33%
2006	57	13	23%
2005	29	8	28%
2004	32	9	28%

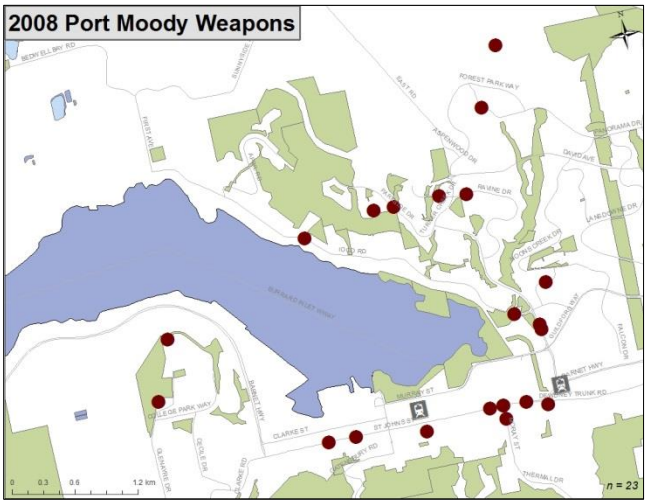


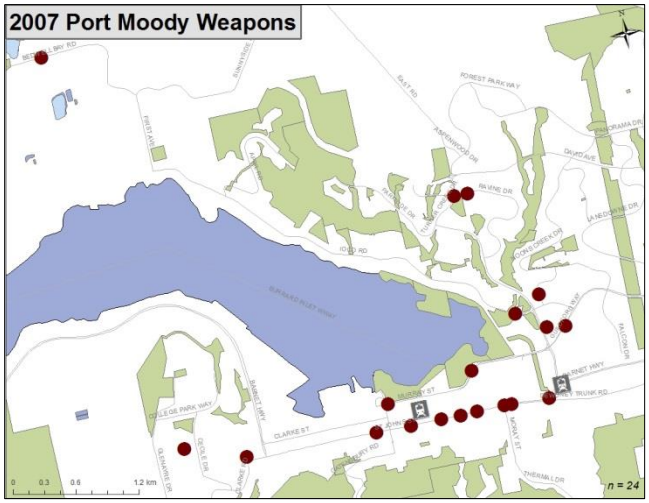


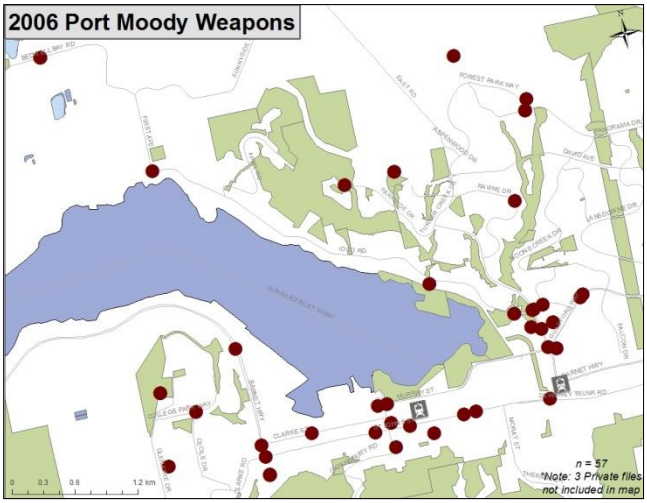


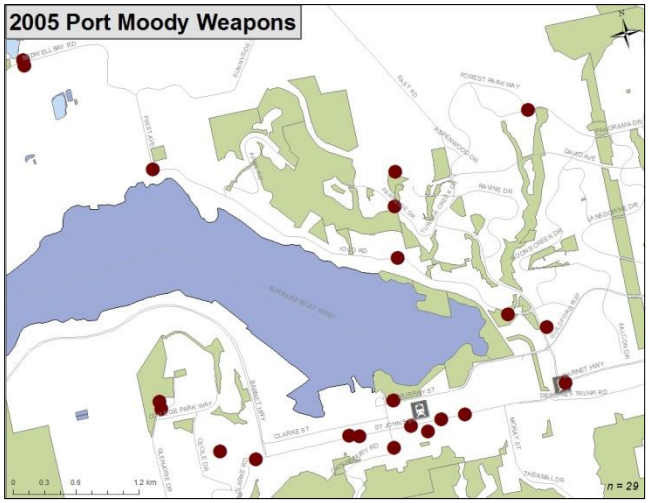


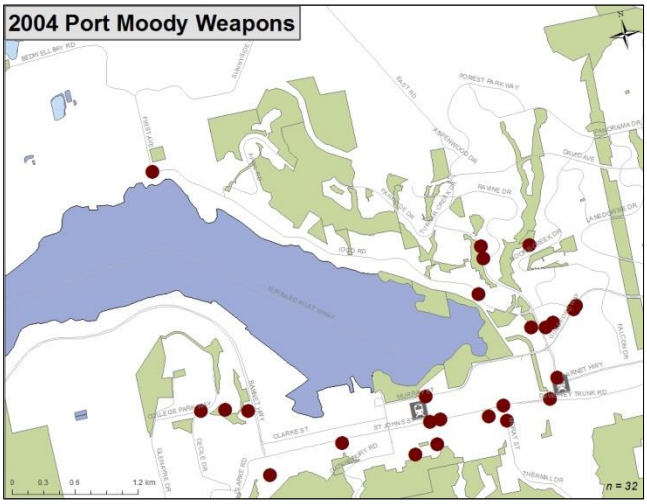



2008 Port Moody Weapons
n = 23


2007 Port Moody Weapons
n = 24


2006 Port Moody Weapons
n = 57
*Note: 3 Private files not included in map


2005 Port Moody Weapons
n = 29


2004 Port Moody Weapons
n = 32

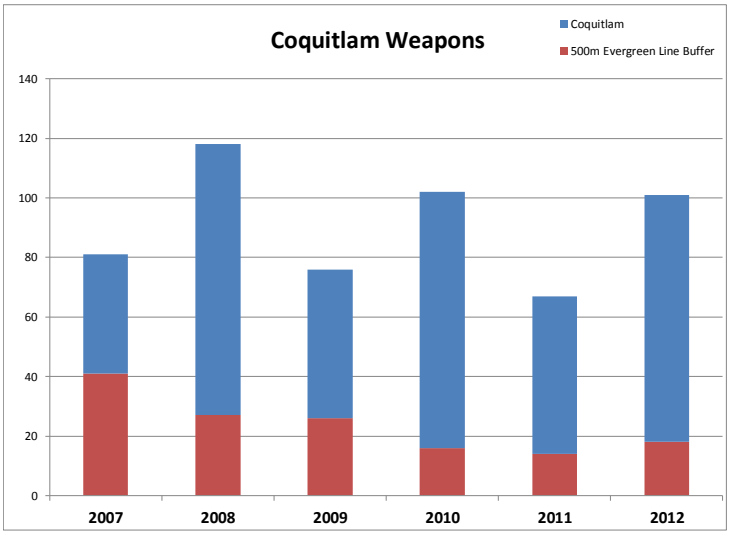
City of Coquitlam Weapons

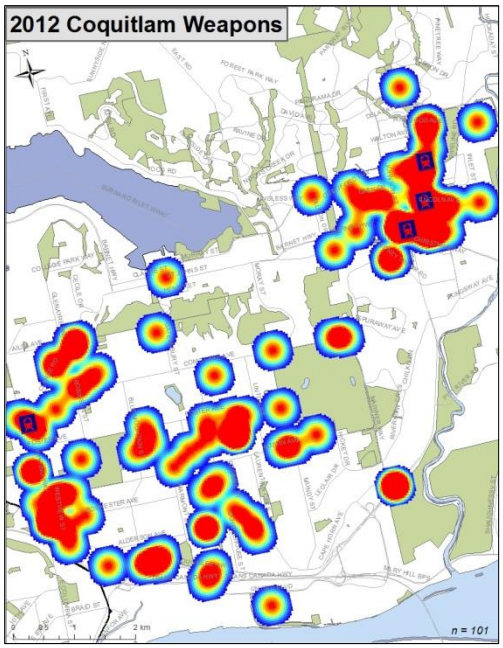
Weapons Offences occurring within the City of Coquitlam were extracted from PRIME using the following UCR codes:

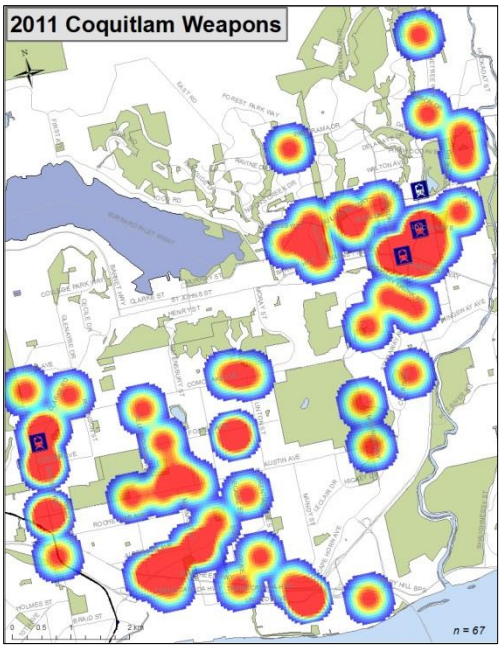
3375-0 Weapons – Possession
3370-0 Weapons Poss – Contrary to Order

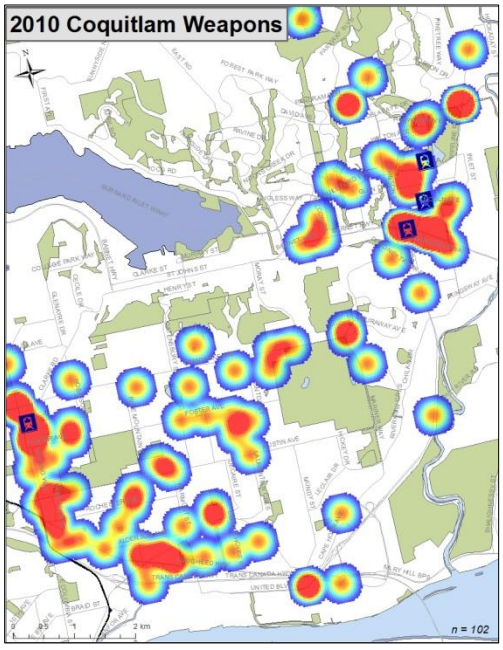
While the overall number of Weapons files in the City of Coquitlam has fluctuated over the past 6 years, there appears to be a slightly lower proportion of these incidents occurring in the areas surrounding the future Evergreen Line stations. This may change as a greater Transit Security and Police presence is introduced into the area – while interacting with passengers, more offenders are likely to be checked resulting in a greater number of prohibited weapons being discovered & seized. This is not to suggest that the number of incidents involving weapons being used would increase – but rather that the number of prohibited weapons being pro-actively seized would cause the number of files to increase. As seen below, the areas in which the future Evergreen Line stations are to be situated are also areas with pre-existing hot spots when it comes to weapons related offences.

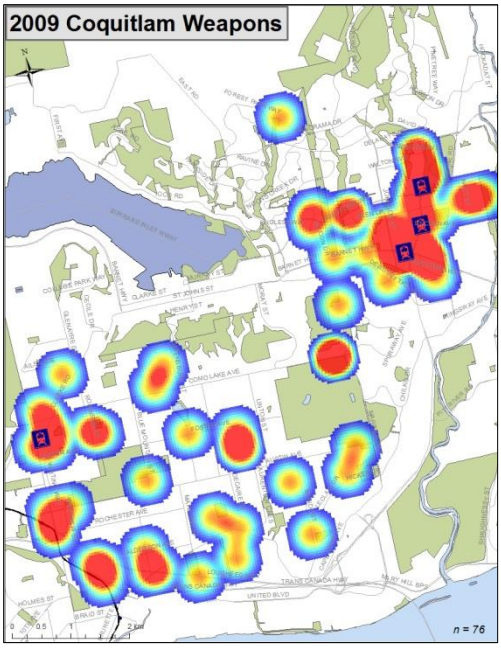
Weapons			
	Coquitlam	500m Evergreen Line Buffer	% w/in Buffer
2012	101	18	18%
2011	67	14	21%
2010	102	16	16%
2009	76	26	34%
2008	118	27	23%
2007	81	41	51%

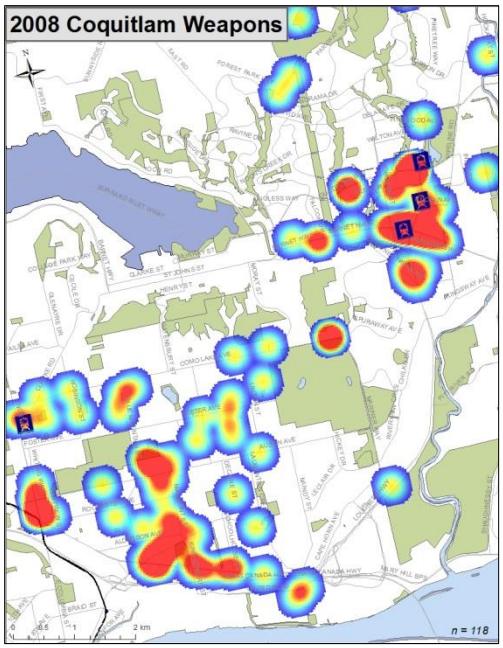


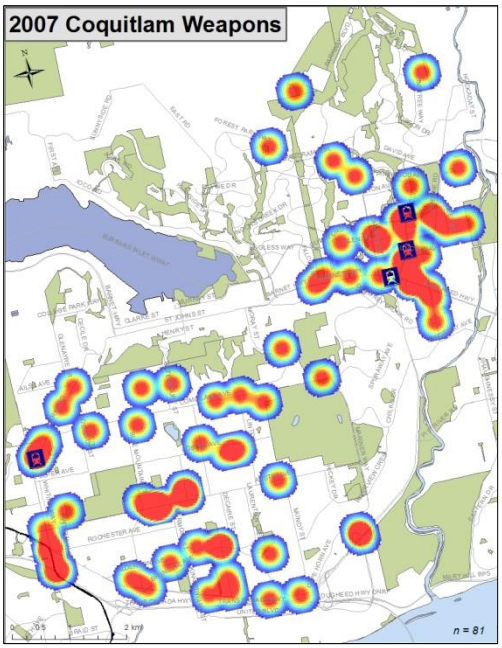

2012 Coquitlam Weapons
n = 101


2011 Coquitlam Weapons
n = 67


2010 Coquitlam Weapons
n = 102


2009 Coquitlam Weapons
n = 76


2008 Coquitlam Weapons
n = 118


2007 Coquitlam Weapons
n = 81

Conclusion

Discussions regarding people's perceptions of safety and security on the Lower Mainland Skytrain system will undoubtedly continue to be a hot topic of conversation for many years to follow. The introduction of a new light-rail system through the city cores of Vancouver and Richmond have understandably resulted in a sprawl of commercial and residential developments in the neighbourhoods surrounding Canada Line stations. Similar levels of urban sprawl have also been evident in Port Moody and Coquitlam in anticipation of the Evergreen Line – set to open in the summer of 2016.

When evaluating crime data relating to light-rail stations, one must be careful to consider factors that affect the distribution of crime in these areas including:

- land usage (residential / commercial / industrial)
- proximity to other crime generators or attractors (malls, bars, parking lots)
- presence of an attached bus loop or parking lot (increased congregation of people & targets)
- presence of commercial establishments within a station
- CPTED (crime prevention through environmental design) features & size of stations (including the use of turnstiles)

While the common theme amongst previous studies has maintained that a causal relationship between crime rates and light-rail could not be determined without a proper analysis of the "before and after" picture, the Canada Line Study (Part 1 of the study in this series) has for the first time provided law enforcement with an objective analysis of crime rates relating to the introduction of a new Skytrain line in the Lower Mainland. While in some cases, certain types of crimes (such as Robberies and Sexual Assaults) appear to have become slightly more concentrated in the areas surrounding the Canada Line stations, the introduction of a new light-rail system did not appear to cause increases in crime rates overall city-wide. Although some slight variances in distributions are expected, the same impact is anticipated to be seen in Port Moody and Coquitlam following the opening of the Evergreen Line. As these communities continue to grow, several factors such as densification and changes in population will undoubtedly be some of the many

factors (including the presence of new light-rail stations) that continue to affect crime rates and trends in these communities serviced by Skytrain.

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