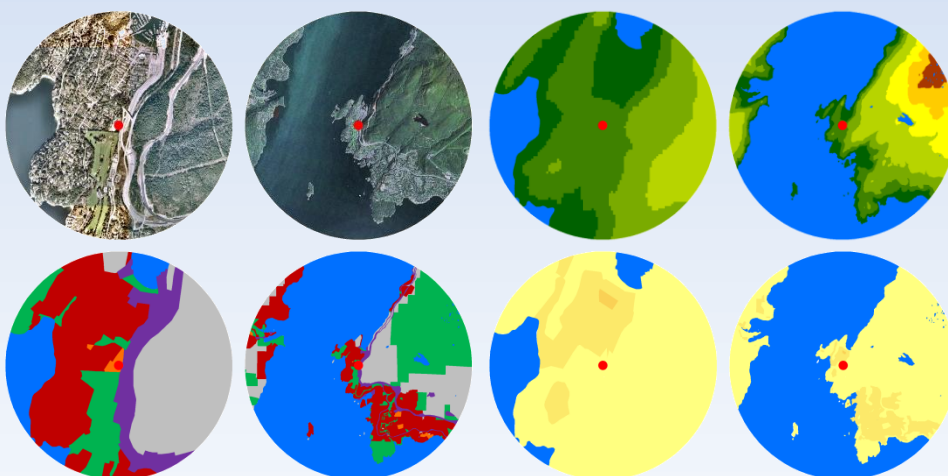


Station Information: Lower Fraser Valley Air Quality Monitoring Network

December 2012



**metro
vancouver**

www.metrovancouver.org

This report was prepared by Geoff Doerksen of the Air Quality Policy and Management Division of Metro Vancouver with support provided by Thomas Enns for GIS services and Ken Reid for senior review. The monitoring network is operated and maintained by a team including Tim Jensen, Michiyo McGaughey, Fred Prystarz, Scott Wong and Alex Clifford with instrumentation support provided by Dave Pengilly, Shawn Connelly, and Don Robertson.

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Questions on the report should be directed to AQInfo@metrovancover.org or the Metro Vancouver Information Centre at 604-432-6200.

Contact us:

Metro Vancouver
Air Quality Policy and Management Division
4330 Kingsway, Burnaby, BC V5H 4G8
604-432-6200

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INTRODUCTION

This report provides detailed information for each active station in the Lower Fraser Valley Air Quality Monitoring Network. For each station, four pages of information are provided including: ***description***, ***terrain***, ***land-use*** and ***population***.

To allow comparisons between stations the presentation of graphs and images include consistent colours and axes throughout the report.

The ***description*** page provides a description of the station and its surroundings along with key station details. Station characteristics are provided in a table and include station name, station ID, location, elevation, station designation, dimensions, measurement heights, date of operation, and predominant land-use. The predominant land-use provided is derived from the largest land-use percentage within a radius of five kilometers from the station.

Station designations have been used at several stations to differentiate them from others. The designations include: Super Site, Special Purpose – Industry, Special Purpose – Research, Meteorological Only and Special Purpose – Test Station. The Super Site designation is given to sites where the full complement of air quality measurements is made. Acronyms for the measurements provided in the ***description*** are defined in Table 1.

Table 1: Measurement acronyms

Acronym	Definition
SO ₂	Sulphur Dioxide
NO ₂	Nitrogen Dioxide
CO	Carbon Monoxide
O ₃	Ozone
TRS	Total Reduced Sulphur Compounds
NH ₃	Ammonia
CARB	Particulate Carbon
THC	Total Hydrocarbon
VOC	Volatile Organic Compounds
PM ₁₀	Inhalable Particulate Matter
PM _{2.5}	Fine Particulate Matter
Dichot	Dichotomous Particulate
T _{air}	Air Temperature
RH	Relative Humidity
Precip	Precipitation
W _{spd}	Wind Speed
W _{dir}	Wind Direction

Measurement heights were obtained by a field survey conducted in the summer of 2012.

The ***terrain*** page shows orthophotos and topography centred on each air quality station. The top images are orthophotos with a radius of one and five kilometers from each station. The orthophotos were taken in 2007 and 2009.

Topographic images are shown at the bottom of the page with one and five kilometer radii. The digital elevation data used in these images were obtained from a DEM mosaic of 1:50,000 Canadian Digital Elevation Data (CDED).

INTRODUCTION

The **land-use** page includes land-use percentages within specific distances from the station including 50 m, 100 m, 500 m, 1 km, 2 km, 5 km, and 10 km. The land-use categories are presented as eight general categories including: Residential, Water, Industrial, Commercial, Park, Open, Agricultural, and Governmental/Institutional. The grouping of each land-use category is given in Table 2 where individual land-use codes and labels are provided.

A stacked bar chart on each page shows the percentage of each land-use category to give an overall impression of the predominant land-use near each station. Each stacked bar adds up to 100 percent.

The images on the bottom of the land-use page show the land-use categories within one and five kilometers of each station. The data presented on this page was taken from the 2006 generalized land-use of Metro Vancouver. Land-use data was not available for the Fraser Valley Regional District or the United States and is therefore not shown. When data is not available it is shown as 'No Data'.

The **population** page includes statistics on the total population within specific distances from the station including 50 m, 100 m, 500 m, 1 km, 2 km, 5 km, and 10 km.

The images on the bottom of the page show population density at a 1 km and 5 km radius from the station. The population density is given as the number of thousand individuals per square kilometer. The population data presented here was taken from the 2011 Census year.

Table 2: Categorization of Land-Use.

Code	Label	Category
A500	Agriculture	Agriculture
F100	Harvesting and Research	Agriculture
M300	Industrial - Extractive	Industrial
R100	Recreation and Protected Natural Areas	Park
R200	Lakes and Water	Water
ROW	Right of Way	Open
S110	Residential - Single Detached & Duplex	Residential
S120	Residential - Rural	Residential
S130	Residential - Low-rise Apartment	Residential
S131	Residential - Townhouse	Residential
S135	Residential - High-rise Apartment	Residential
S200	Commercial	Commercial
S210	Residential - Commercial/Mixed	Commercial
S300	Industrial	Industrial
S400	Institutional	Institutional
S500	Transportation, Communication & Utility	Commercial
S600	Ports	Industrial
U100	Open and Undeveloped	Open
W400	Protected Watershed	Park

STATION DETAILS

Station Name	Vancouver-Downtown
Station ID	T001
Latitude	49.2823° N
Longitude	123.1219° W
Ground Elevation	32 m amsl*
Station Housing	Building
Station Dimensions	
Height	N/A
Width	N/A
Length	N/A
Measurement Heights (above ground)	
SO ₂ , NO ₂ , O ₃ , CO	3.8 m
Date of Operation	1975 to present
Station Designation	None
Predominant Land-use	Water (35%) @ 5 km
Municipality	City of Vancouver

*Above mean sea level

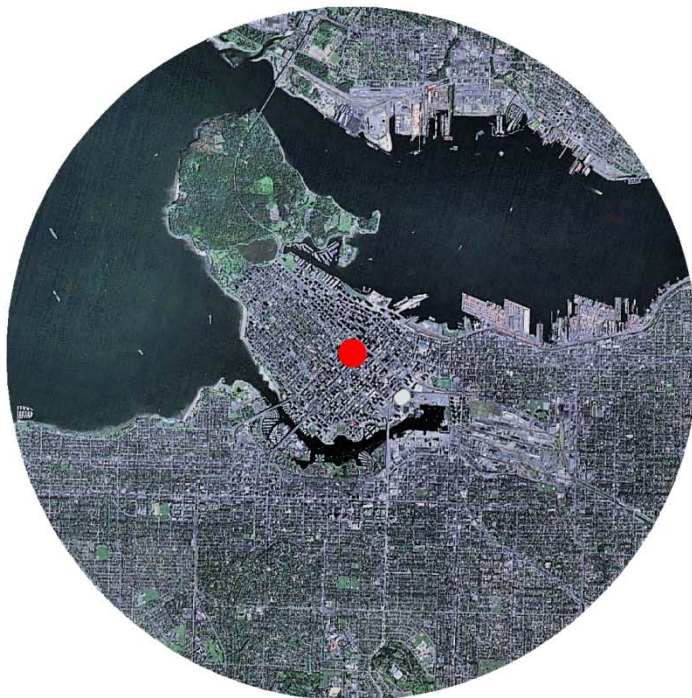
STATION DESCRIPTION

Located in the Robson Square Complex in downtown Vancouver, this station is situated in an area of dense traffic surrounded by mixed multiple-story and high-rise residential and commercial buildings. Instrumentation is housed within a concrete walled room at ground level that is accessible from underground parking. The outside of the building outside of the station room is mainly landscaped with a soil slope containing vegetation. The air intake is within 15 to 20 metres of a major one-way road with two lanes of travel, one lane of parking and a newly established separated bike lane that was installed in November of 2010.

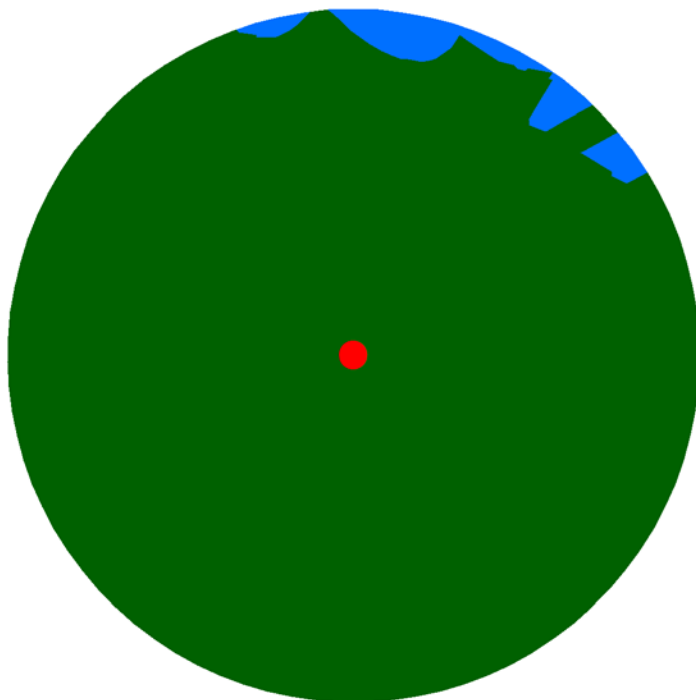




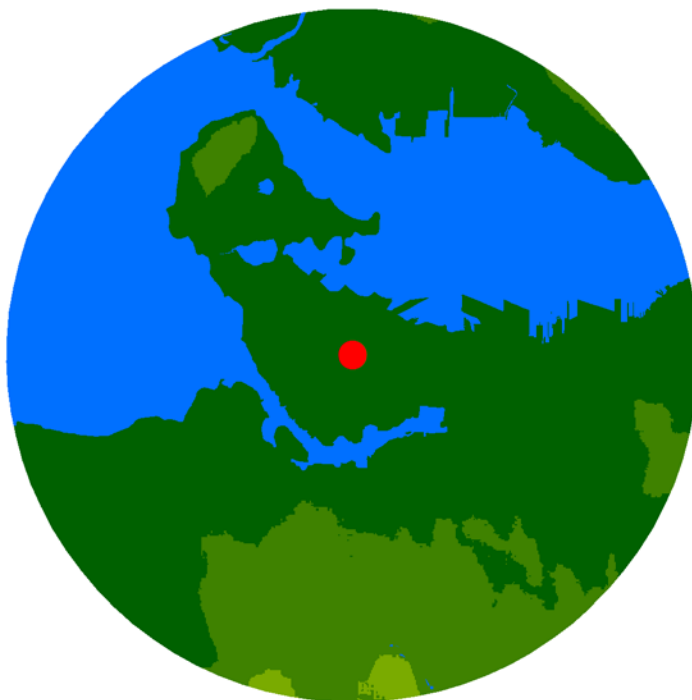
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

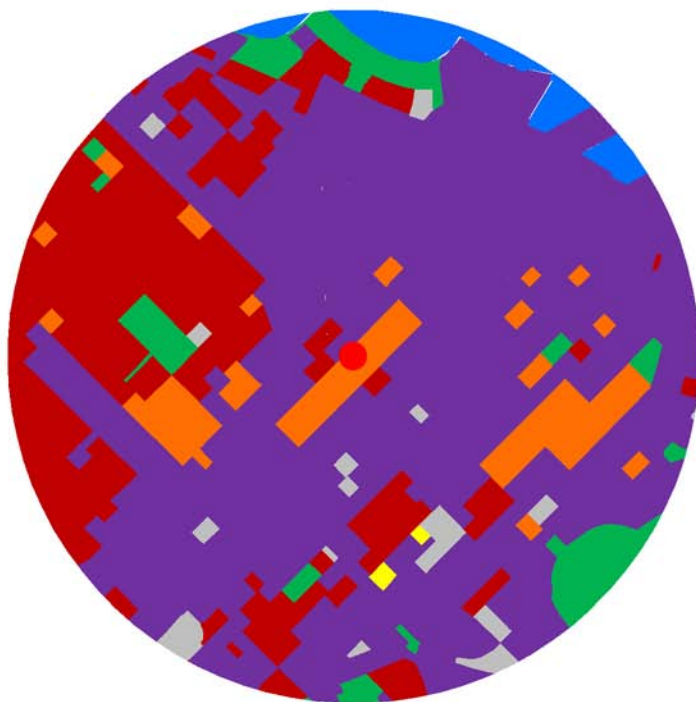
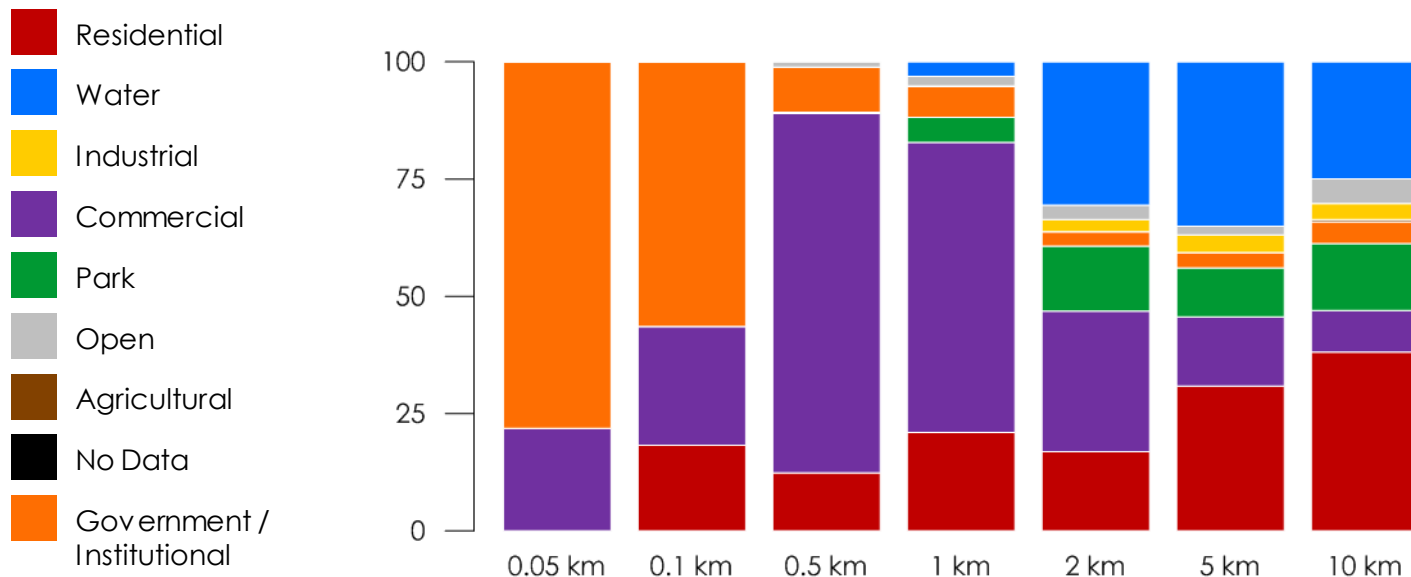


TOPOGRAPHY AT 5 KM

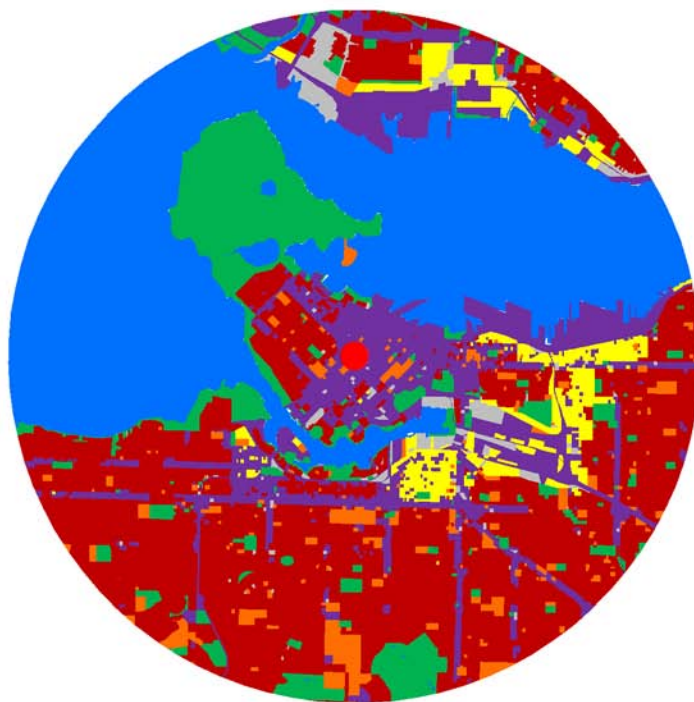


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

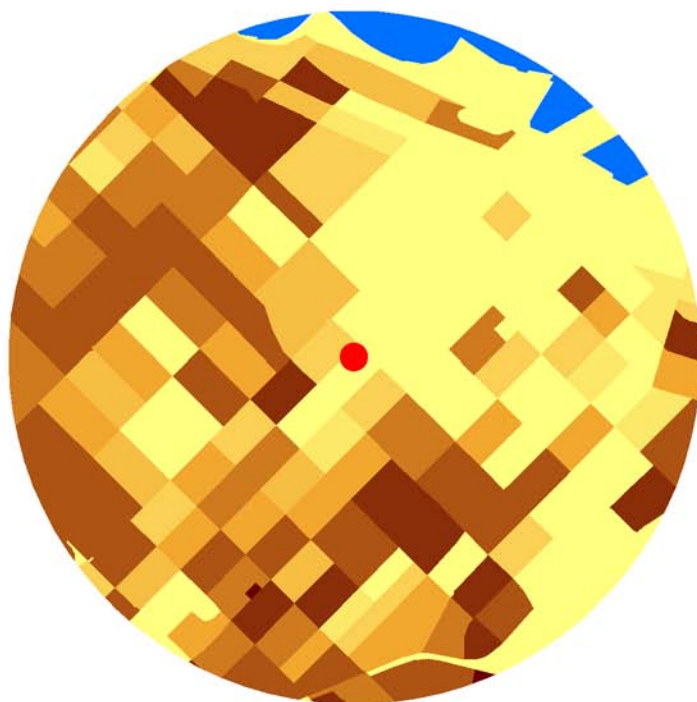
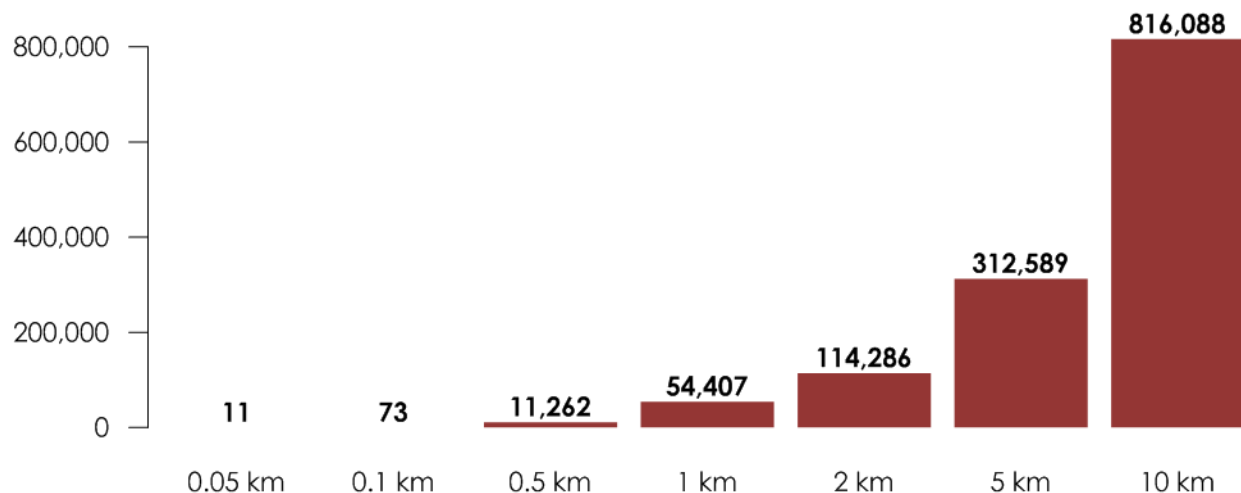


LAND-USE AT 1 KM

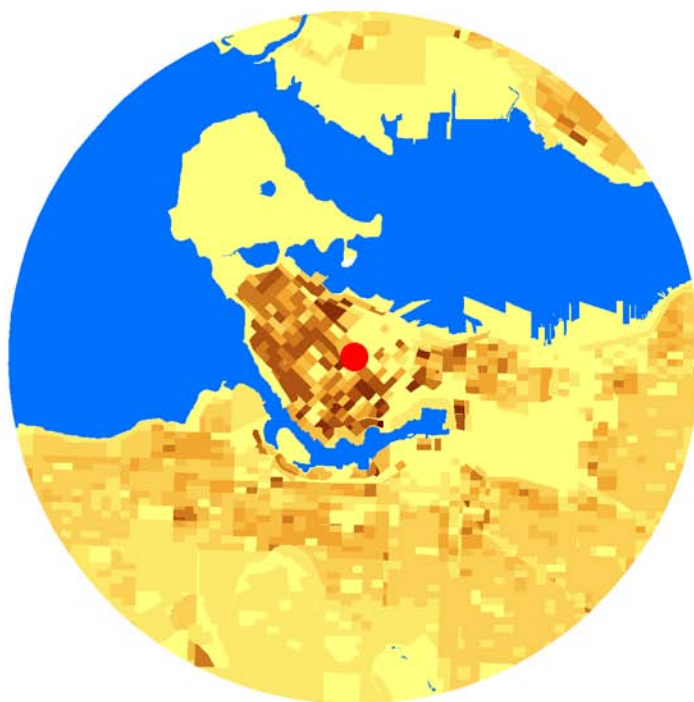


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Vancouver-Kitsilano
Station ID	T002
Latitude	49.2617° N
Longitude	123.1635° W
Ground Elevation	34 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.2 m
Width	2.4 m
Length	4.9 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	4.5 m
PM _{2.5}	5.2 m
T _{air} , RH	12.5 m
Precip	3.8 m
W _{spd} , W _{dir}	12.5 m
Date of Operation	*1986 to present
Station Designation	None
Predominant Land-use	Residential (41%) @ 5 km
Municipality	City of Vancouver

* Hi-Vol Total Suspended Particulate sampling began near this site in 1972.

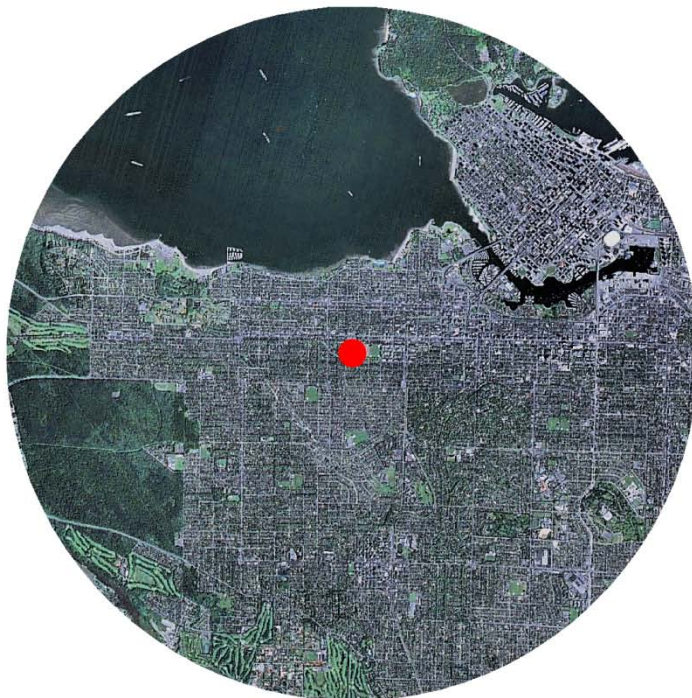
STATION DESCRIPTION

This station in Kitsilano is situated in a densely populated residential neighbourhood on the west side of Vancouver. The station is a modular shelter located at Kitsilano Secondary School. The station is located within a few metres of a large two-story gymnasium and a sandy beach volleyball court. The fine particles from the sand are known to influence the particulate matter measurements from time to time when the court is in use. This long-term station is one of the original NAPS (National Air Pollution Surveillance) stations in the network.

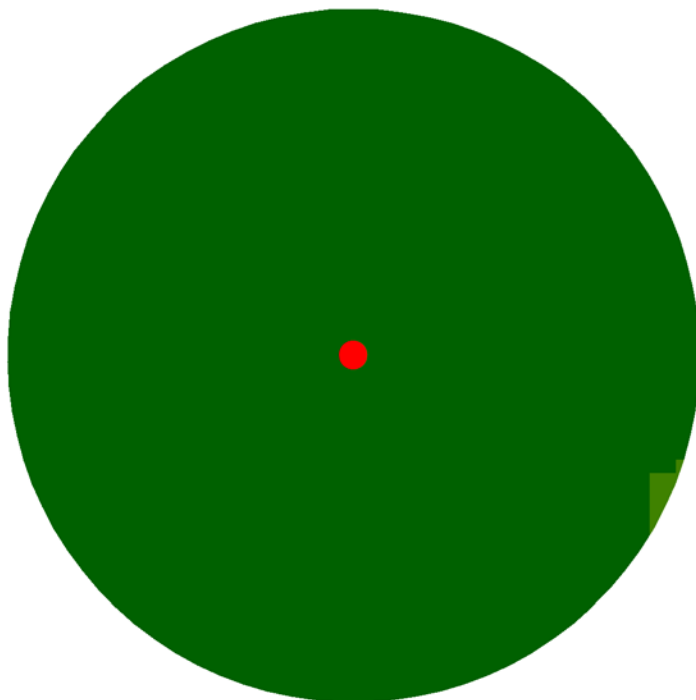




AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

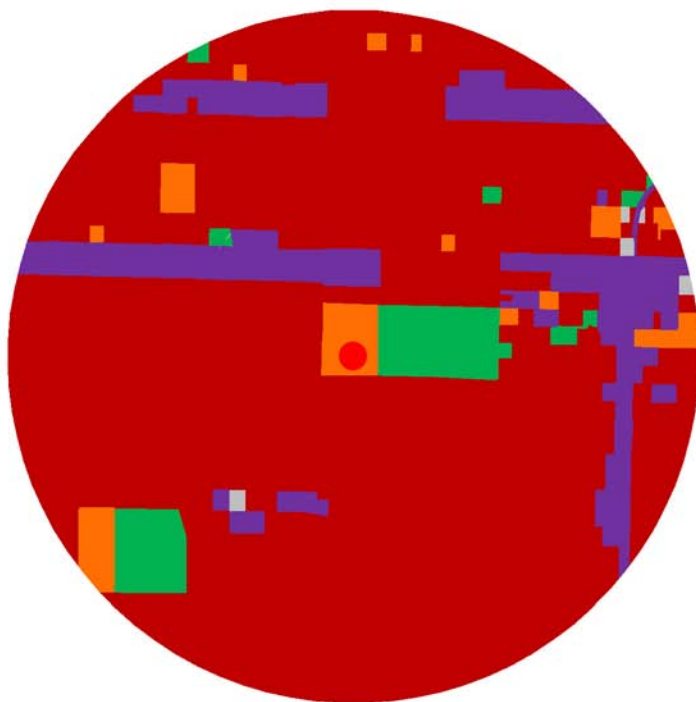
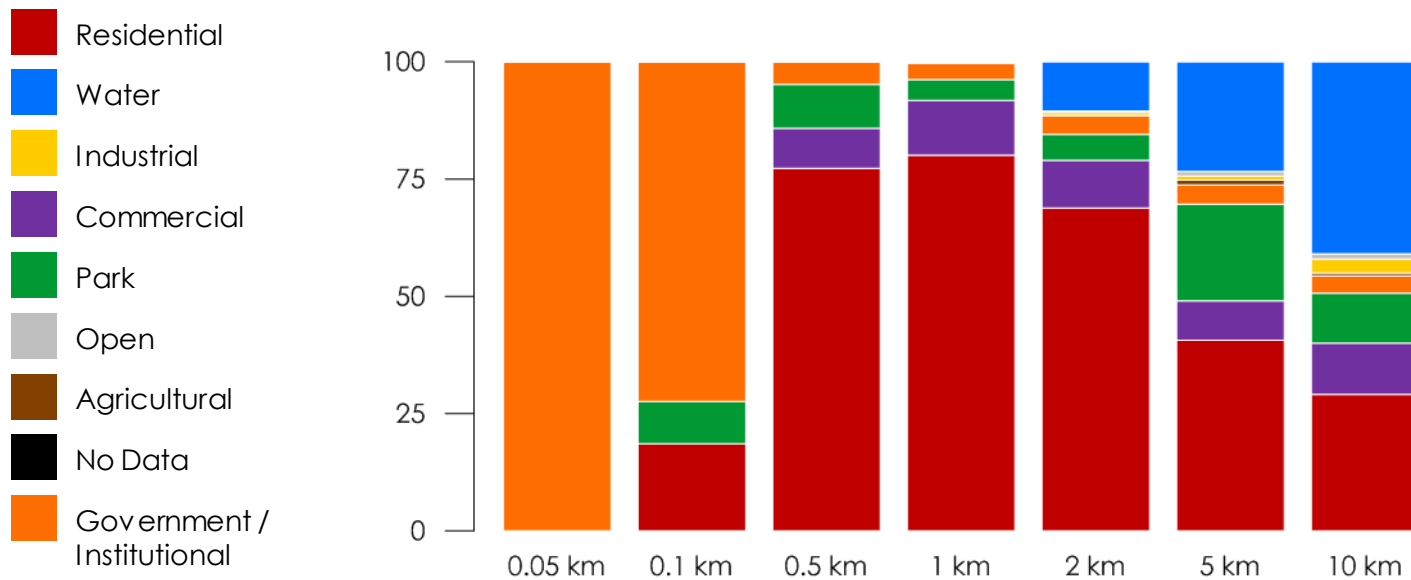


TOPOGRAPHY AT 5 KM

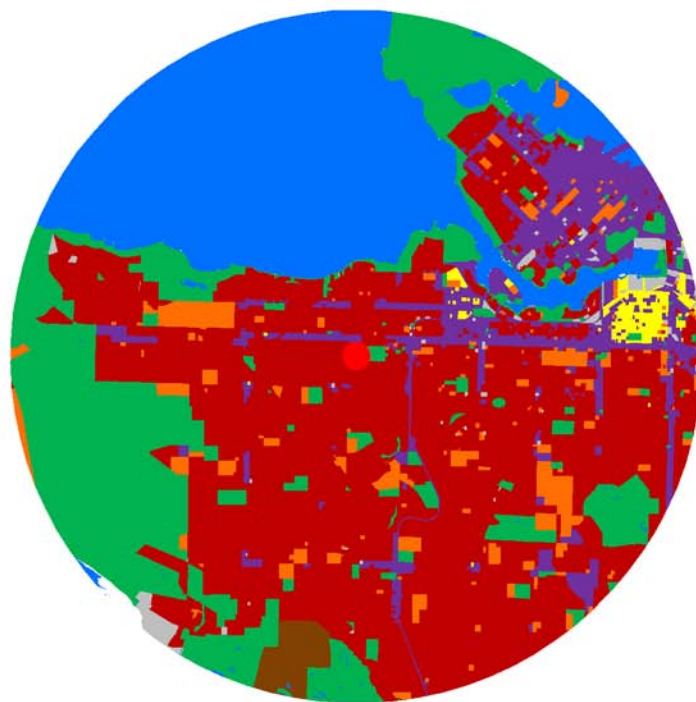


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

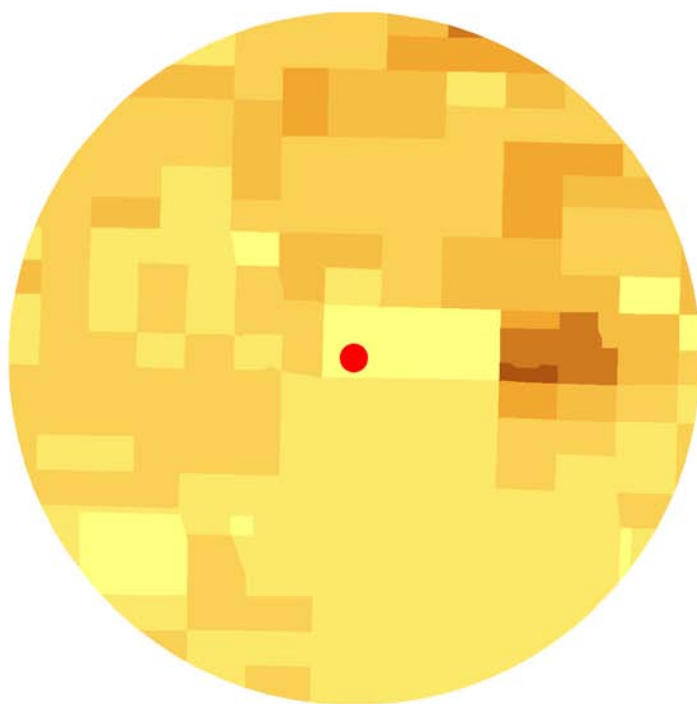
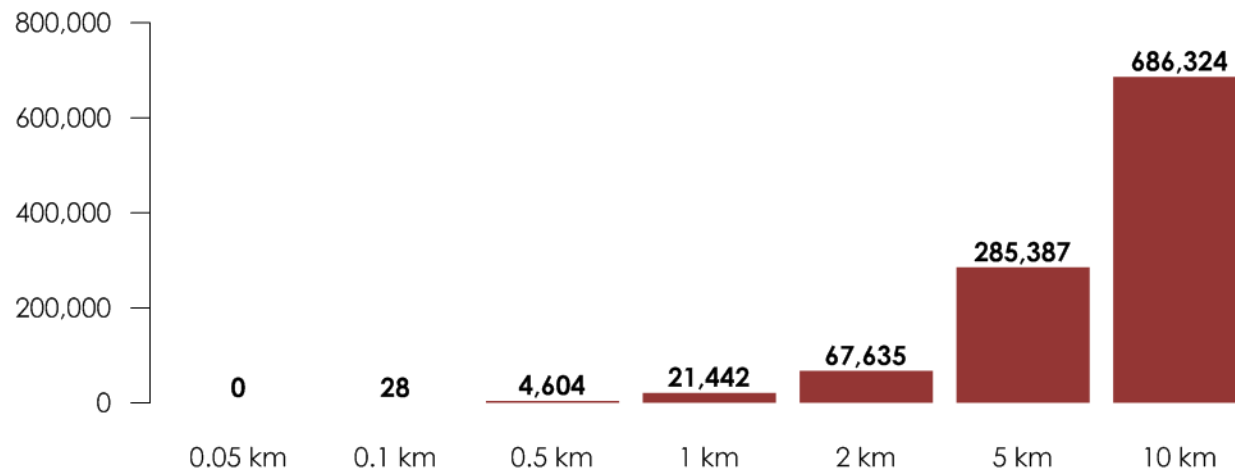


LAND-USE AT 1 KM

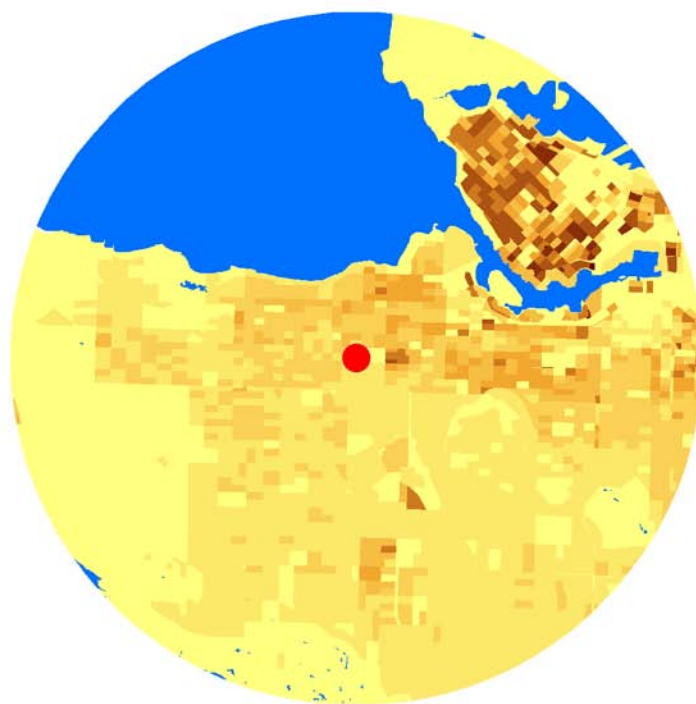


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Burnaby-Kensington Park T4

DESCRIPTION

STATION DETAILS

Station Name	Burnaby-Kensington Park
Station ID	T004
Latitude Longitude	49.2792° N 122.9707° W
Ground Elevation	104 m amsl
Station Housing	Building
Station Dimensions Height Width Length	3.3 m 9.0 m 60.0 m
Measurement Heights (above ground)	
SO ₂ , TRS, NO ₂ , CO, O ₃	4.1 m
PM _{2.5}	5.4 m
PM ₁₀	5.3 m
T _{air}	12.5 m
W _{spd} , W _{dir}	13.5 m
Date of Operation	1975 to present
Station Designation	None
Predominant Land-use	Residential (30%) @ 5 km
Municipality	City of Burnaby

STATION DESCRIPTION

This station located in North Burnaby is situated in a mixed neighbourhood which includes residential, industrial, commercial, and park land-use. The station is about 100 m south of a major east-west roadway (Hastings St) and 275 m south of Shellburn, a petroleum distribution terminal. The area is typical of other surrounding areas within the North Burnaby region and the site is one of the original NAPS stations in the network. Instrumentation is housed within a municipal maintenance/public swimming pool building at ground level.

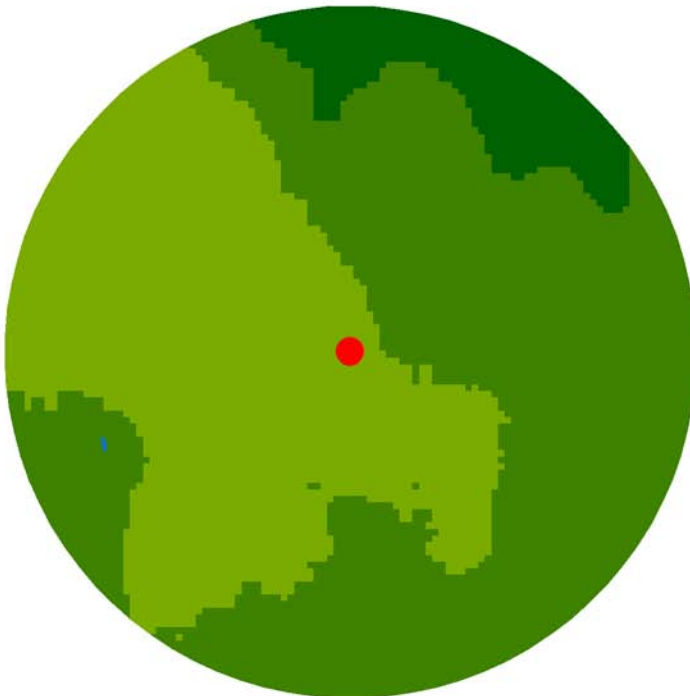




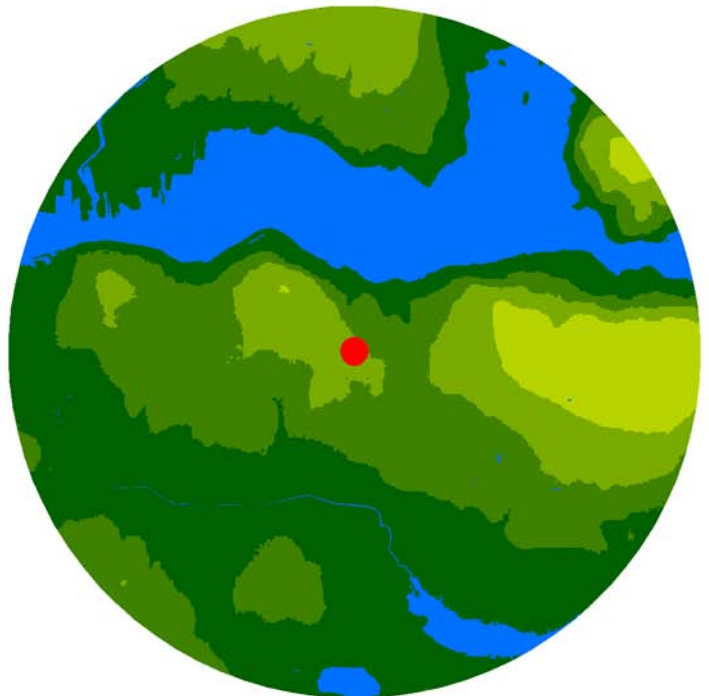
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

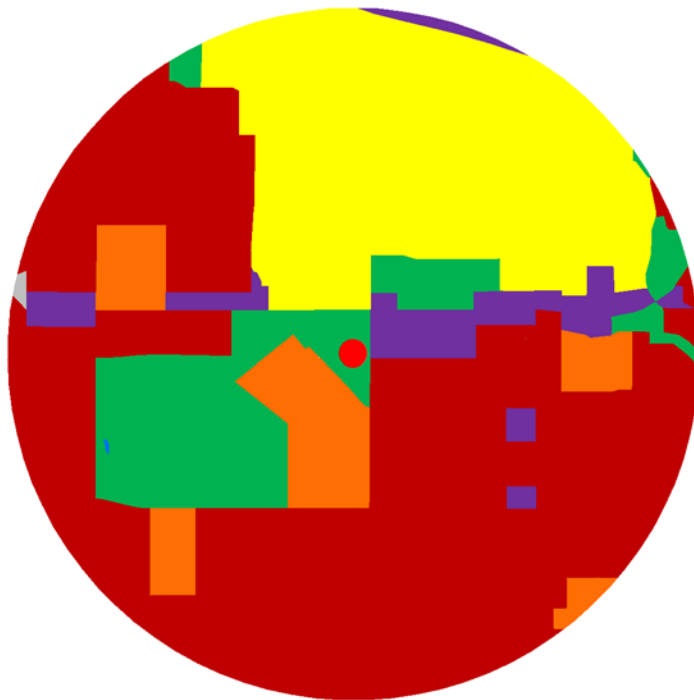
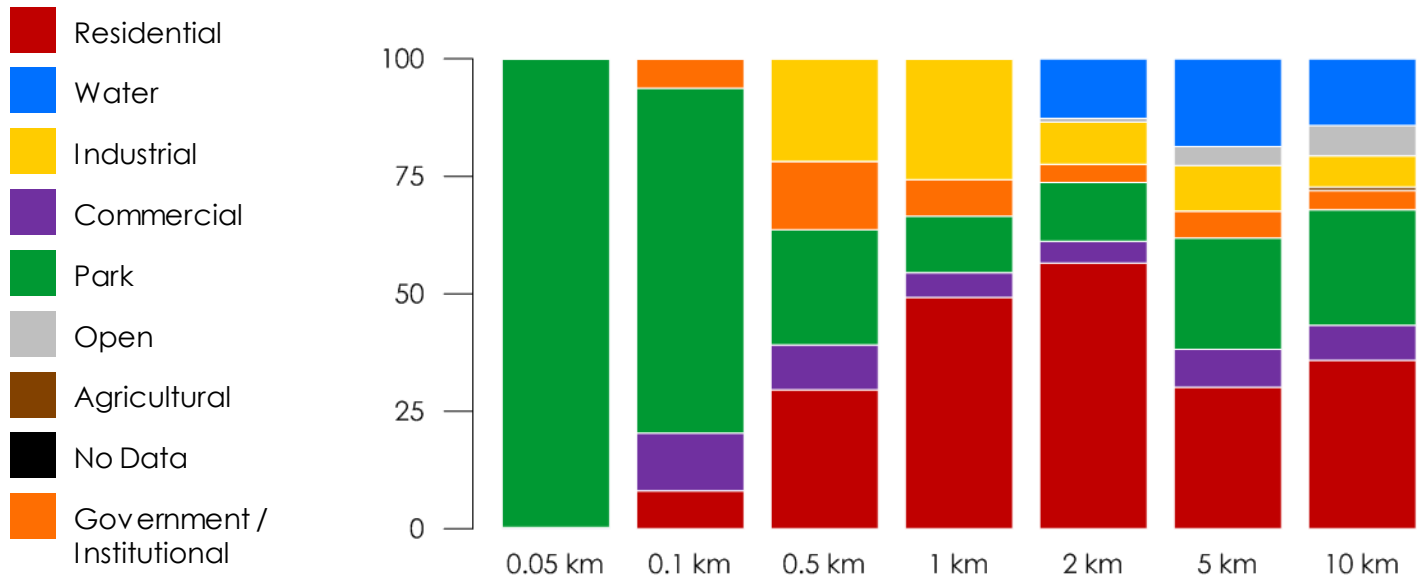


TOPOGRAPHY AT 5 KM

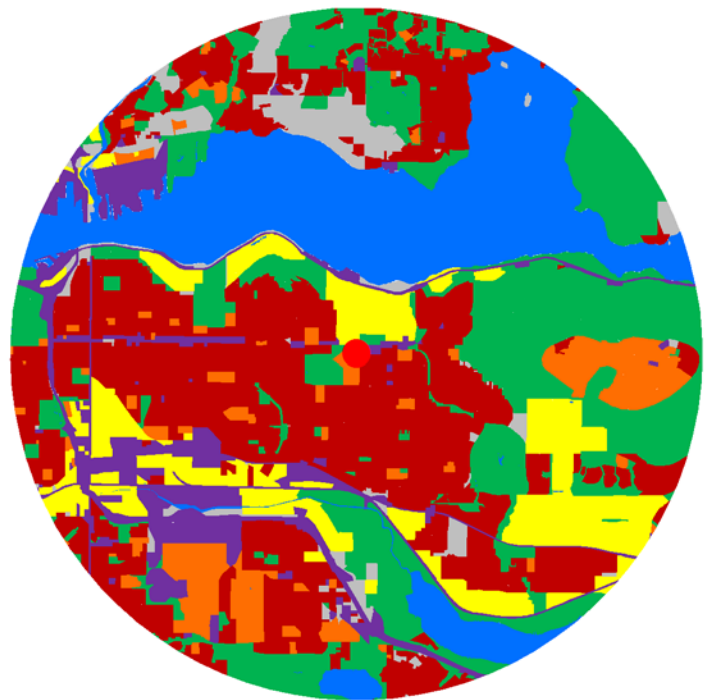


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

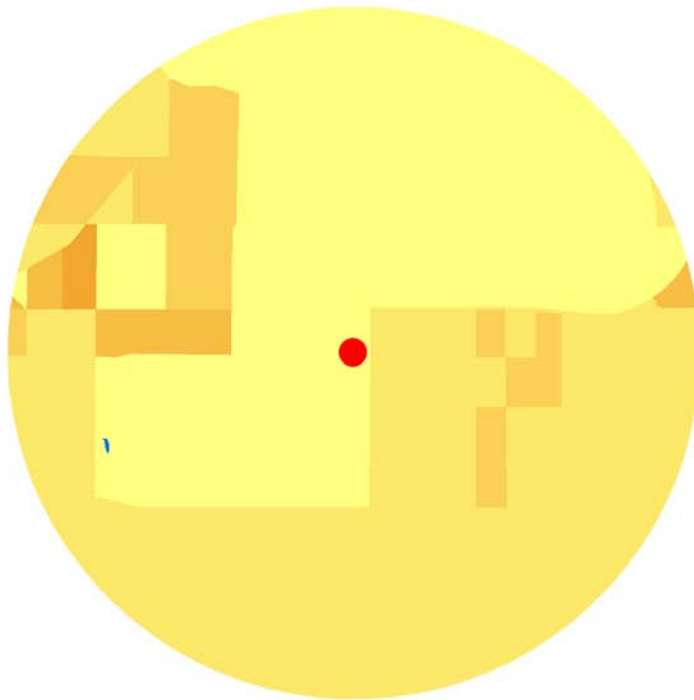
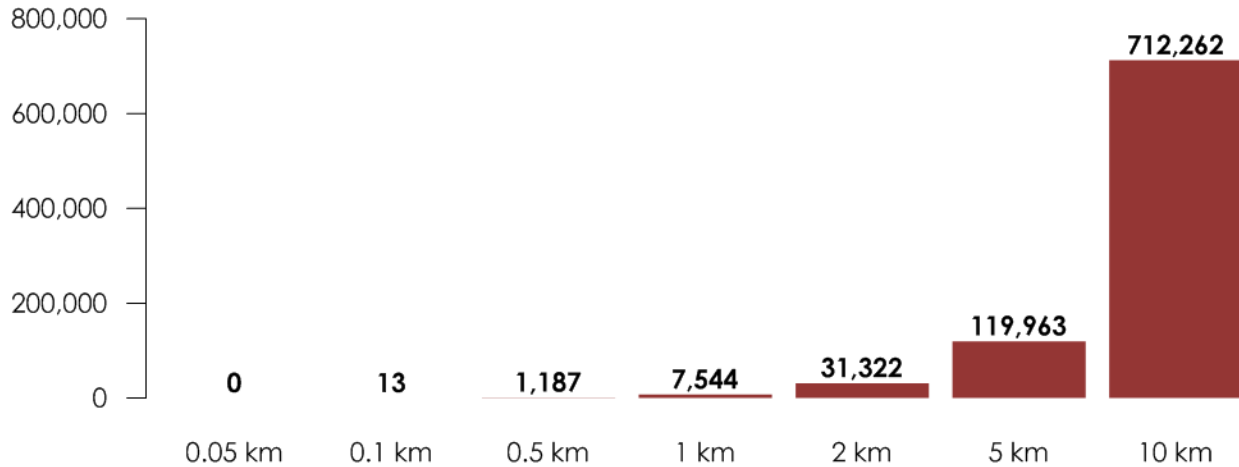


LAND-USE AT 1 KM

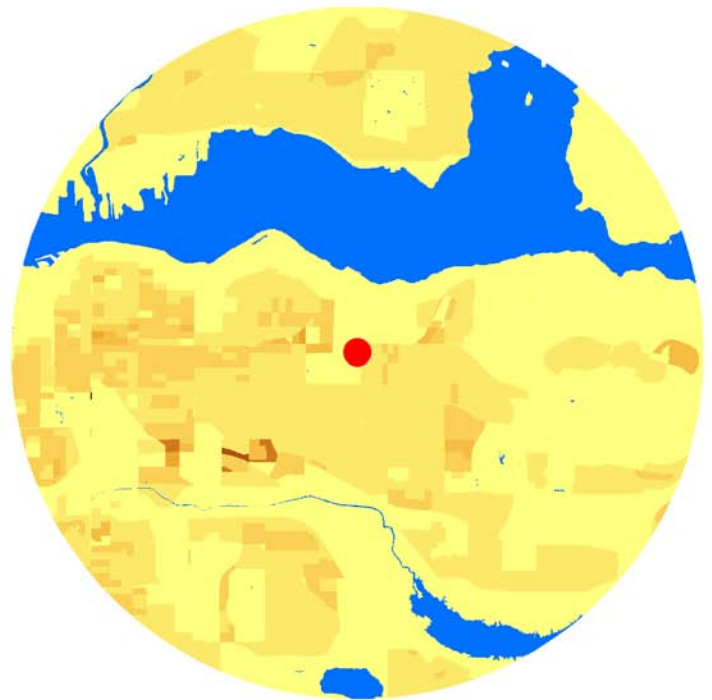


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

N. Vancouver- 2nd Narrows T6

DESCRIPTION

STATION DETAILS

Station Name	N. Vancouver-2nd Narrows
Station ID	T006
Latitude	49.3015° N
Longitude	123.0204° W
Ground Elevation	4 m amsl
Station Housing	Building
Station Dimensions	
Height	4.7 m
Width	5.4 m
Length	17.0 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	5.7 m
PM _{2.5}	6.2 m
CARB	6.1 m
W _{spd} , W _{dir}	11.9 m
Date of Operation	1977 to present
Station Designation	Special Purpose - Industry
Predominant Land-use	Residential (37%) @ 5 km
Municipality	District of North Vancouver

STATION DESCRIPTION

This station is located in the District of North Vancouver near Second Narrows Bridge in a busy commercial and industrial setting at Metro Vancouver's Beach Works Yard. The station has been designated as 'Special Purpose – Industry' since it is situated on an active works yard adjacent to many nearby emission sources, and may not be representative of air quality in surrounding residential areas. The station is near intermittent traffic line-ups for the North Vancouver transfer station (within 50 m), a chemical plant which is a large emitter of NO_x in the region (within 250 m), an asphalt plant (within 250 m), two concrete batch plants (within 750 m), a major port terminal and ocean-going vessels (within 1 km), and multiple unpaved surfaces frequented by moving vehicles and non-road equipment. The air quality monitoring instruments are housed in a small one-story building.

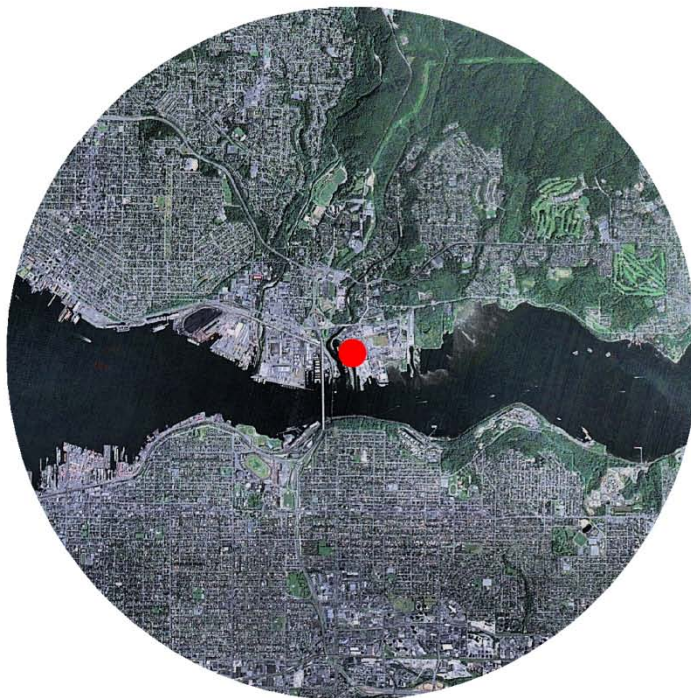


N. Vancouver- 2nd Narrows T6

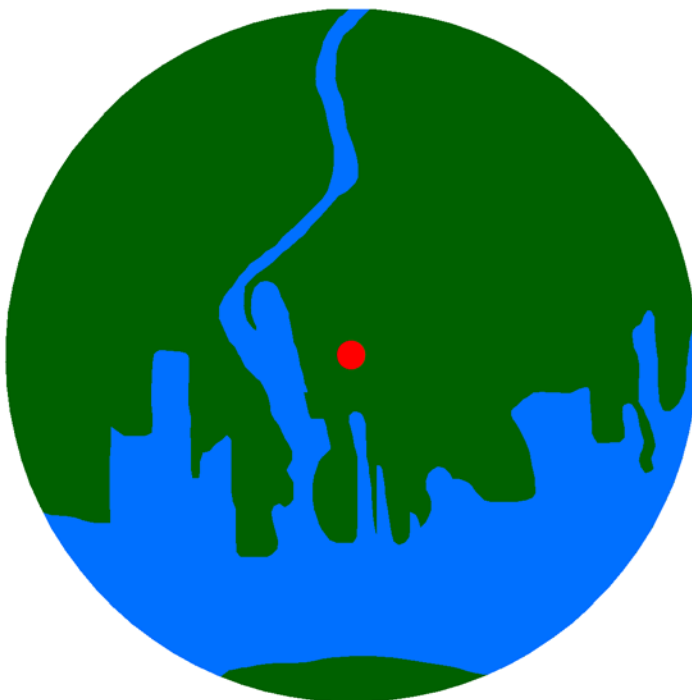
TERRAIN



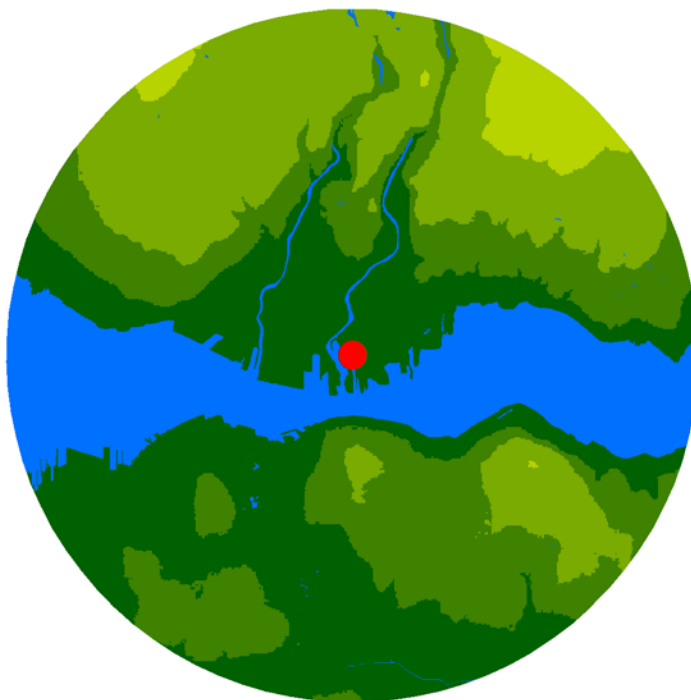
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AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

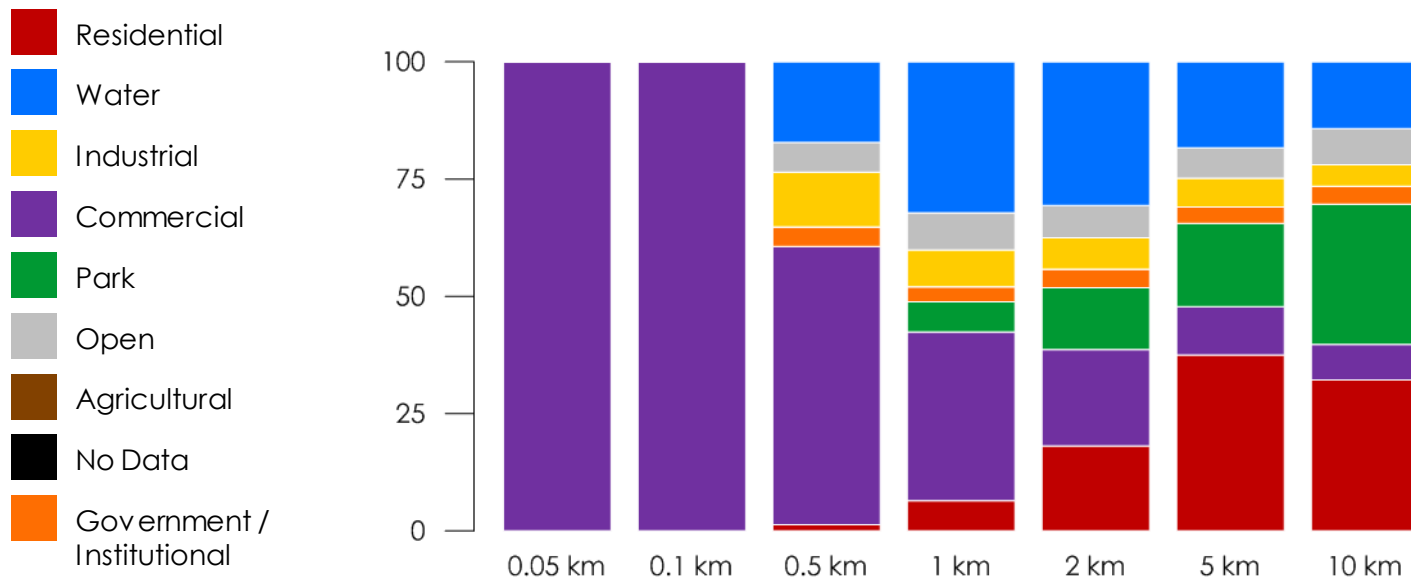


TOPOGRAPHY AT 5 KM

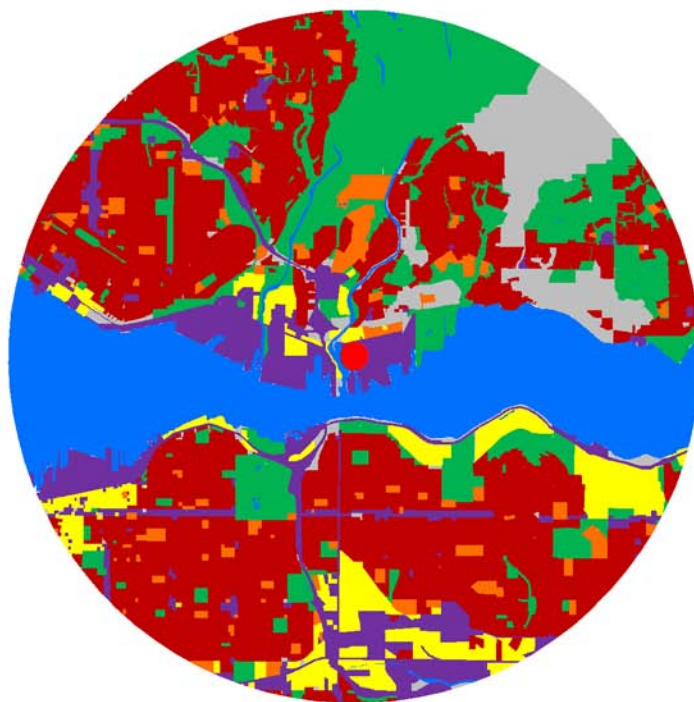


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION



LAND-USE AT 1 KM

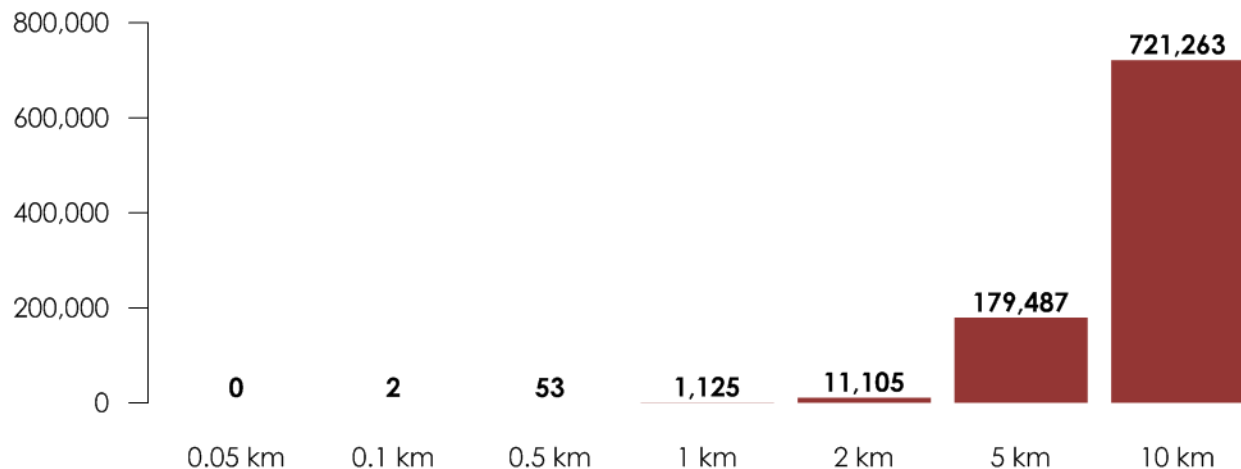


LAND-USE AT 5 KM

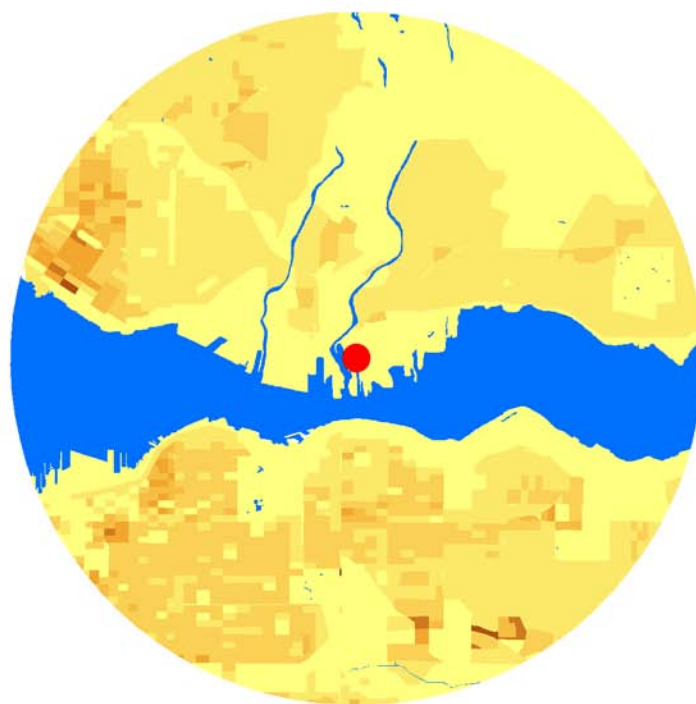
N. Vancouver- 2nd Narrows T6

POPULATION

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Port Moody

T9

DESCRIPTION

STATION DETAILS

Station Name	Port Moody
Station ID	T009
Latitude	49.2809° N
Longitude	122.8493° W
Ground Elevation	6 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.5 m
Width	3.7 m
Length	6.2 m
Measurement Heights (above ground)	
SO ₂ , TRS, NO ₂ , CO, O ₃	6.0 m
PM _{2.5}	6.4 m
PM ₁₀	6.2 m
CARB	6.1 m
Dichot PM ₁₀ , PM _{2.5}	5.6 m
T _{air} , RH	11.8 m
Precip	5.3 m
W _{spd} , W _{dir}	12.8 m
Date of Operation	1977 to present
Station Designation	Super Site
Predominant Land-use	Residential (42%) @ 5 km
Municipality	City of Port Moody

STATION DESCRIPTION

This site is located in Rocky Point Park within an area that has experienced a reduction in industrial sources and an increase in mobile and residential sources over the last two decades. This well instrumented site is one of the original NAPS stations in the network and has been the focus of many research projects. Instrumentation is housed within a modular building at ground level. This station has been influenced by industry located along Burrard Inlet including an oil refinery and a natural-gas fired power generation station. BC Hydro provides some funding support for this station as part of an on-going commitment to air quality monitoring resulting from their operation of the Burrard Thermal generating station.

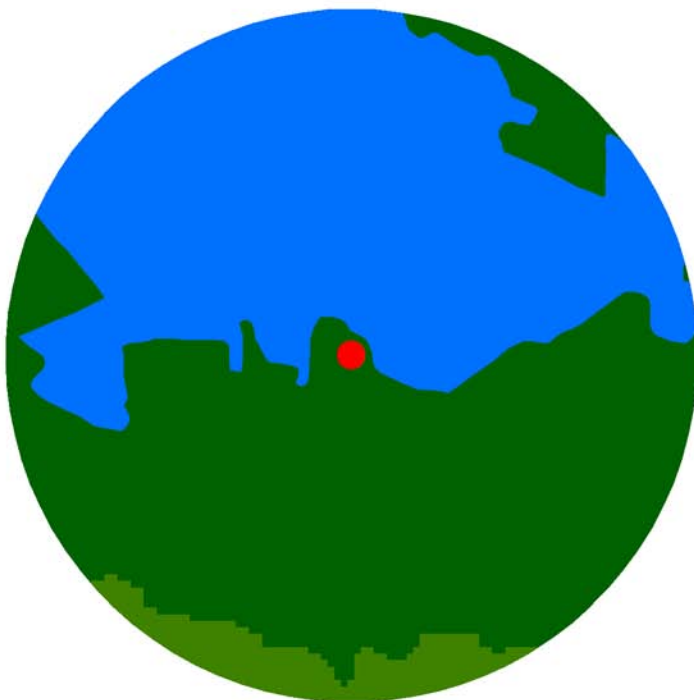




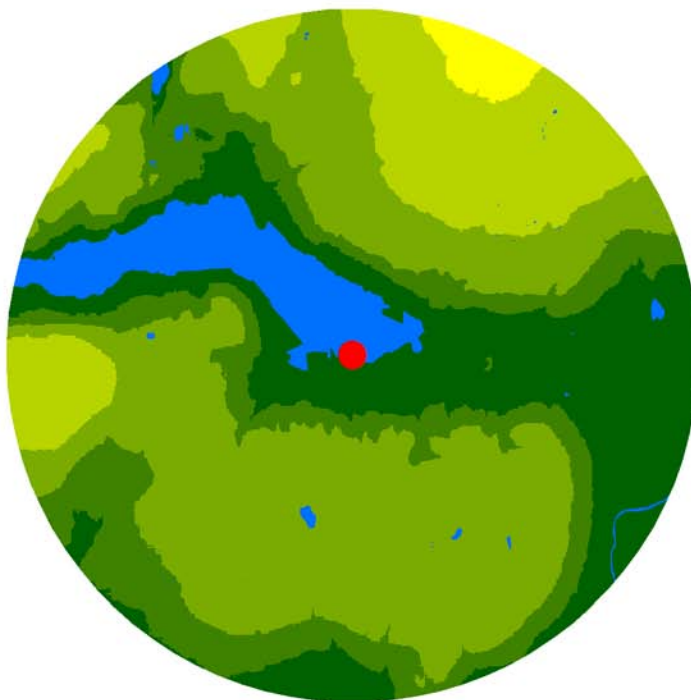
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

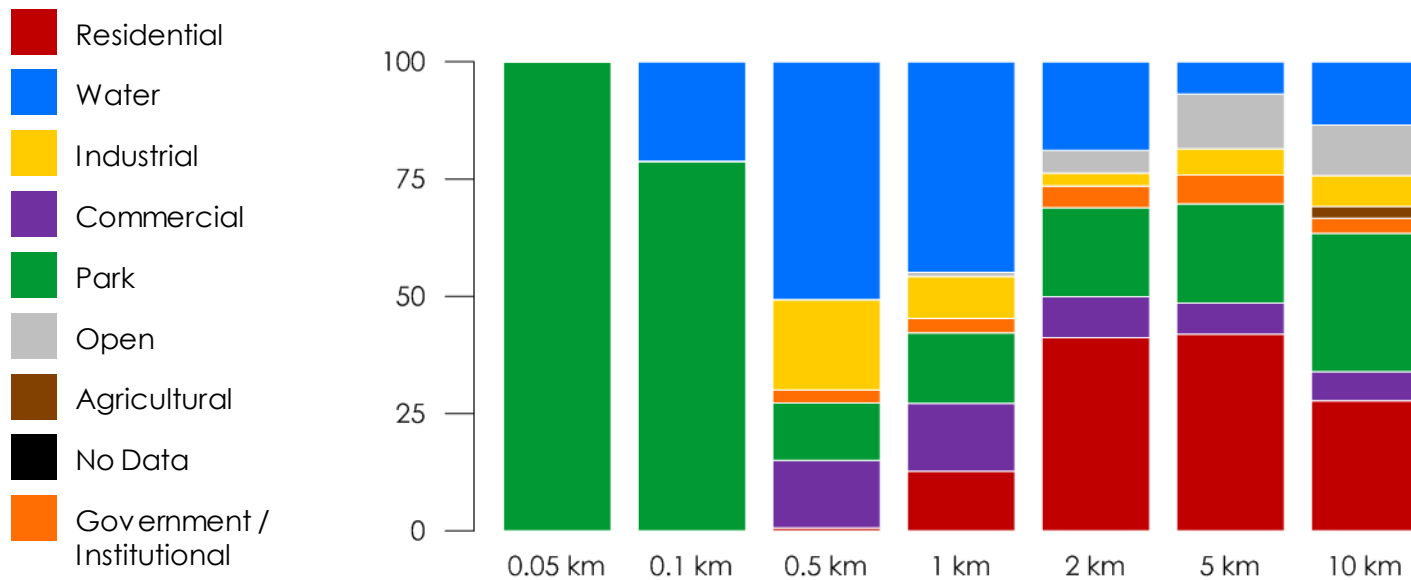


TOPOGRAPHY AT 5 KM

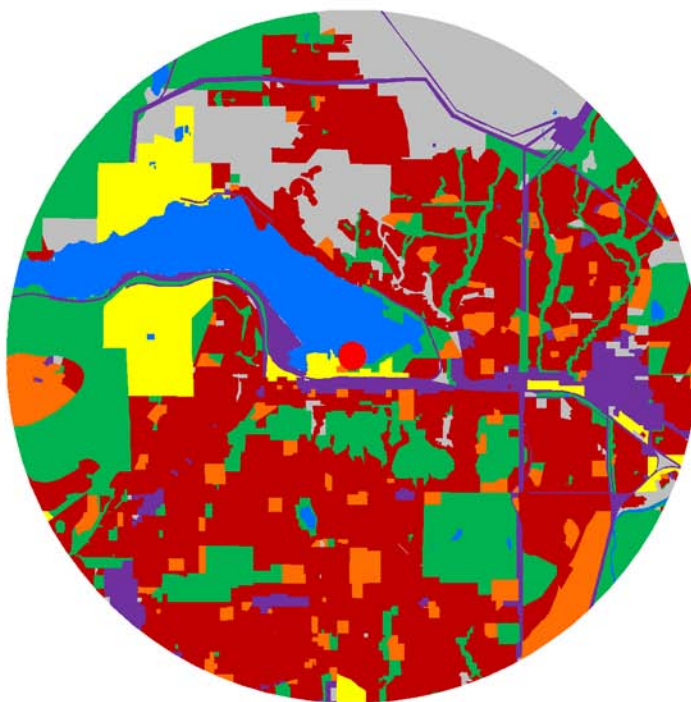


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

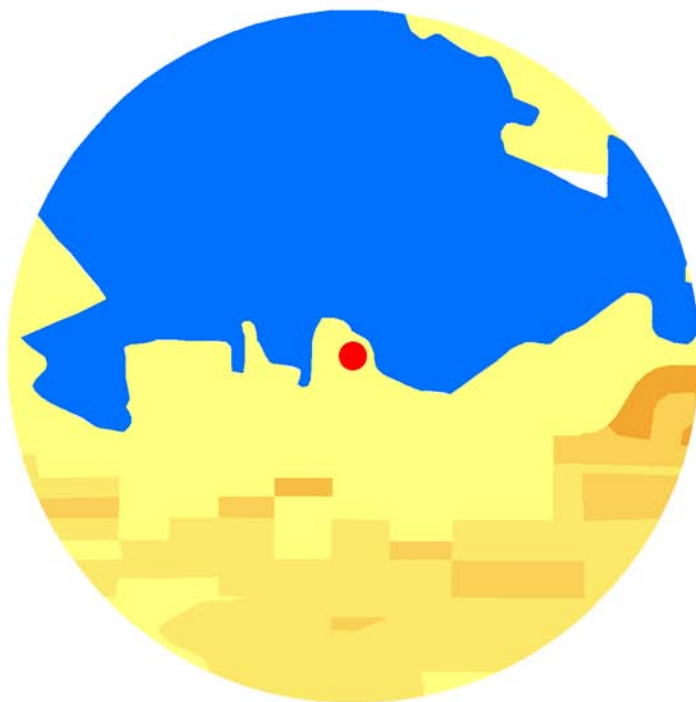
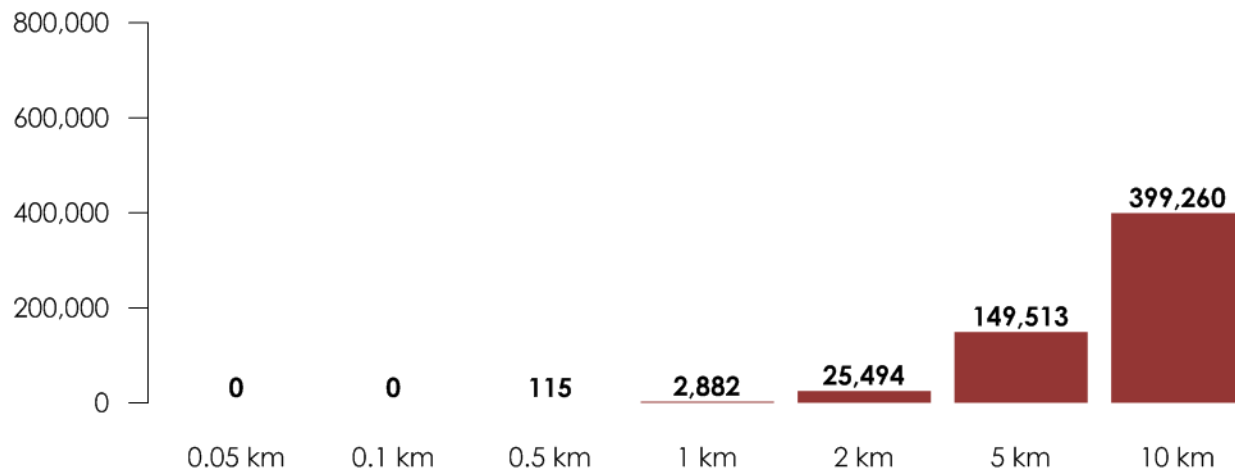


LAND-USE AT 1 KM

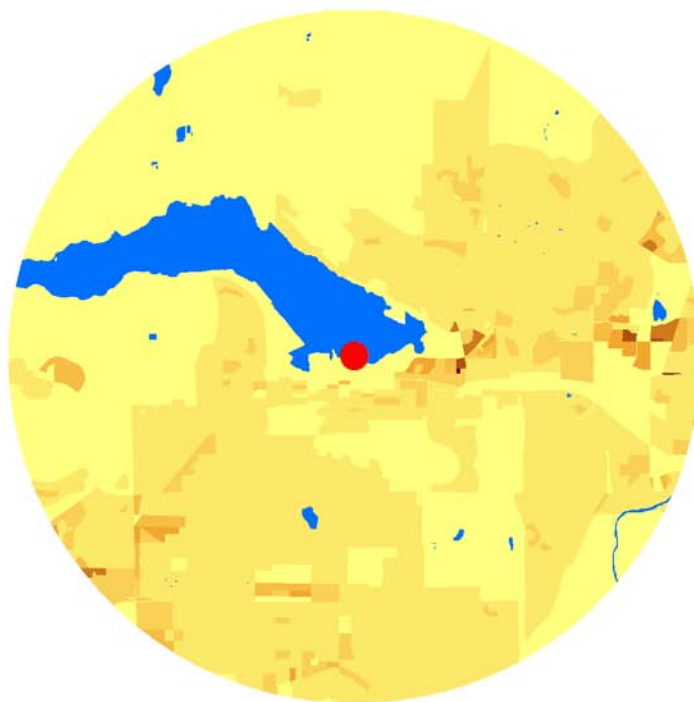


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Chilliwack
Station ID	T012
Latitude	49.1558° N
Longitude	121.9403° W
Ground Elevation	12 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.7 m
Width	3.4 m
Length	6.4 m
Measurement Heights (above ground)	
SO ₂ , NH ₃ , NO ₂ , CO	4.6 m
O ₃ , VOC	4.6 m
PM _{2.5} , PM ₁₀ , CARB	4.7 m
T _{air} , RH	12.0 m
Precip	3.3 m
W _{spd} , W _{dir}	12.0 m
Date of Operation	+1984 to present
Station Designation	Super Site
Predominant Land-use	*Not Available
Municipality	City of Chilliwack

*Land-use data was not available from the FVRD. As data becomes available it will be included in the future.

*This station was moved to its current location in 1994.

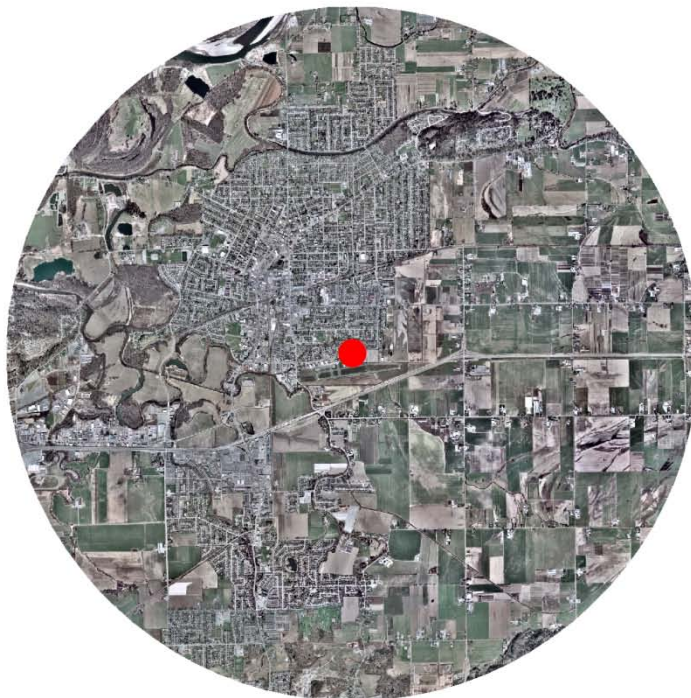
STATION DESCRIPTION

This monitoring station is located at the Chilliwack Airport in an area bordered by the airport to the south, farmland on the east and a residential area to the north. Located in an open area in the centre of the Fraser Valley, this site is suited to monitor regional air quality in the Chilliwack area and has been designated a NAPS site. Its operation is funded by the FVRD. Instrumentation is housed within a modular building at ground level.

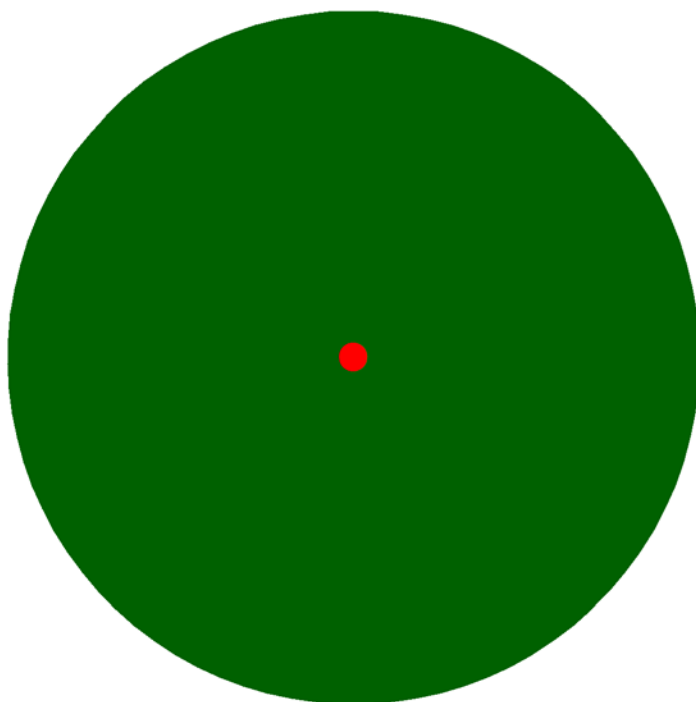




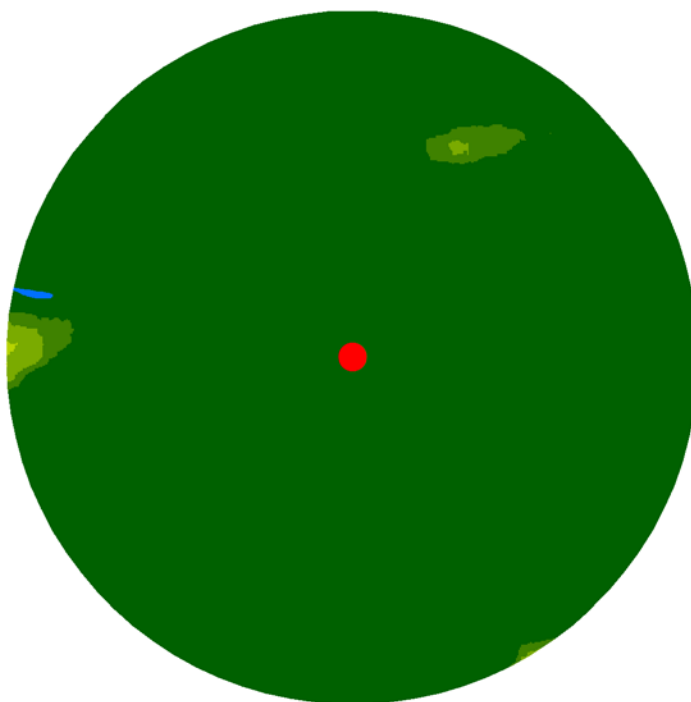
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

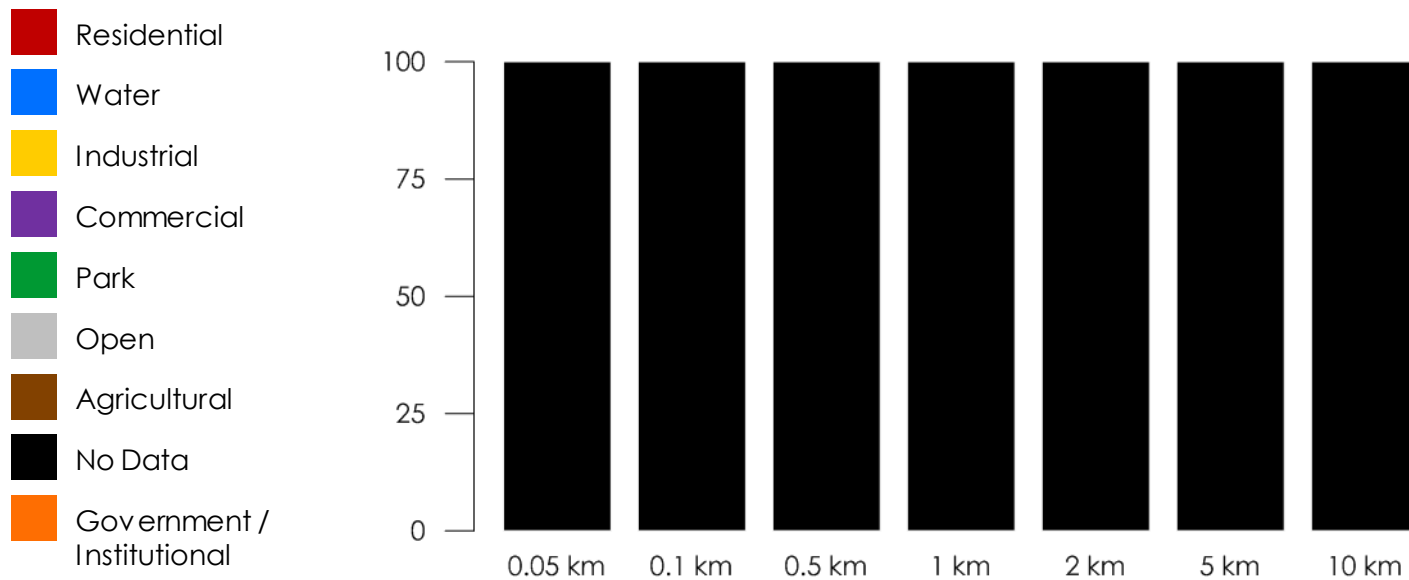


TOPOGRAPHY AT 5 KM



Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION



No Data

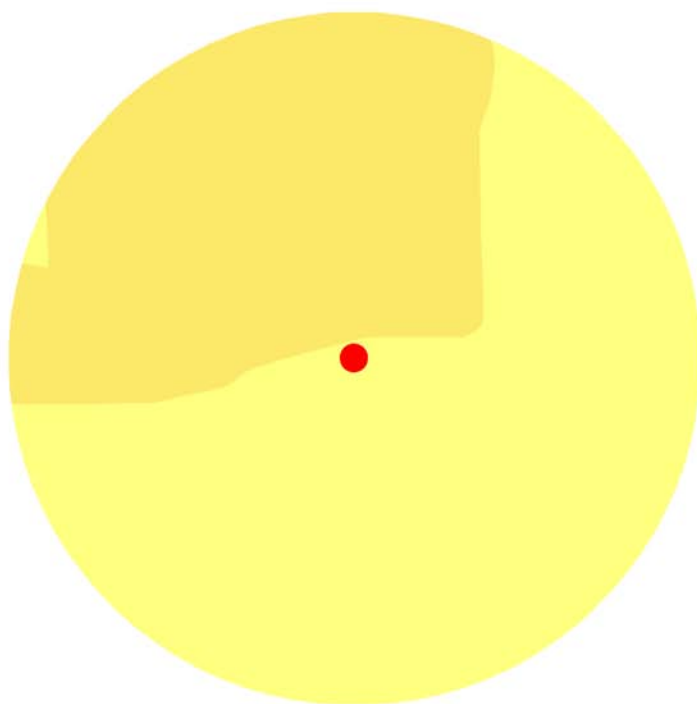
LAND-USE AT 1 KM



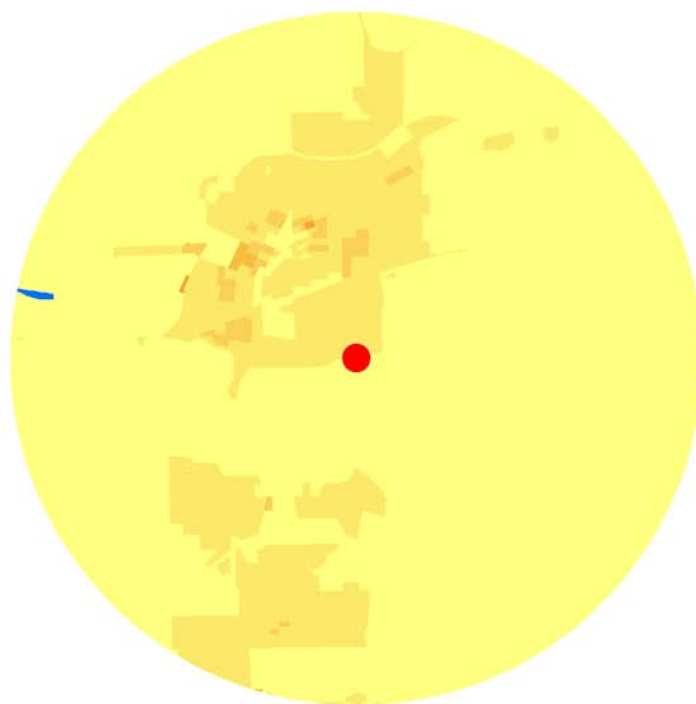
No Data

LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

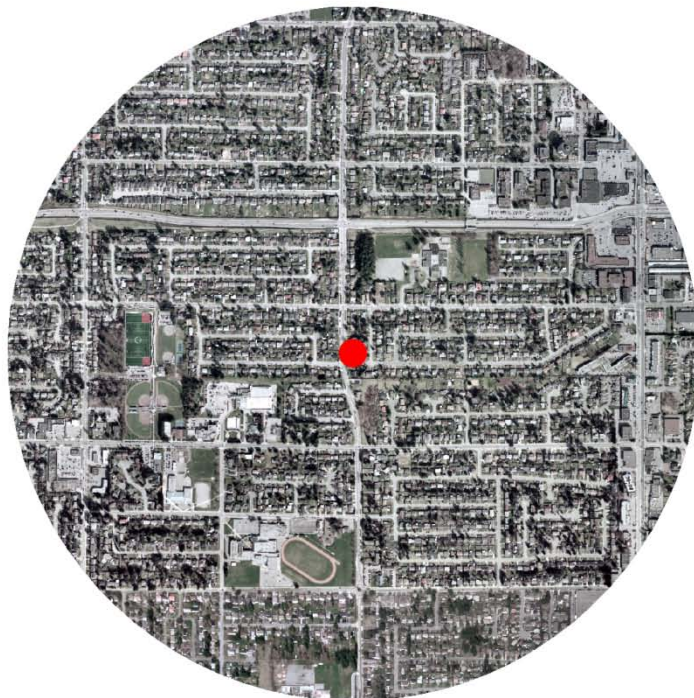
Station Name	North Delta
Station ID	T013
Latitude	49.1583° N
Longitude	122.9017° W
Ground Elevation	113 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.1 m
Width	2.5 m
Length	4.9 m
Measurement Heights (above ground)	
NO ₂ , O ₃	4.2 m
PM _{2.5}	5.1 m
T _{air}	5.0 m
Precip	3.7 m
W _{spd} , W _{dir}	*18.3 m
Date of Operation	1987 to present
Station Designation	None
Predominant Land-use	Residential (42%) @ 5 km
Municipality	Corporation of Delta

*The tower was raised on August 29, 2012. Prior to this, the wind measurement height was 14.3 m.

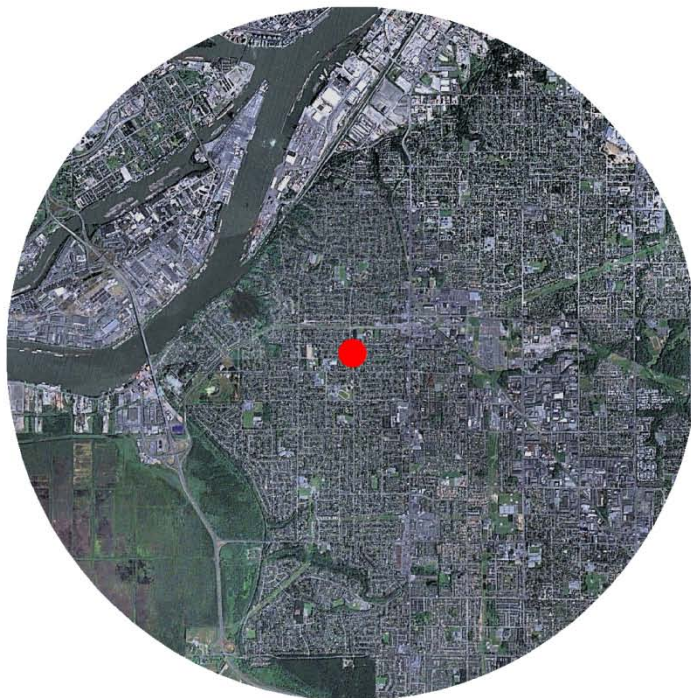
STATION DESCRIPTION

Located in North Delta, this station monitors air quality immediately west of Central Surrey, a rapidly growing area, and east of the agricultural areas of Delta and Richmond. Immediate surroundings are primarily residential. Air quality instrumentation is housed within a modular building at ground level (shown in the top photo below). Air temperature is observed on a post extending from the station while the wind measurements are observed on a tower situated on top of a large reservoir 30 m from the station (shown in the bottom photo below). The reservoir is 8.3 m tall with a 12 m radius.

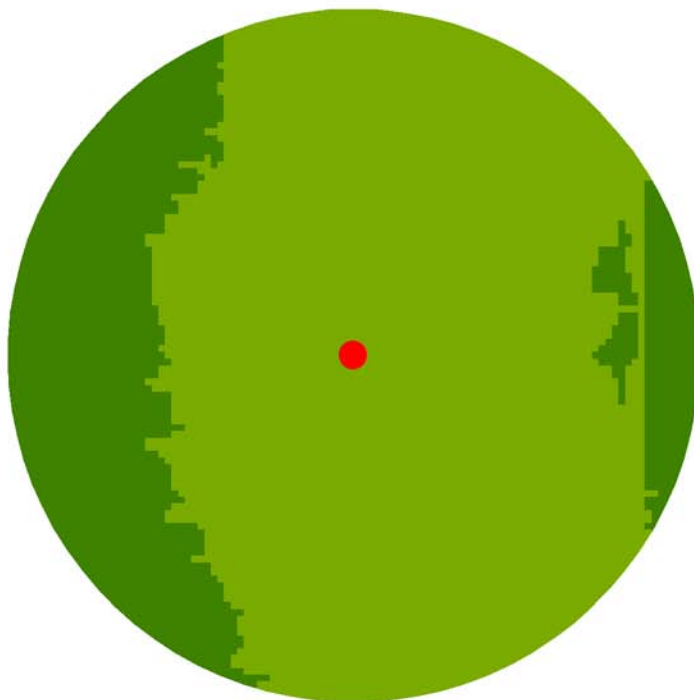




AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

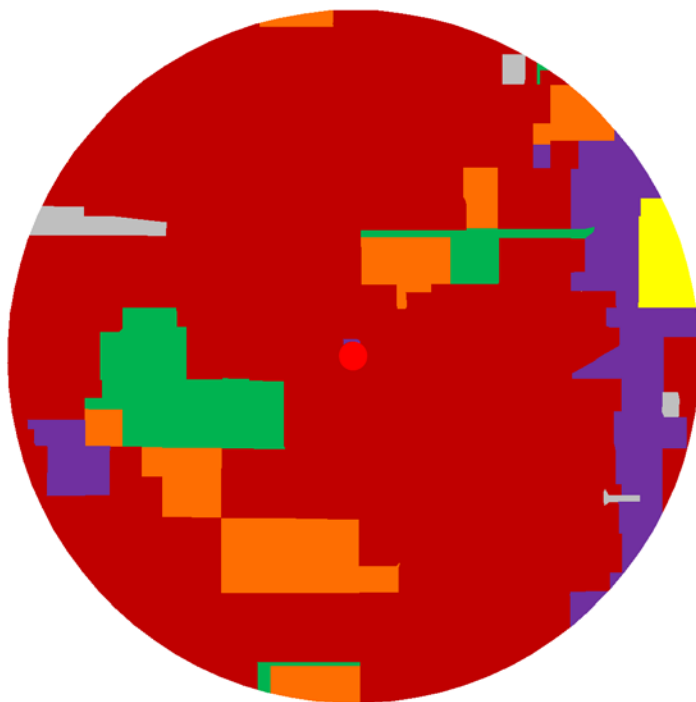
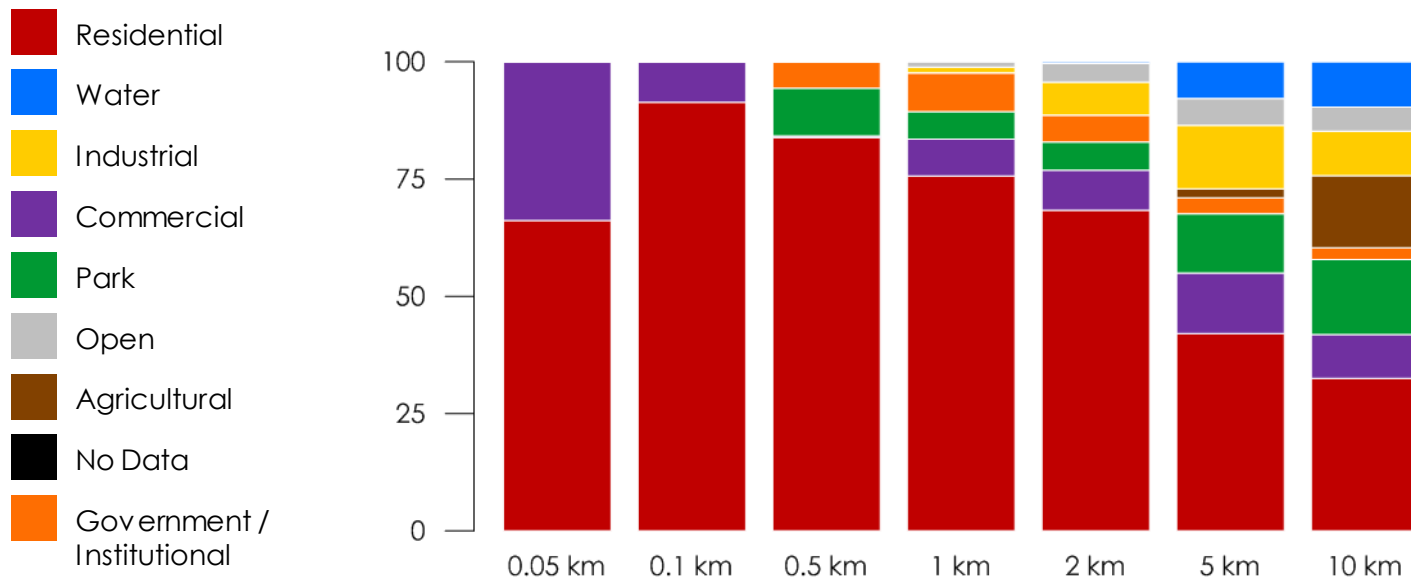


TOPOGRAPHY AT 5 KM

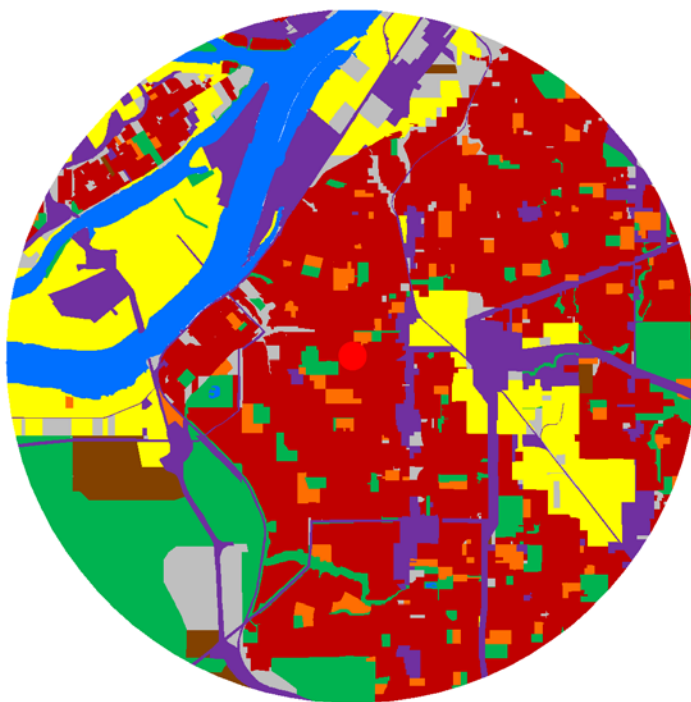


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

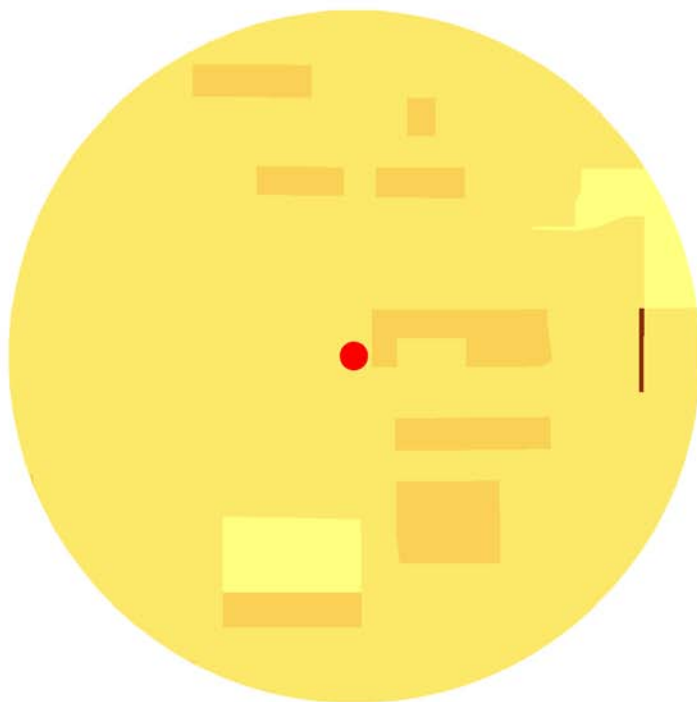
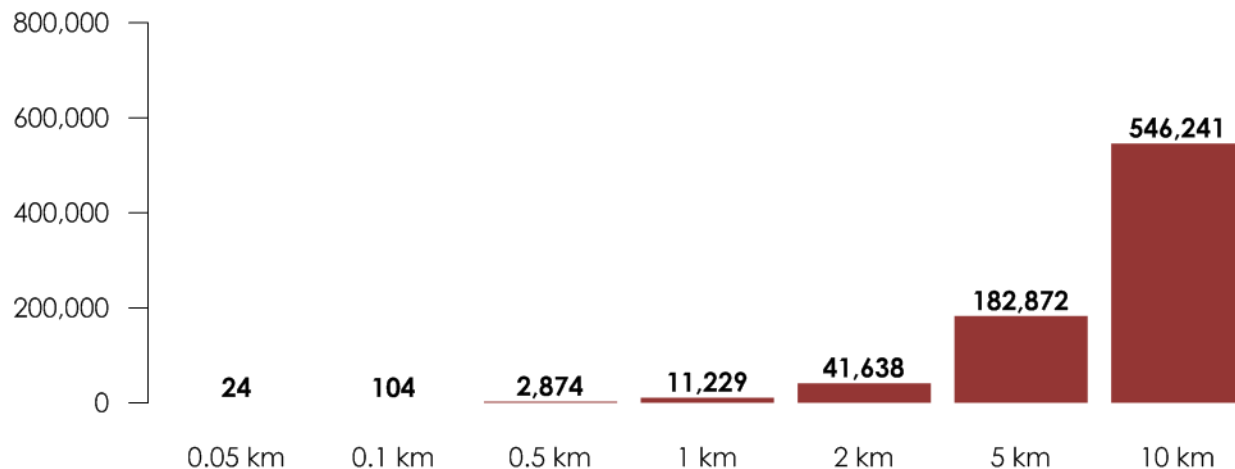


LAND-USE AT 1 KM

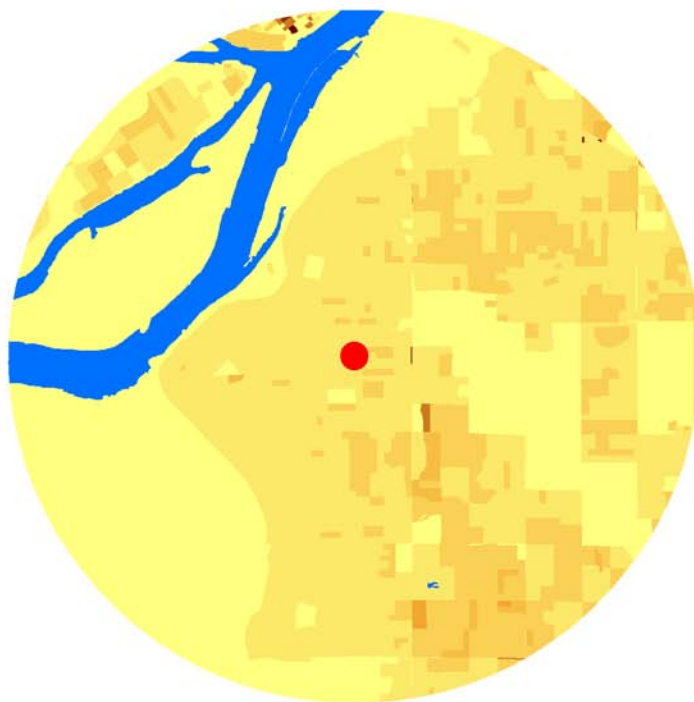


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Burnaby Mountain
Station ID	T014
Latitude	49.2798° N
Longitude	122.9223° W
Ground Elevation	360 m amsl
Station Housing	Building
Station Dimensions	
Height	21.6 m
Width	9.7 m
Length	9.7m
Measurement Heights (above ground)	
NO ₂ , O ₃	23.4 m
T _{air} , RH	28.8 m
Precip	22.2 m
W _{spd} , W _{dir}	*29.8 m
Date of Operation	+1984 to present
Station Designation	Special Purpose - Research
Predominant Land-use	Park (30%) @ 5 km
Municipality	City of Burnaby

*The height of the building is 21.6 m while the height of the tower is only 8.2 m above roof height.

*This station was moved to its current location in 2004.

STATION DESCRIPTION

Located atop Burnaby Mountain at Simon Fraser University this station is the only station situated at high elevation (>350 m). Given the unique air quality that can be experienced at an elevated site, the station has been designated as “Special Purpose – Research”. The predominant land-use in the area is park with the majority of it forested. Recently a new residential development has been built nearby which is projected to house approximately 10,000 people. The instruments are housed within a maintenance room of a building located in a large complex of multi-tiered buildings. BC Hydro provides some funding support for this station as part of an on-going commitment to air quality monitoring resulting from their operation of the Burrard Thermal generating station.

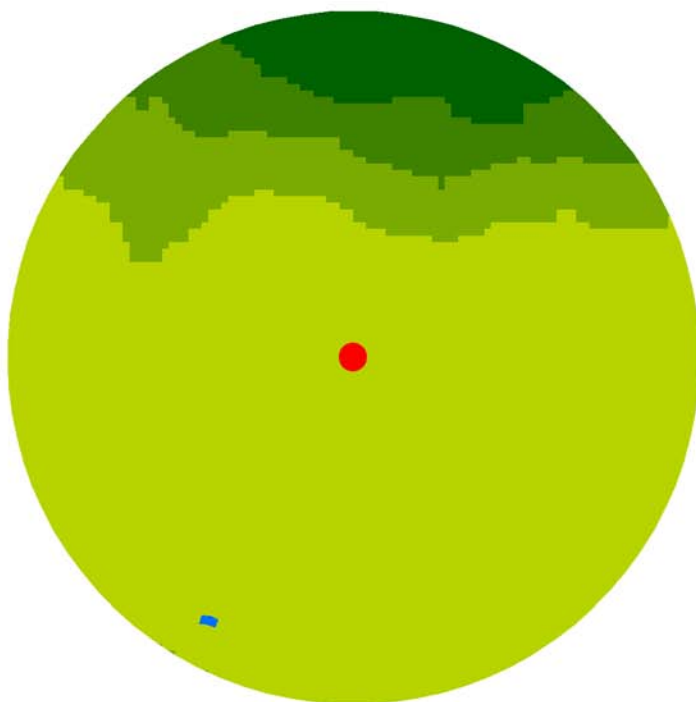




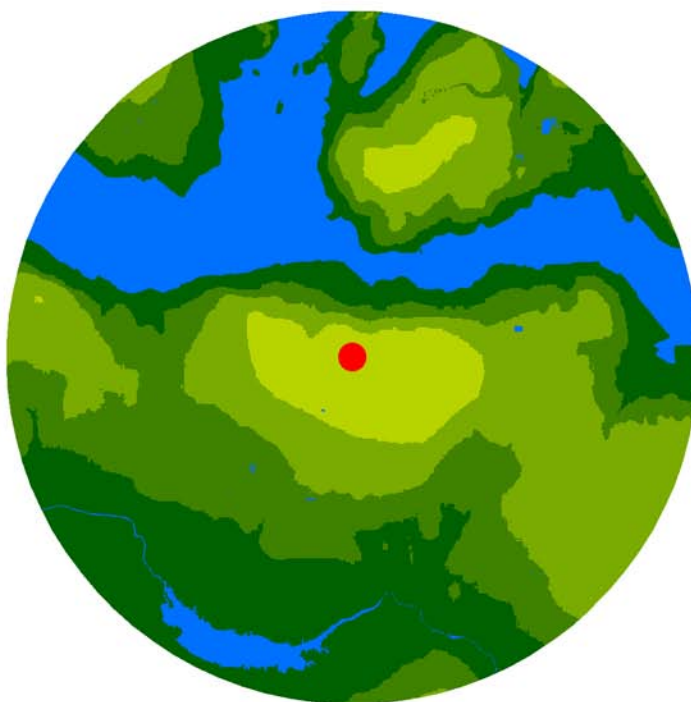
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

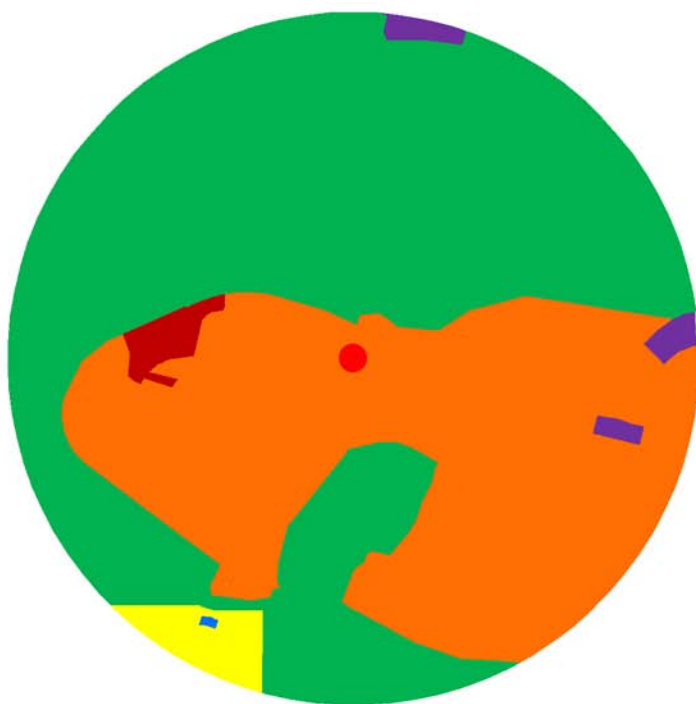
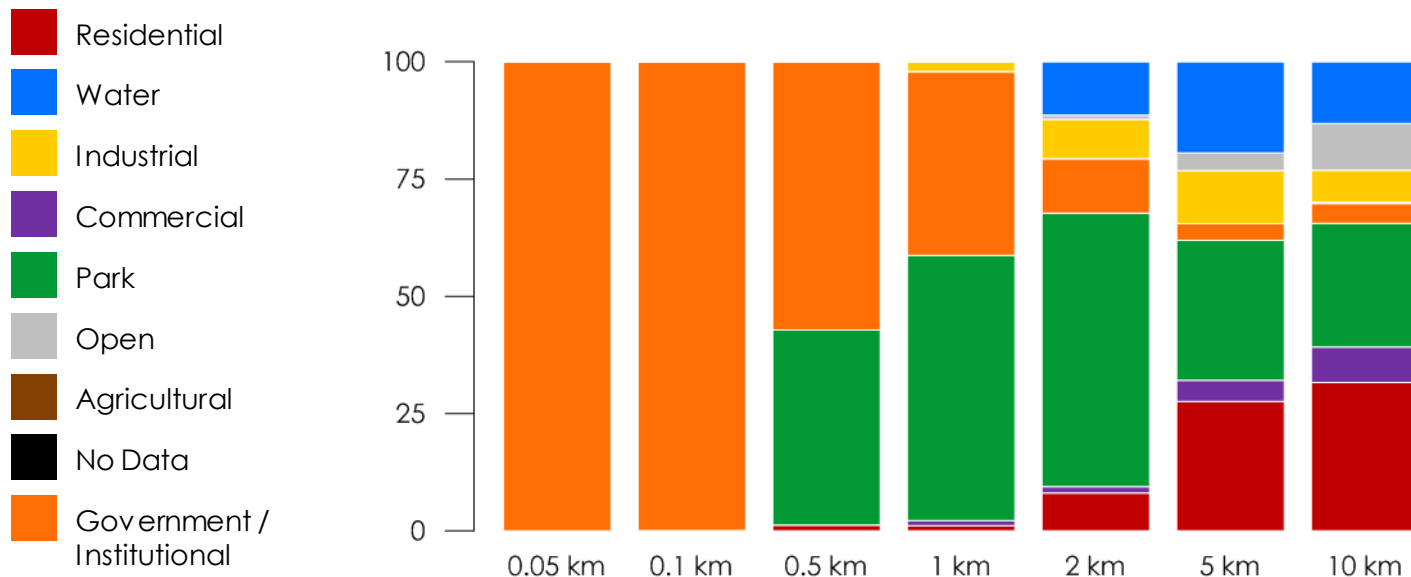


TOPOGRAPHY AT 5 KM

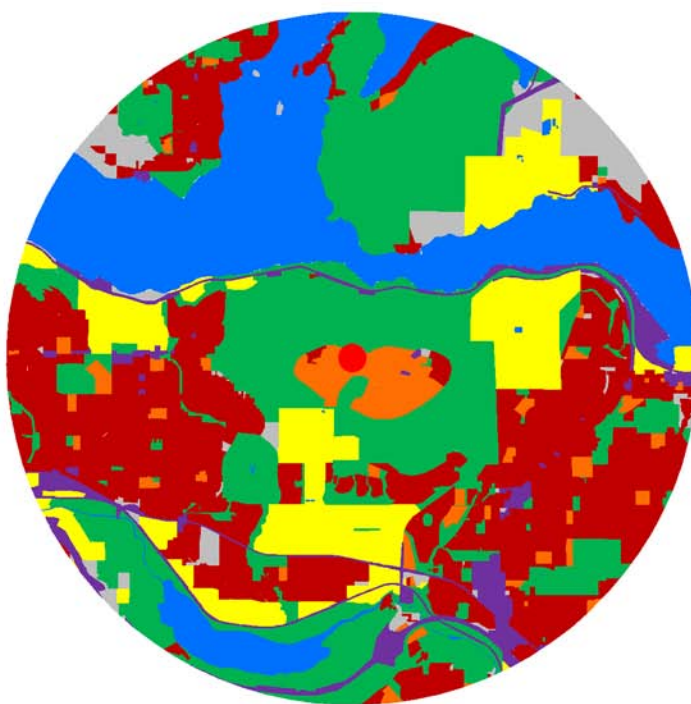


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

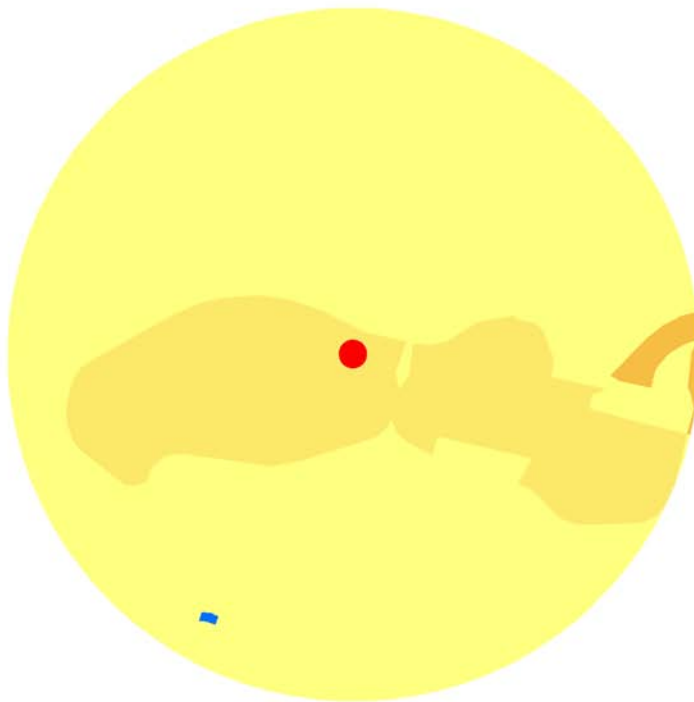
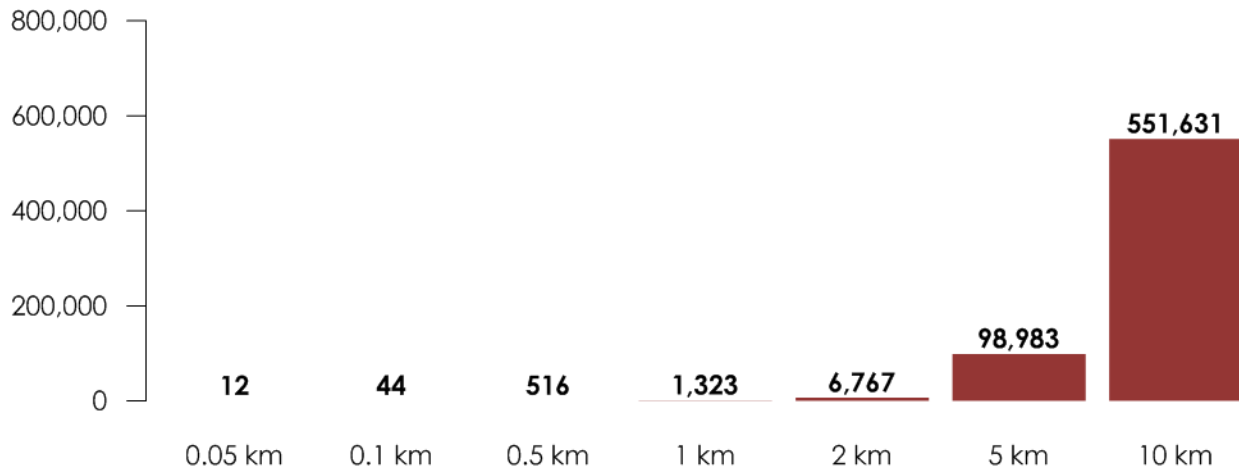


LAND-USE AT 1 KM

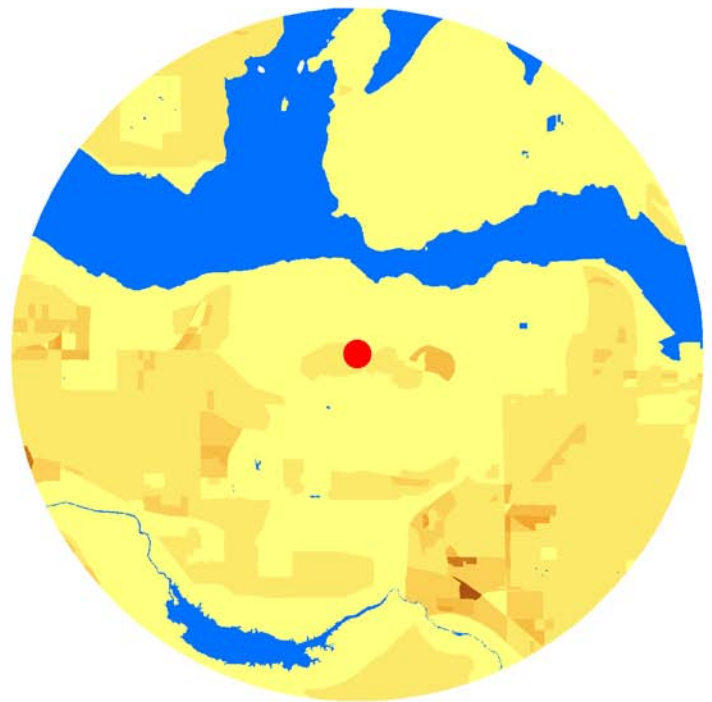


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Surrey East
Station ID	T015
Latitude	49.1329° N
Longitude	122.6942° W
Ground Elevation	79 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.0 m
Width	2.5 m
Length	4.9 m
Measurement Heights (above ground)	
NO ₂ , CO, O ₃	4.3 m
PM _{2.5}	4.9 m
T _{air}	15.9 m
Precip	3.6 m
W _{spd} , W _{dir}	16.9 m
Date of Operation	1984 to present
Station Designation	None
Predominant Land-use	Residential (40%) @ 5 km
Municipality	City of Surrey

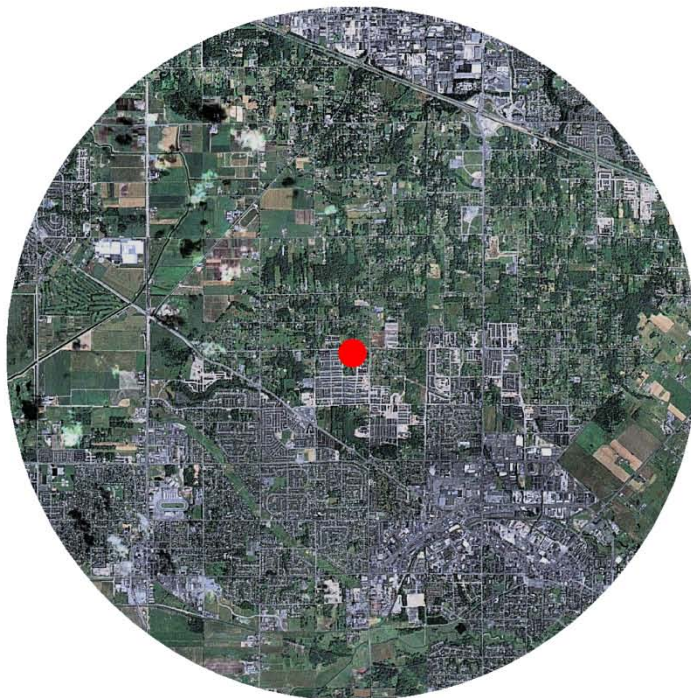
STATION DESCRIPTION

Located in a semi-rural but rapidly growing residential area on the eastern side of Surrey, this station is centrally located in an area that is predominantly residential. Instrumentation is housed within a modular building at ground level. The station is less than 25 metres away from a large reservoir structure that likely has some influence on wind measurements. As a result this station makes use of one of the tallest meteorological towers in the monitoring network. PM_{2.5} measurements were added to this site in 2010. BC Hydro provides some funding support for this station as part of an on-going commitment to air quality monitoring resulting from their operation of the Burrard Thermal generating station.

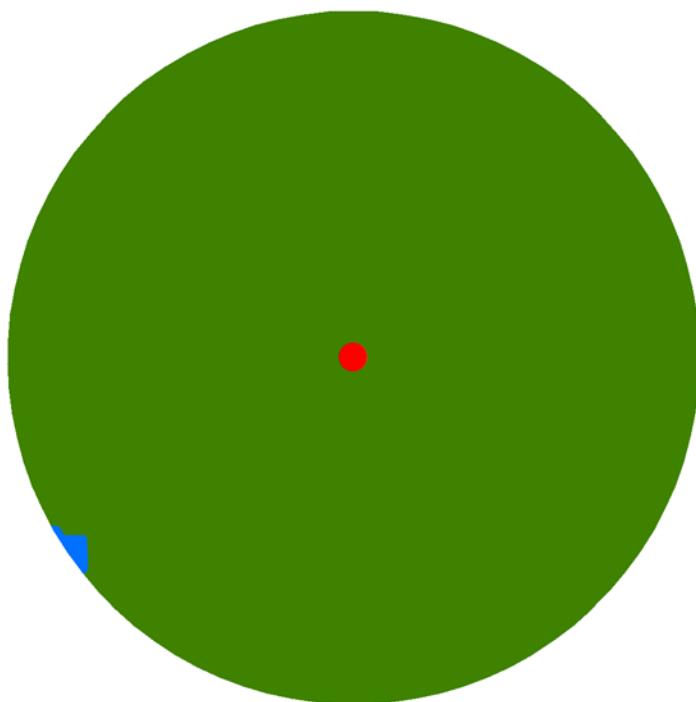




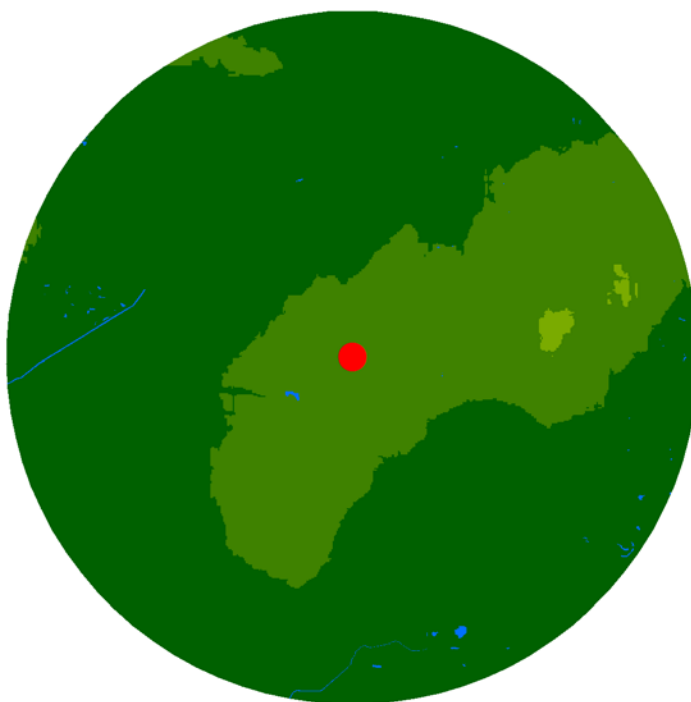
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

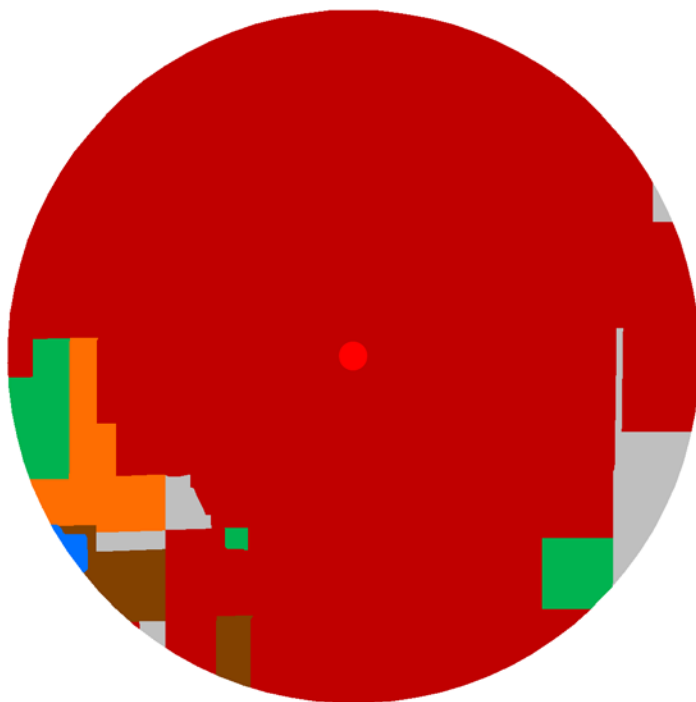
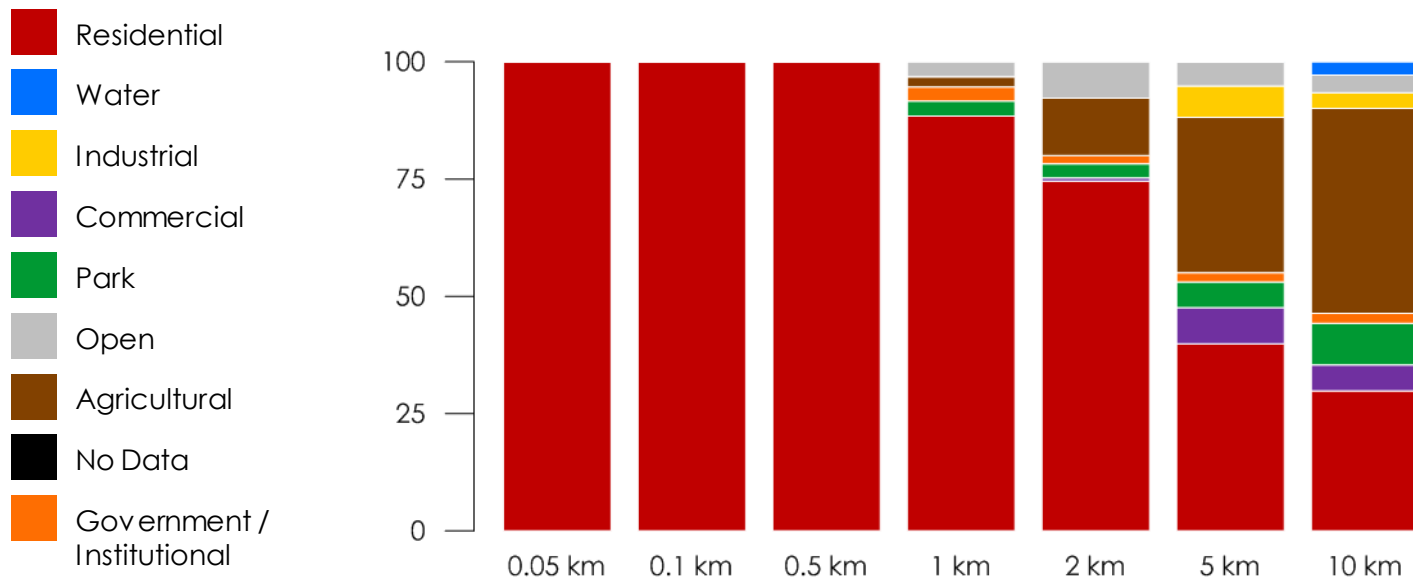


TOPOGRAPHY AT 5 KM

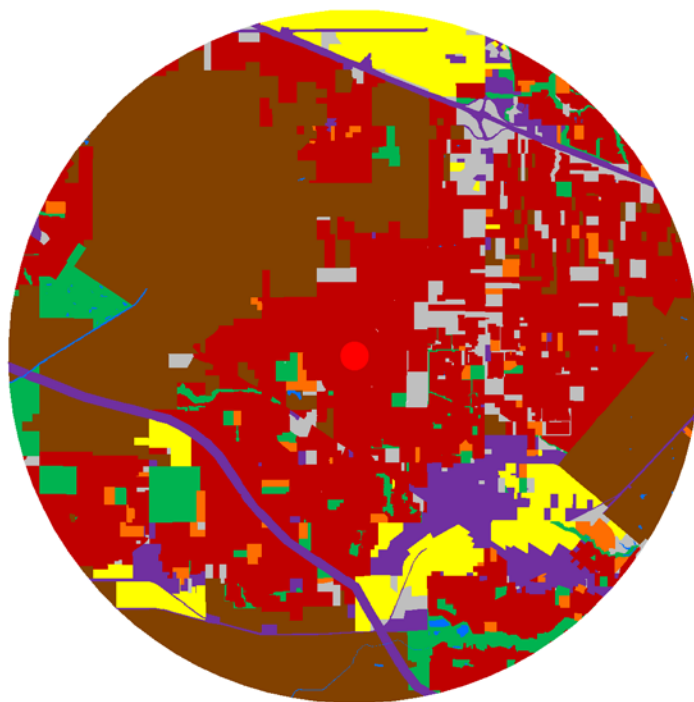


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

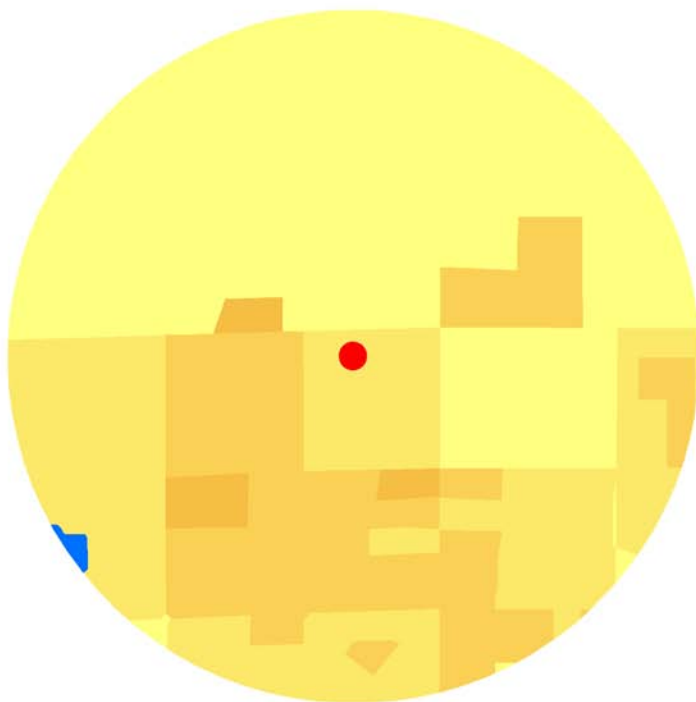
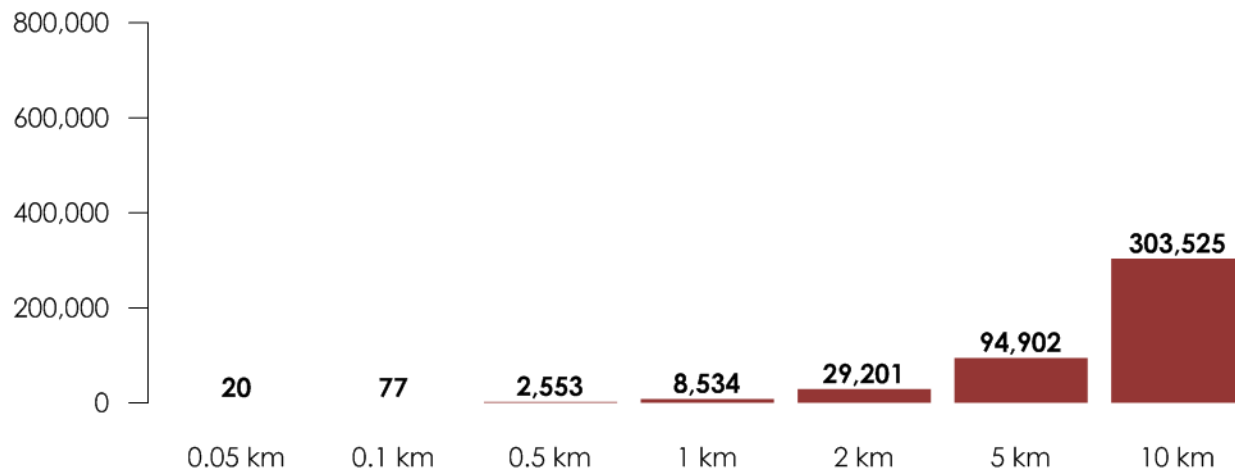


LAND-USE AT 1 KM

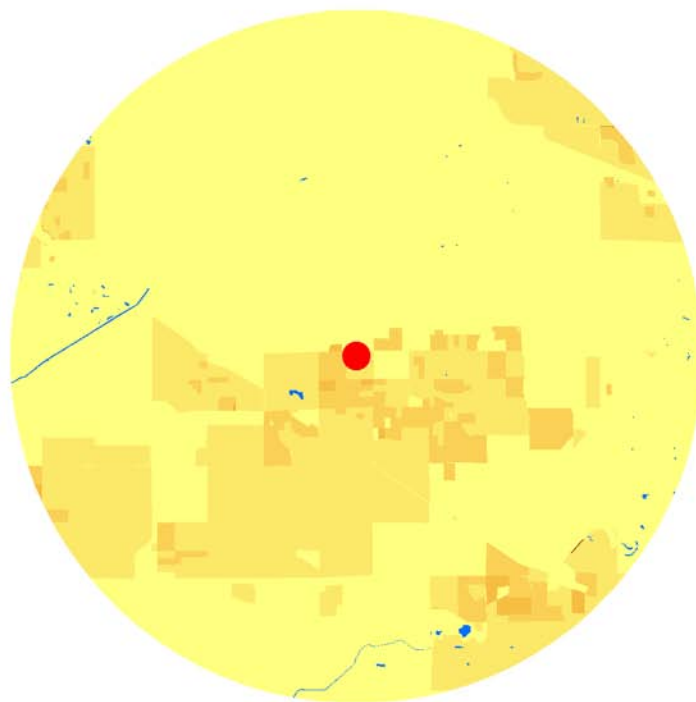


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Richmond South

T17

DESCRIPTION

STATION DETAILS

Station Name	Richmond South
Station ID	T017
Latitude	49.1414° N
Longitude	123.1082° W
Ground Elevation	4 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.0 m
Width	2.0 m
Length	4.0 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	4.3 m
PM _{2.5}	5.0 m
T _{air}	8.2 m
Precip	3.6 m
W _{spd} , W _{dir}	12.5 m
Date of Operation	1986 to present
Station Designation	None
Predominant Land-use	Agriculture (33%) @ 5 km
Municipality	City of Richmond

STATION DESCRIPTION

This site is located in an established neighbourhood primarily made up of residential detached homes within the rapidly growing community of South Richmond. The site is less than 75 m from an east-west road corridor. Within five kilometers of the station the dominant land-use is agricultural at 33% and residential at 27%. A densely populated neighbourhood is situated several kilometers to the north-west of the station. Instrumentation is housed within a modular building at ground level.



Richmond South T17

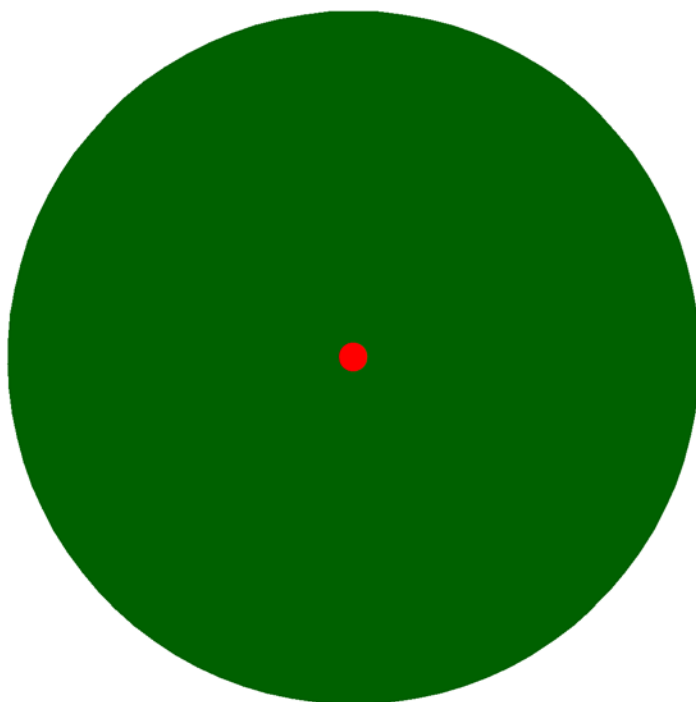
TERRAIN



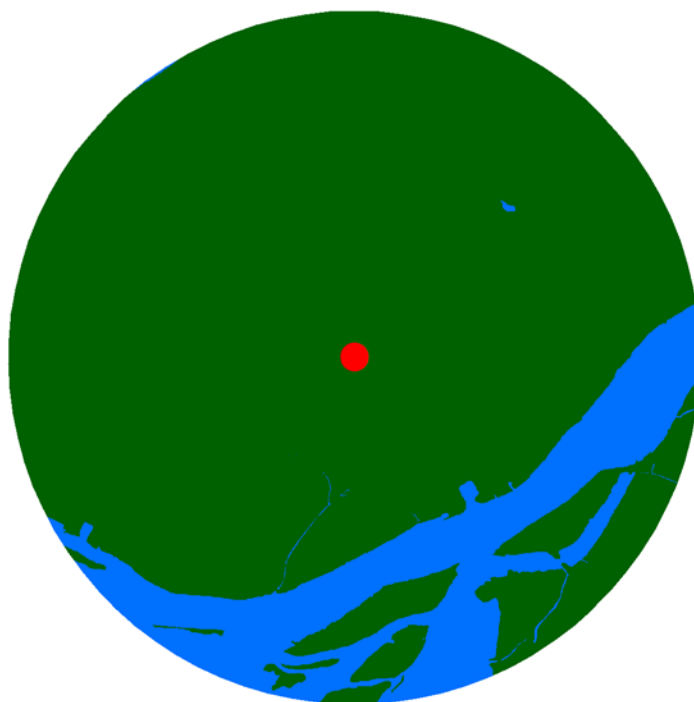
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

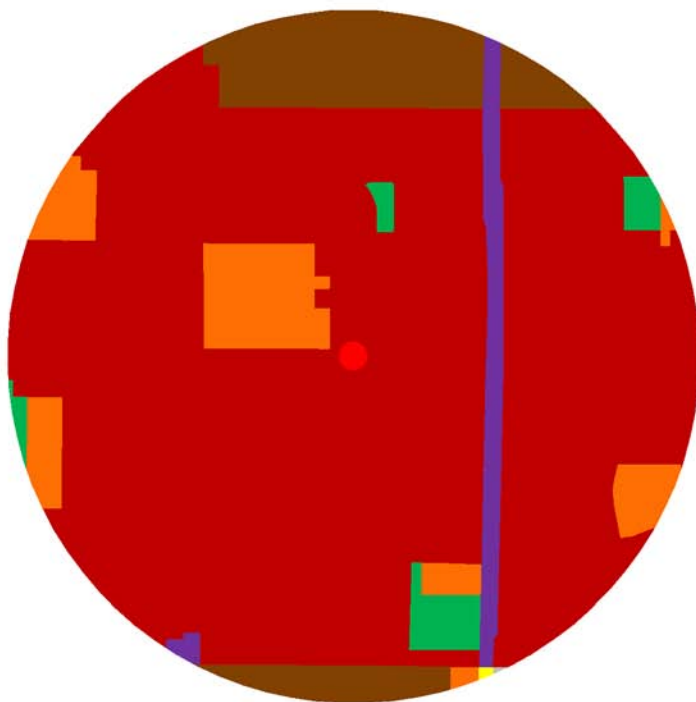
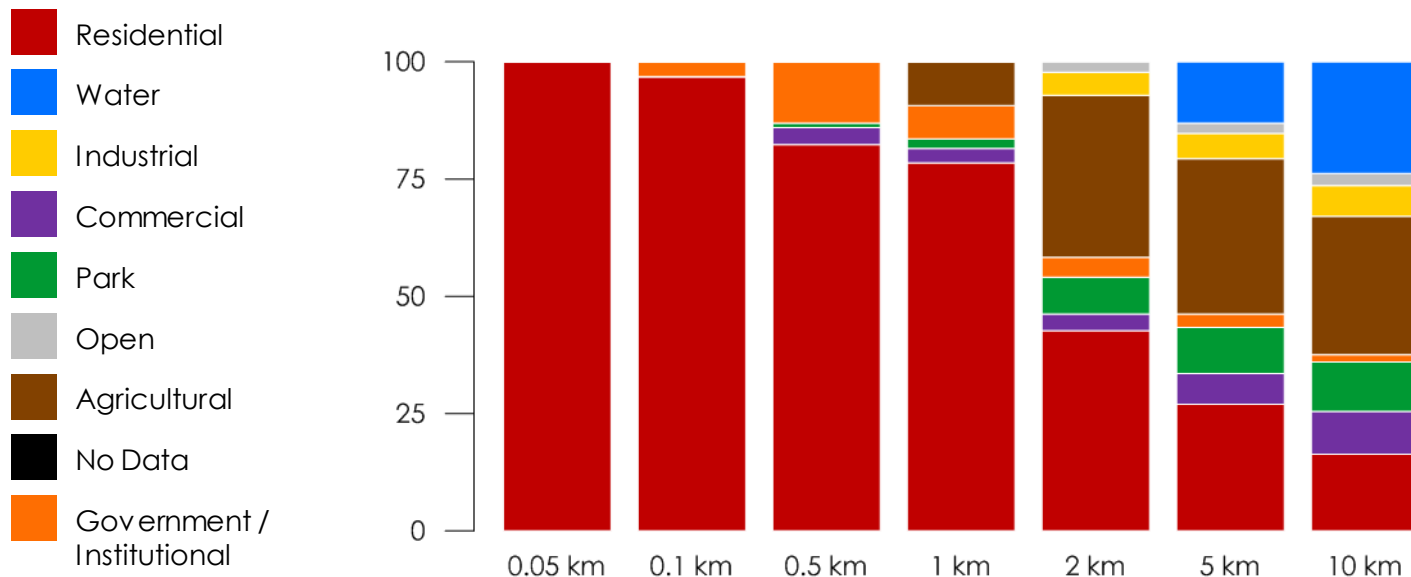


TOPOGRAPHY AT 5 KM

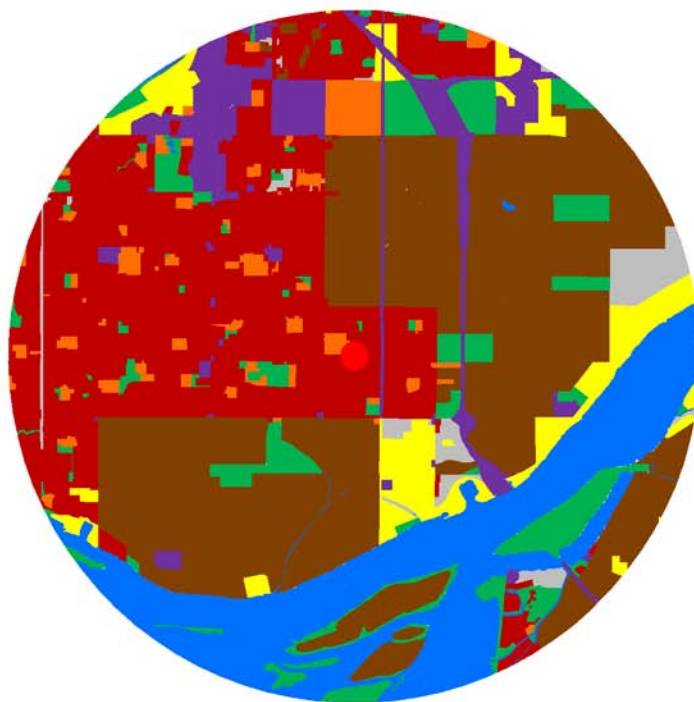


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

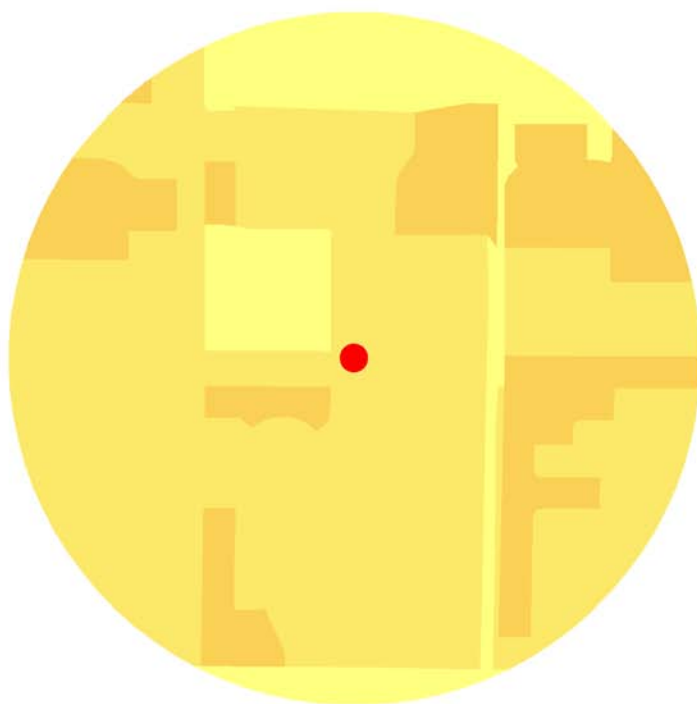
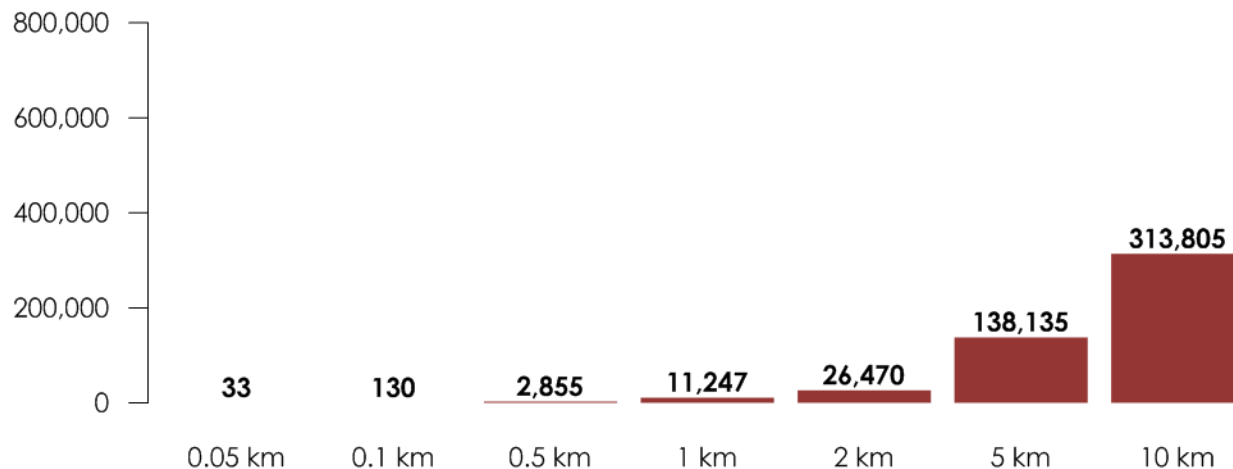


LAND-USE AT 1 KM

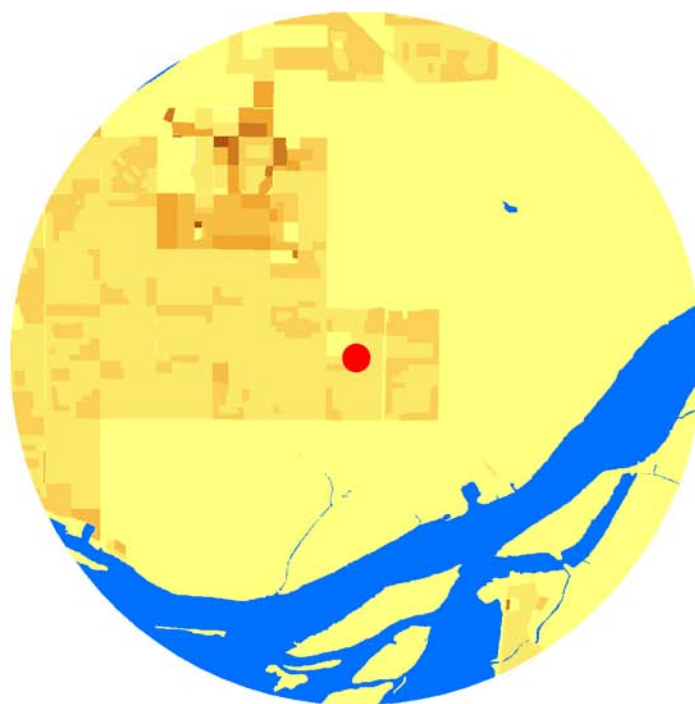


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Burnaby South

T18

DESCRIPTION

STATION DETAILS

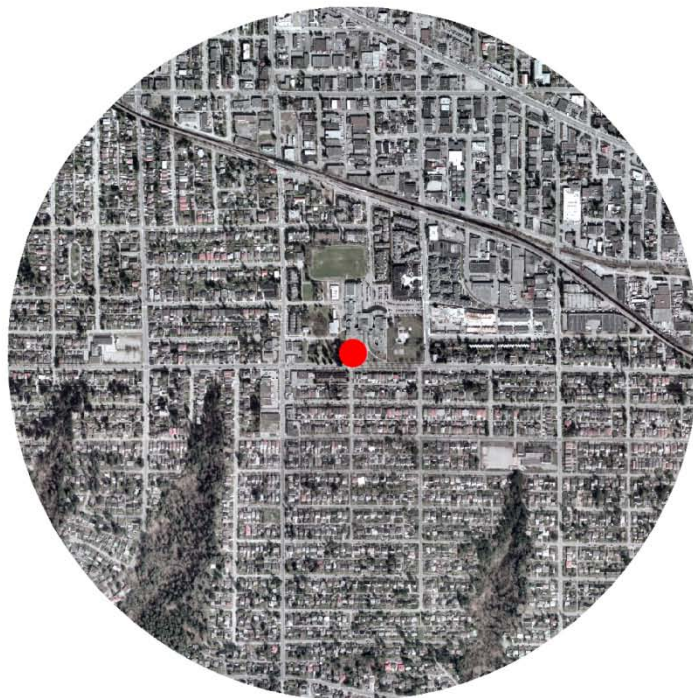
Station Name	Burnaby South
Station ID	T018
Latitude	49.2152° N
Longitude	122.9857° W
Ground Elevation	122 m amsl
Station Housing	Building
Station Dimensions	
Height	9.7 m
Width	48 m
Length	125 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃ , VOC	13.7 m
PM ₁₀ , PM _{2.5}	11.7 m
CARB	11.5 m
Particulate Speciation	12.2 m
Dichot PM ₁₀ , PM _{2.5}	11.8 m
T _{air} , RH	19.3 m
Precip	10.3m
W _{spd} , W _{dir}	19.9 m
Date of Operation	*1987 to present
Station Designation	Super Site
Predominant Land-use	Residential (39%) @ 5 km
Municipality	City of Burnaby

*Hi-Vol Total Suspended Particulate sampling began at this site in 1973.

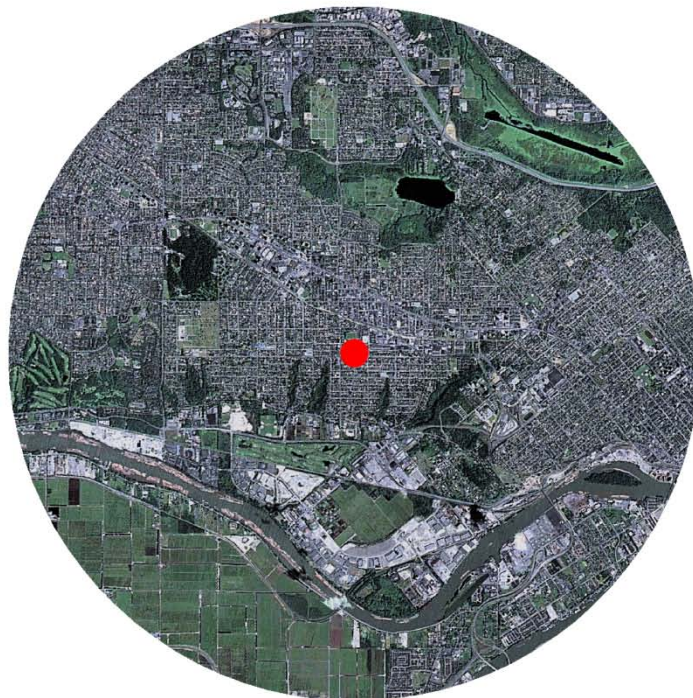
STATION DESCRIPTION

Located at Burnaby South Secondary School, this monitoring station is established in a residential area on the top of the south slope of Burnaby. Over the years this site has grown in importance, a designated NAPS monitoring station, and used as a key site within Metro Vancouver. This station is Metro Vancouver's most instrumented station and is designated as a 'Super Site'. Instrumentation is housed within an interior room on the 2nd floor of the school.

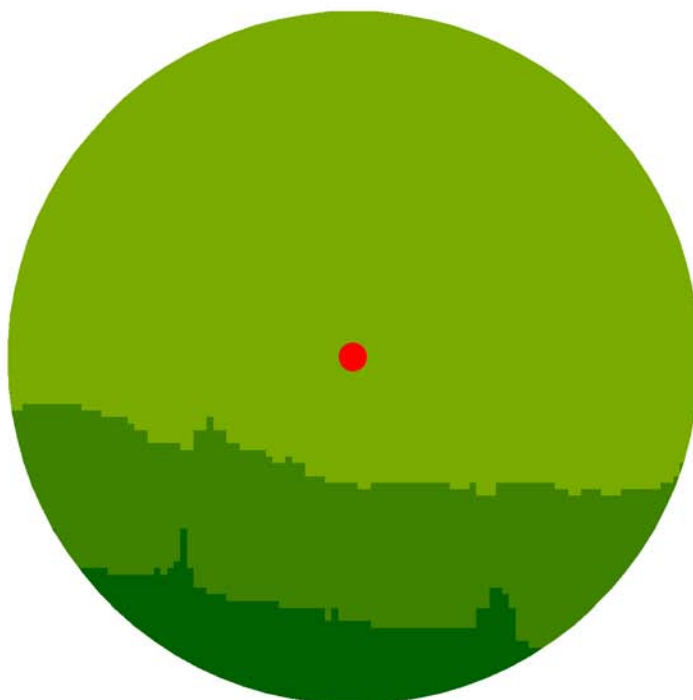




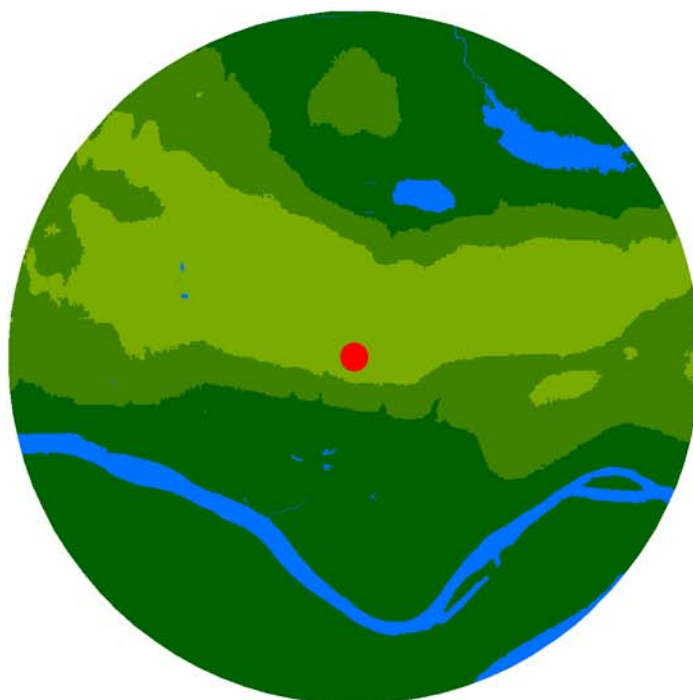
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

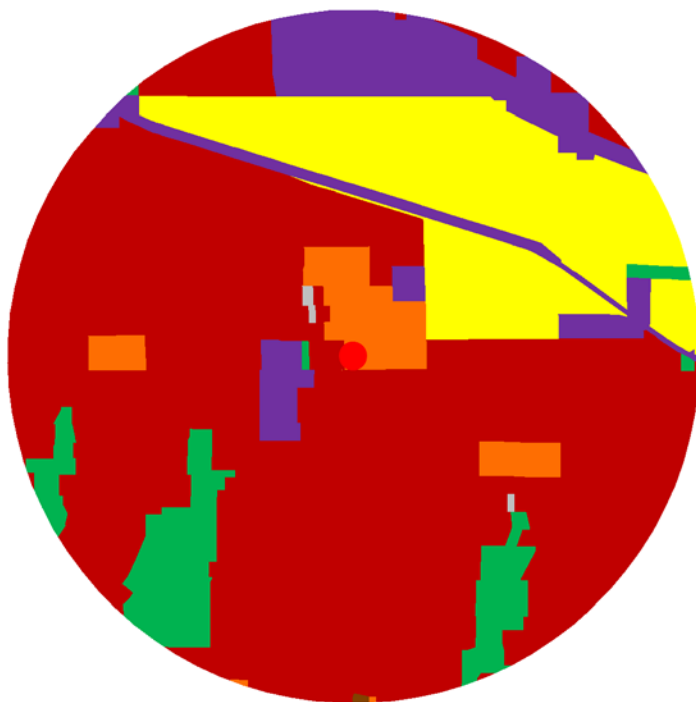
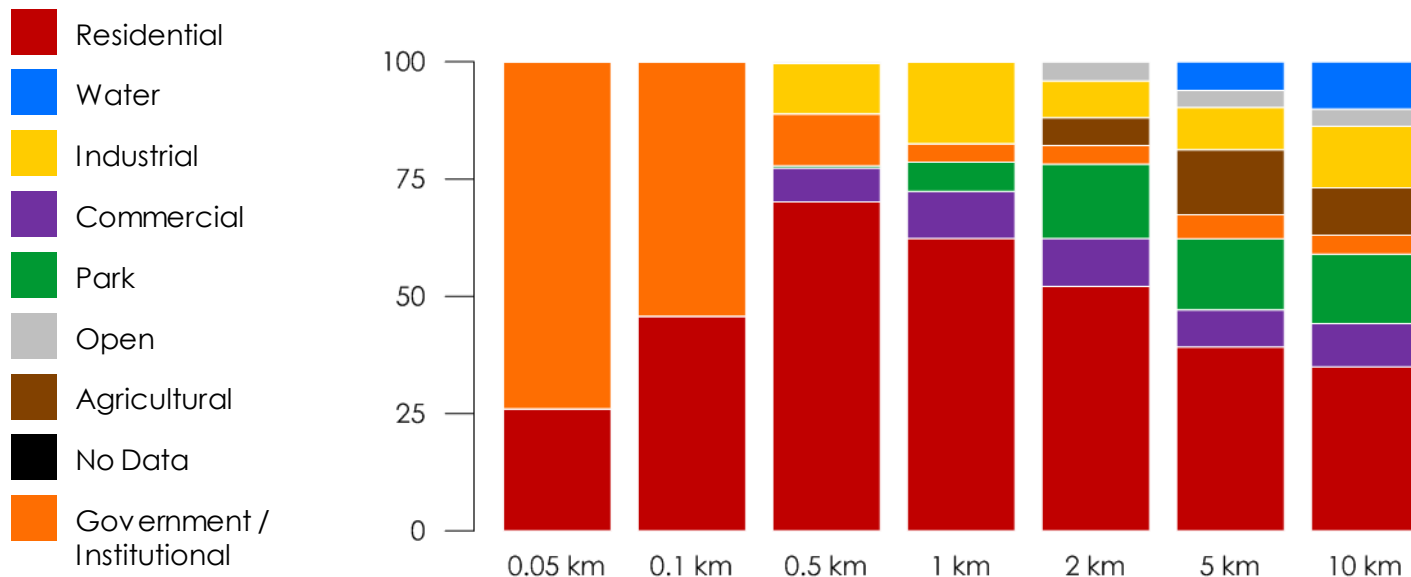


TOPOGRAPHY AT 5 KM

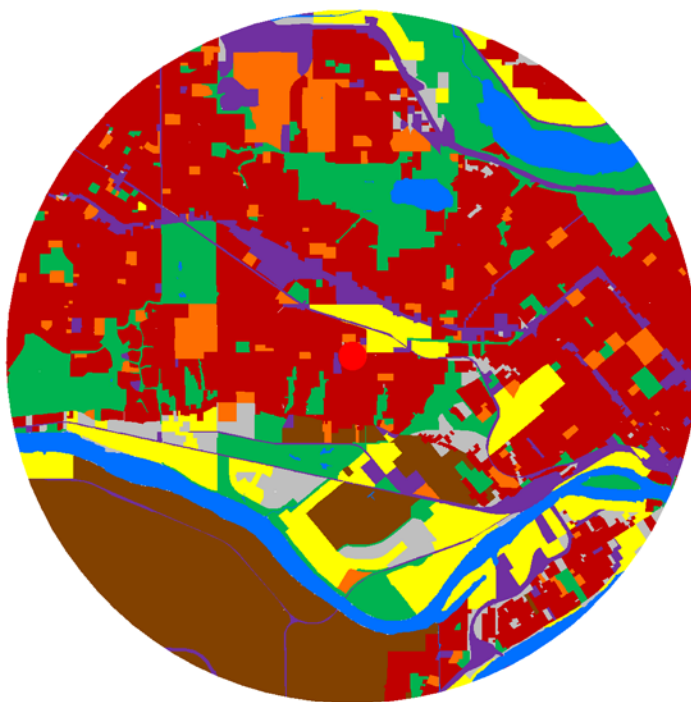


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

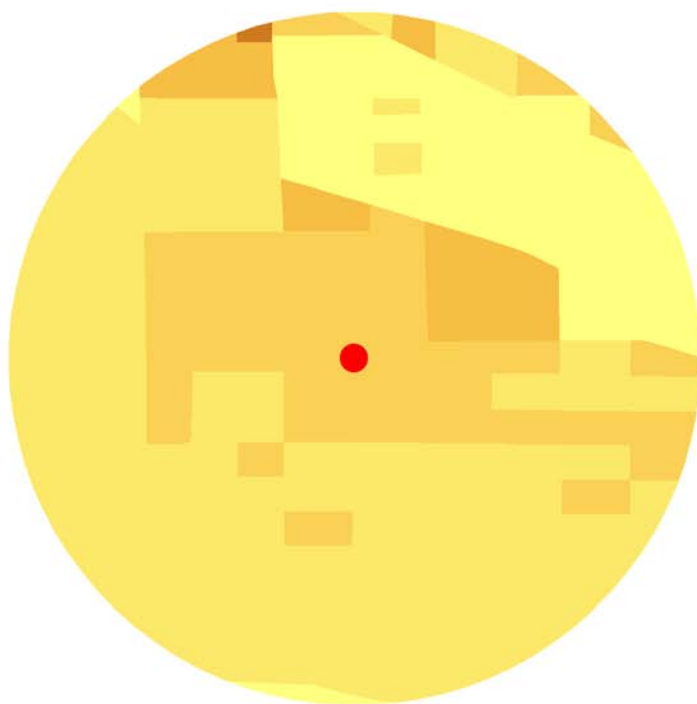
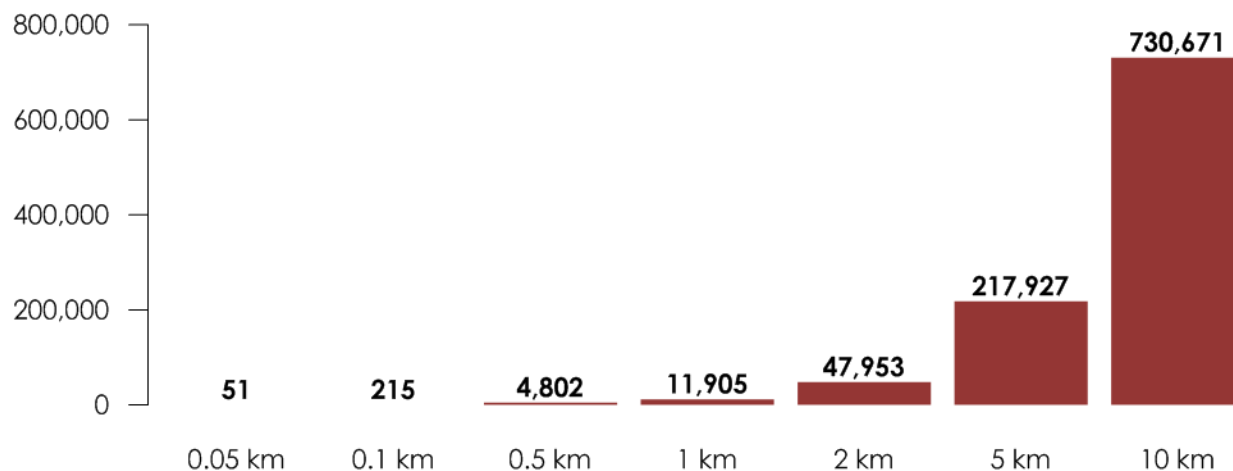


LAND-USE AT 1 KM

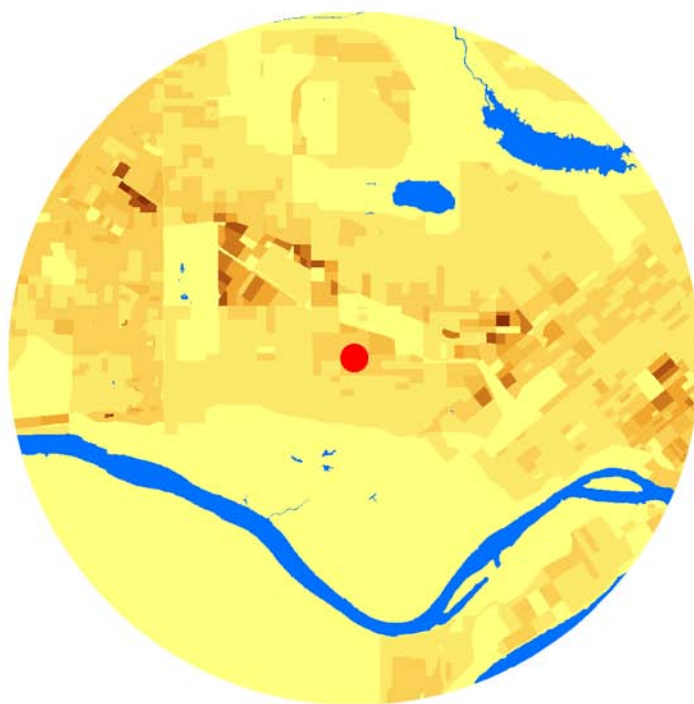


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Pitt Meadows

T20

DESCRIPTION

STATION DETAILS

Station Name	Pitt Meadows
Station ID	T020
Latitude	49.2452° N
Longitude	122.7089° W
Ground Elevation	4 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.8 m
Width	3.4 m
Length	6.5 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , O ₃	4.0 m
PM _{2.5}	4.6 m
PM ₁₀	4.7 m
T _{air} , RH	9.6 m
Precip	3.4 m
W _{spd} , W _{dir}	10.1 m
Date of Operation	1998 to present
Station Designation	None
Predominant Land-use	Agricultural (51%) @ 5 km
Municipality	City of Pitt Meadows

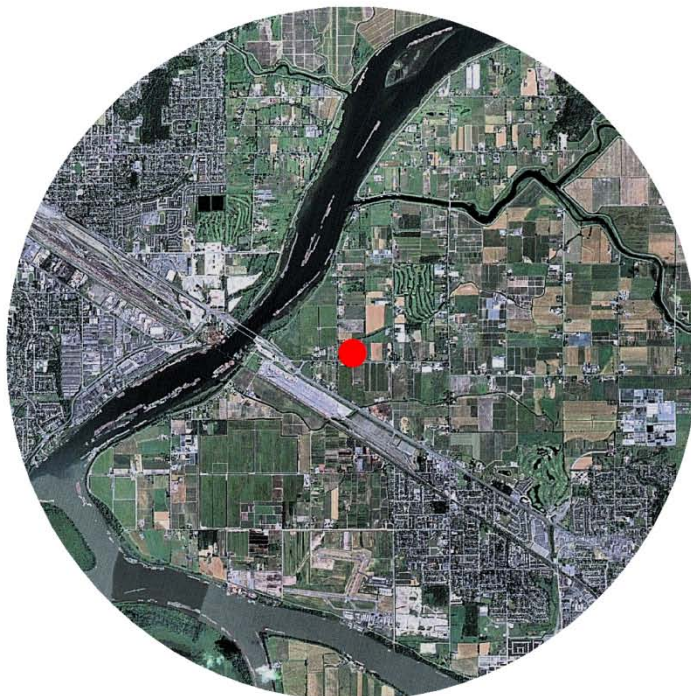
STATION DESCRIPTION

This site is located at an elementary school just north of the Lougheed Highway in a rural part of Pitt Meadows. The majority of land surrounding this station is agricultural, with 51% of the land-use designated as agricultural within 5 km of the station. The data collected at this location is useful in determining pollutant transport along the north side of the region. Air quality instrumentation is housed within a modular building at ground level

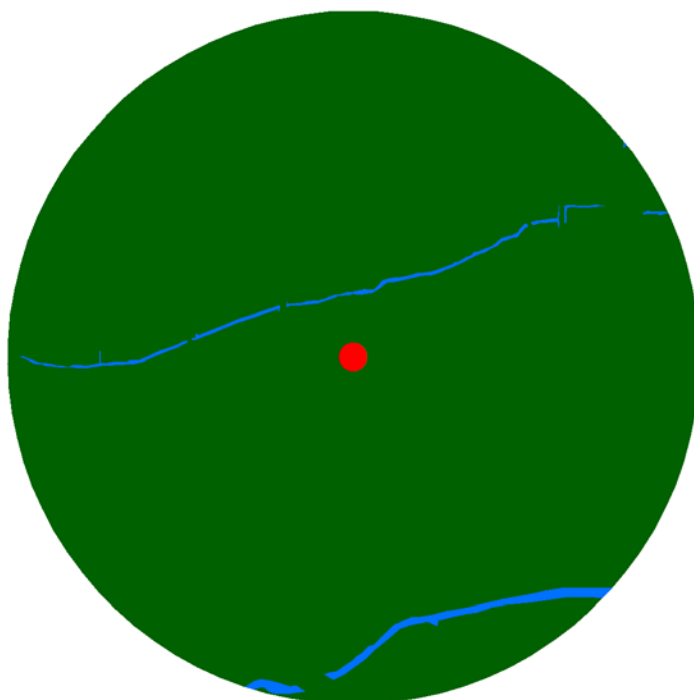




AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

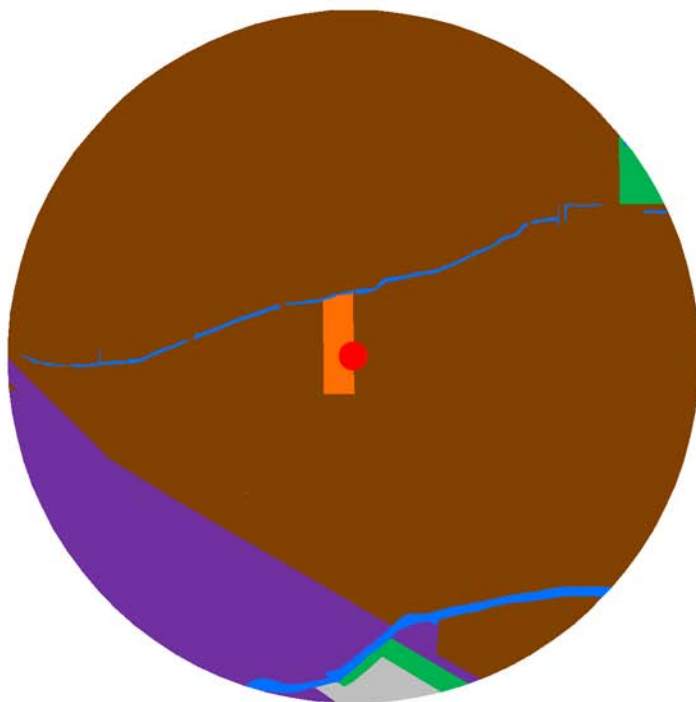
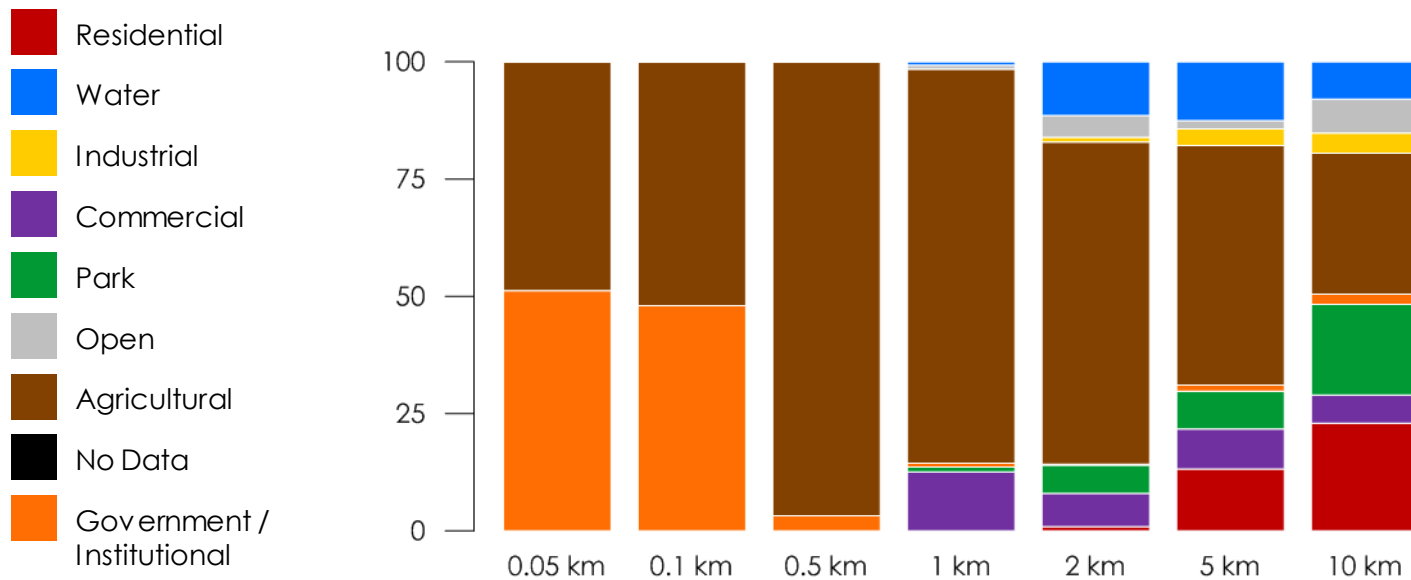


TOPOGRAPHY AT 5 KM

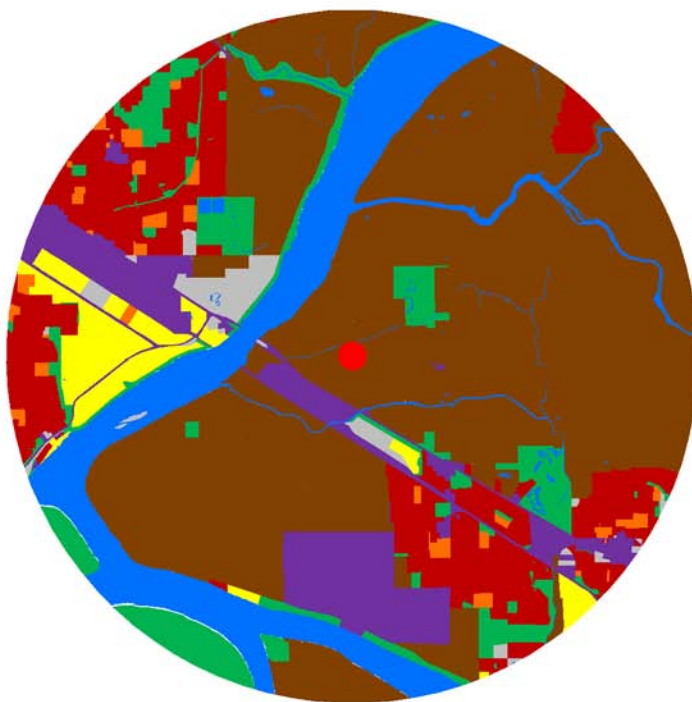


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

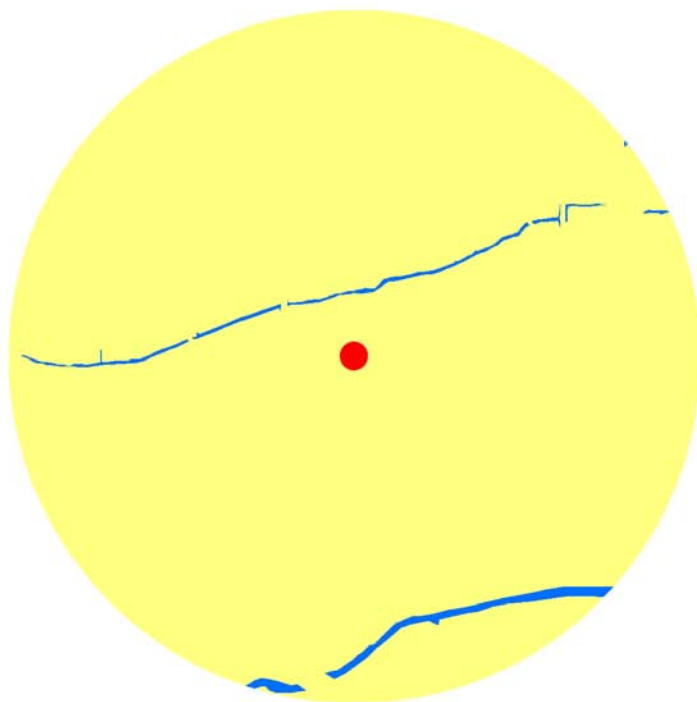
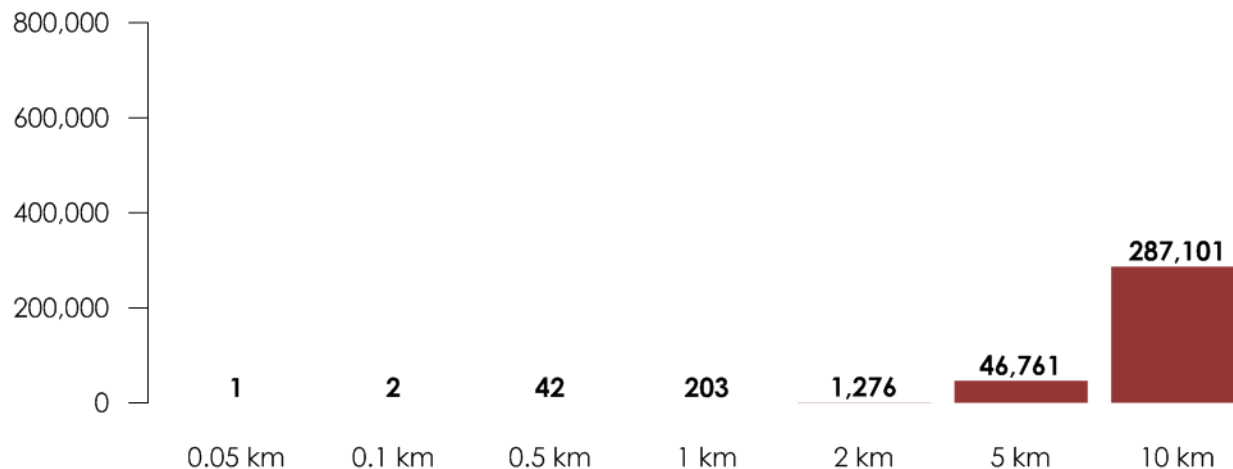


LAND-USE AT 1 KM

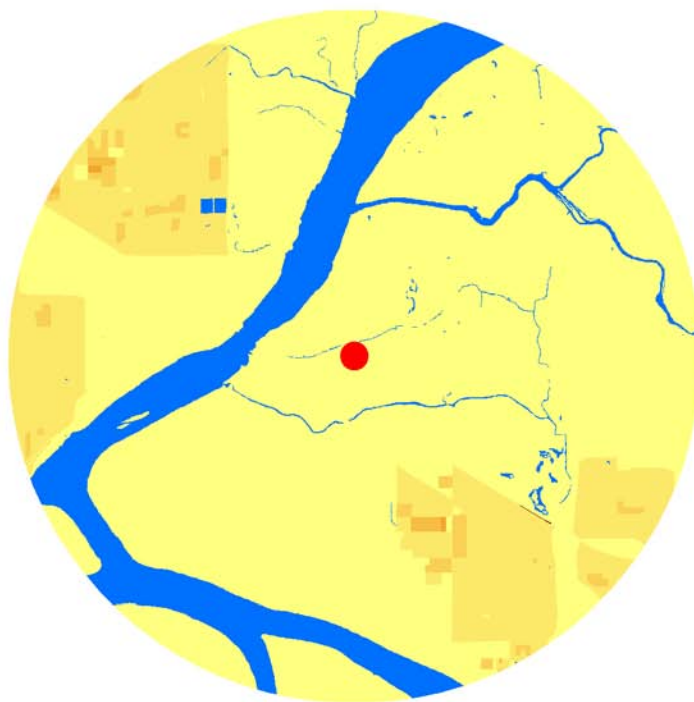


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Burnaby-Burmound

T22

DESCRIPTION

STATION DETAILS

Station Name	Burnaby-Burmound
Station ID	T022
Latitude	49.2667° N
Longitude	122.9355° W
Ground Elevation	101 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.5 m
Width	2.6 m
Length	3.8 m
Measurement Heights (above ground)	
TRS, THC, VOC	8.0 m
T _{air}	2.8 m
W _{spd} , W _{dir}	10.0 m
Date of Operation	1989 to present
Station Designation	Special Purpose - Industry
Predominant Land-use	Residential (35%) @ 5 km
Municipality	City of Burnaby

STATION DESCRIPTION

The purpose of this station is to monitor fugitive emissions of odorous sulphur and hydrocarbon compounds from the Burnaby Mountain Tank Farm. The station is mainly funded by the facility operator Kinder Morgan Canada. Due to the topography of the area, the air quality and meteorological instruments are located at two locations, approximately 375 m apart. The air quality instruments are housed within a modular building (top photo) at ground level in the southwest corner of the facility while the meteorological instruments are mounted on a tower (bottom photo) to the northeast on the property.

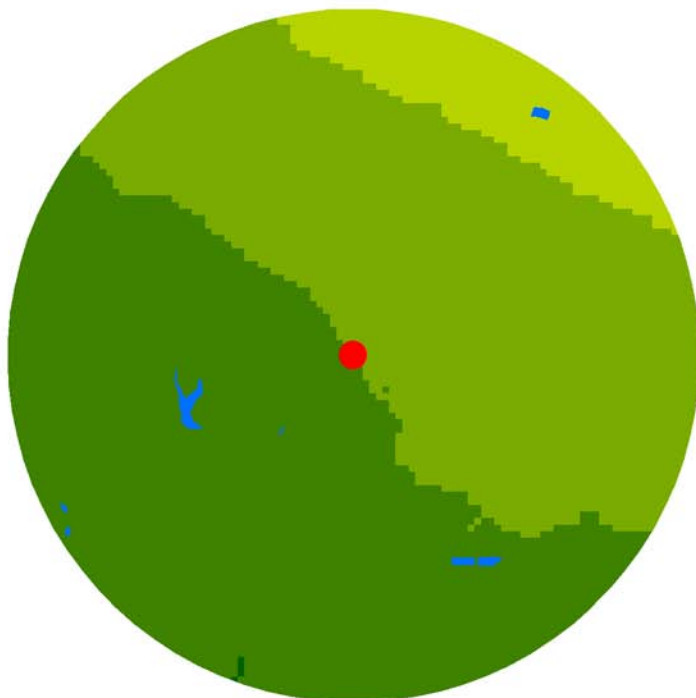




AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

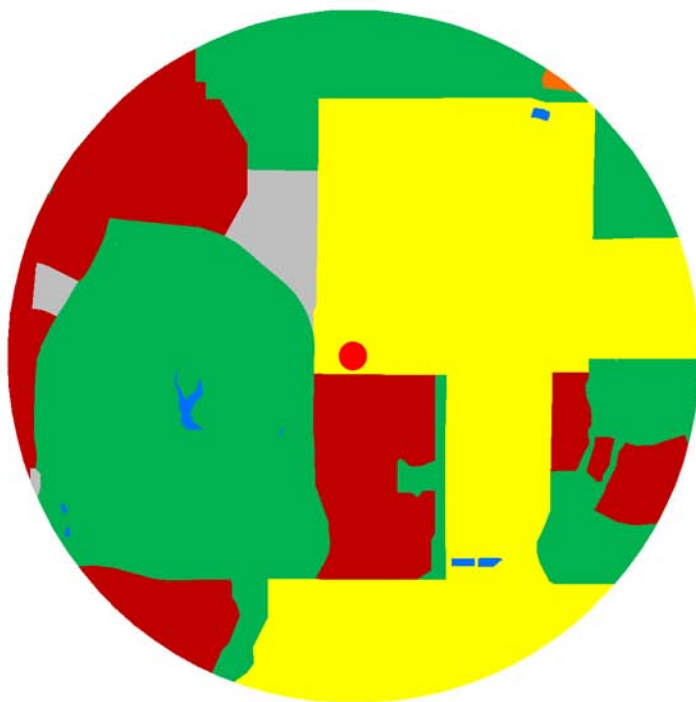
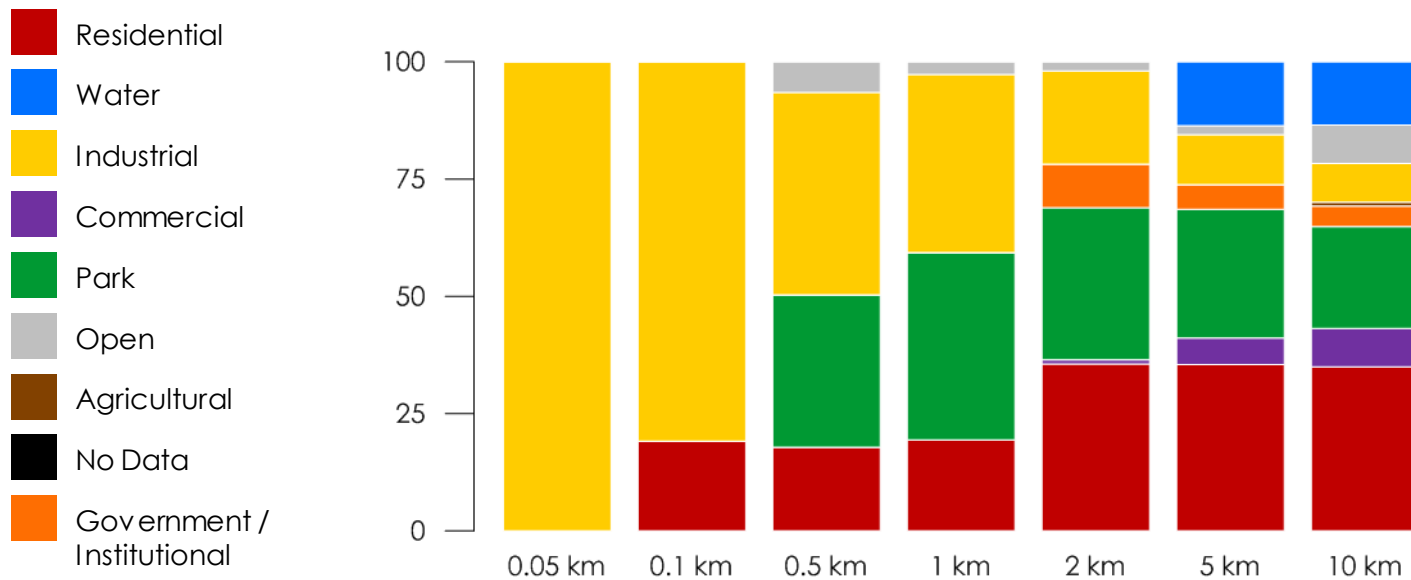


TOPOGRAPHY AT 5 KM

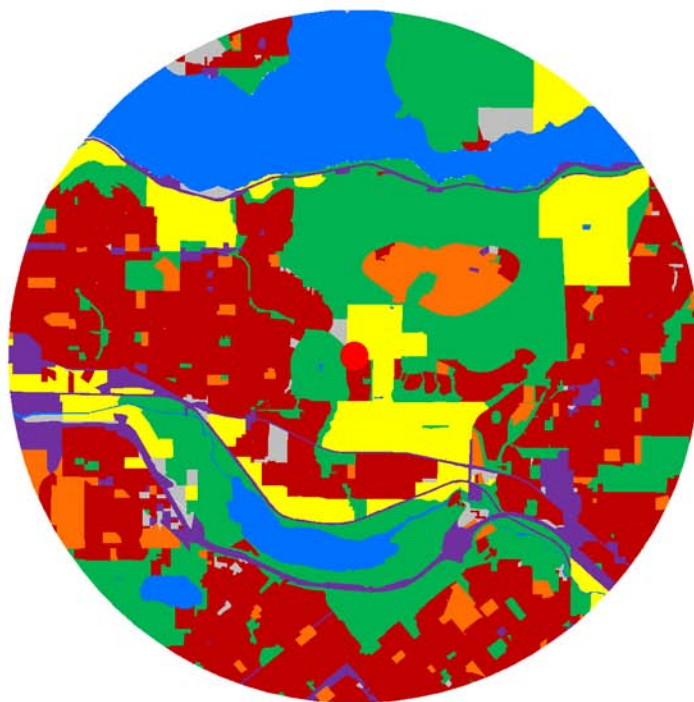


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

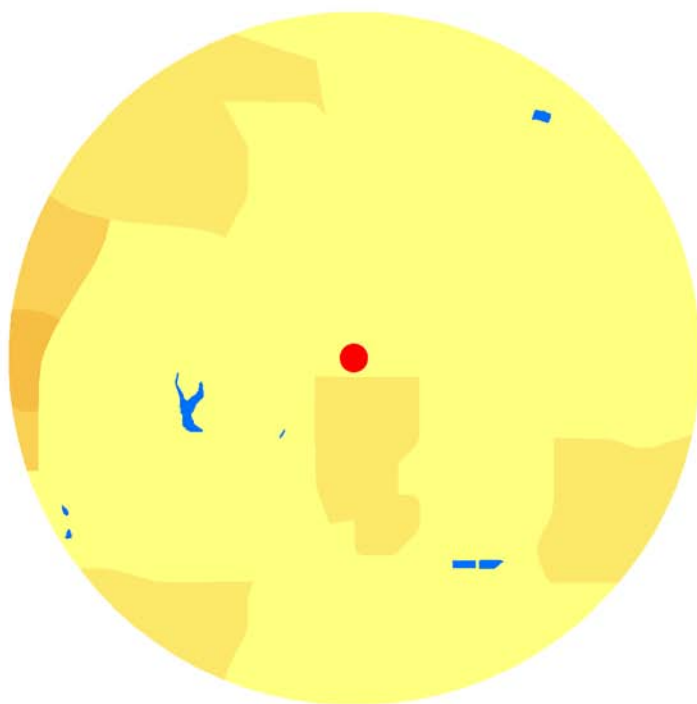
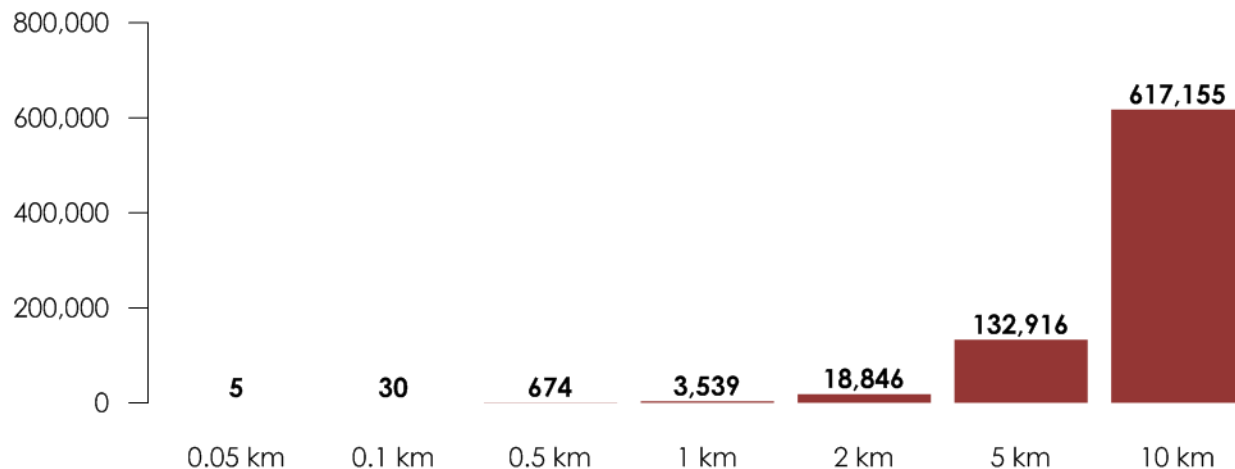


LAND-USE AT 1 KM

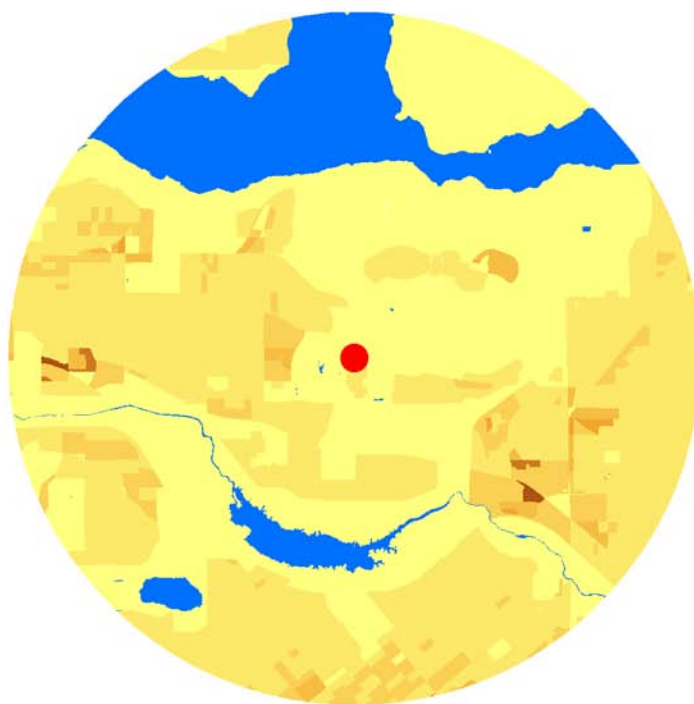


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Burnaby-Capitol Hill
Station ID	T023
Latitude	49.2879° N
Longitude	122.9856° W
Ground Elevation	200 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.6 m
Width	2.8 m
Length	2.8 m
Measurement Heights (above ground)	
SO ₂ , TRS	4.1 m
T _{air}	9.1 m
W _{spd} , W _{dir}	10.0 m
Date of Operation	1995 to present
Station Designation	Special Purpose - Industry
Predominant Land-use	Residential (33%) @ 5 km
Municipality	City of Burnaby

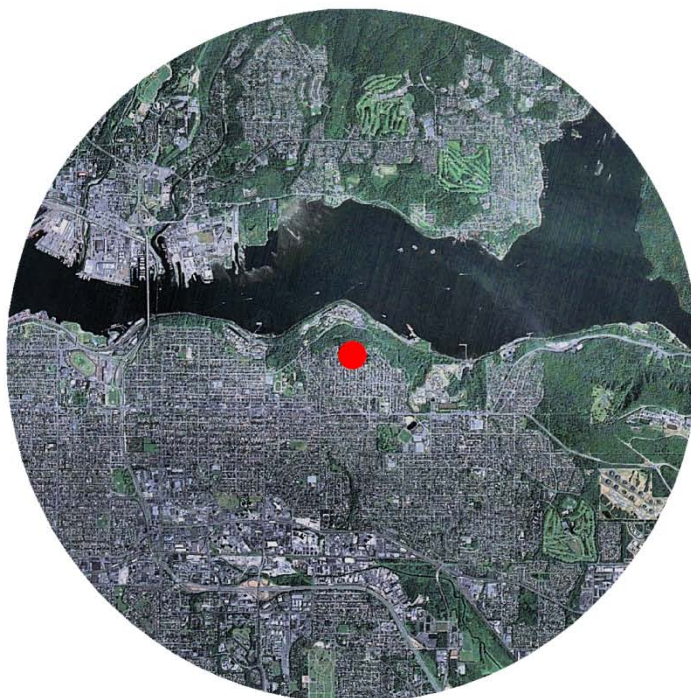
STATION DESCRIPTION

This site, located atop Capitol Hill in North Burnaby is situated at the boundary of a residential neighbourhood adjacent to the Chevron oil refinery. The location of this site was selected based on dispersion modelling of refinery emissions as well as a long history of complaints from residents of the area. The station is located at the top of the hill directly south of the refinery. Funded by the refinery operator (Chevron Canada Ltd.), this station is used as part of the refinery's real-time emission control system. Since the establishment of the station, trees near the station have grown and are now thought to influence wind measurements. Instrumentation is housed within a modular building at ground level.

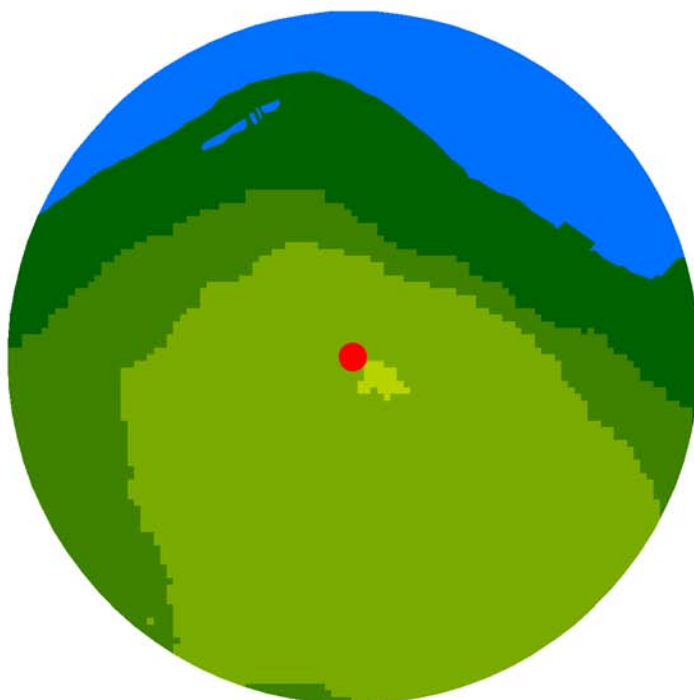




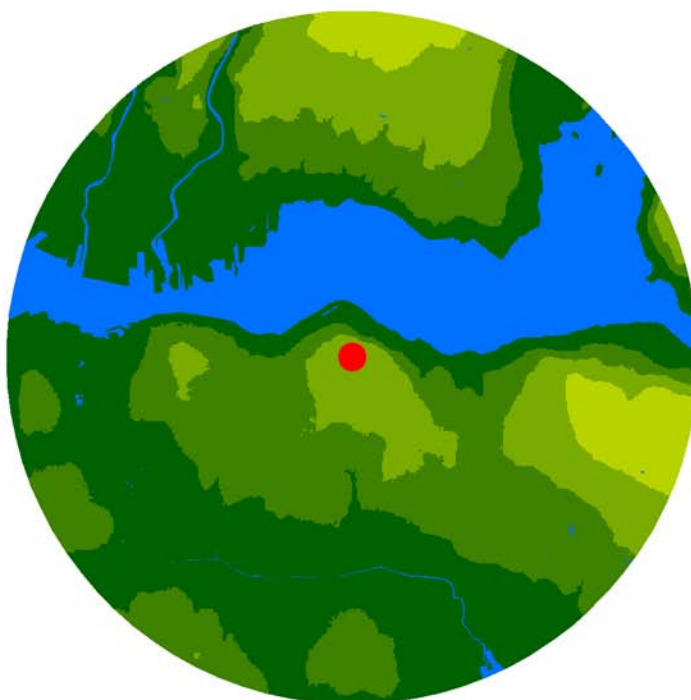
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

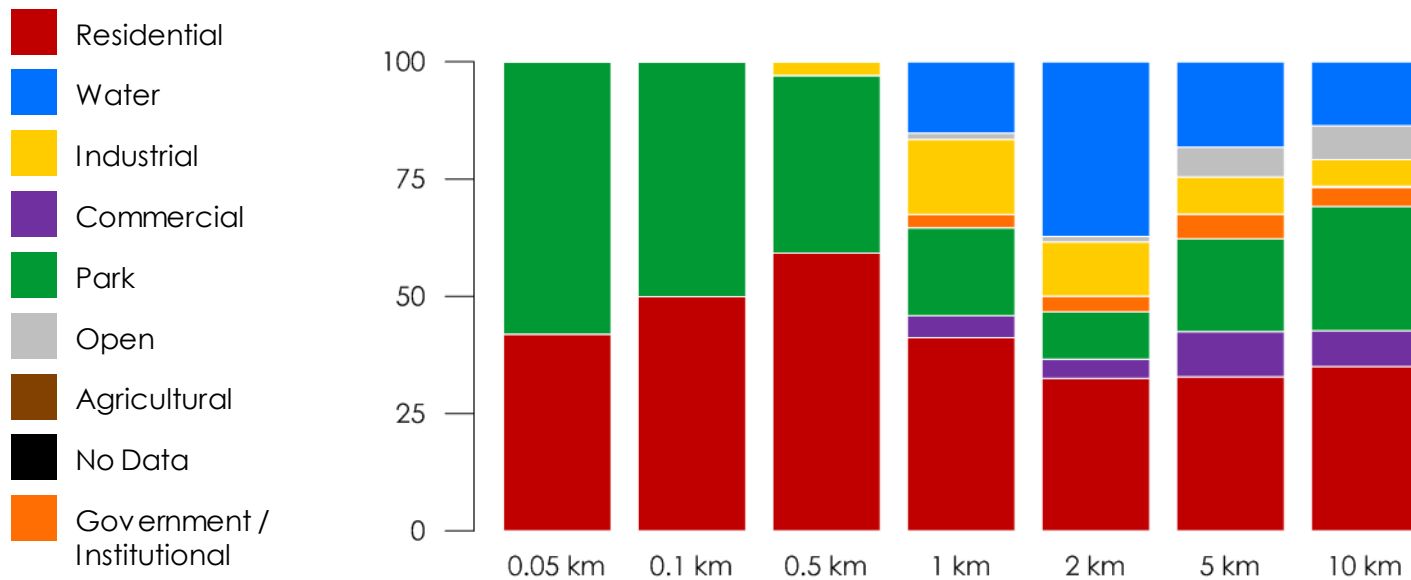


TOPOGRAPHY AT 5 KM

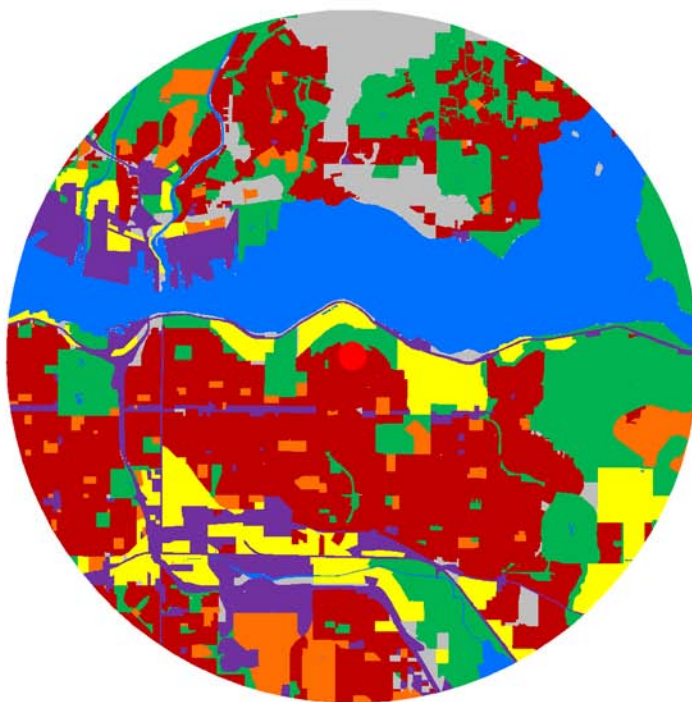


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

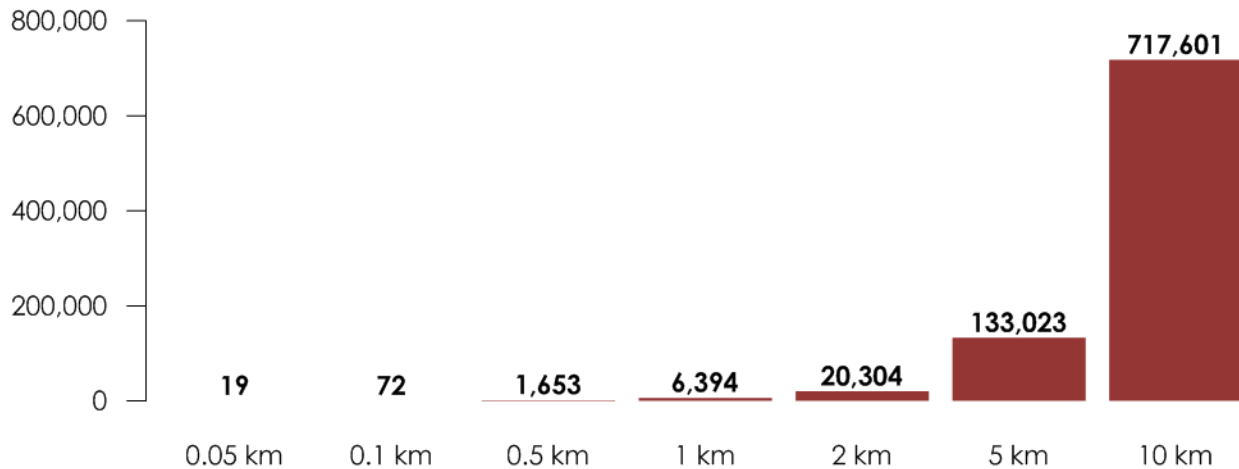


LAND-USE AT 1 KM

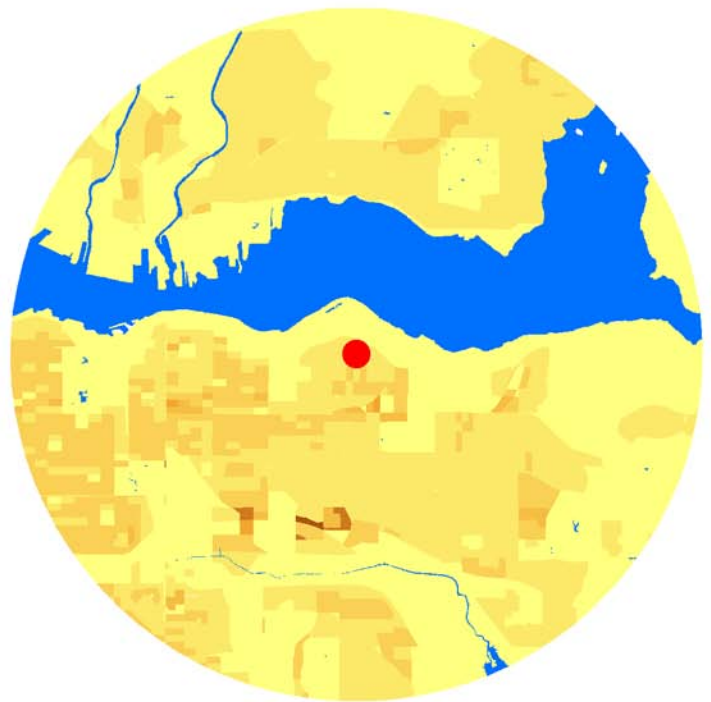


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Burnaby North

T24

DESCRIPTION

STATION DETAILS

Station Name	Burnaby North
Station ID	T024
Latitude Longitude	49.2875° N 123.0080° W
Ground Elevation	70 m amsl
Station Housing	Modular Shelter
Station Dimensions Height Width Length	2.7 m 2.6 m 3.8 m
Measurement Heights (above ground)	
SO ₂ , TRS, THC, VOC	4.1m
PM ₁₀	4.7 m
T _{air}	5.7 m
Precip	3.3 m
W _{spd} , W _{dir}	10.0 m
Date of Operation	1999 to present
Station Designation	Special Purpose - Industry
Predominant Land-use	Residential (40%) @ 5 km
Municipality	City of Burnaby

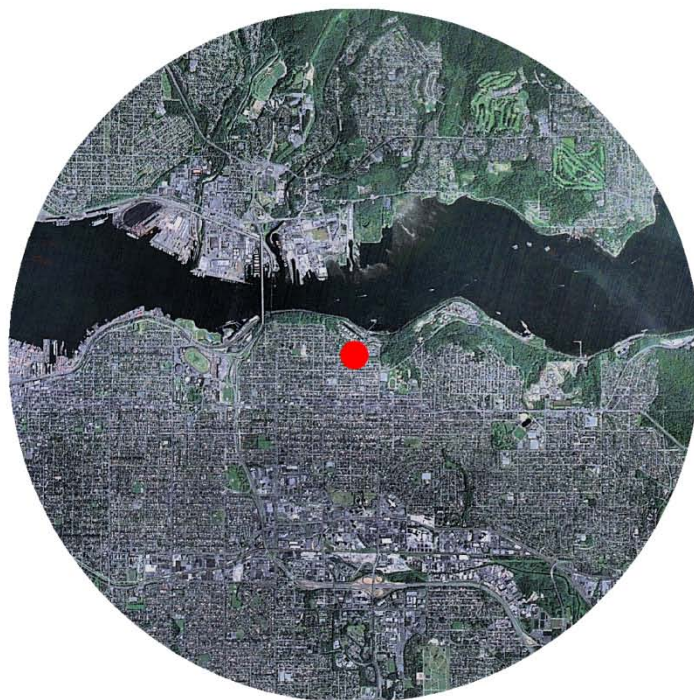
STATION DESCRIPTION

This site is located in a park adjacent to the tank farm and product distribution center of the Chevron refinery. The site was chosen based on dispersion modelling of emissions from the refinery and tank farm, located between the major emission source and the neighbouring community. This site, like T23, is integral to the operating requirements for the refinery and is funded by the facility operator (Chevron Canada Ltd.). Instrumentation is housed within a modular building at ground level.

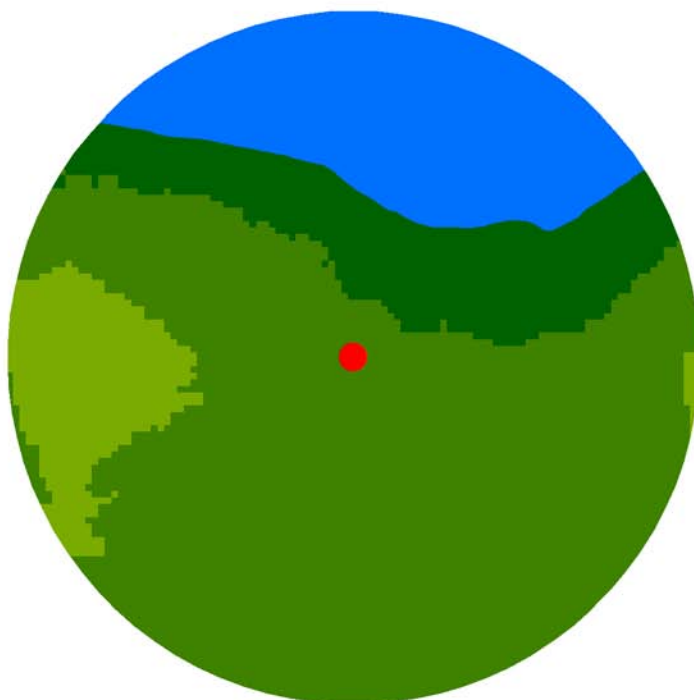




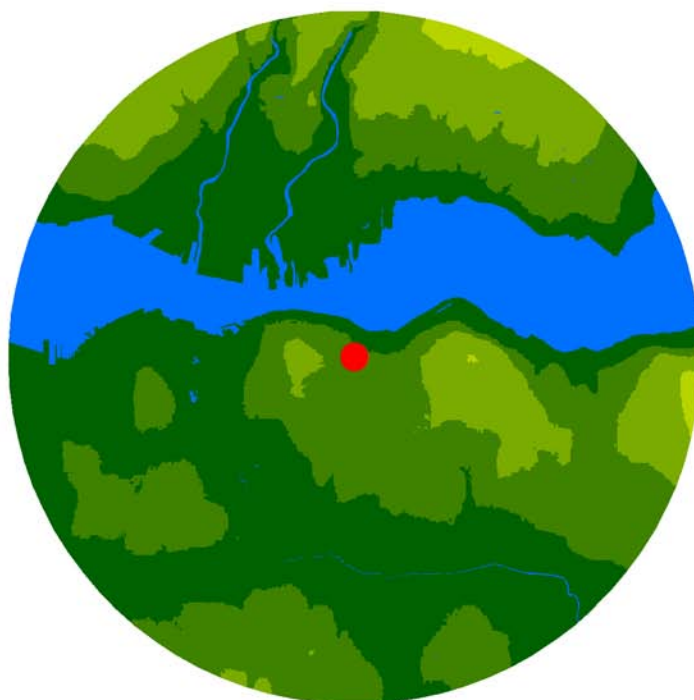
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

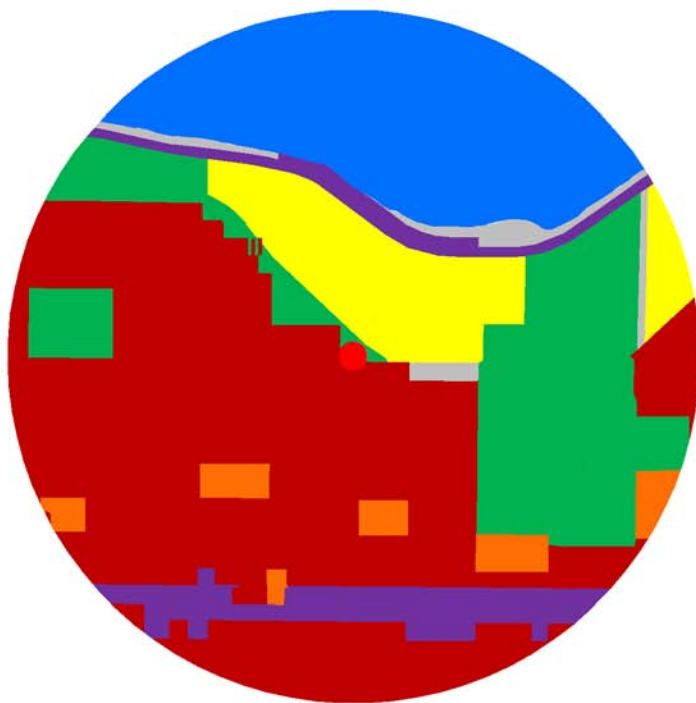
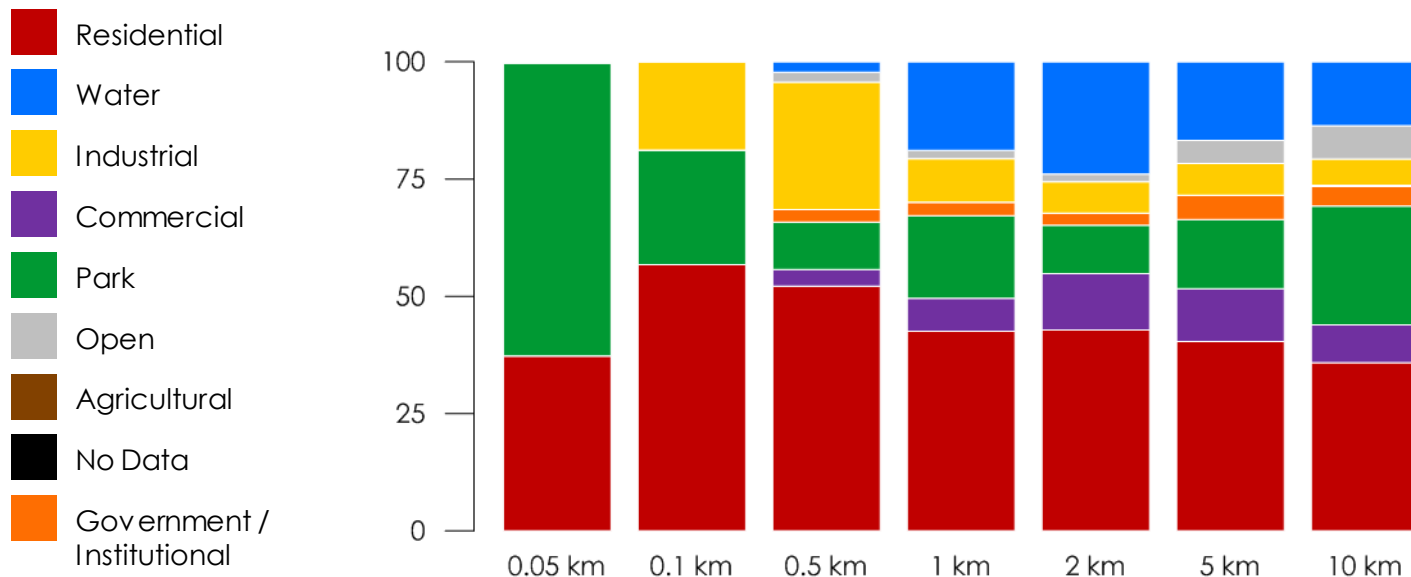


TOPOGRAPHY AT 5 KM

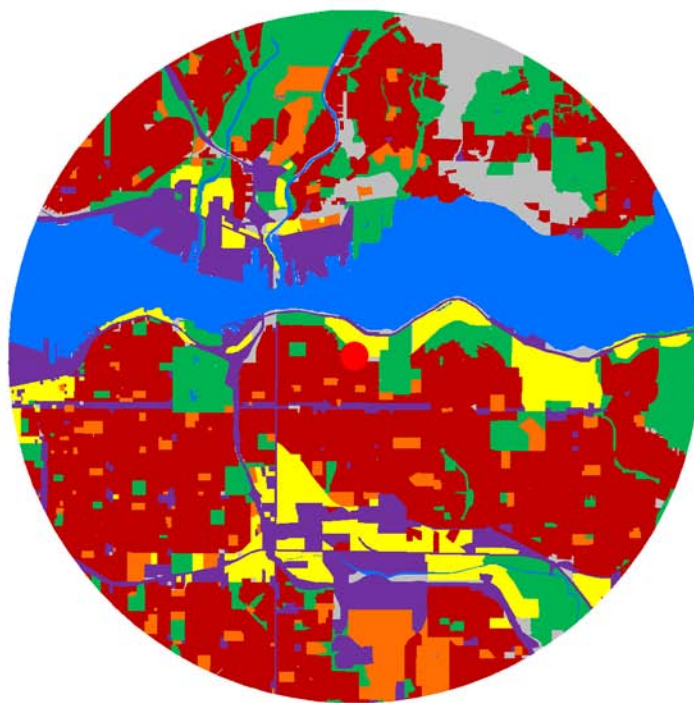


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

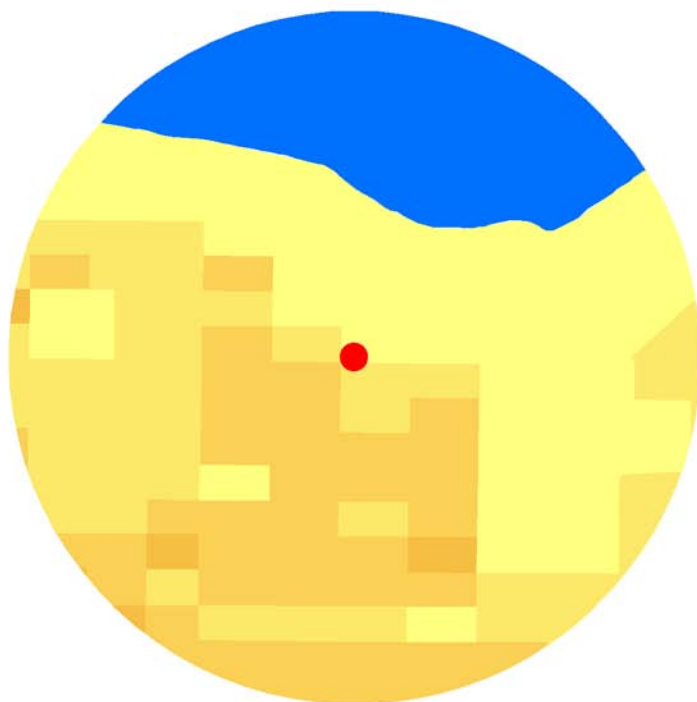
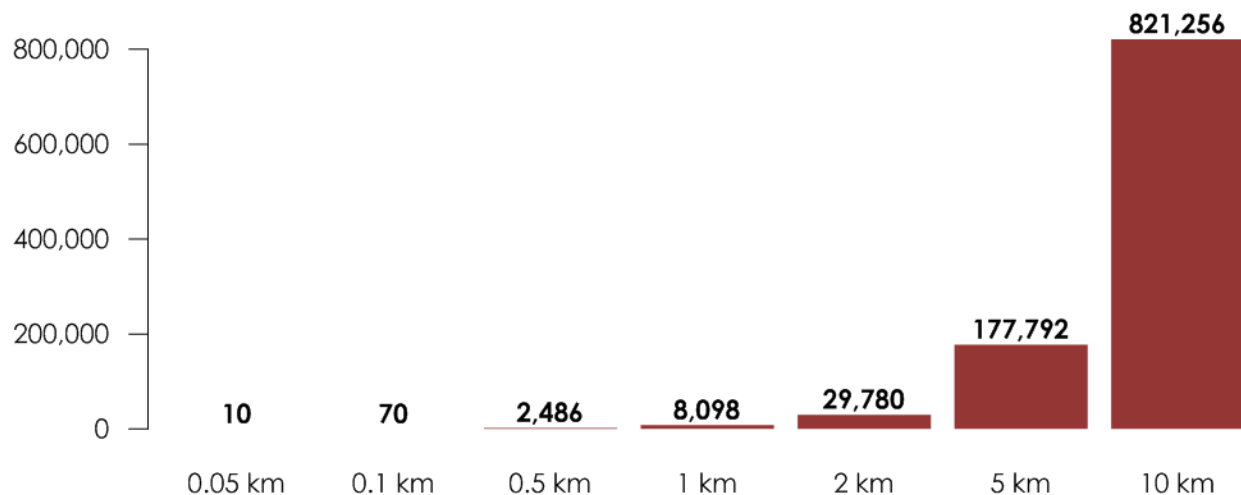


LAND-USE AT 1 KM

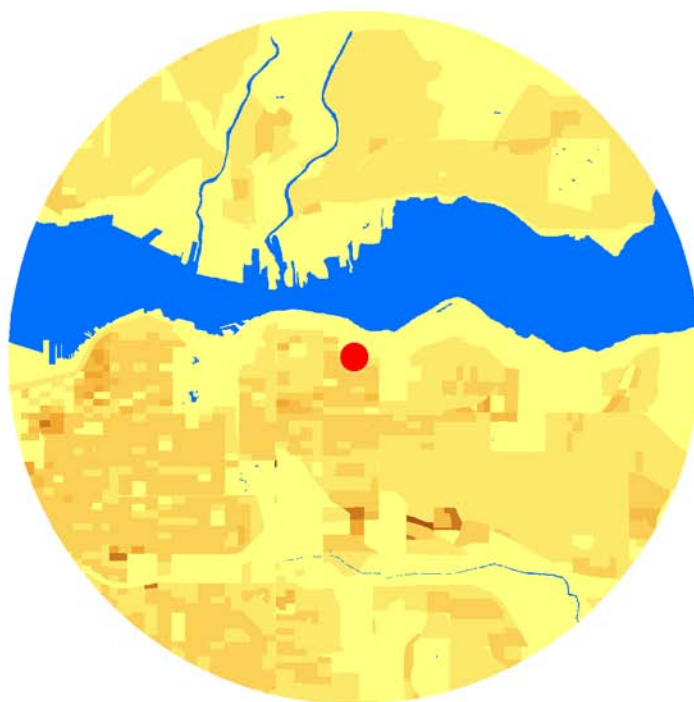


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

N. Vancouver- Mahon Park T26

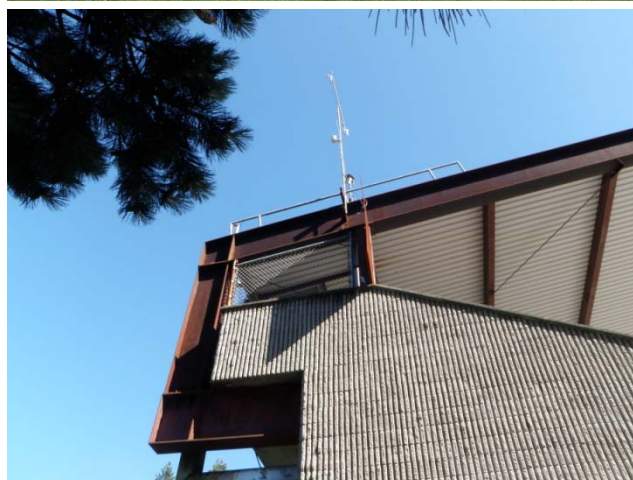
DESCRIPTION

STATION DETAILS

Station Name	N. Vancouver- Mahon Park
Station ID	T026
Latitude	49.3240° N
Longitude	123.0835° W
Ground Elevation	71 m amsl
Station Housing	Building
Station Dimensions	
Height	9.7 m
Width	12.0 m
Length	23.0 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	11.0 m
PM _{2.5}	11.7 m
T _{air}	12.5 m
Precip	12.3 m
W _{spd} , W _{dir}	14.2 m
Date of Operation	1990 to present
Station Designation	None
Predominant Land-use	Residential (37%) @ 5 km
Municipality	City of North Vancouver

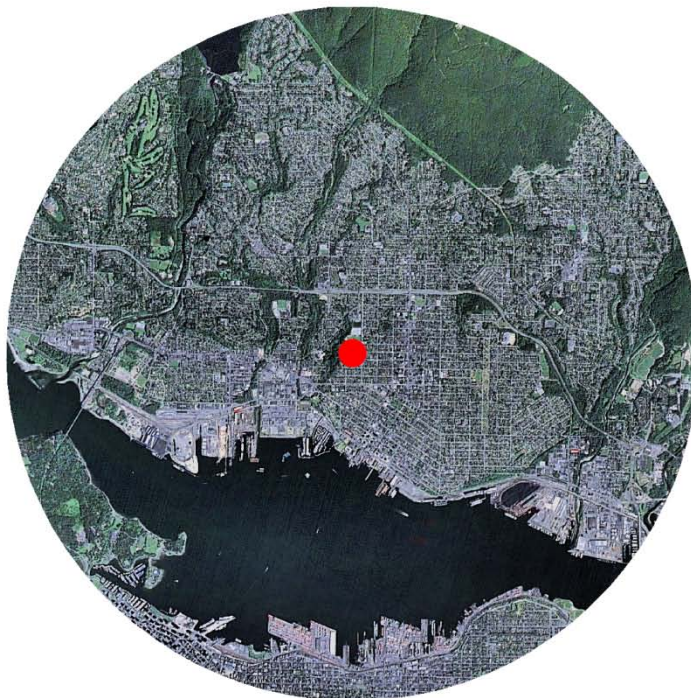
STATION DESCRIPTION

This station measures air quality in the residential areas of central North Vancouver. On bench-land above the harbour and away from major traffic corridors, this station is situated so as to represent air quality for a wider region along the North Shore mountains. Instrumentation is housed within a room under Mahon Park's stadium grandstands at ground level with the sample inlets above roof height. The wind observations at this site are likely somewhat influenced by the building structure itself.

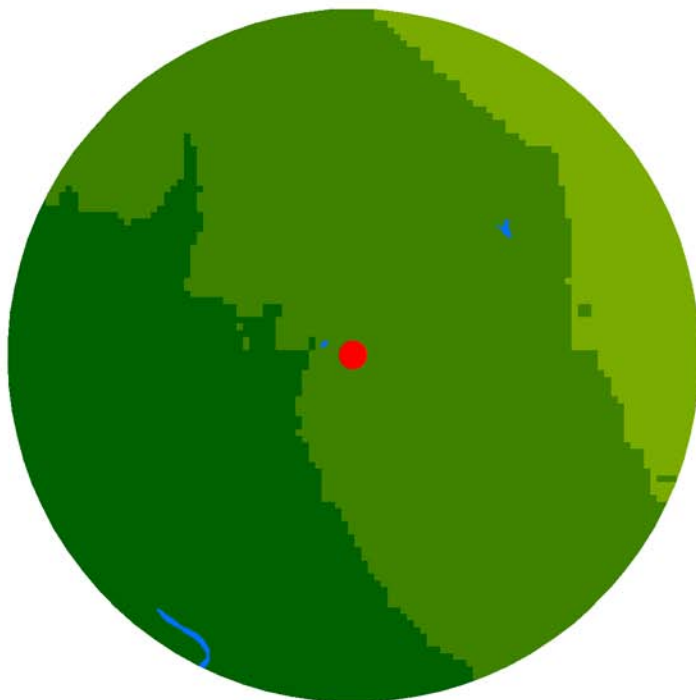




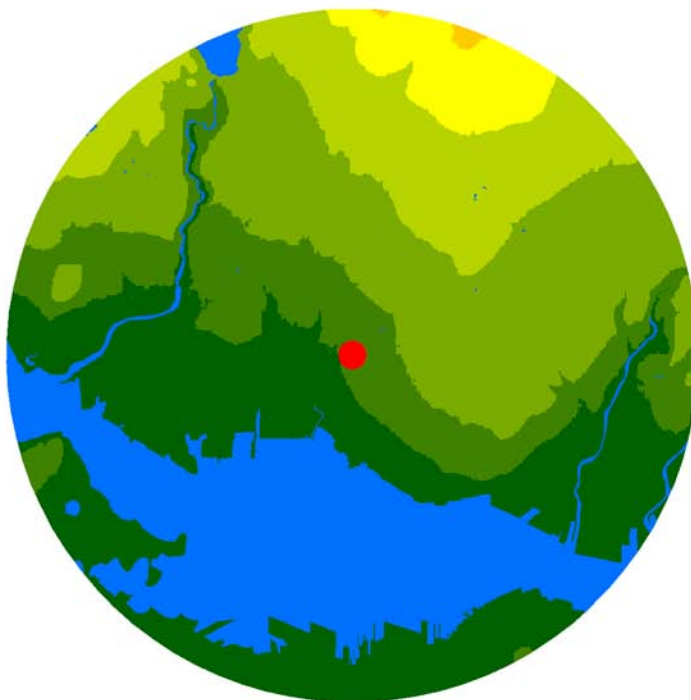
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

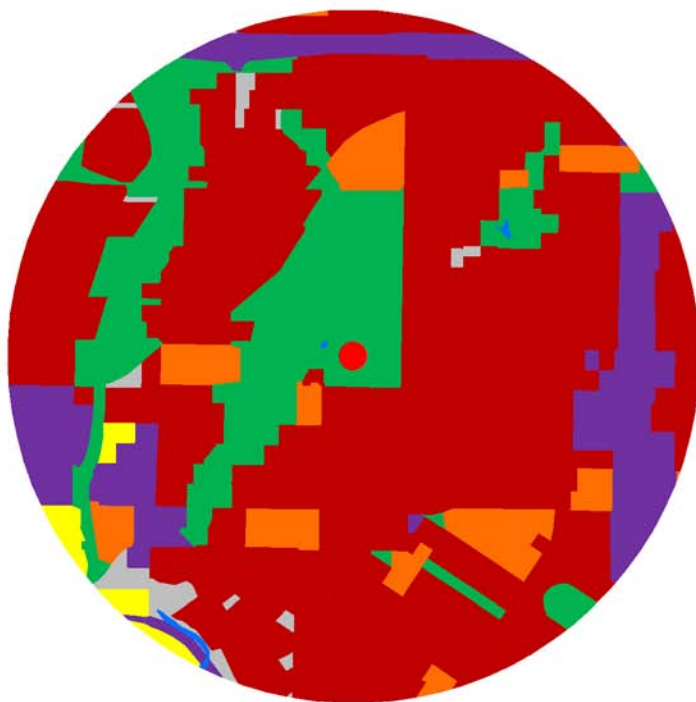
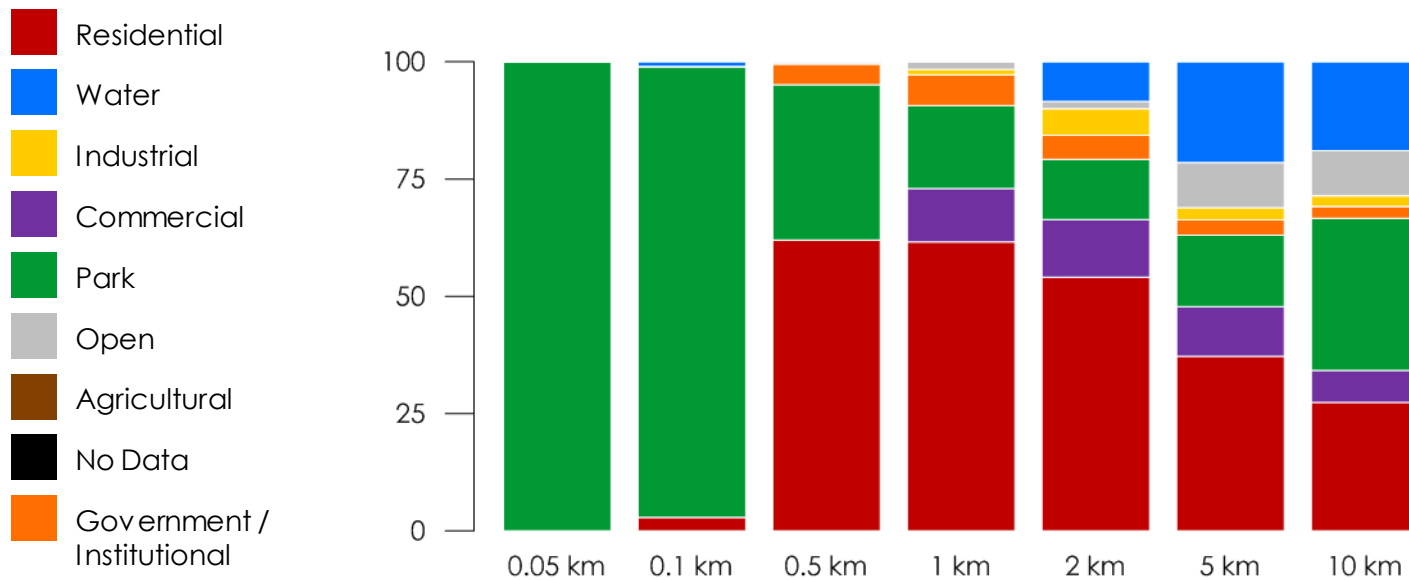


TOPOGRAPHY AT 5 KM

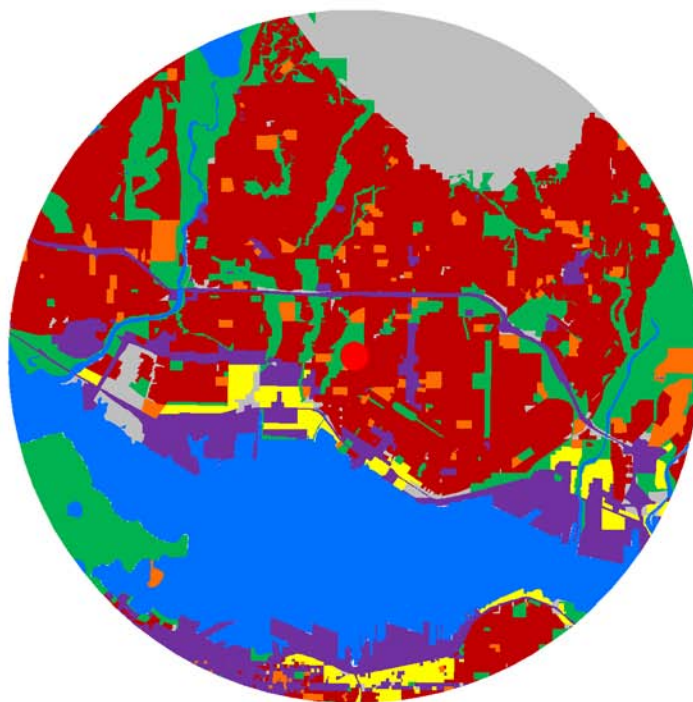


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

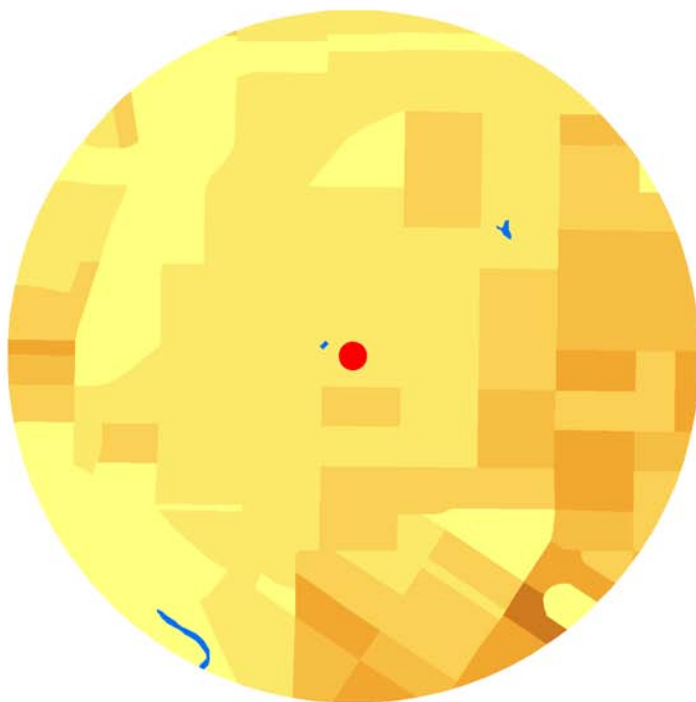
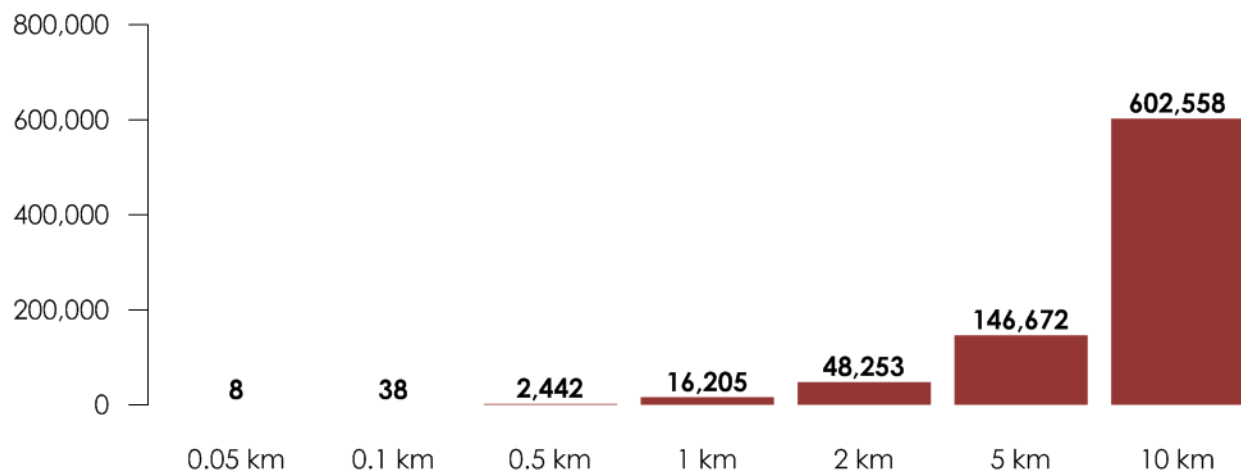


LAND-USE AT 1 KM

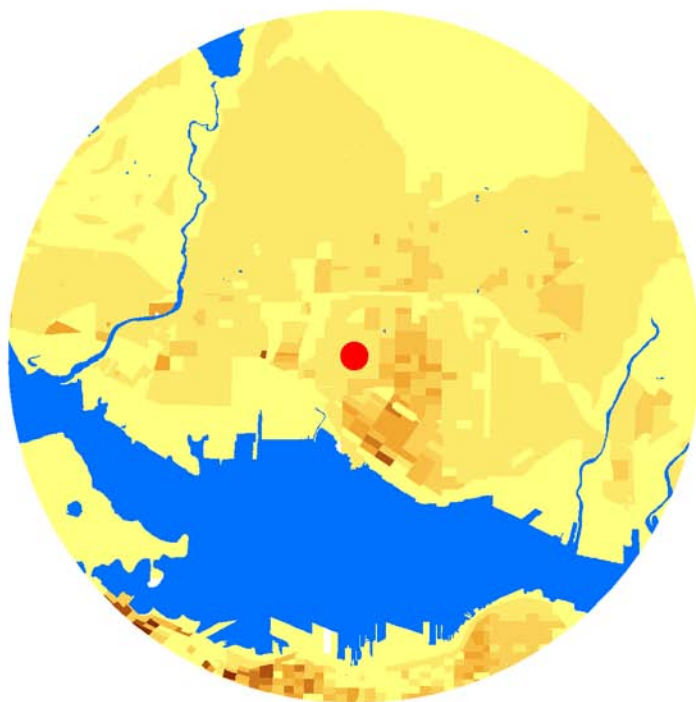


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

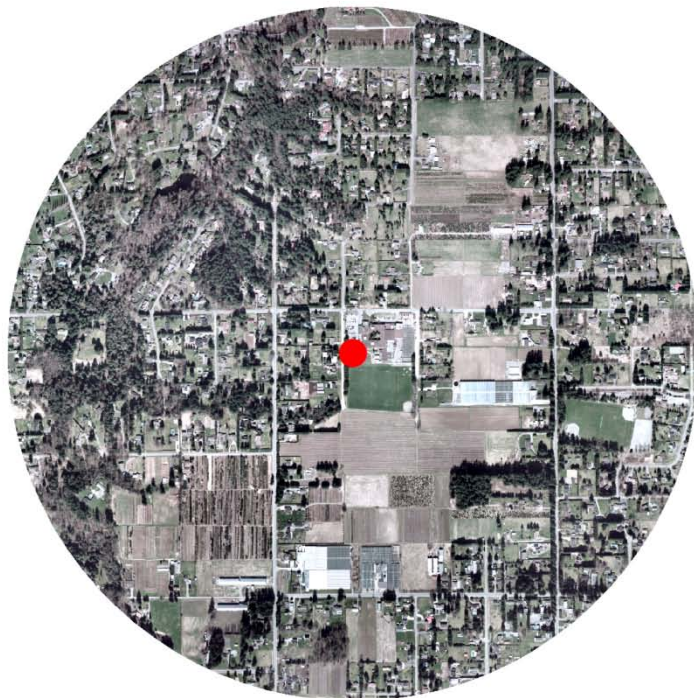
STATION DETAILS

Station Name	Langley
Station ID	T027
Latitude	49.0956° N
Longitude	122.5671° W
Ground Elevation	88 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.1 m
Width	3.0 m
Length	6.1 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	4.8 m
PM _{2.5} , PM ₁₀	5.0 m
T _{air} , RH	12.7 m
Precip	3.9 m
W _{spd} , W _{dir}	14.5 m
Date of Operation	1992 to present
Station Designation	None
Predominant Land-use	Agricultural (75%) @ 5 km
Municipality	Township of Langley

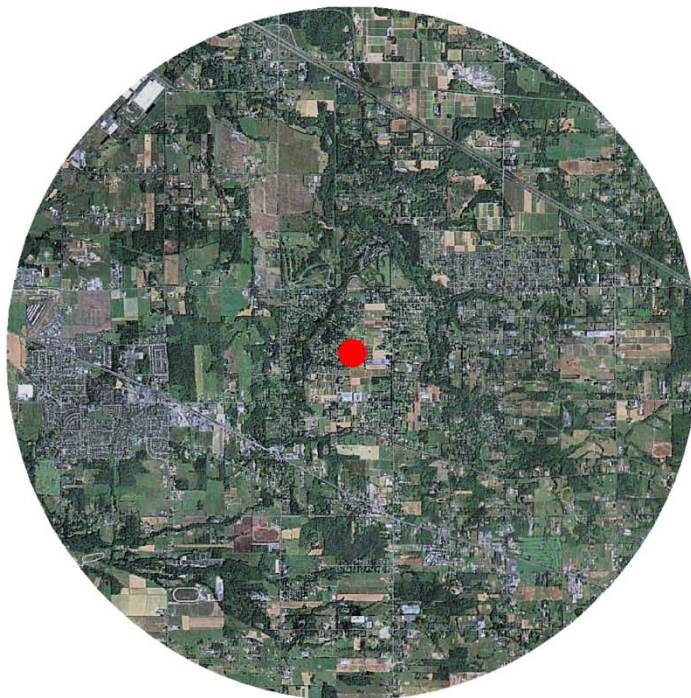
STATION DESCRIPTION

This station is located on the grounds of D.W. Poppy Secondary school near the geographic centre of Langley and monitors air quality near the eastern boundary of Metro Vancouver. This NAPS station is located in a predominately agricultural area with sparsely spaced detached residential houses. Instrumentation is housed within a modular building at ground level. A single line of mature evergreen trees are situated close to the station and are thought to influence winds blowing from the west. The line of trees is aligned north-south and is to the west and southwest of the station.

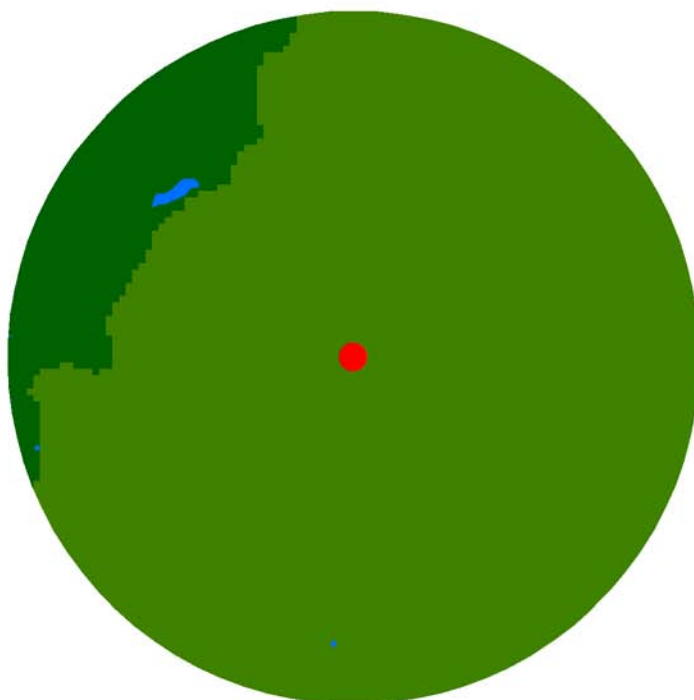




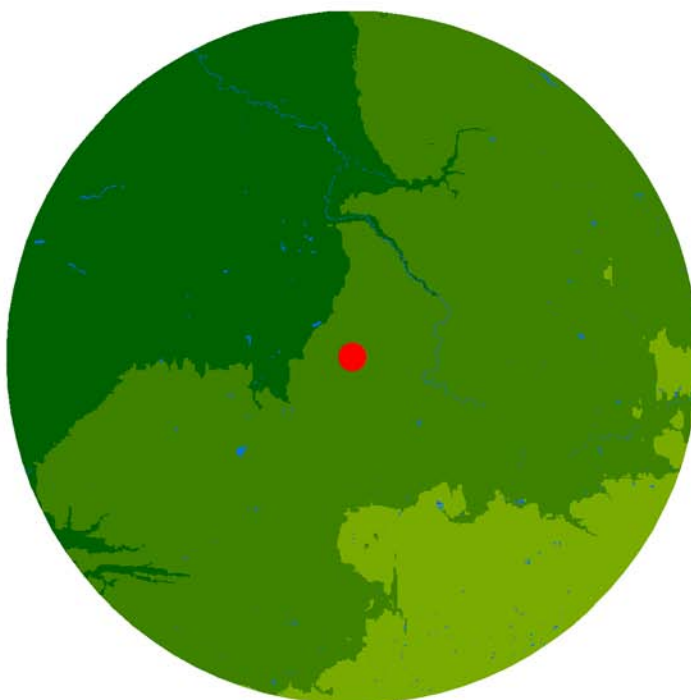
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

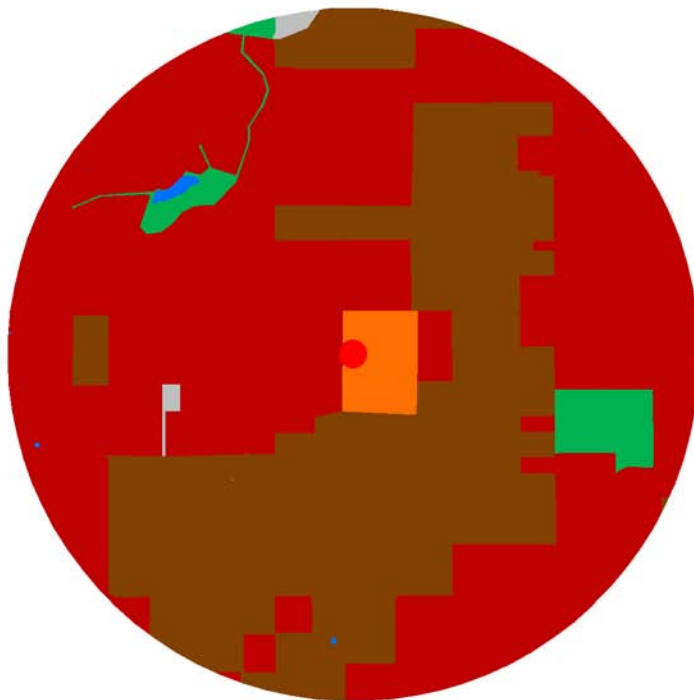
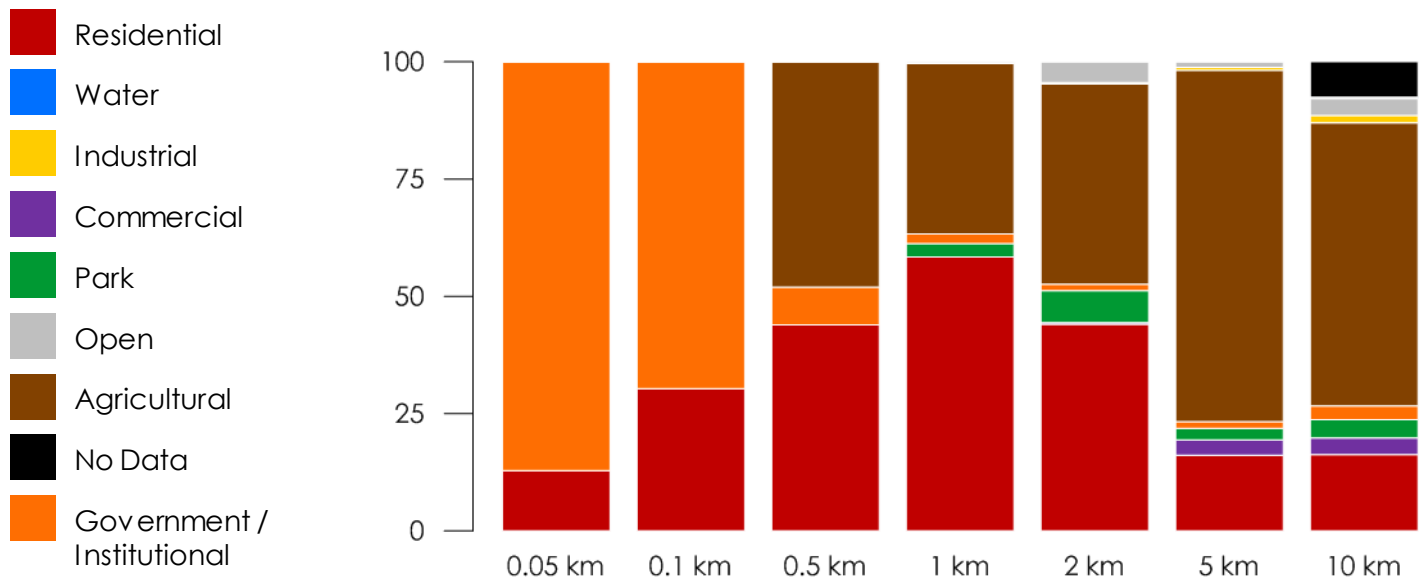


TOPOGRAPHY AT 5 KM

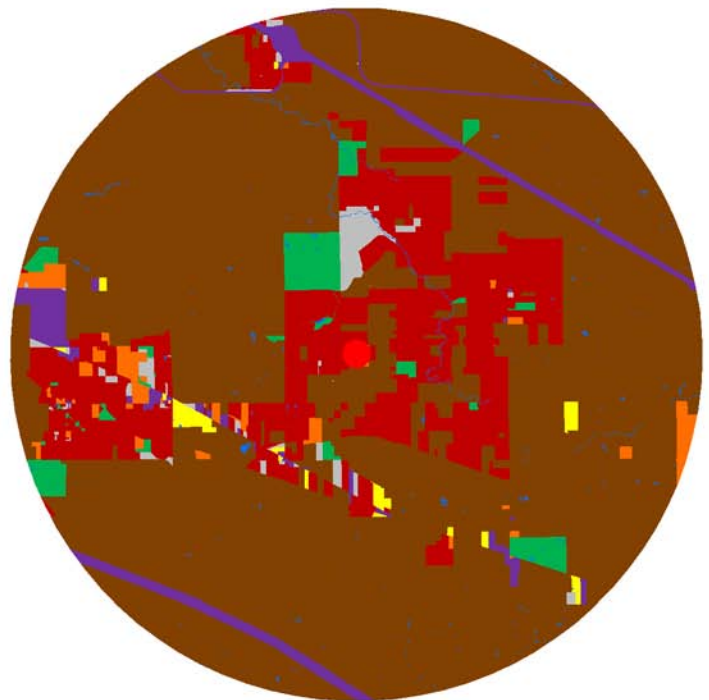


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

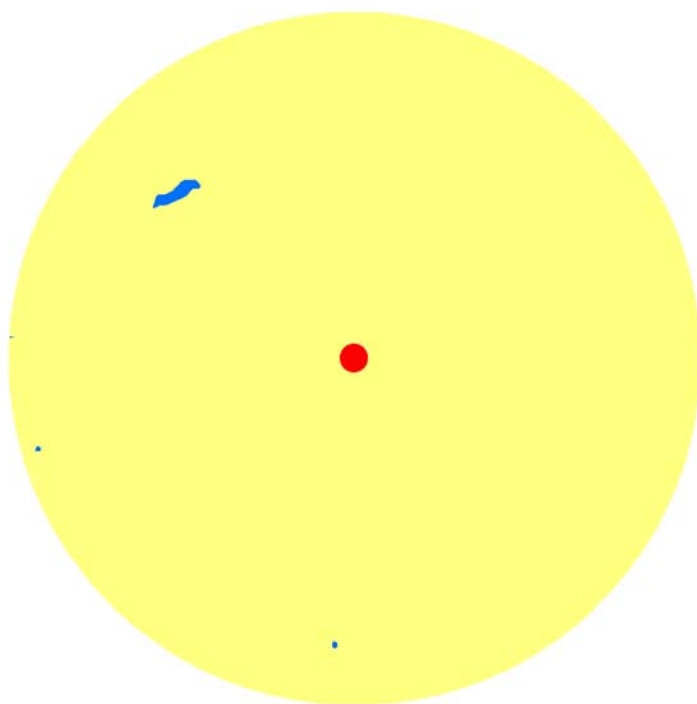
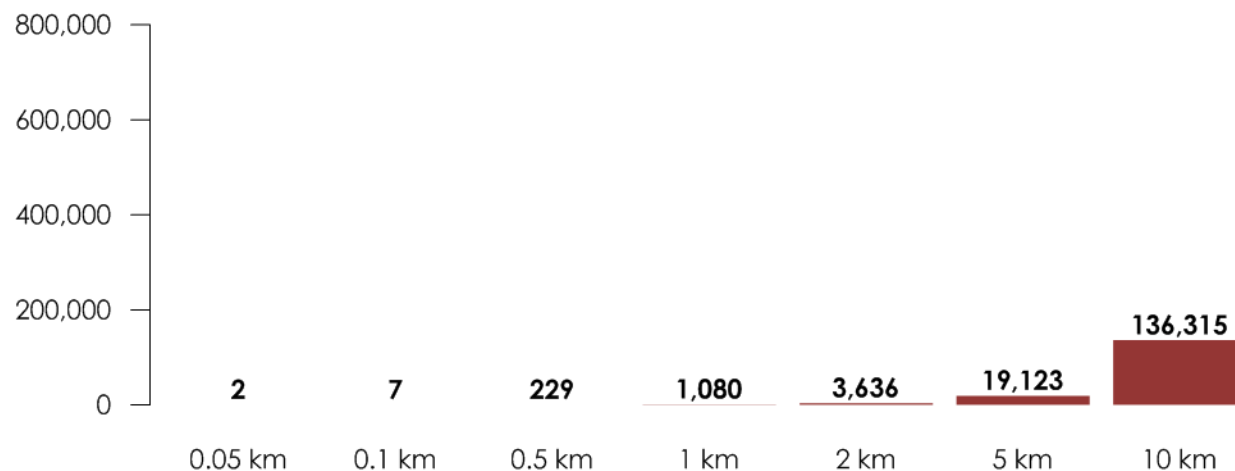


LAND-USE AT 1 KM

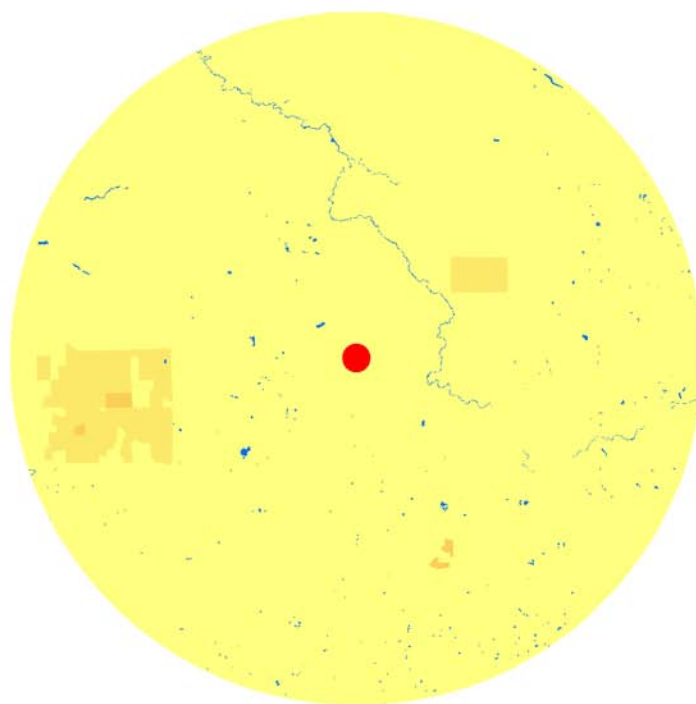


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Hope Airport

T29

DESCRIPTION

STATION DETAILS

Station Name	Hope Airport
Station ID	T029
Latitude	49.3699° N
Longitude	121.4991° W
Ground Elevation	40 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.0 m
Width	2.0 m
Length	4.0 m
Measurement Heights (above ground)	
NO ₂ , CO, O ₃	3.7 m
PM _{2.5}	3.8 m
PM ₁₀	3.6 m
T _{air} , RH	8.7 m
Precip	2.6 m
W _{spd} , W _{dir}	10.1 m
Date of Operation	1996 to present
Station Designation	None
Predominant Land-use	*Not Available
Municipality	District of Hope

*Land-use data was not available from the FVRD. As data becomes available it will be included in the future.

STATION DESCRIPTION

Located at the rural Hope airport, this station is a key site for studying pollutant distribution within the Lower Fraser Valley. The steep mountainous terrain of the area channels wind flows in the east/west direction. During specific meteorological conditions, air quality can be influenced by air pollutants transported from areas to the west in combination with more localized pollutants. Instrumentation is housed within a modular building at ground level. Its operation is funded by the FVRD.

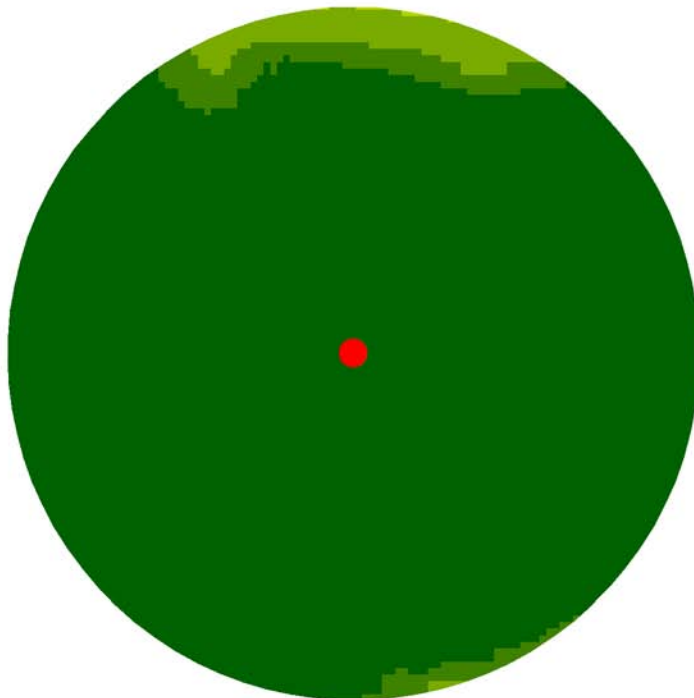




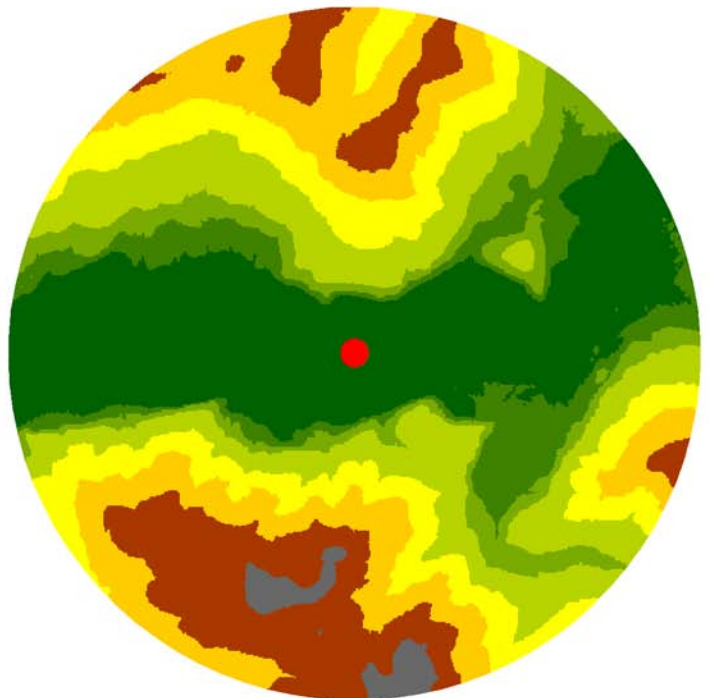
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

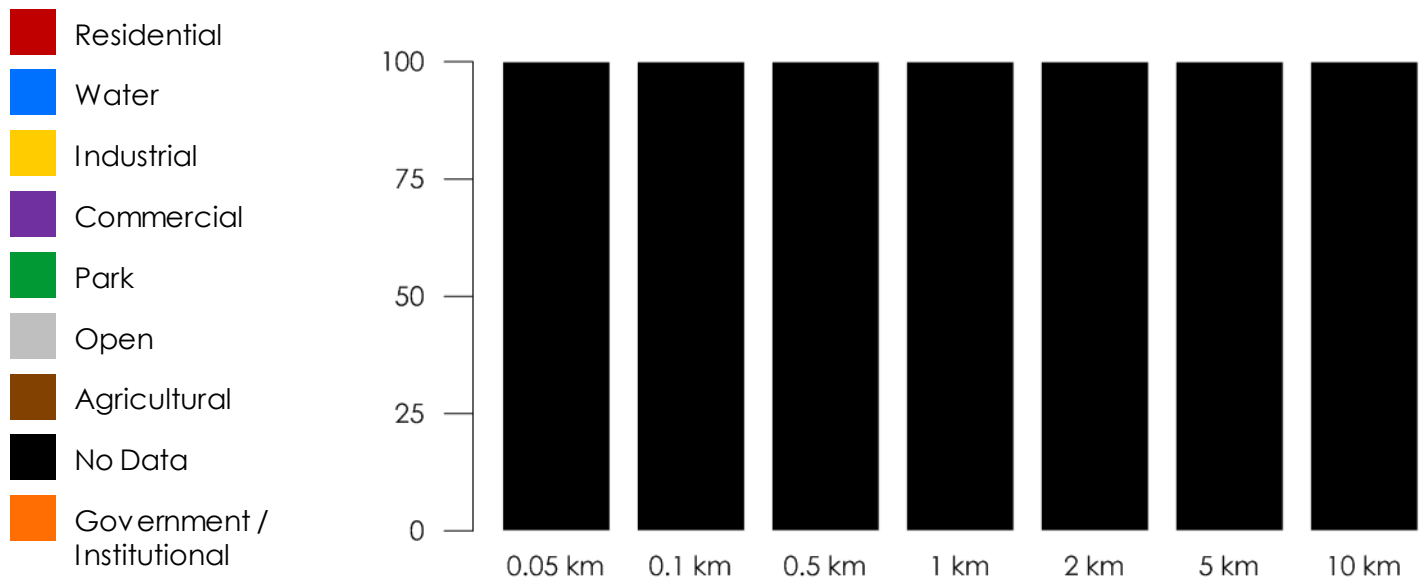


TOPOGRAPHY AT 5 KM



Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION



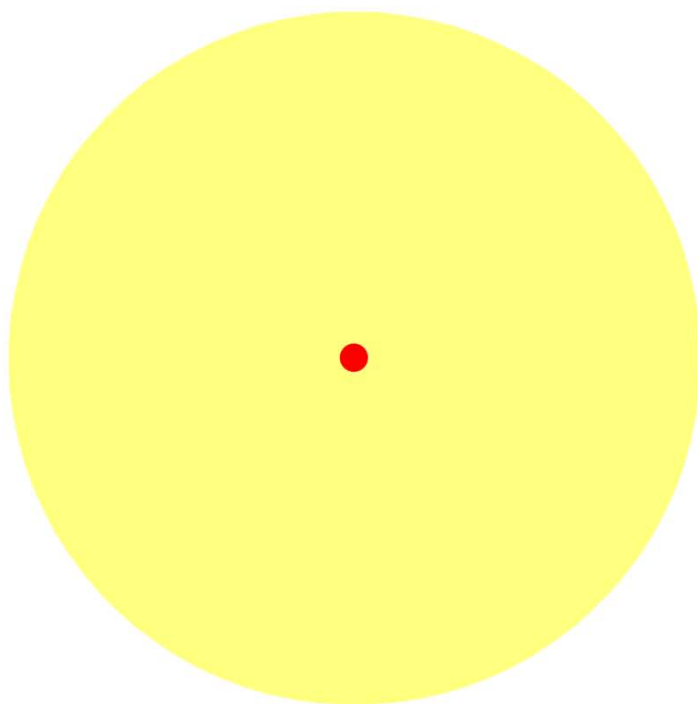
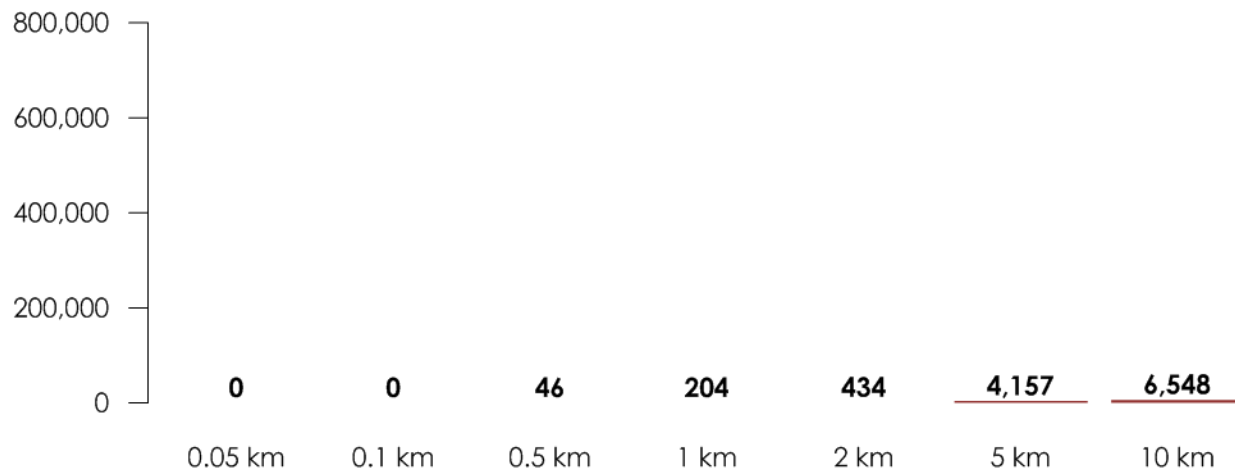
No Data

LAND-USE AT 1 KM

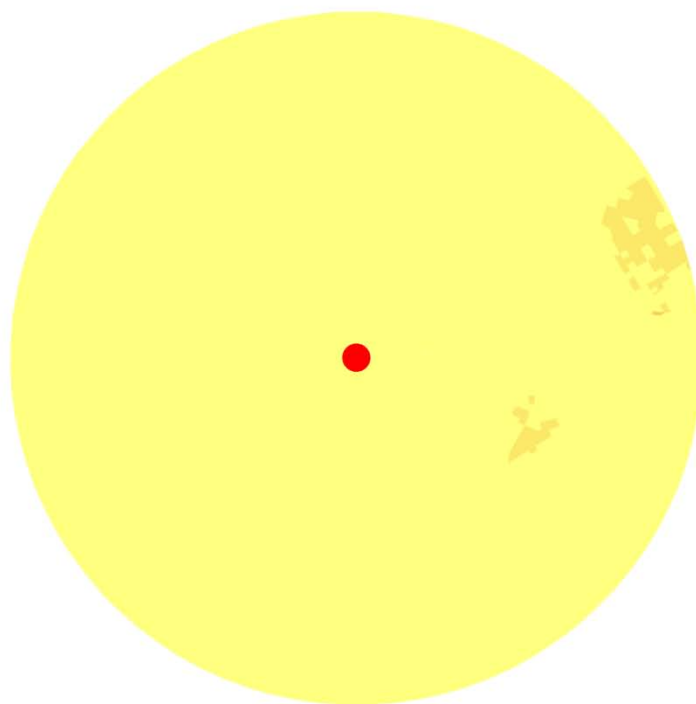
No Data

LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Maple Ridge

T30

DESCRIPTION

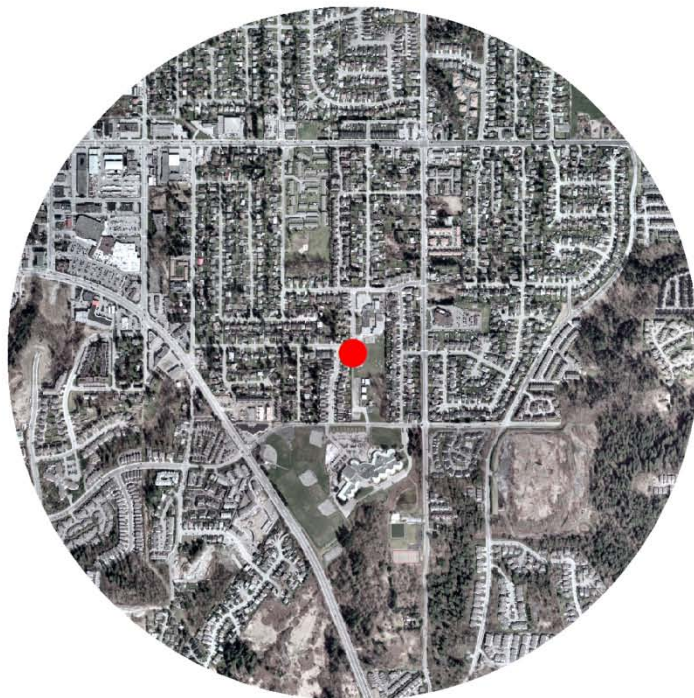
STATION DETAILS

Station Name	Maple Ridge
Station ID	T030
Latitude	49.2149° N
Longitude	122.5821° W
Ground Elevation	50 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.9 m
Width	3.1 m
Length	6.2 m
Measurement Heights (above ground)	
NO ₂ , CO, O ₃	4.1 m
T _{air}	6.1 m
Precip	3.5 m
W _{spd} , W _{dir}	10.3 m
Date of Operation	1998 to present
Station Designation	None
Predominant Land-use	Agricultural (39%) @ 5 km
Municipality	District of Maple Ridge

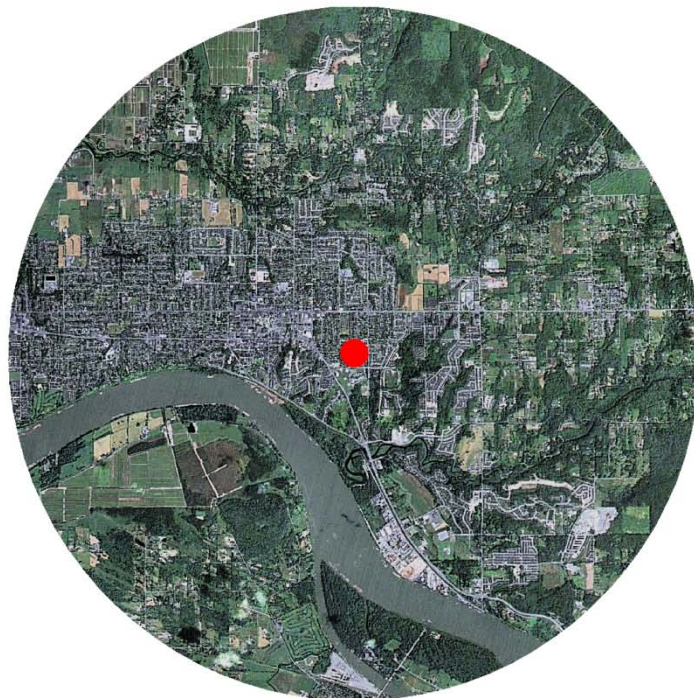
STATION DESCRIPTION

Located at Golden Ears Elementary school in a residential neighbourhood of Maple Ridge, this site is the most northeastern monitoring location in Metro Vancouver. The station is only a few metres from a residential two story house and approximately 400 m from a major four lane roadway, Lougheed Hwy. Despite the station mainly being surrounded by residential dwellings the predominant land-use within five kilometers of the station is agriculture. Instrumentation is housed within a modular building at ground level.

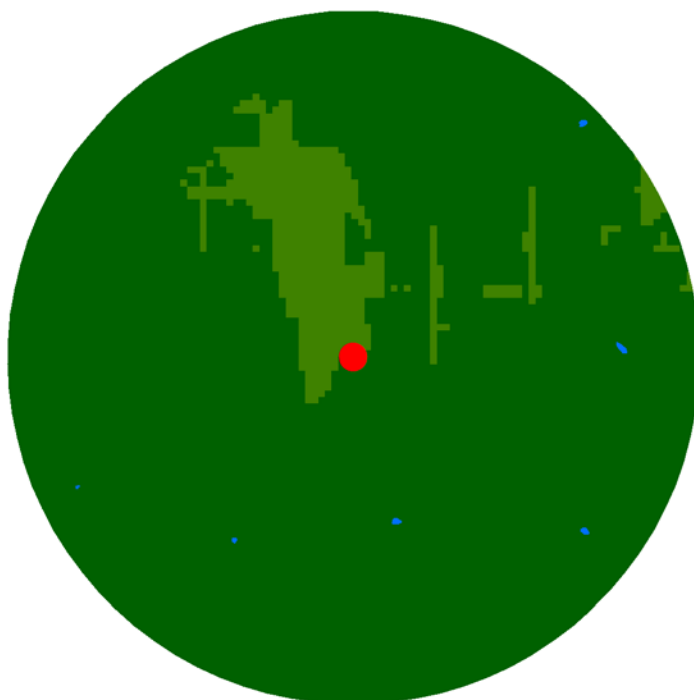




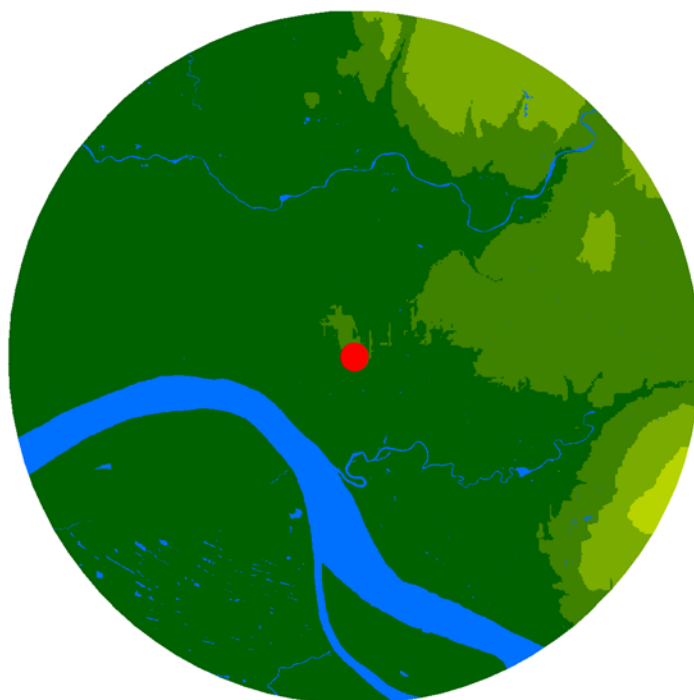
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

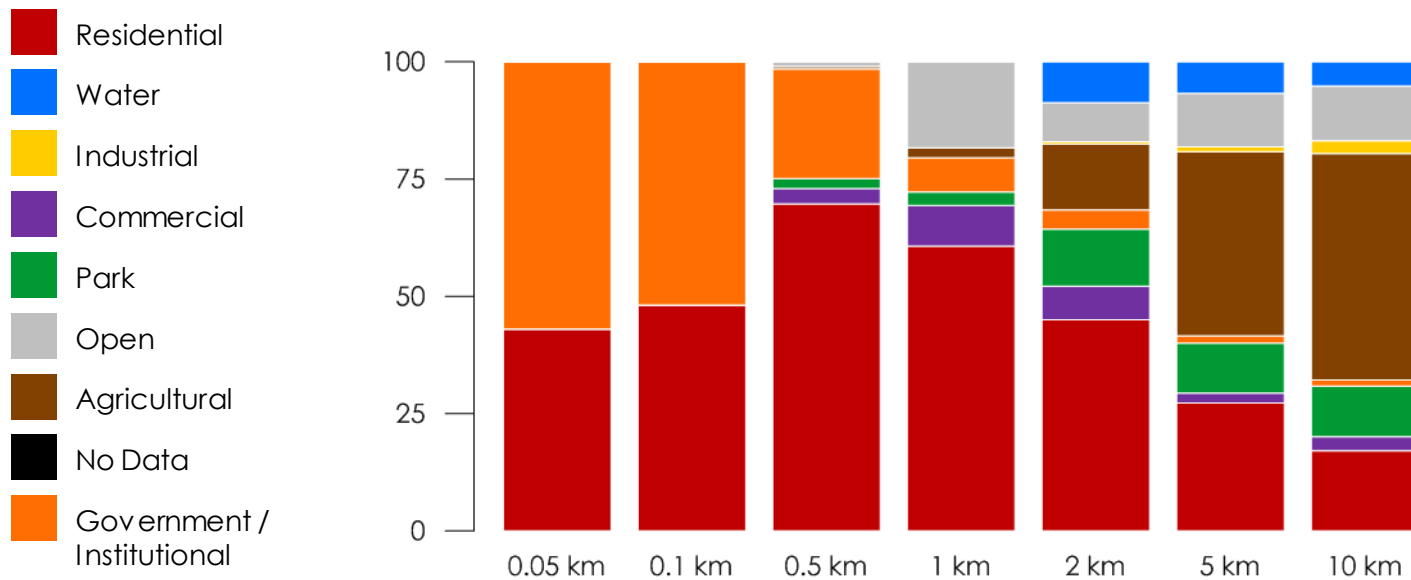


TOPOGRAPHY AT 5 KM

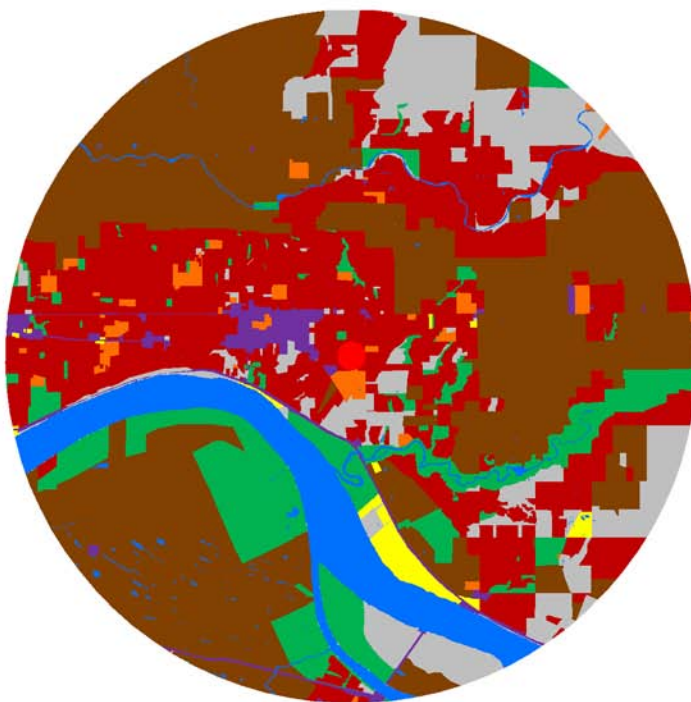


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

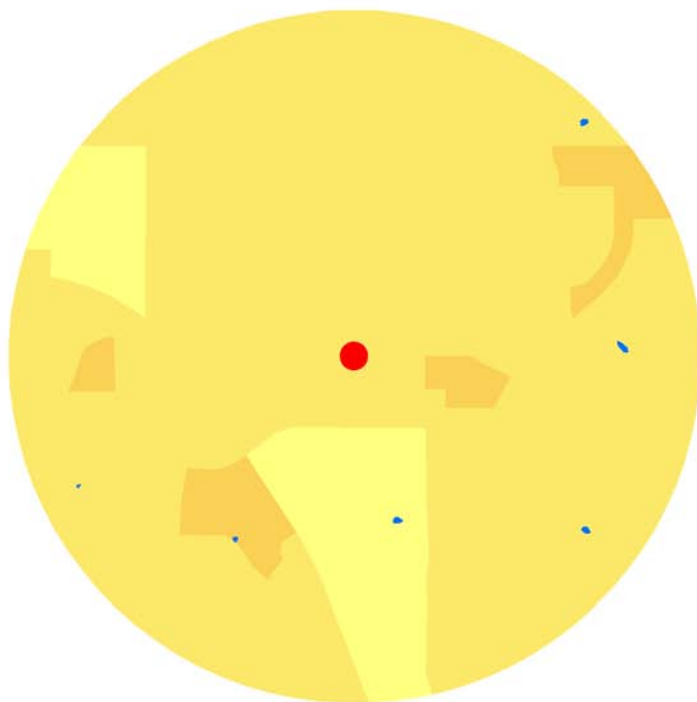
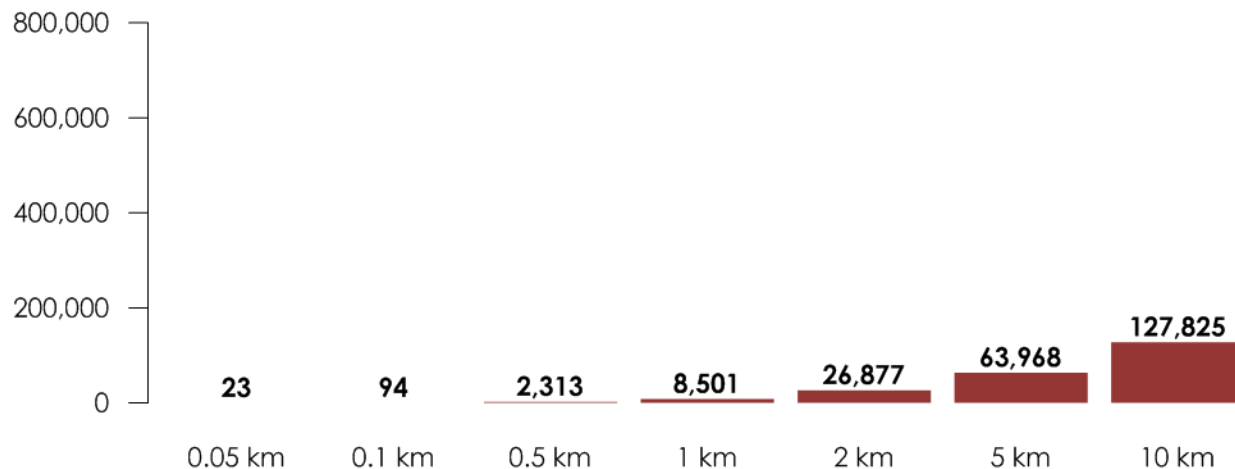


LAND-USE AT 1 KM

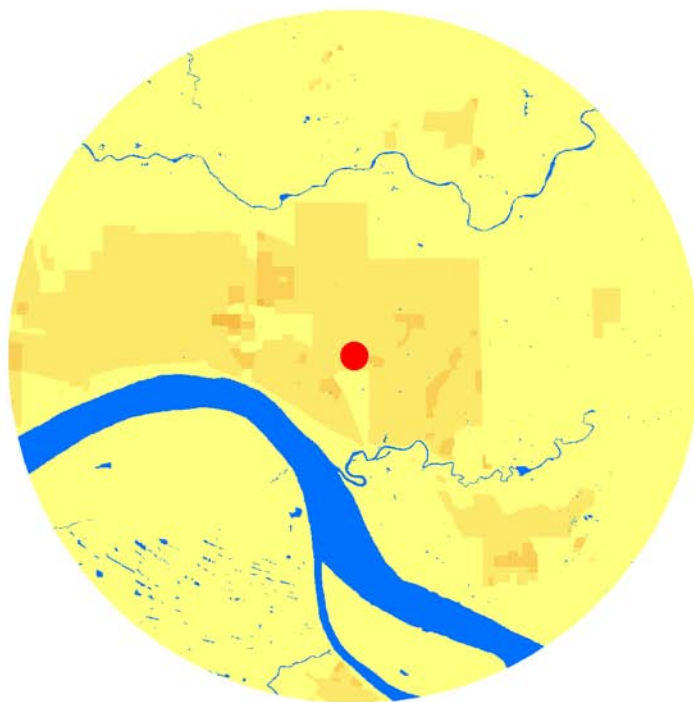


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Richmond- Airport

T31

DESCRIPTION

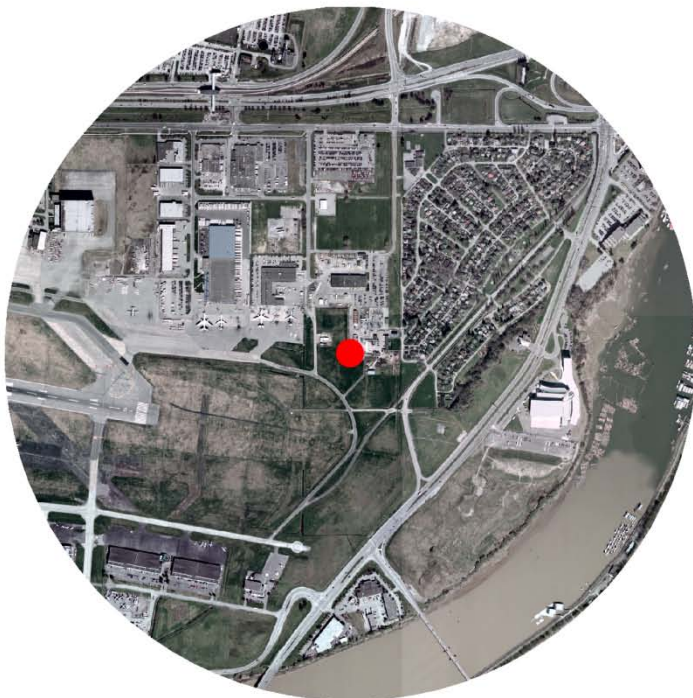
STATION DETAILS

Station Name	Richmond-Airport
Station ID	T031
Latitude	49.1863° N
Longitude	123.1524° W
Ground Elevation	1 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.0 m
Width	2.5 m
Length	4.0 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃ , VOC	4.3 m
PM _{2.5}	5.1 m
PM ₁₀	4.7 m
CARB	4.9 m
T _{air} , RH	5.5 m
Precip	3.6 m
W _{spd} , W _{dir}	10.3 m
Date of Operation	1998 to present
Station Designation	None
Predominant Land-use	Residential (35%) @ 5 km
Municipality	City of Richmond

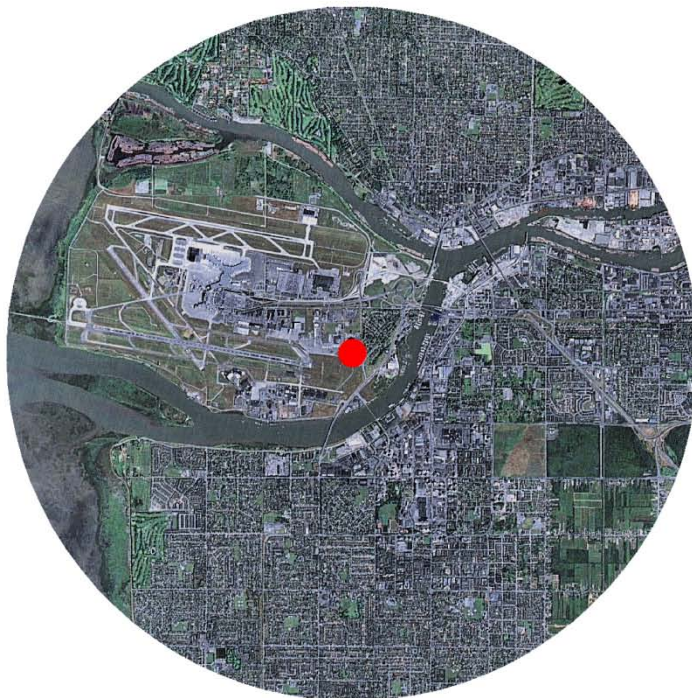
STATION DESCRIPTION

Located at Vancouver International Airport on Sea Island in Richmond, this station is near the east end of a major take-off runway, between airport operations and the residential community of Burkeville to the east. The site is located in an airport works yard and was originally selected to inform the development of the third runway. A substantial portion of the operational costs are funded by the Vancouver Airport Authority. Instrumentation is housed within a modular building at ground level.

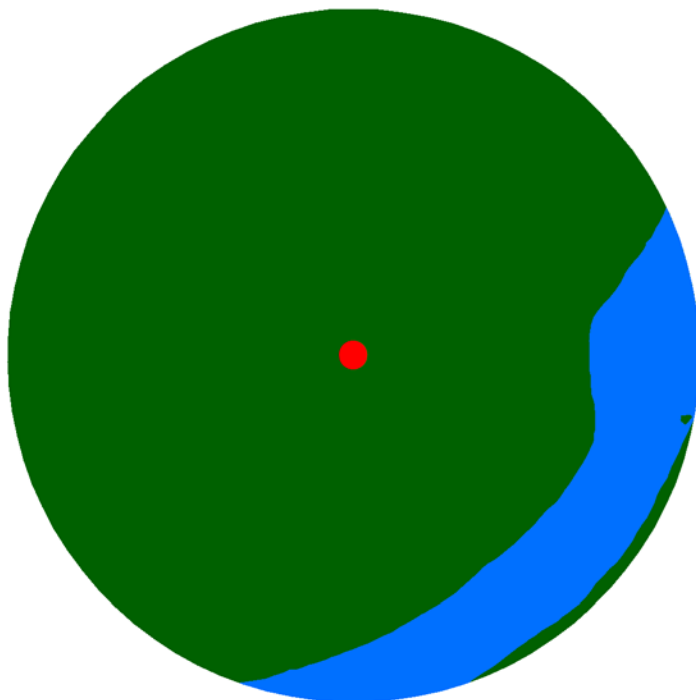




AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

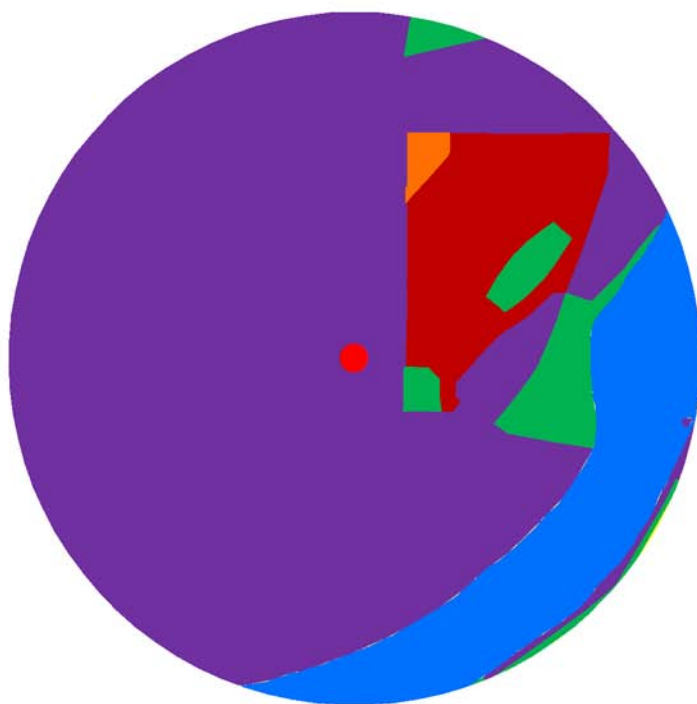
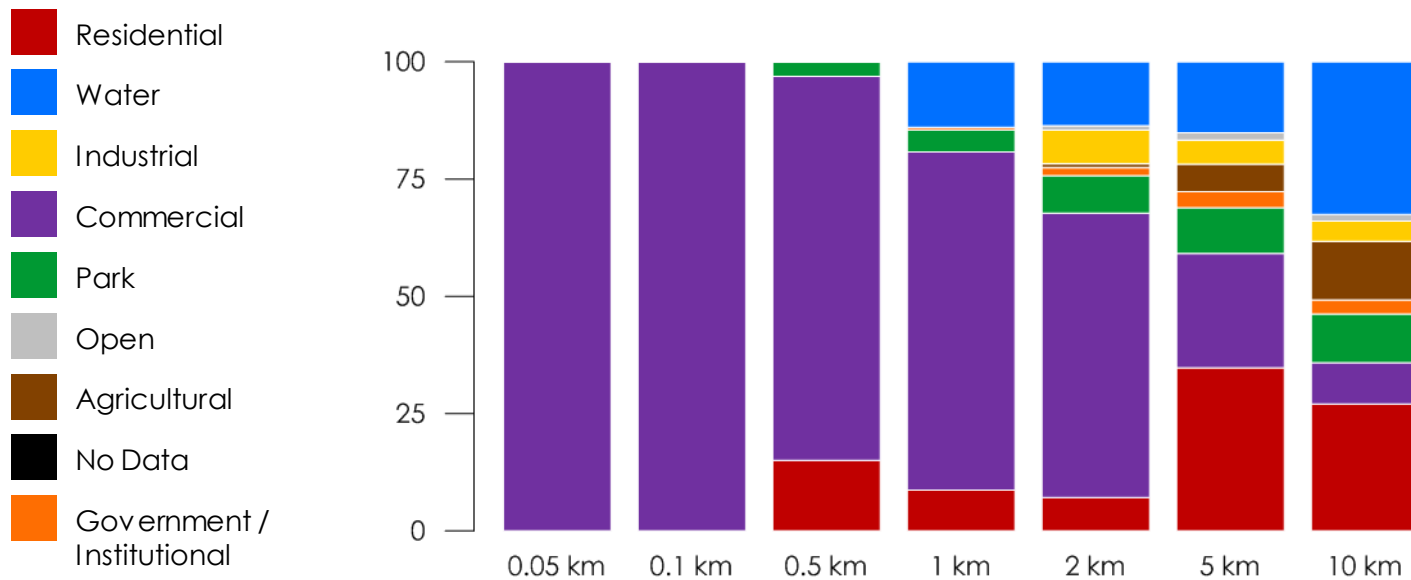


TOPOGRAPHY AT 5 KM

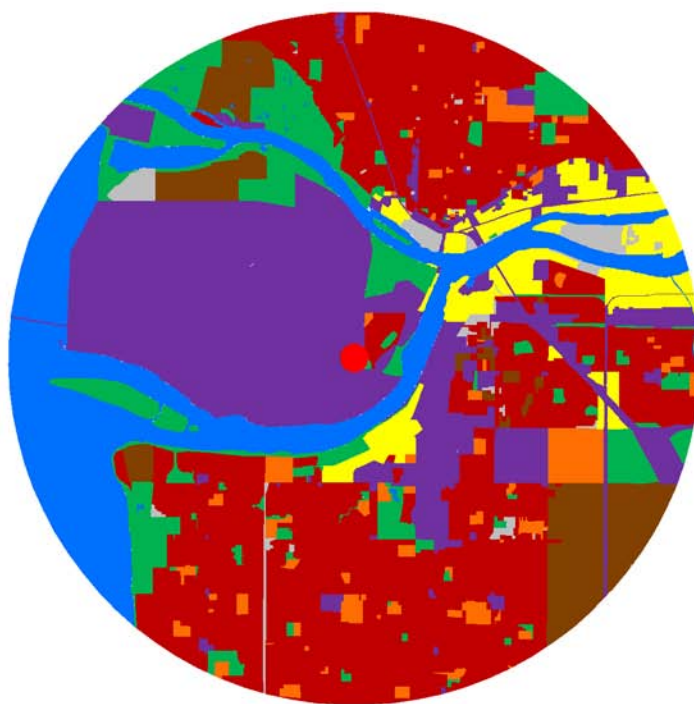


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

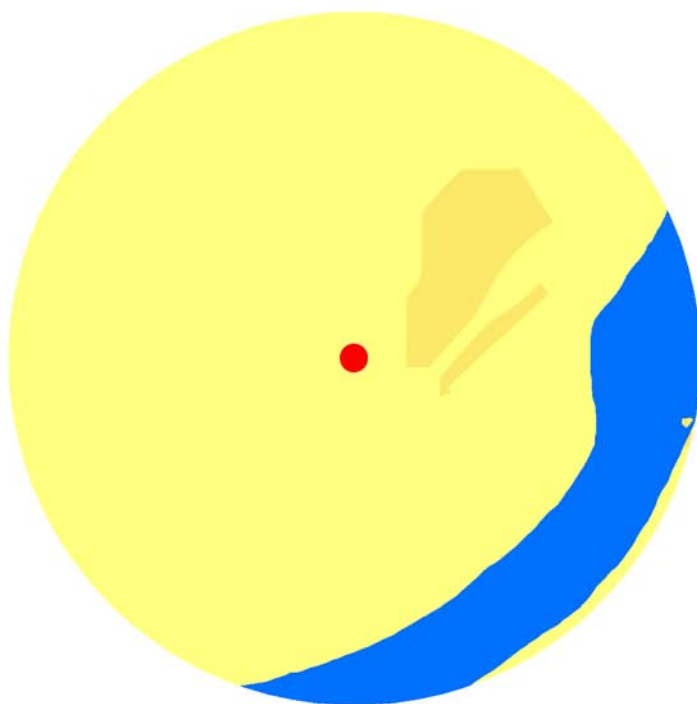
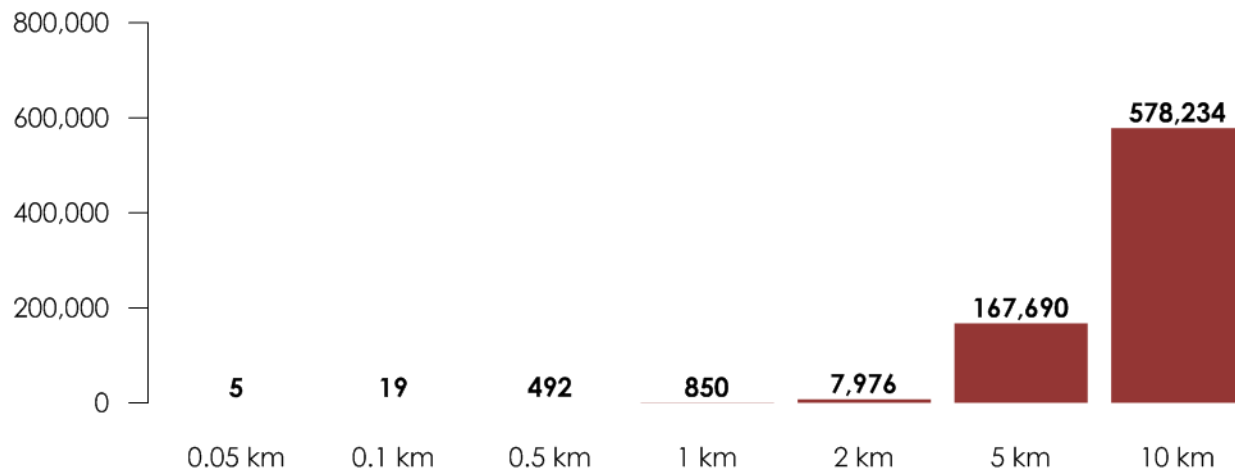


LAND-USE AT 1 KM



LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

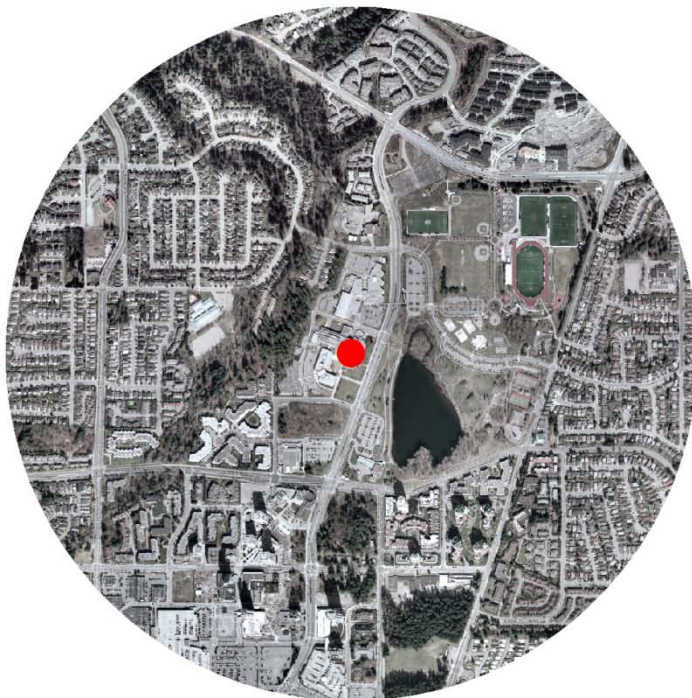
Station Name	Coquitlam
Station ID	T032
Latitude	49.2883° N
Longitude	122.7916° W
Ground Elevation	38 m amsl
Station Housing	Building
Station Dimensions	
Height	12.5 m
Width	35.0 m
Length	100.0 m
Measurement Heights (above ground)	
NO ₂ , CO, O ₃	13.9 m
T _{air} , RH	22.4 m
Precip	13.1 m
W _{spd} , W _{dir}	*24.0 m
Date of Operation	2000 to present
Station Designation	None
Predominant Land-use	Residential (38%) @ 5 km
Municipality	City of Coquitlam

*This height is only 7.8 m above the top tier of the building. The top tier of the building is 16.2 m in height.

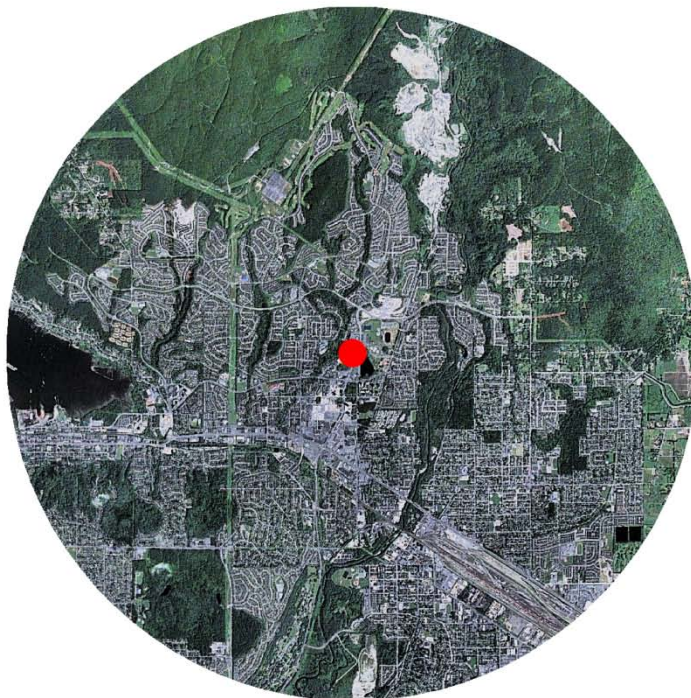
STATION DESCRIPTION

This site was established to measure air quality in a rapidly growing area of Coquitlam in the northeast sector of Metro Vancouver. Located atop the Coquitlam Campus of Douglas College, the site is surrounded by residential and park land-use and is relatively close to major transportation corridors. Instrumentation is housed within a 3rd floor room of the College with sample inlets extending above the roof. A meteorological tower is attached to the top tier of the building and extends about eight metres above the roof. Wind measurements are likely influenced by the building structure itself.

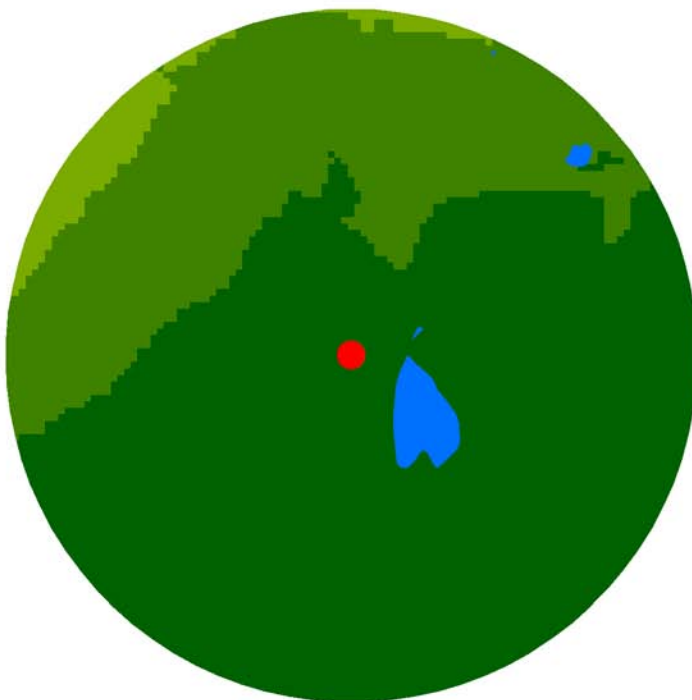




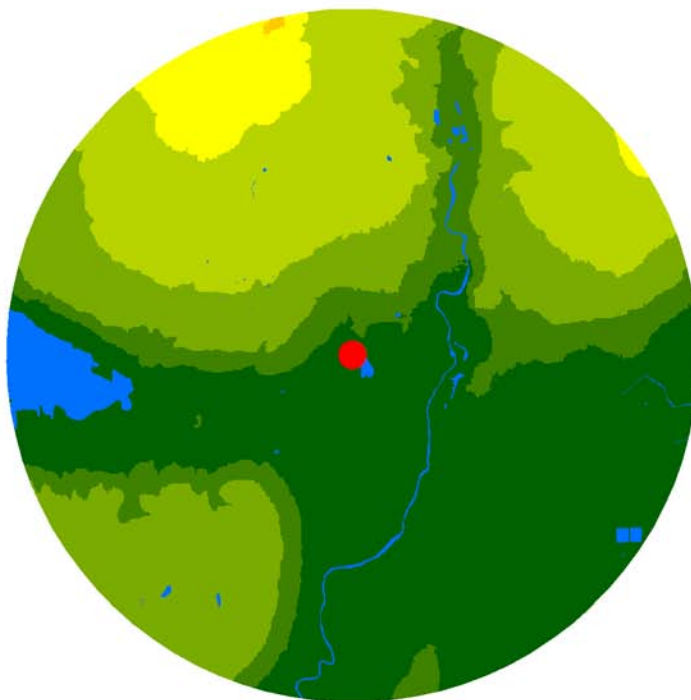
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

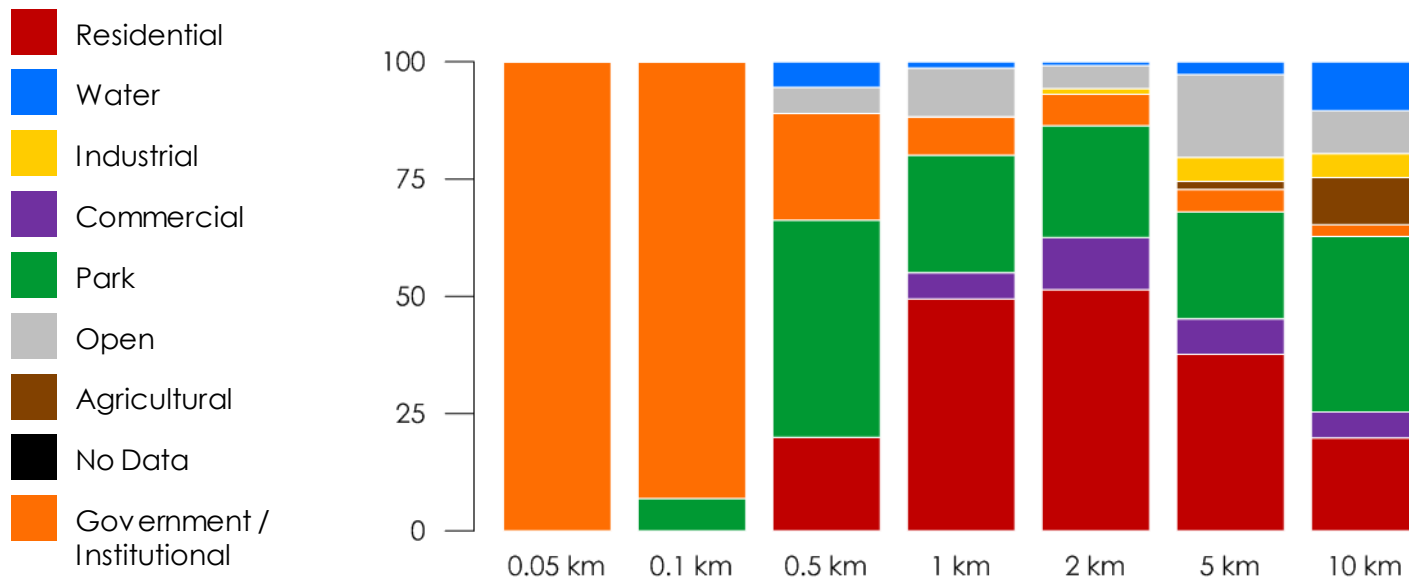


TOPOGRAPHY AT 5 KM

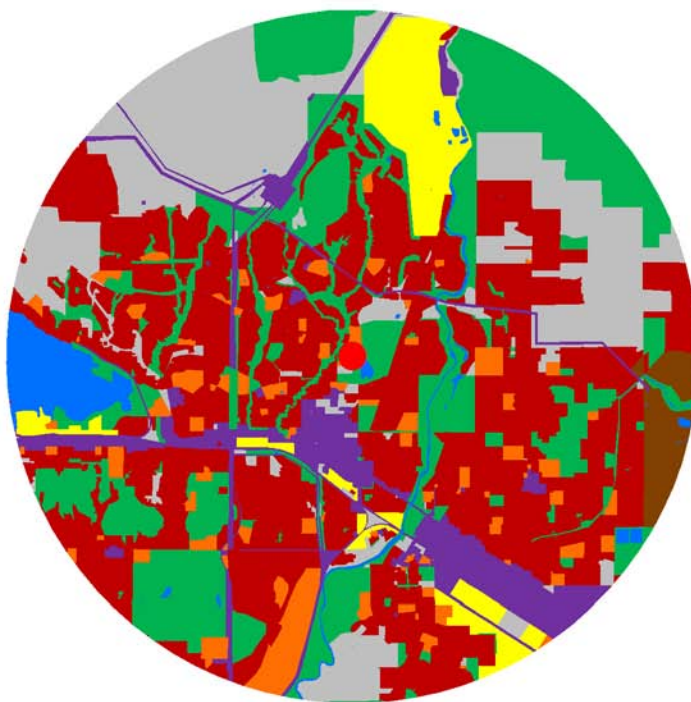


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

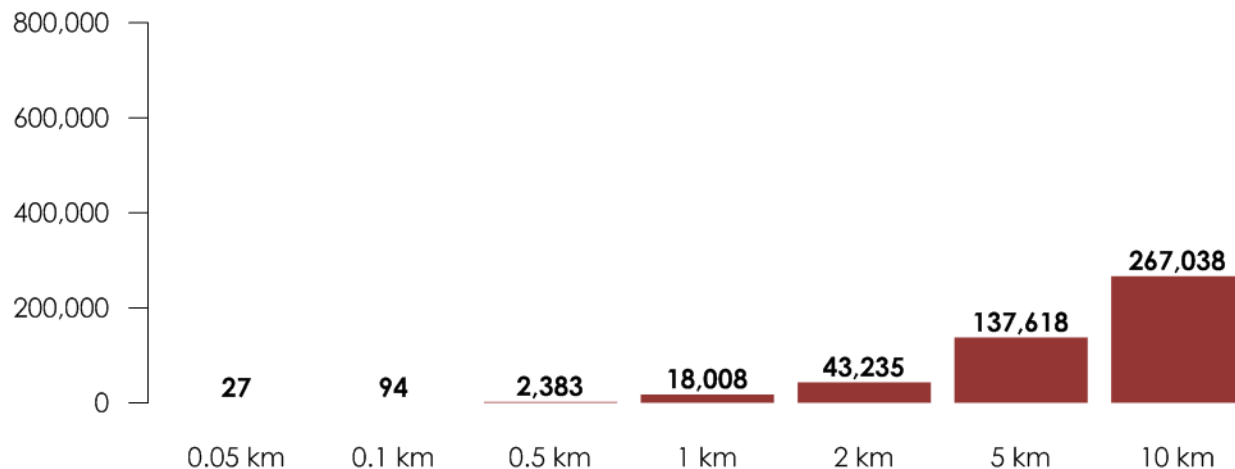


LAND-USE AT 1 KM

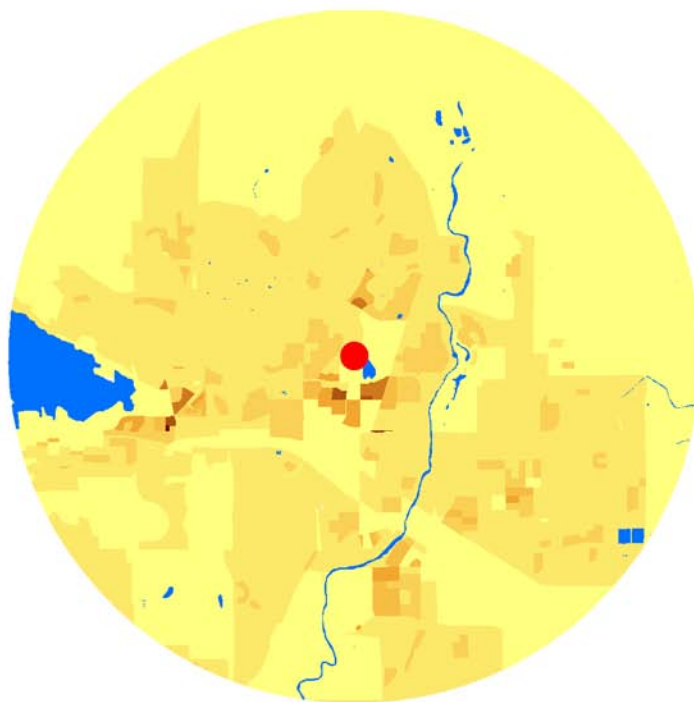


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Abbotsford
Station ID	T033
Latitude	49.0426° N
Longitude	122.3098° W
Ground Elevation	58 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.3 m
Width	3.9 m
Length	6.5 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃ , NH ₃	5.9 m
PM _{2.5}	6.1 m
PM ₁₀	6.0 m
T _{air}	10.2 m
Precip	3.9 m
W _{spd} , W _{dir}	11.9 m
Date of Operation	1998 to present
Station Designation	None
Predominant Land-use	*Not Available
Municipality	City of Abbotsford

*Land-use data was not available for the FVRD. As data becomes available it will be included in the future.

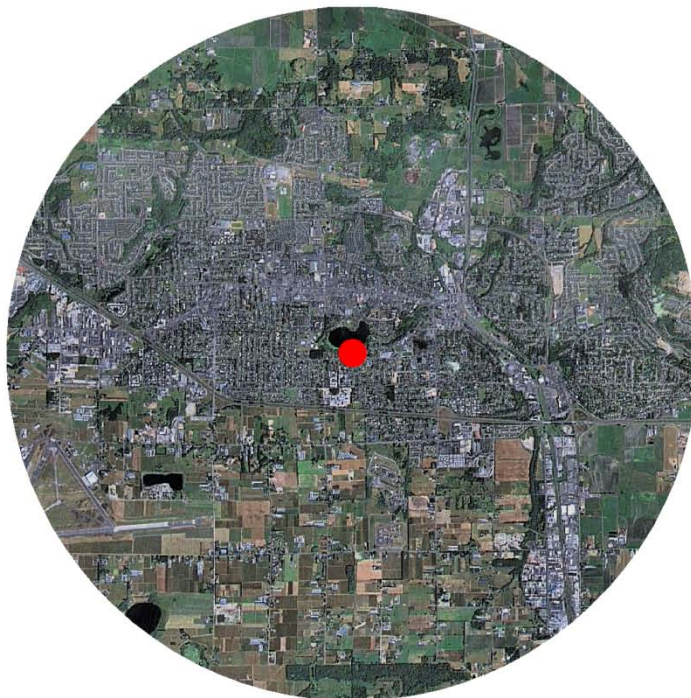
STATION DESCRIPTION

Located at Mill Lake Park in the center of the City of Abbotsford, this NAPS site is surrounded by park areas and residential subdivisions. Due to its location it has also been used to study the effect of surrounding agricultural activities on air quality within the City of Abbotsford. This site is funded by the FVRD. Instrumentation is housed within a modular building at ground level.

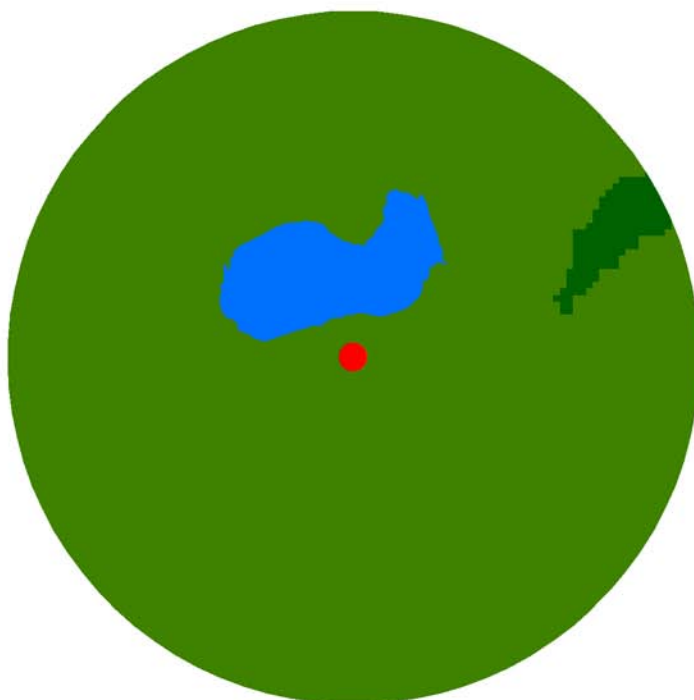




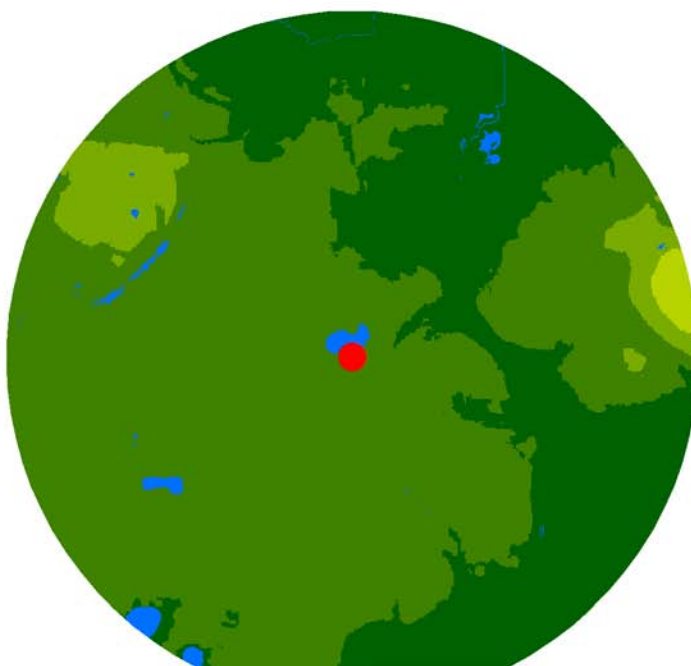
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

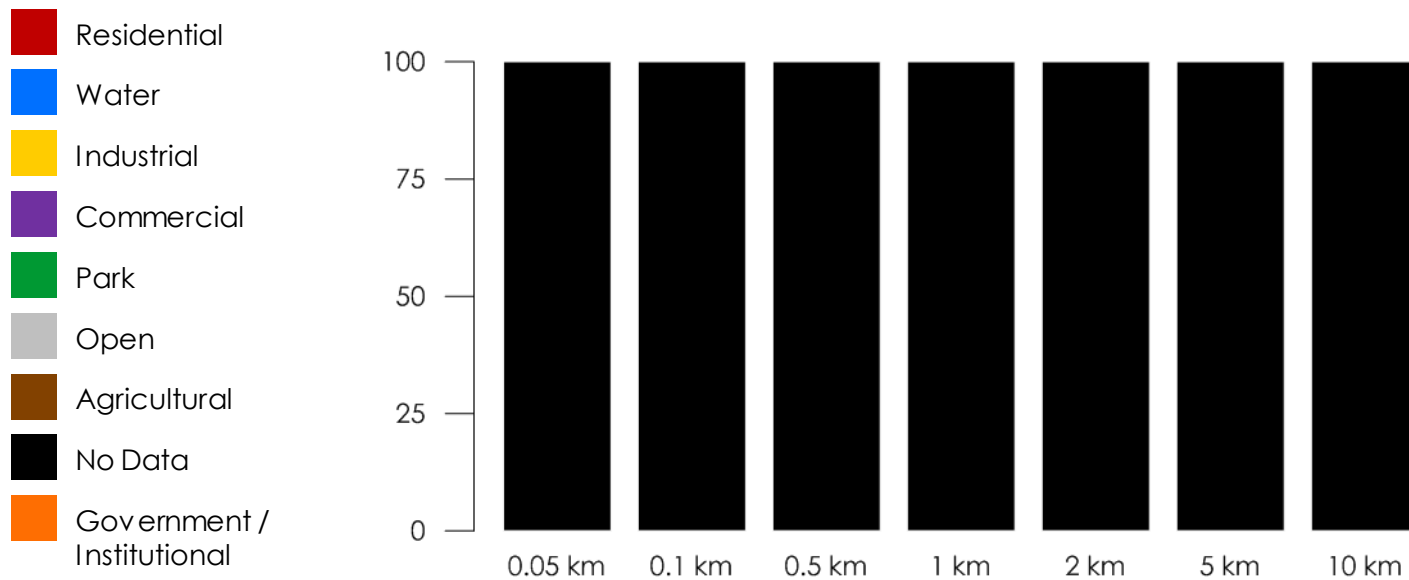


TOPOGRAPHY AT 5 KM



Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION



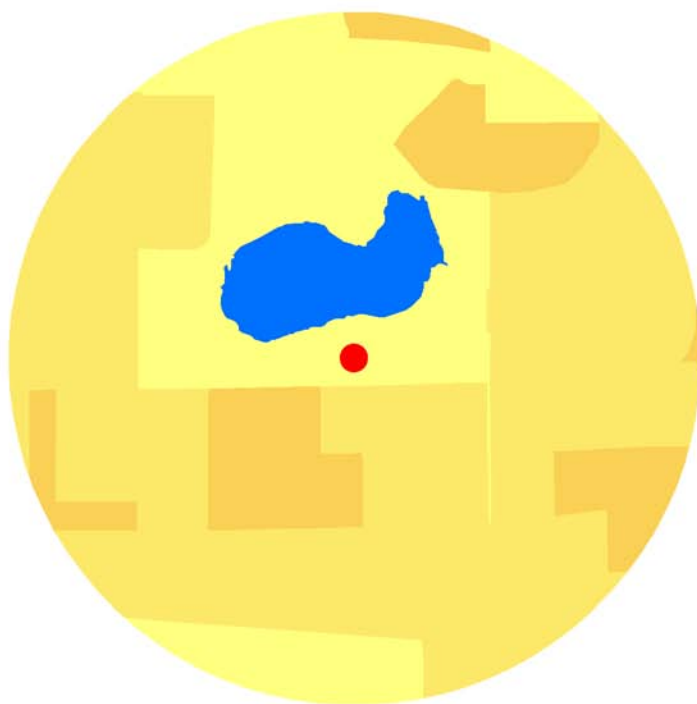
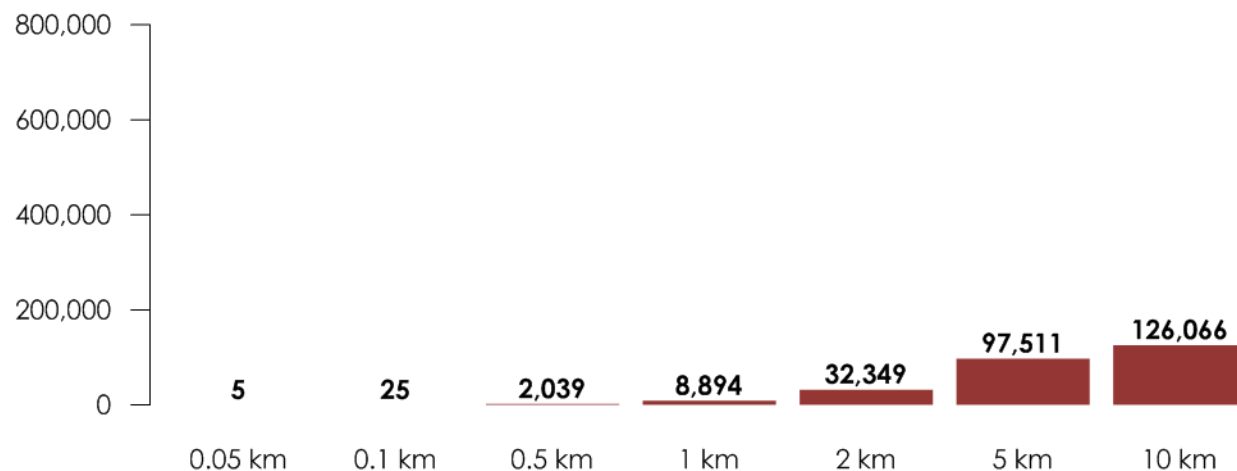
No Data

LAND-USE AT 1 KM

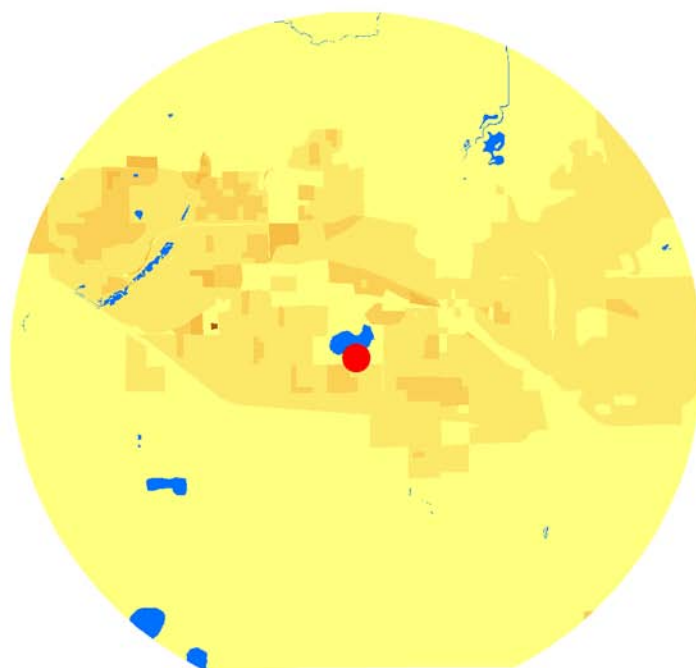
No Data

LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Horseshoe Bay

T35

DESCRIPTION

STATION DETAILS

Station Name	Horseshoe Bay
Station ID	T035
Latitude	49.3686° N
Longitude	123.2767° W
Ground Elevation	65 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	2.6 m
Width	2.5 m
Length	3.7 m
Measurement Heights (above ground)	
CO	3.9 m
PM _{2.5}	4.9 m
T _{air} , RH	9.6 m
Precip	3.2 m
W _{spd} , W _{dir}	10.0 m
Date of Operation	2002 to present
Station Designation	None
Predominant Land-use	Water (55 %) @ 5 km
Municipality	District of West Vancouver

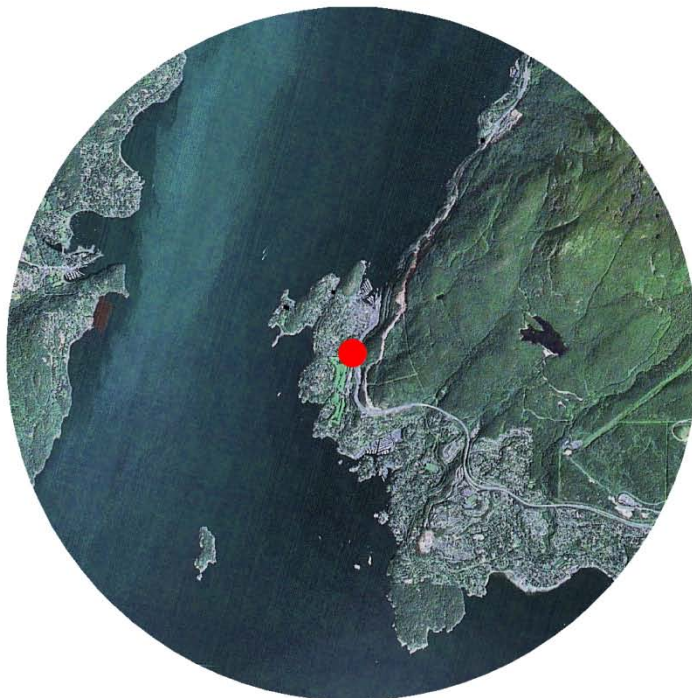
STATION DESCRIPTION

This station is located at Gleneagles elementary school in West Vancouver. The station is adjacent to a gravel field approximately 30 m from Highway 1 and the traffic holding area for the BC Ferry terminal at Horseshoe Bay. The site is located on a peninsula with mountainous terrain to the east and a golf course to the south. The land surrounding the station is predominantly residential and forested. The station was established to study air quality resulting from redevelopment of the Horseshoe Bay Ferry Terminal, Sea-to-Sky Highway project and the 2010 Olympic Winter Games. Instrumentation is housed within a modular building at ground level.

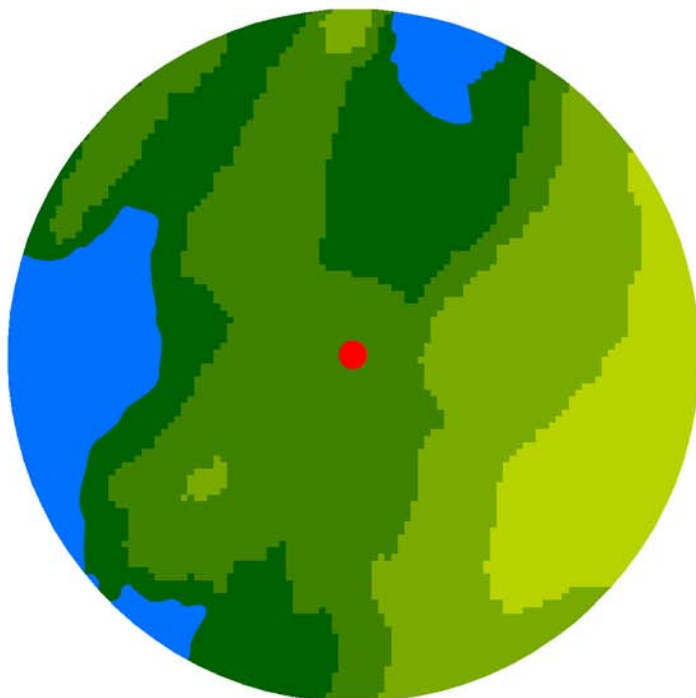




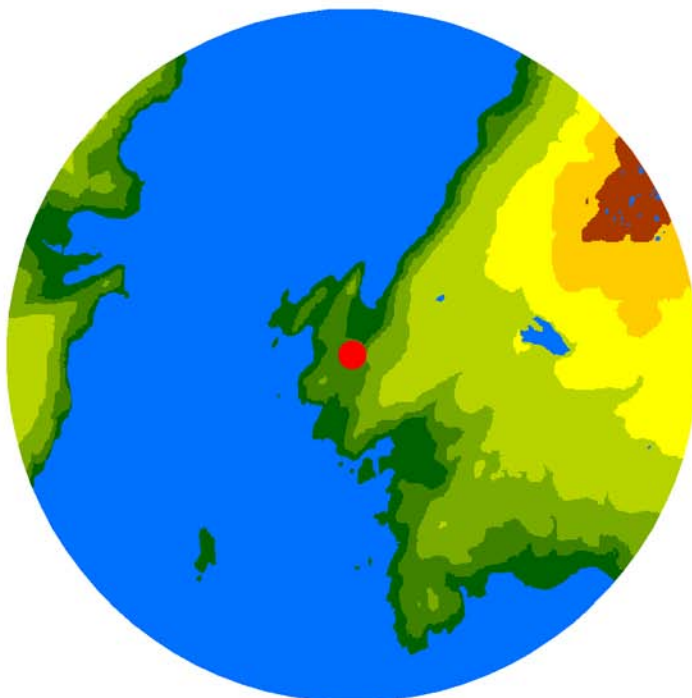
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

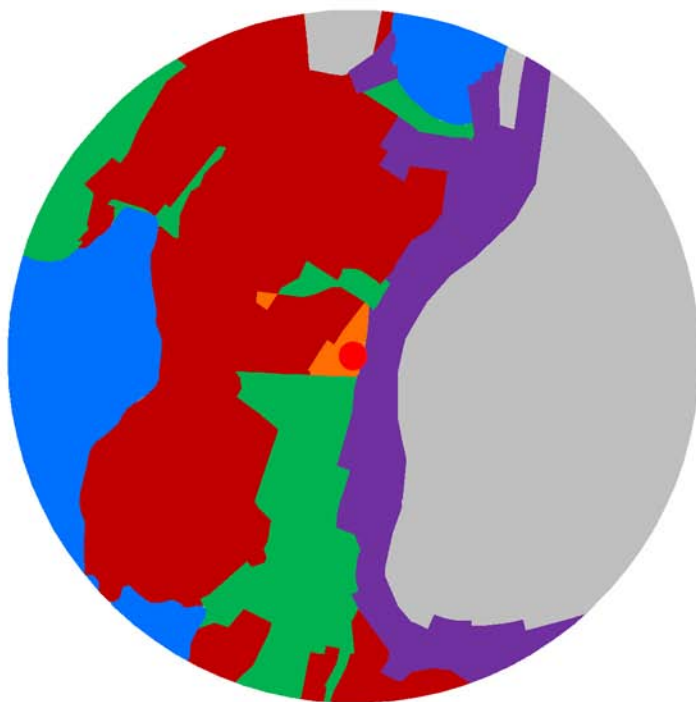
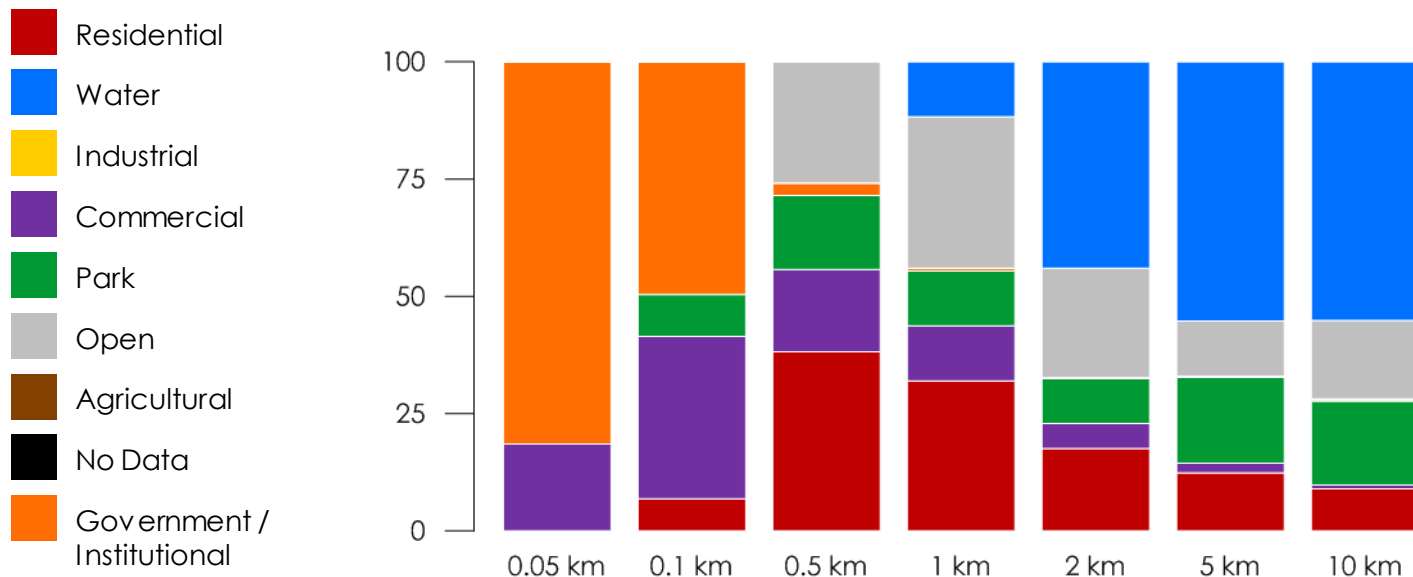


TOPOGRAPHY AT 5 KM

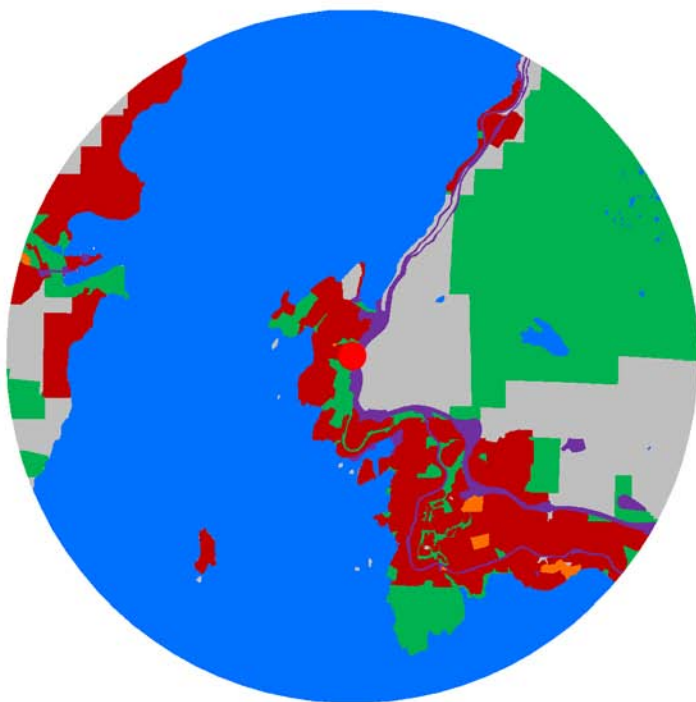


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

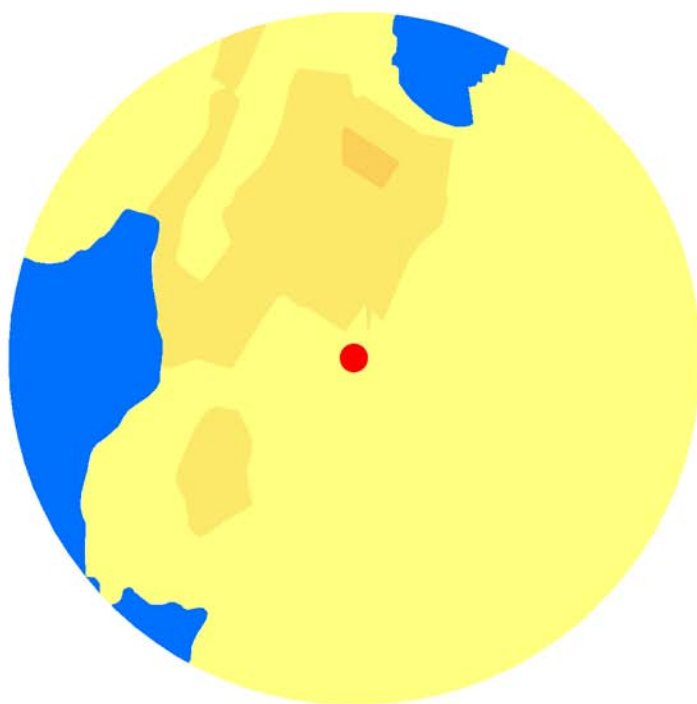


LAND-USE AT 1 KM

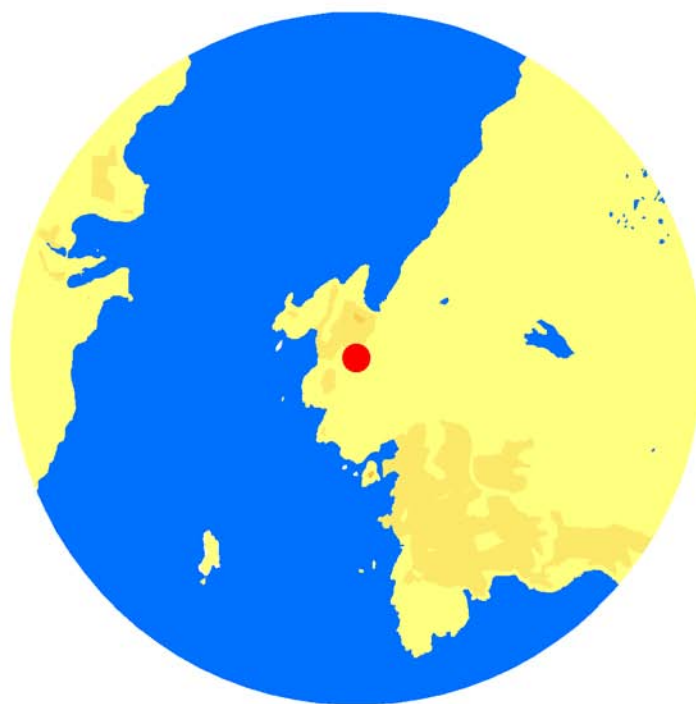


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Alex Fraser Bridge

T37

STATION DETAILS

Station Name	Alex Fraser Bridge
Station ID	T037
Latitude	49.1619° N
Longitude	122.9437° W
Ground Elevation	5 m amsl
Station Housing	Bridge Structure
Station Dimensions	
Height	N/A
Width	N/A
Length	N/A
Measurement Heights (above ground)	
T _{air} , RH	*160.0 m
W _{spd} , W _{dir}	*160.0 m
Date of Operation	+2002 to present
Station Designation	Meteorological Only
Predominant Land-use	Residential (25%) @ 5 km
Municipality	Corporation of Delta

*Estimated height.

+This station was operated by the BC Ministry of the Environment prior to 2002.

STATION DESCRIPTION

This station is a meteorological station only and is located at the top of the north-west supporting tower of the Alex Fraser Bridge. The height of the measurements is about 160 m above ground level.



Alex Fraser
Bridge

T37

Annacis Island

T38

DESCRIPTION

STATION DETAILS

Station Name	Annacis Island
Station ID	T038
Latitude	49.1657° N
Longitude	122.9607° W
Ground Elevation	6 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.5 m
Width	18.0 m
Length	19.0 m
Measurement Heights (above ground)	
T _{air} , RH	9.6 m
Precip	4.1 m
W _{spd} , W _{dir}	10.0 m
Date of Operation	2002 to present
Station Designation	Special Purpose - Test Station
Predominant Land-use	Park (20%) and Industrial (19%) @ 5 km
Municipality	Corporation of Delta

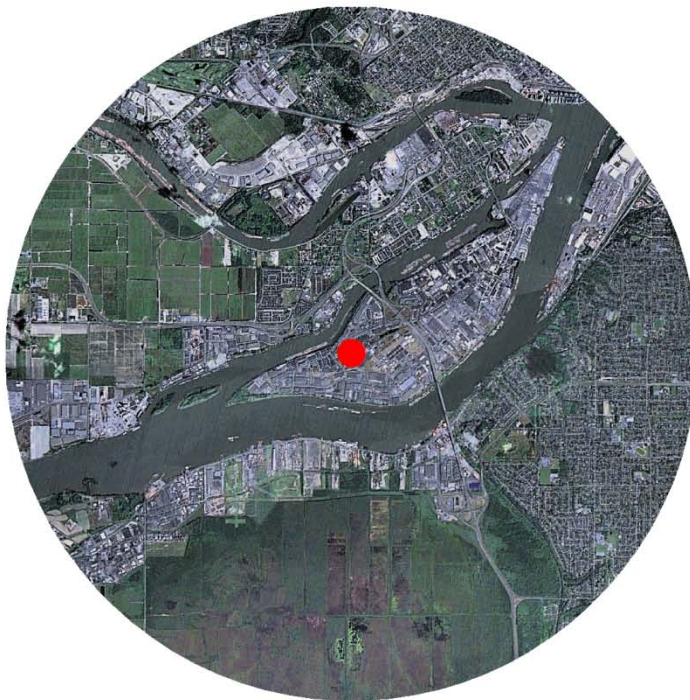
STATION DESCRIPTION

Located at Metro Vancouver's Air Quality Instrument Shop on Annacis Island in Delta, this station is a test station where air quality monitoring equipment is tested, serviced and maintained. The station has been designated 'Special Purpose – Test Station'. Meteorological measurements are also collected at this site with a tower mounted to the side of the building.

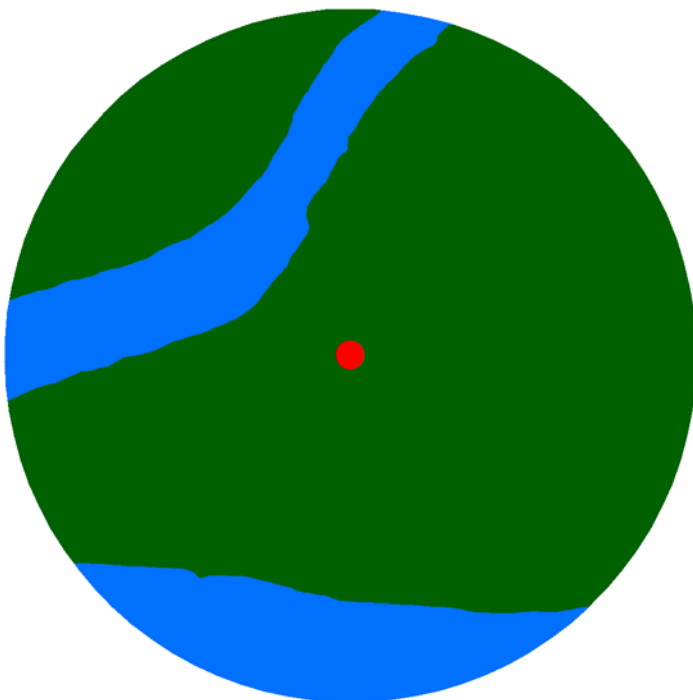




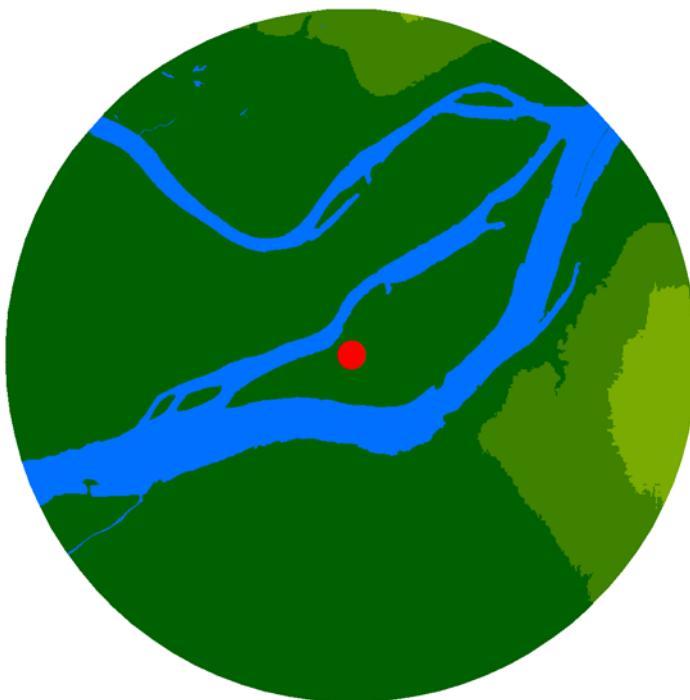
AERIAL PHOTO AT 1 KM



AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

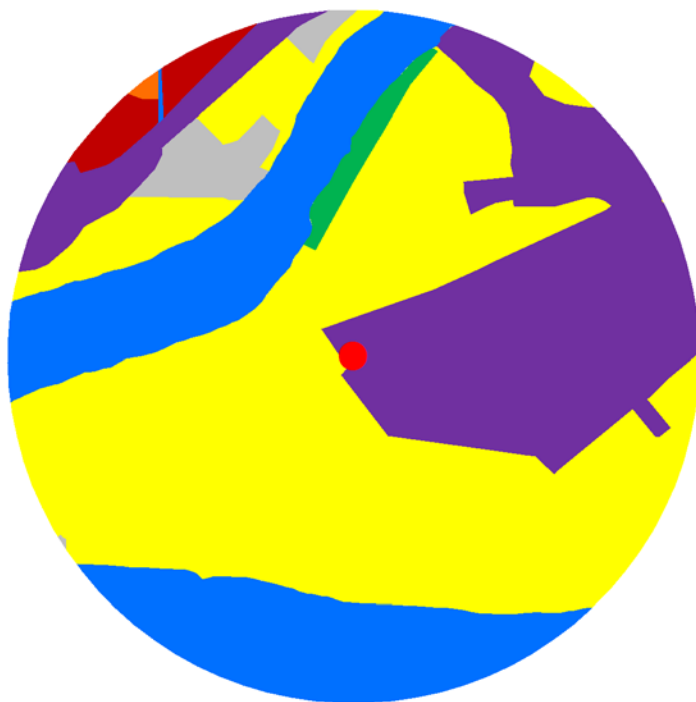
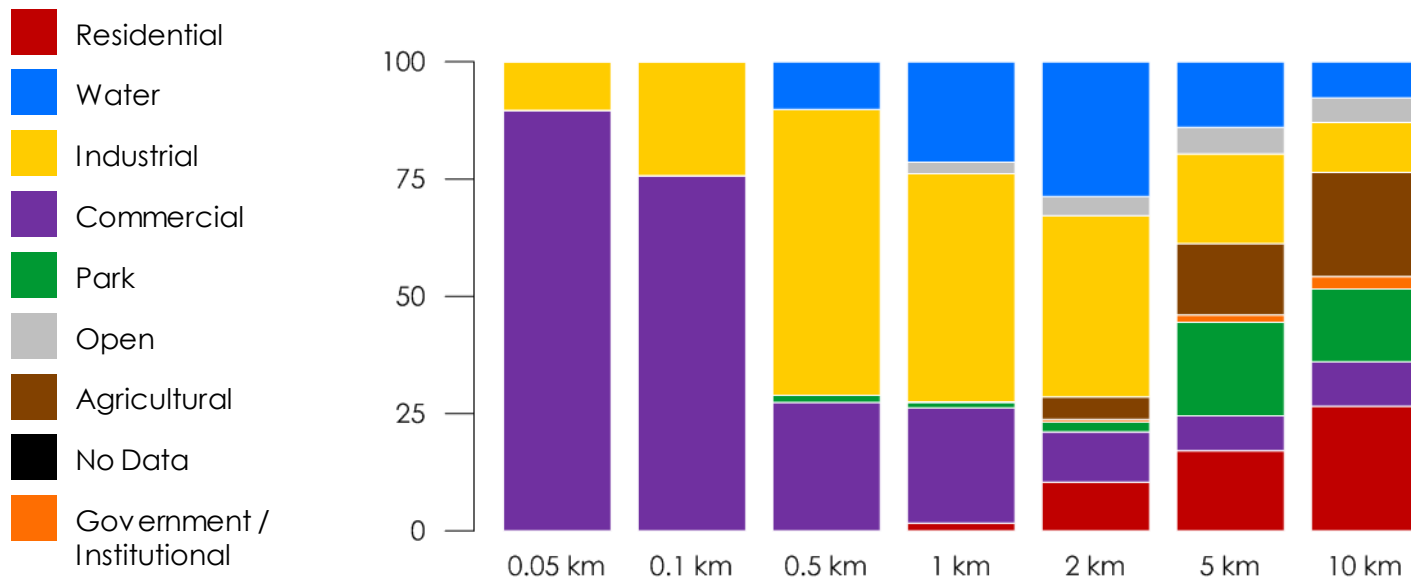


TOPOGRAPHY AT 5 KM

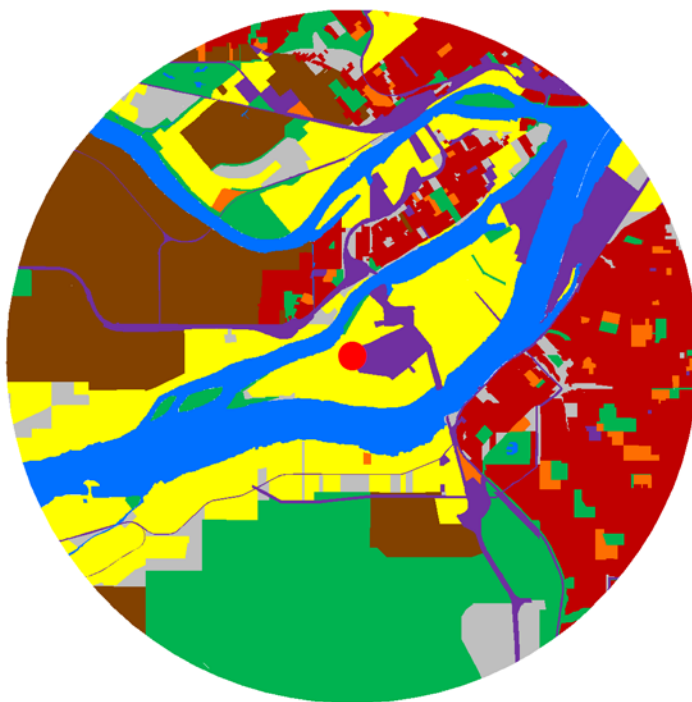


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

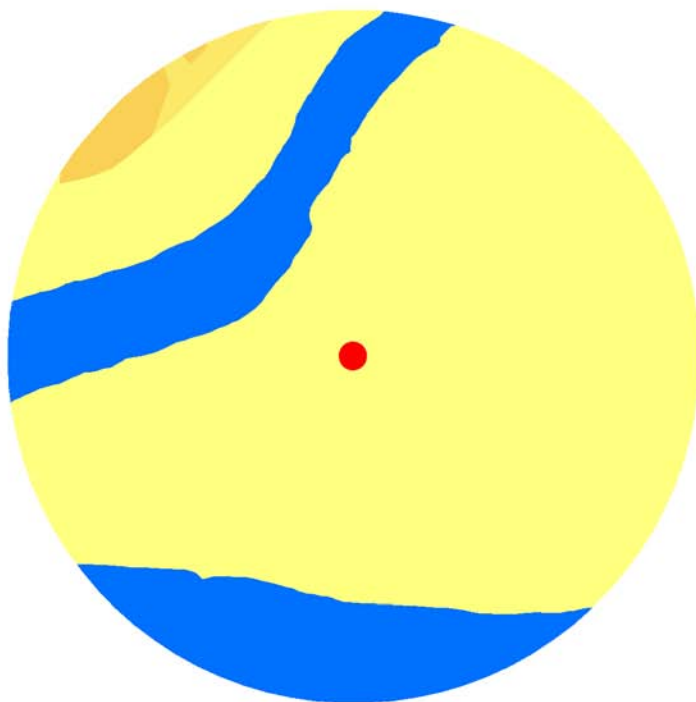
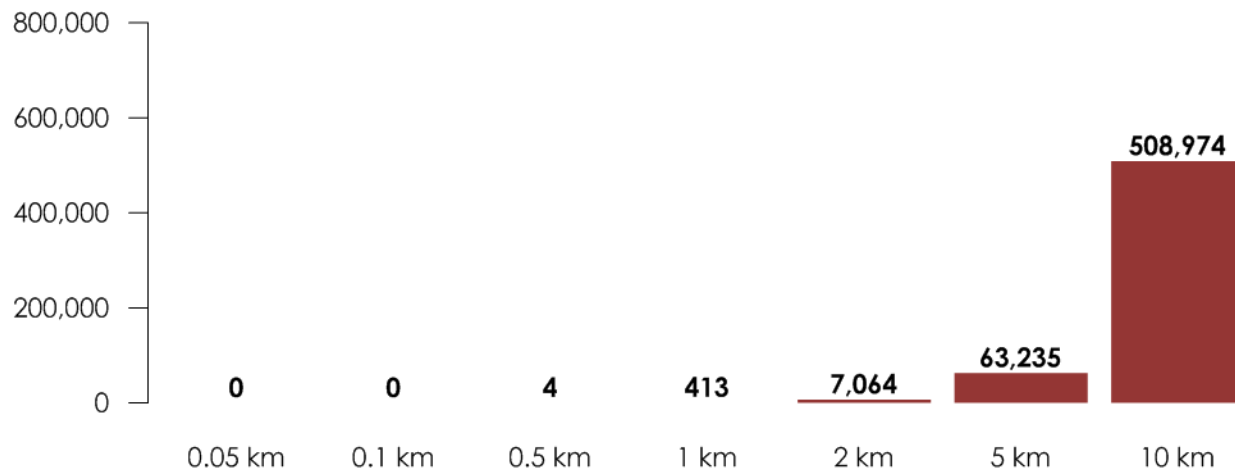


LAND-USE AT 1 KM



LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	Tsawwassen
Station ID	T039
Latitude	49.0099° N
Longitude	123.0820° W
Ground Elevation	52 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.1 m
Width	3.4 m
Length	6.8 m
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	4.1 m
PM _{2.5}	5.2 m
T _{air} , RH	10.8 m
Precip	3.7 m
W _{spd} , W _{dir}	10.8 m
Date of Operation	2010 to present
Station Designation	None
Predominant Land-use	Water (55%) @ 5 km
Municipality	Corporation of Delta

STATION DESCRIPTION

This station was established in 2010 and is located at Pebble Hill Park in Tsawwassen in a residential neighbourhood. The station was established to assess air quality near Deltaport, marine activities and other sources, and to help fill a gap in the monitoring network in the southwest part of the region. Deltaport is located to the west-northwest of the station. The station is situated on the Tsawwassen peninsula surrounded by water to the east, west and south. The community of Point Roberts in the United States is directly south of the station. Instrumentation is housed within a modular building at ground level. Funding for the operation and maintenance of the station is provided by Port Metro Vancouver.



The English Bluff station (#24) that had operated a non-continuous particulate matter monitor was decommissioned when the new continuous Tsawwassen station became fully operational.

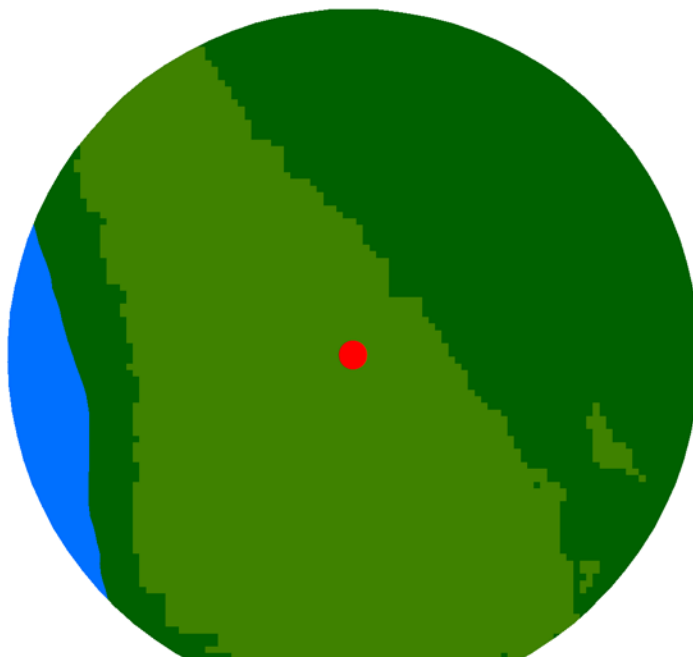


AERIAL PHOTO AT 1 KM

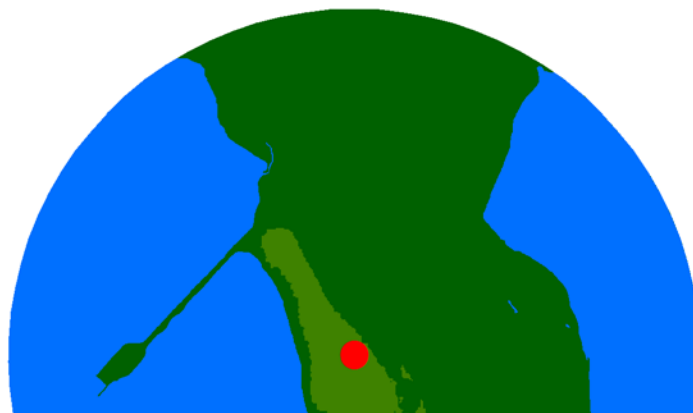


No Data

AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM



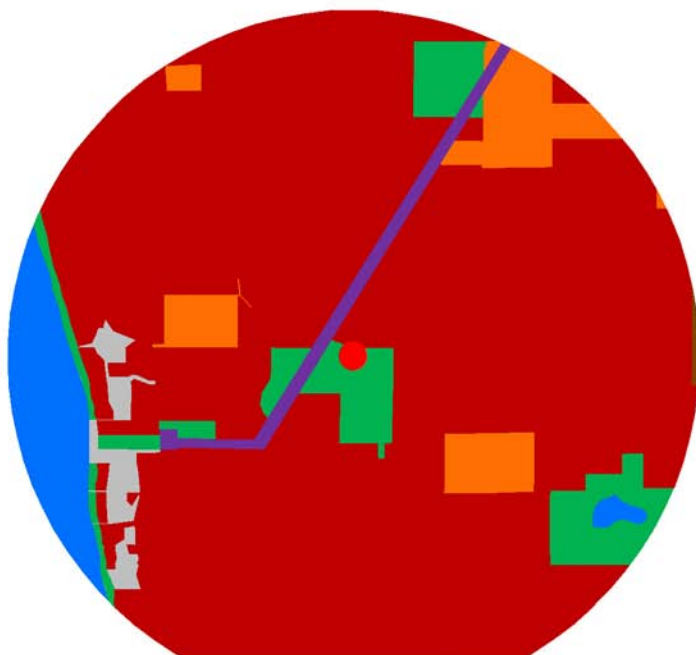
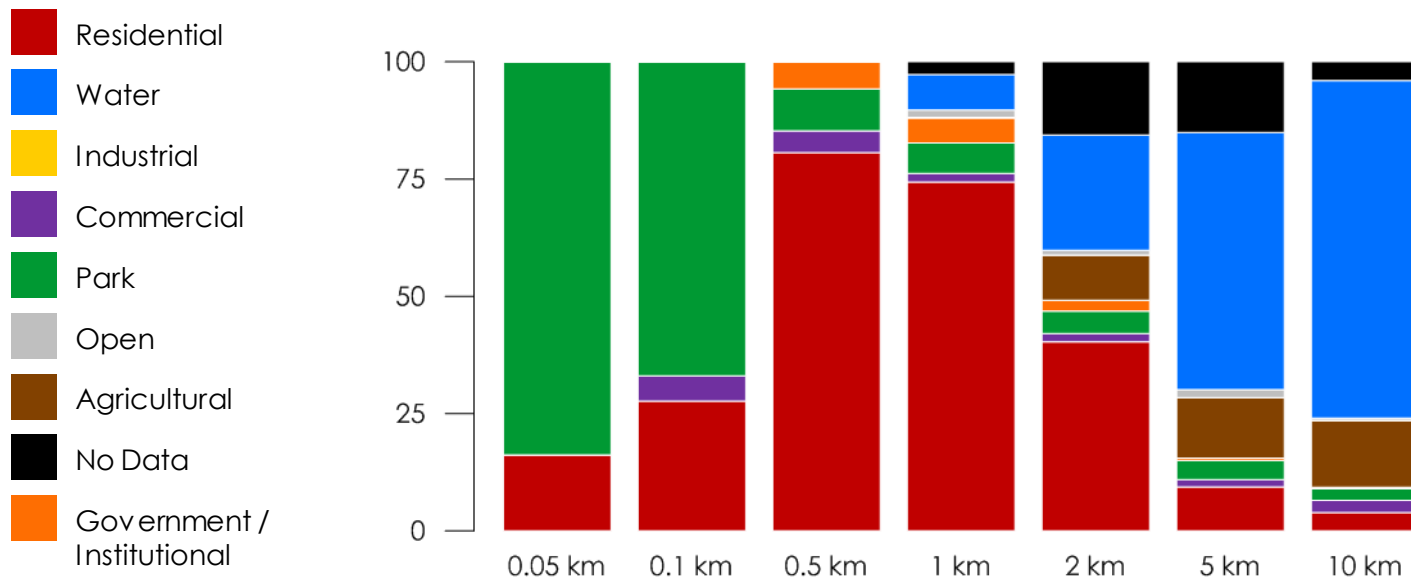
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TOPOGRAPHY AT 5 KM

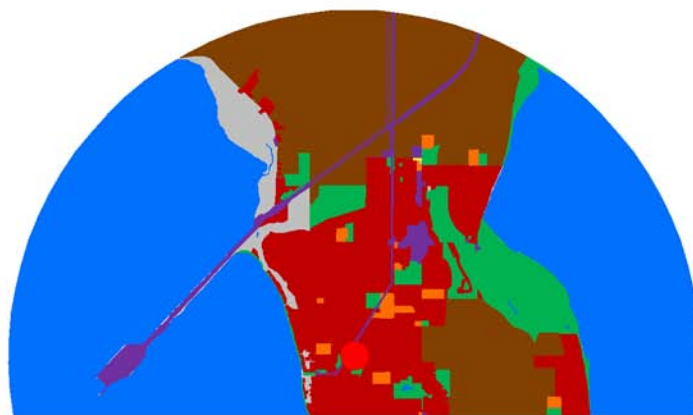


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION



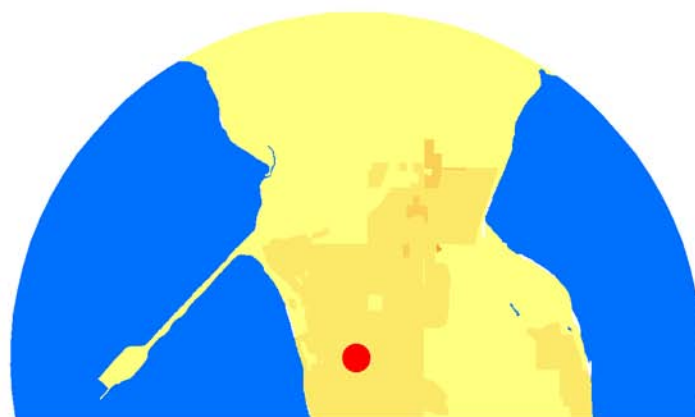
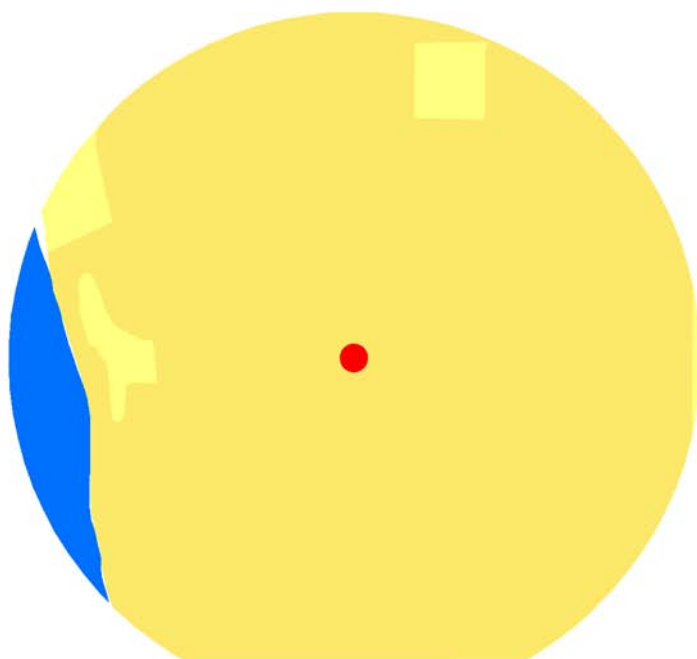
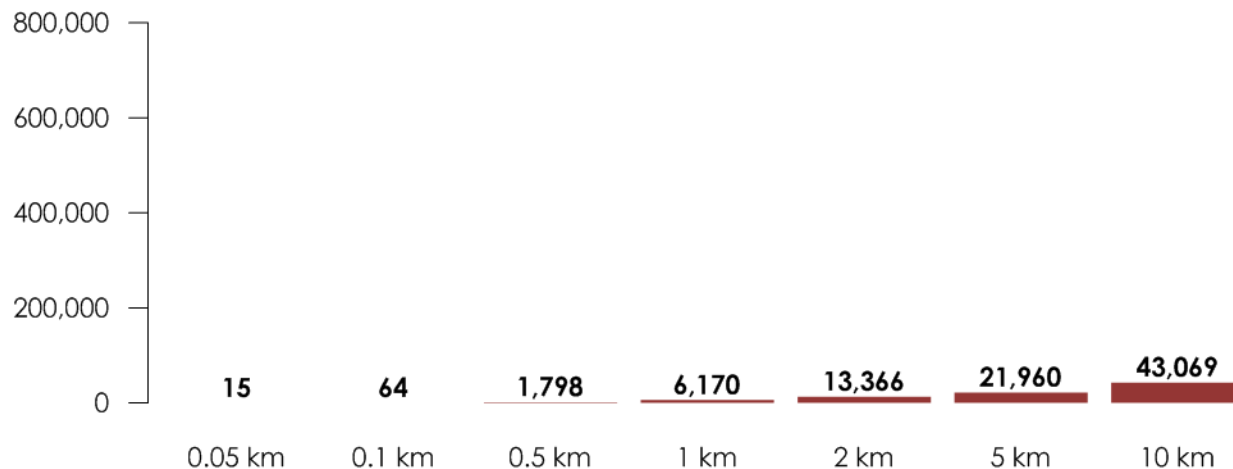
LAND-USE AT 1 KM



No Data

LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



No Data

POPULATION DENSITY AT 1 KM

POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

Abbotsford Airport

T45

DESCRIPTION

STATION DETAILS

Station Name	Abbotsford Airport
Station ID	T045
Latitude	49.0215° N
Longitude	122.3265° W
Ground Elevation	64.6 m amsl
Station Housing	Modular Shelter
Station Dimensions	
Height	3.1
Width	3.4
Length	6.4
Measurement Heights (above ground)	
SO ₂ , NO ₂ , CO, O ₃	4.9 m
VOC, NH ₃	4.9 m
PM _{2.5}	5.1 m
PM ₁₀	5.0 m
Particulate Speciation	6.9 m
CARB	5.1 m
Dichot PM ₁₀ , PM _{2.5}	7.0 m
T _{air} , RH	10.7 m
Precip	3.7 m
W _{spd} , W _{dir}	12.1 m
Date of Operation	2012 to present
Station Designation	Super Site
Predominant Land-use	*Not Available
Municipality	City of Abbotsford

*Land-use data was not available from the FVRD. As data becomes available it will be included in the future.

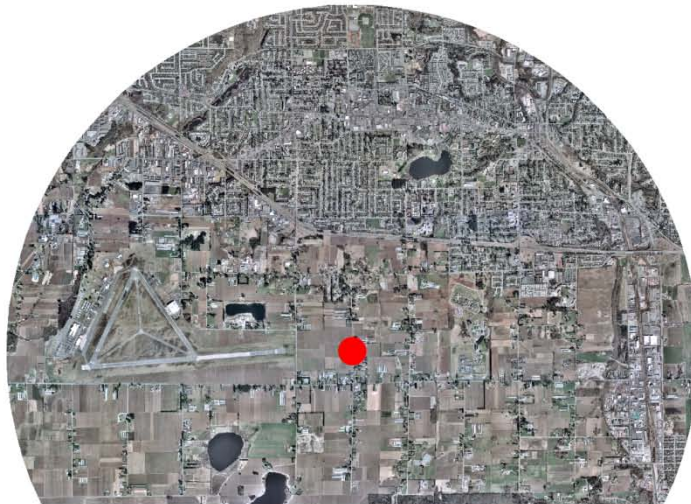
STATION DESCRIPTION

This station was established in 2012, due to the relocation of the old Abbotsford Airport station (T34) following its shutdown in 2010. The new site is 1.3 km east of the old site and is located in a rural area amongst agricultural operations. The station houses a number of specialty monitors to study various aspects of air quality within the eastern portion of the airshed. This Abbotsford Airport site was originally established by Environment Canada as a research site due to its important geographic position within the LFV. Instrumentation is housed within a modular building at ground level.



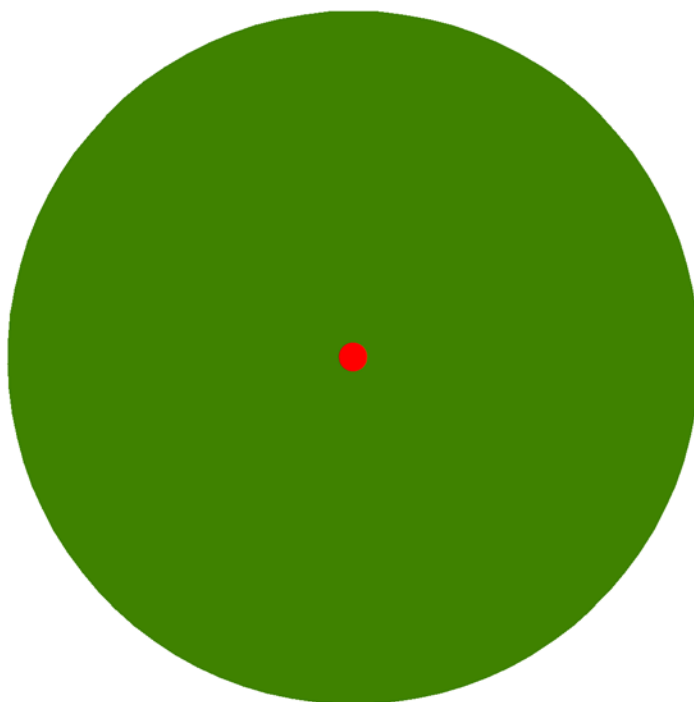


AERIAL PHOTO AT 1 KM

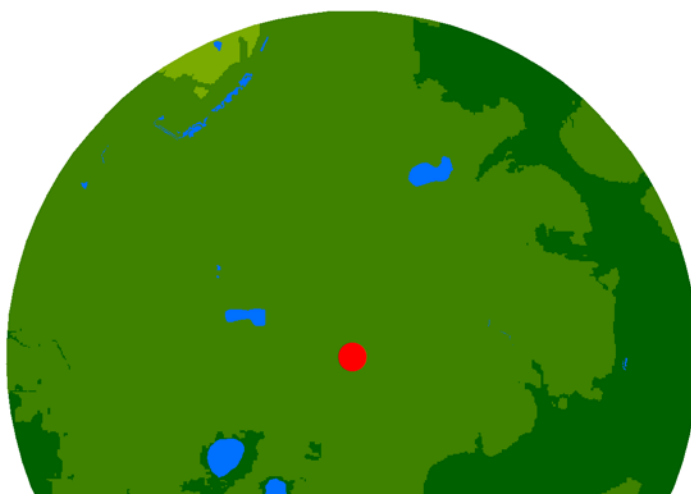


No Data

AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM



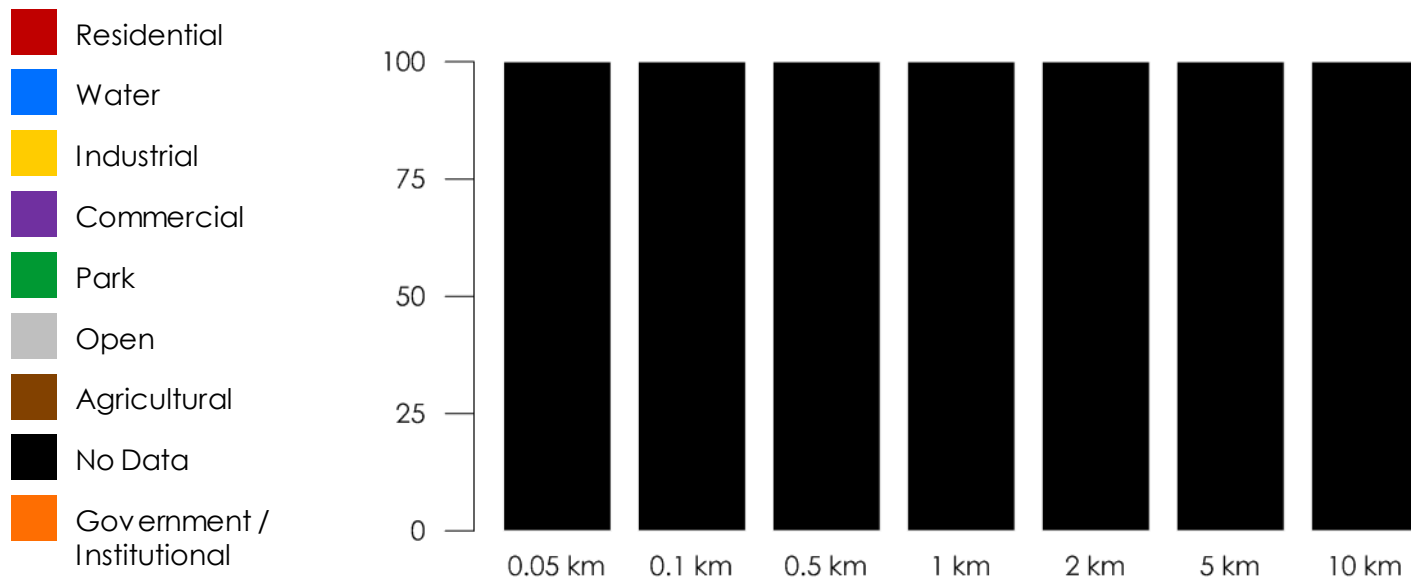
No Data

TOPOGRAPHY AT 5 KM



Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION



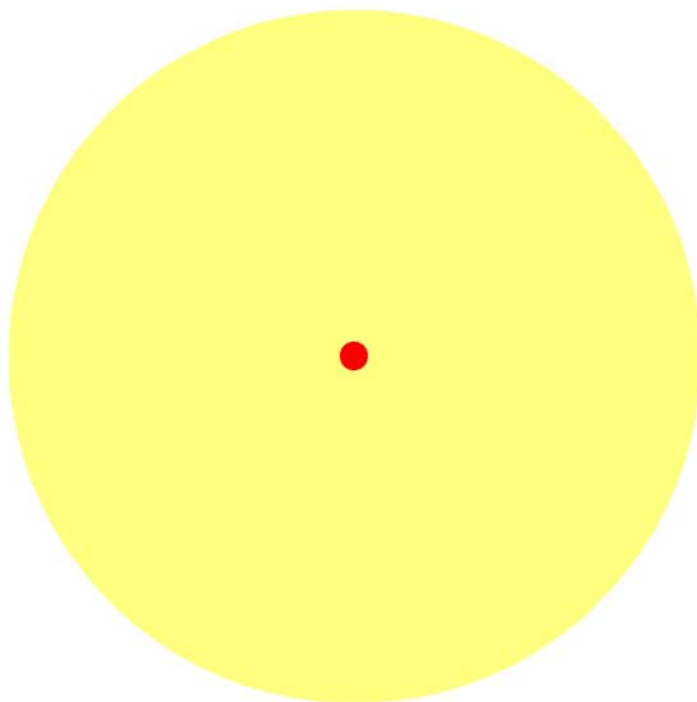
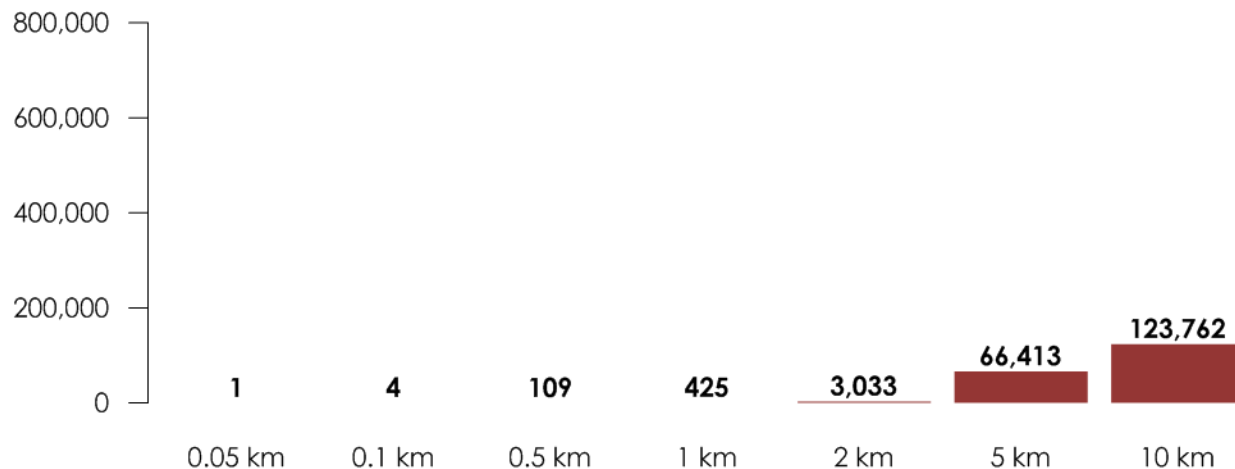
No Data

No Data

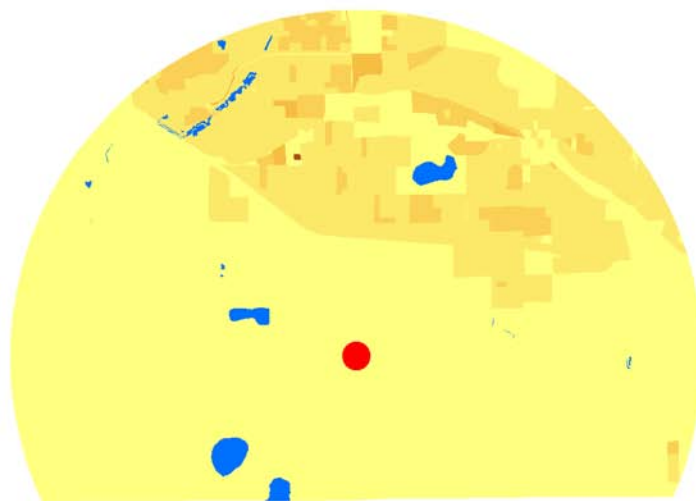
LAND-USE AT 1 KM

LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



No Data

POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)

STATION DETAILS

Station Name	White Rock
Station ID	#20
Latitude	49.0236° N
Longitude	122.7979° W
Ground Elevation	77 m amsl
Station Housing	None
Station Dimensions	
Height	*5.9 m
Width	14 m
Length	19 m
Measurement Heights (above ground)	
Dichot PM ₁₀ , PM _{2.5}	8.1 m
Date of Operation	1973 to present
Station Designation	Non-Continuous
Predominant Land-use	Water (38%) @ 5 km
Municipality	City of White Rock

*The building is situated on a slope and the average height of the building is given here.

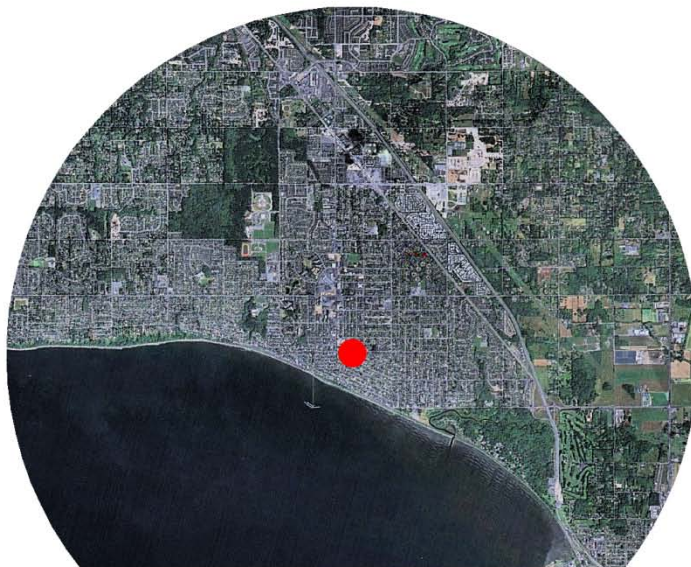
STATION DESCRIPTION

This non-continuous particulate monitoring station is located at the City Hall complex in White Rock. The dichotomous PM sampler is situated on the roof of city hall (seen in the centre of the top photo) and collects both PM₁₀ and PM_{2.5} samples every sixth day, according to the NAPS sampling schedule.



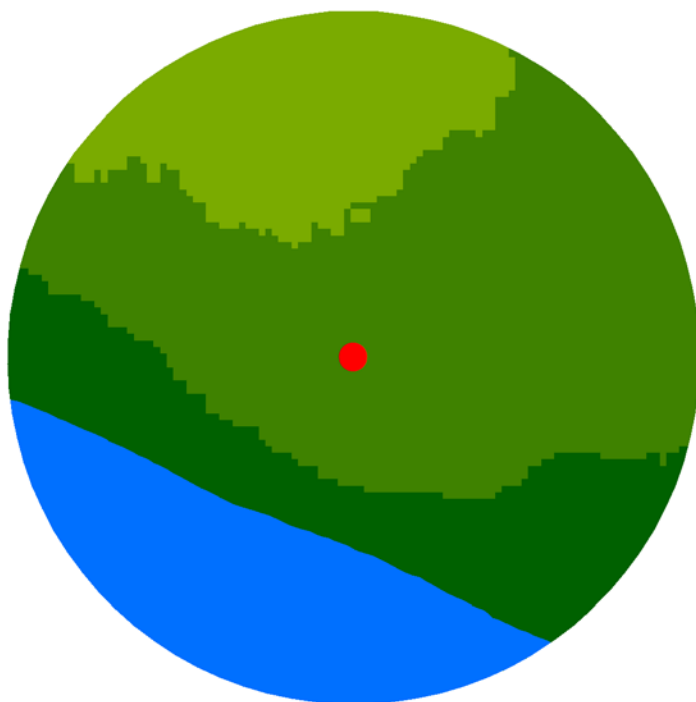


AERIAL PHOTO AT 1 KM

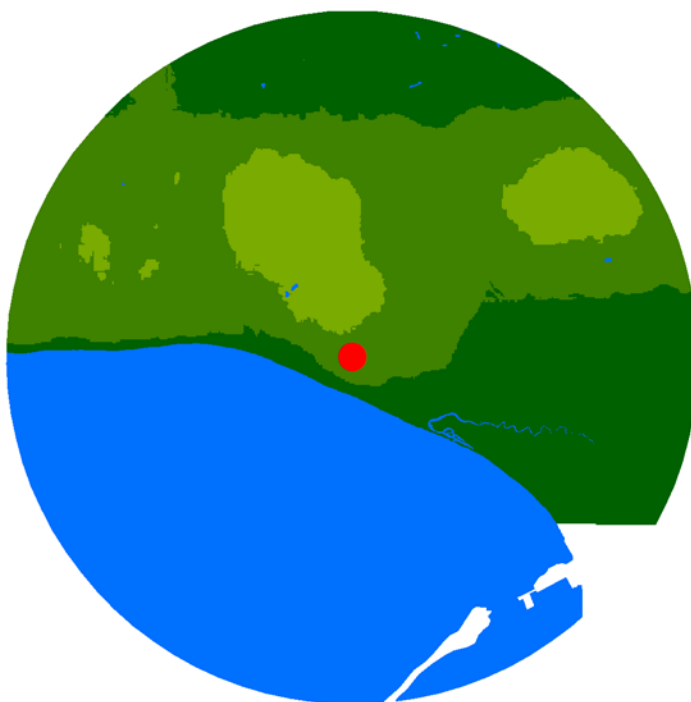


No Data

AERIAL PHOTO AT 5 KM



TOPOGRAPHY AT 1 KM

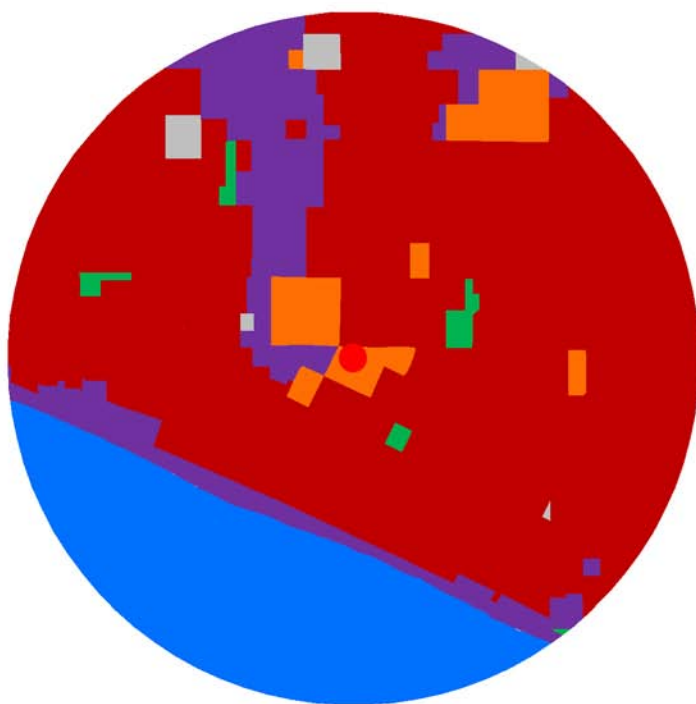
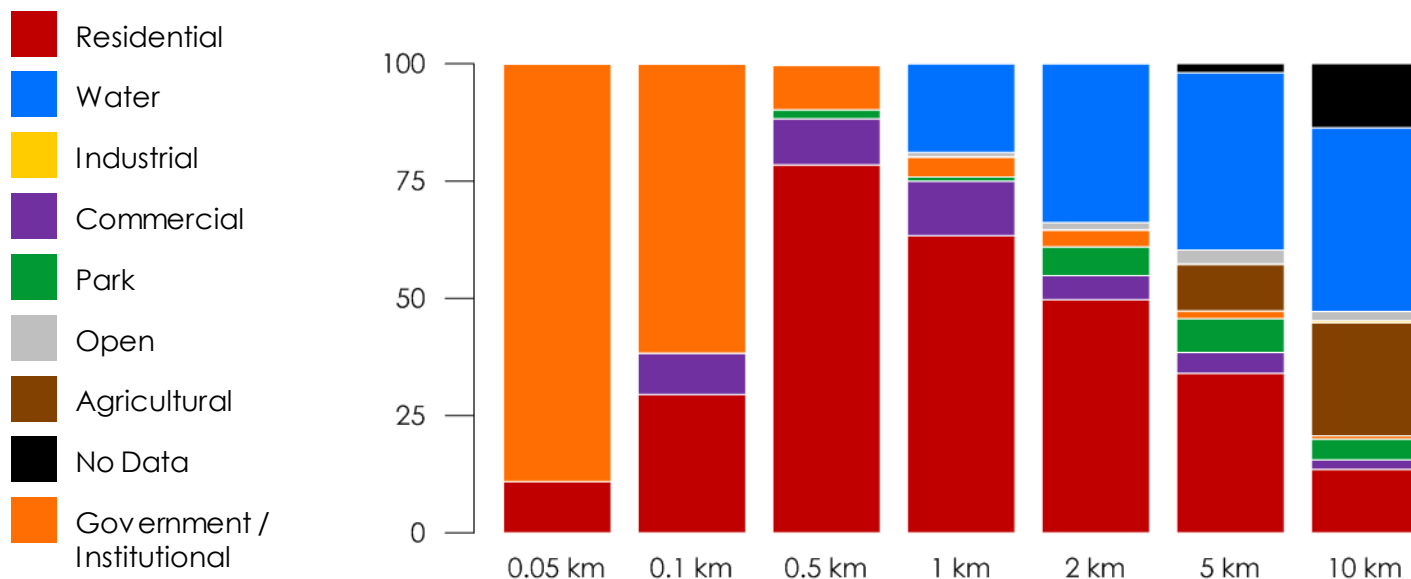


TOPOGRAPHY AT 5 KM

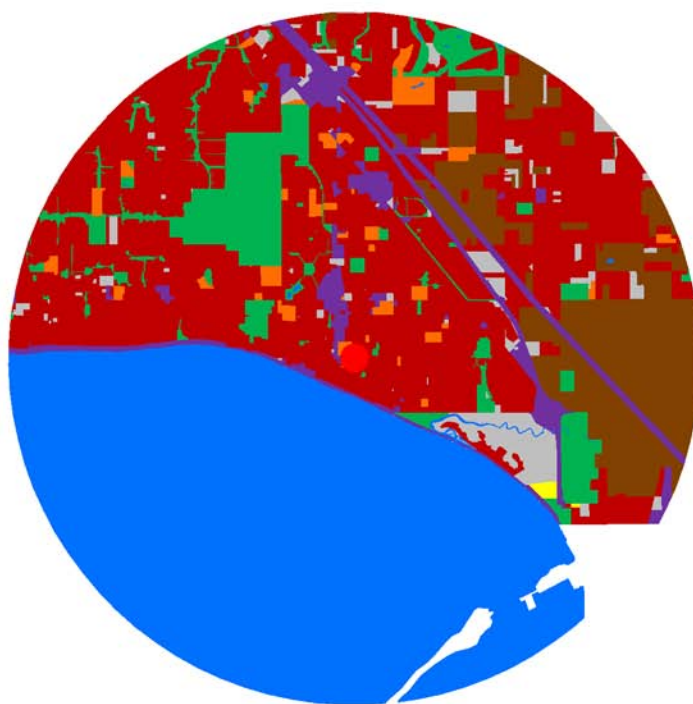


Terrain Heights (metres above mean sea level)

LAND-USE PERCENTAGES AT VARIOUS DISTANCES FROM STATION

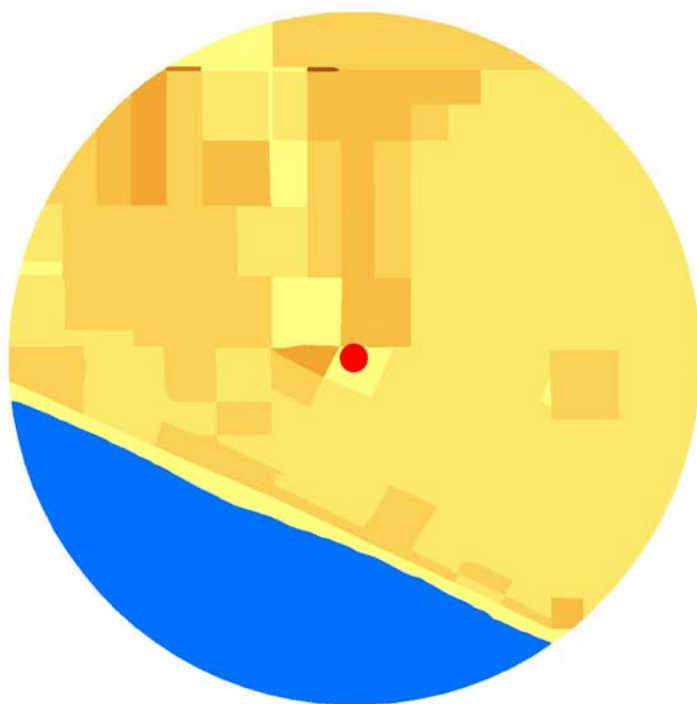
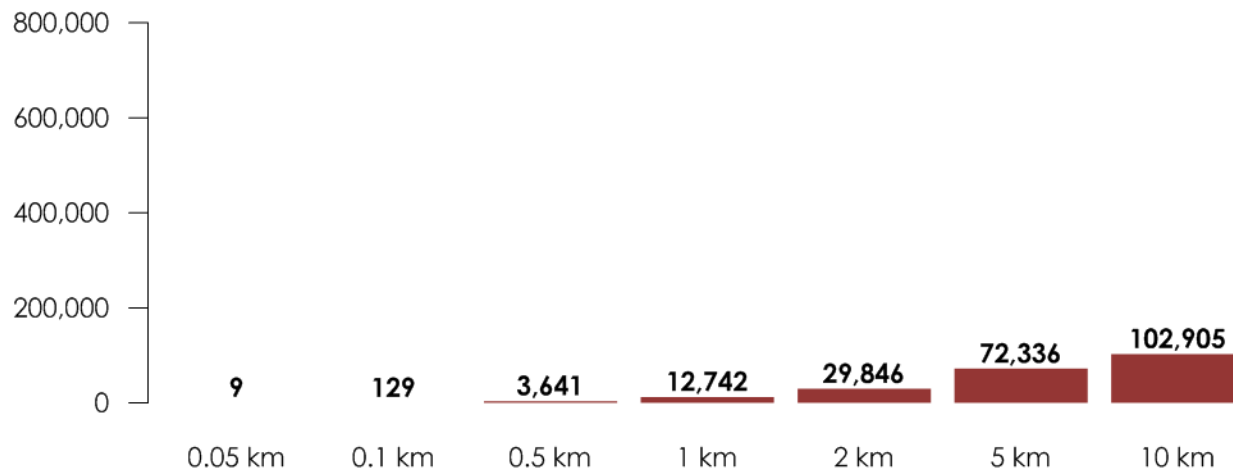


LAND-USE AT 1 KM

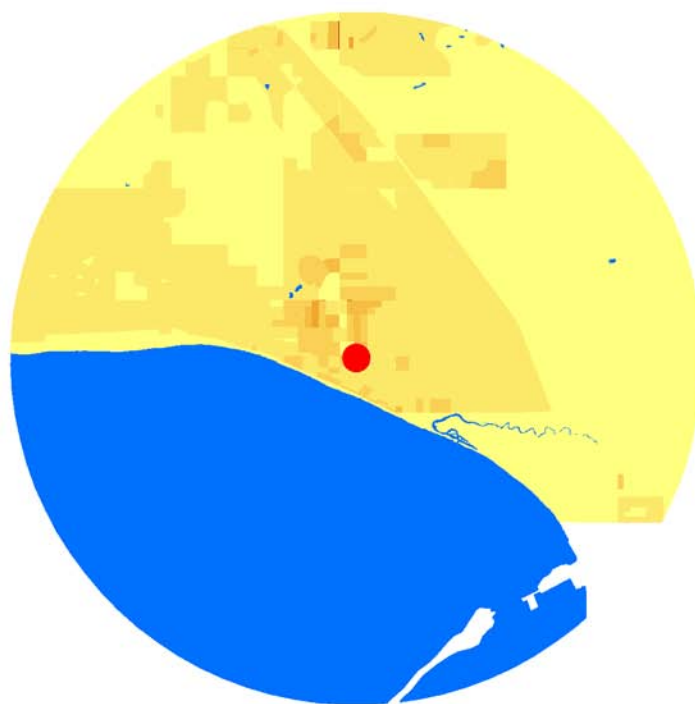


LAND-USE AT 5 KM

POPULATION TOTALS AT VARIOUS DISTANCES FROM STATION



POPULATION DENSITY AT 1 KM



POPULATION DENSITY AT 5 KM



Population Density (thousand people per square kilometre)