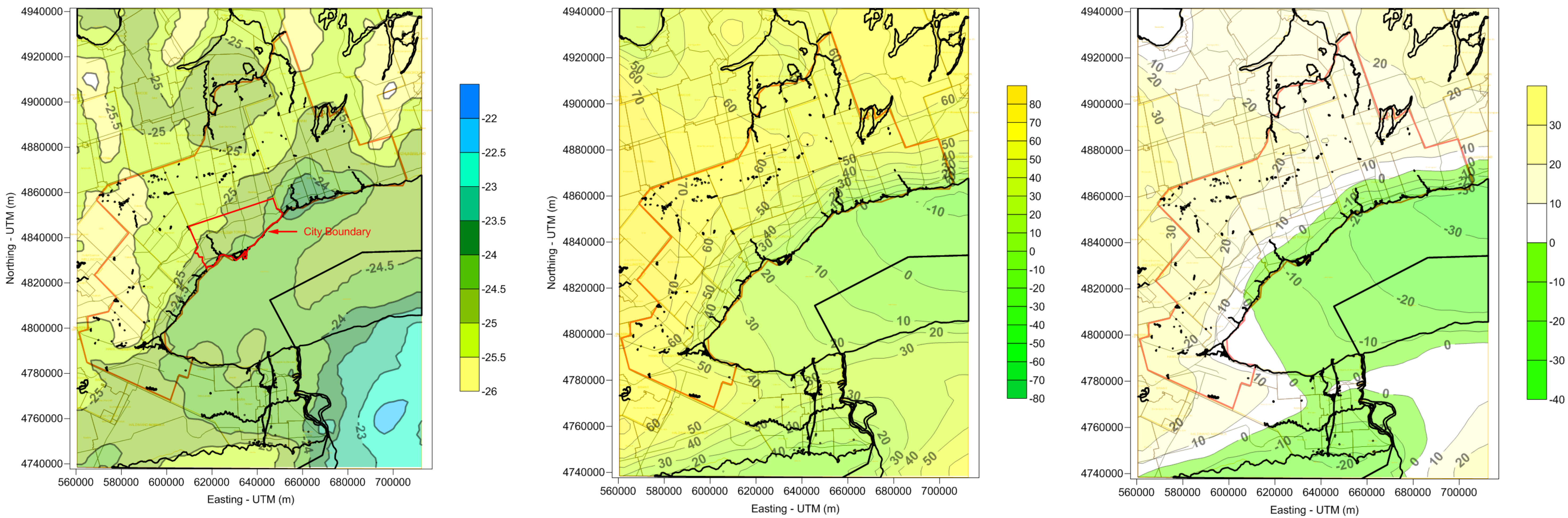
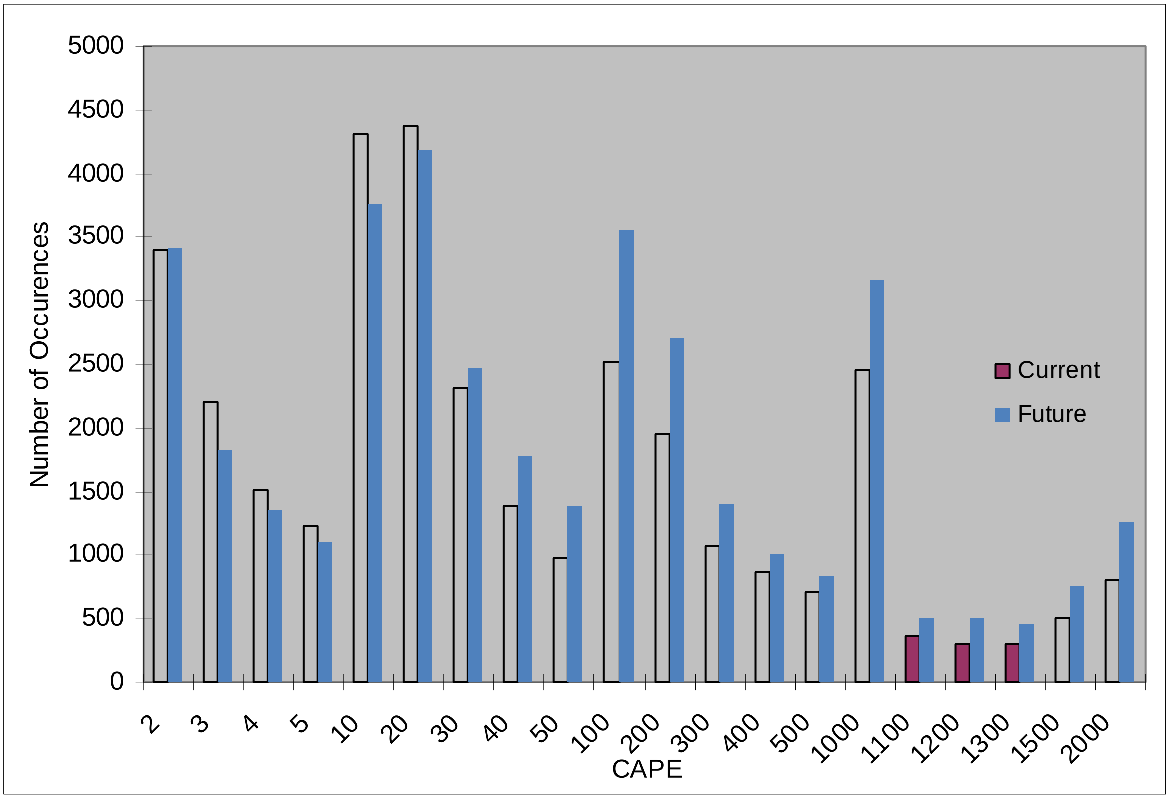
Figure 52 Spatial Distribution of SRH, CAPE and EHI Differences



SRH Difference (%) **Mean CAPE Difference (%)** **Mean EHI Difference (%)**

Figure 53 Distribution of CAPE from FReSH for Current and Future Cases



6.0 WHY IS THE FUTURE EXPECTED TO BE DIFFERENT?

6.1 INTRODUCTION

According to the most recent synthesis report released by the Intergovernmental Panel on Climate Change (IPCC) (2007b), 11 of the 12 years in the period 1995-2006 have experienced the warmest average global temperatures on record. This historical global temperature record dates from around 1850. In Toronto, 2005 was, for example, one of the warmest years on record with 37 days exceeding 30^{o}C (Clean Air Partnership, 2006).

Climate change is now evident from observations showing increased global air and ocean temperatures, disappearing snow and sea ice, as well as a rise in sea level (IPCC, 2007b). The impact of these changes on various regions of the world has been the subject of much scientific research; for example, current climate change research includes examining the impacts of declining sea ice on certain regions of the world and changes to northern latitude storm tracks have also been a recent topic of interest. These two subjects are examined below in the context of how these future changes may impact the climate of the City of Toronto.

6.2 CLIMATE OUTLOOK FOR THE 21ST CENTURY

Communities across the north of the North American continent are projected to experience far fewer extreme cold periods over the winter months owing to the significant warming predicted for the area. Ice storms, typically associated with slow or stalled low pressure systems, such as that which hit Ontario and Quebec in 1998, could increase in frequency if the associated storm tracks shift northwards with climate change (Yin, 2005; Roberts & Stewart, 2008). Warmer winter temperatures could result in more freezing rain events, although some current investigations in future climates do not show significant changes in the number of such events. One paper by Cheng *et al*[8], using synoptic typing and statistical downscaling from four GCM scenarios, suggests that freezing rain events could increase by 40% in southern Ontario during the three colder months (December – February) by the 2050s. This same study shows that southern Ontario could experience a 10% reduction in freezing rain events during the three warmer months (November, March and April).

The rest of the region is projected to experience increased temperatures and longer duration heat waves, particularly in the cities where the temperatures will be exacerbated by the 'urban heat island effect' (Christensen *et al.,* 2007). In most Canadian cities, as well as cities around the world, the night-time temperatures recorded in the urban environment are usually significantly warmer than the surrounding countryside, and this is true for the cities of Canada.

[8] Cheng, C.S., H. Auld, G. Li, J. Klaassen and Q. Li, 2007. Possible impacts of climate change on freezing rain in south-central Canada using downscaled future climate scenarios. Nat. Hazards Earth Syst. Sci., 7, 71-87.

Annual mean precipitation is expected to increase over Canada by a maximum in some specific areas of 20% (although there is significant uncertainty in this maximum value) with winter precipitation possibly exceeding 130% of present day values (Christensen *et al*., 2007). However, there is currently only poor agreement, among the results obtained from various standard climate models, in the projected summer precipitation changes to be expected over much of Canada. Snowfall and snow cover have been decreasing across the continent during the 20th century, a trend which is expected to continue despite increased precipitation, owing to the high likelihood of increasing annual mean temperatures and the even more pronounced (as over Toronto) mean minimum annual temperatures. Studies show that precipitation is likely to increase in intensity as well as quantity throughout the 21st century across much of North America, particularly in the Canadian Rockies (Leung *et al.,* 2004).

Increasing demand for water to supply rising populations and demands for crop irrigation, means that any decline in freshwater supply could have significant impacts on water stress in Canada. The projected rise in winter precipitation may help to alleviate some water supply issues, although projections suggest that much of this increased precipitation could be in the form of extreme rainfall events, leading to flooding, difficulties in retaining the water for future supplies and a decline in water quality from increased erosion (Christensen *et al*., 2007).

Groundwater sources and other reservoirs are expected to be influenced by climate change. With increasing temperatures, demand for irrigation will rise and groundwater sources will be depleted. Recharge of aquifers may not be as great, due to increased evaporation as a result of rising temperatures. Reservoirs and rivers may suffer from oxygen depletion and toxicity more frequently as temperatures increase. Water quality problems may become more common as sediment and chemical loads increase due to erosion during intense rainfall and higher temperatures (Christensen *et al.,* 2007).

6.3 NORTHERN LATITUDE STORM TRACKS

As previously discussed, low pressure systems play a dominant role in a region's climate since they influence important factors such as cloud cover and precipitation. Therefore, any changes to the position of a storm track will consequently have an impact on a region's climate. This section provides an overview of observational changes to North American storm tracks as well as storm frequency and intensity.

6.3.1 Observational Changes in Northern Hemisphere Storms

Observational studies of Northern Hemisphere storms have generally shown that over the last half of the 20th century, storm tracks have shifted poleward (i.e., north) and that there are fewer, but more intense storms (IPCC, 2007c). For example, McCabe *et al.* (2001) found that there has been a decrease in the number of mid-latitude (30° to 60°N) storms and an increase in high-latitude (60° to 90°N) storms, and that storms are now more intense in both regions. Note that Toronto lies at approximately 43°N and, therefore, the mid-latitude trends are applicable.

Additionally, Levinson and Bromirski (2007) completed a review of observational evidence for trends in the frequency and intensity of storms in the Northern Hemisphere and noted that there were very few studies that focused on the Great Lakes Region. However, one study, which did examine the storms that occurred in this region between 1900 and 1990, found that there was a significant increase in the number of strong or intense storms (Angel and Isard, 1998) which is consistent with McCabe *et al.* (2001) findings. They also found a decrease in the overall number of storms.

Altogether, the observational evidence suggests that areas in the mid-latitudes, including Toronto, have seen a trend towards fewer, but more intense storms over the latter half of 20th century.

6.3.2 Storms in a Future Climate

Recent climate model results project that in a future climate regime, a poleward shift in Northern Hemisphere storm tracks will occur (McCabe *et al.*, 2001; Magnusdottir *et al.,* 2004; Bengtsson *et al.,* 2006; Yin, 2005; IPCC, 2007de). In particular, Yin (2005) examined the output from fifteen climate models and found a consistent poleward shift in storm tracks in the Northern Hemisphere and thus greater storm activity at higher latitudes. As a result, precipitation also shifts poleward with the storm track; however, this coupling will be less prominent during the northern hemisphere's summer when precipitation is largely controlled by convection and not the passage of storms.

Model projections also show evidence of fewer, but more intense mid-latitude storms. Locations in the mid-latitudes, such as Toronto, would therefore experience fewer storms, but those that do impact the city in the future are likely to be more extreme. This may result in more severe weather occurrences including extreme rain and snowfall events, as well as damaging winds.

As noted by the IPCC (2007de), there is some disagreement among future model projections and thus there is some uncertainty with regards to the specific nature of future storms. However, there is also some observational evidence to support the idea that fewer storms would occur in a warmer climate. For example, McCabe *et al.* (2001) and Angel and Isard (1998) found a negative correlation between storm frequency and temperature meaning that warmer temperatures will result in fewer storms. They found no correlation between temperature and storm intensity, however.

Taken together, future model projections and observational evidence demonstrate that it is likely that there will be a poleward shift in the Northern Hemisphere storm track and a decrease in the number of mid-latitude storms, but there is uncertainty with regards to the intensity of such future storms.

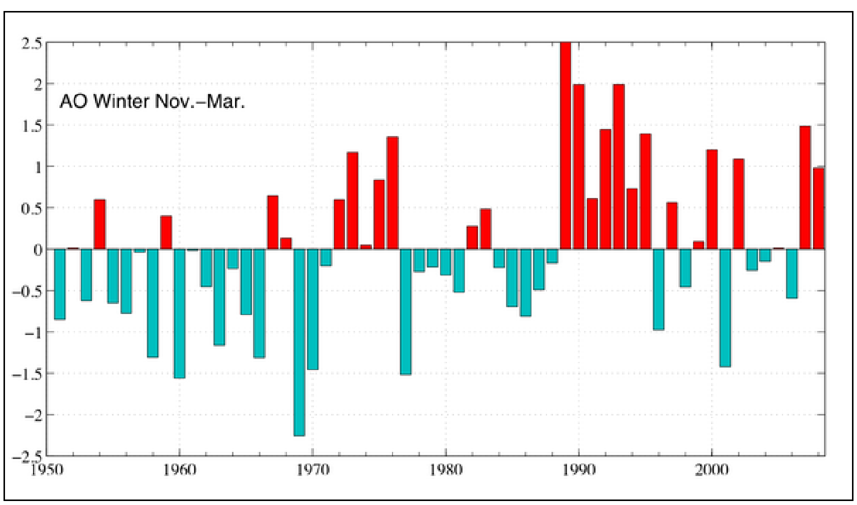
6.3.3 Possible Causes of a Poleward Shift in Storm Tracks

There is speculation about the reasons behind the projected shift in the North American storm track and the projected changes in storm frequency and intensity in a future climate. The discussion below provides a possible explanation as to why we will observe a shift in the North American storm track and thus fewer storms in the mid-latitudes.

In the northern hemisphere it is thought that the general position of storm tracks is under the influence of the Arctic Oscillation (AO). As discussed later in this chapter, during the positive phase of the AO, upper atmospheric temperatures are cold, and the mean sea level pressure is below normal over the northern pole (Wallace and Hobbs, 2006). As a result, cold air and storm tracks are displaced poleward and regions such as Southern Ontario, experience warmer temperatures. Conversely, the negative phase of the AO is associated with warm upper atmospheric temperatures and a higher mean sea level pressure. This weakens the prevailing westerly flow and allows cold air outbreaks to occur over much of Canada and the United States.

In 2001, researchers published evidence that the winter AO index had been mostly positive (that is, exhibiting anomalously low pressure) since approximately 1990 (Stricherz, 2001) as shown in Figure 54. For reasons beyond the scope of this discussion, greenhouse gases released into the troposphere (the lowest layer of the atmosphere) cause the stratosphere (layer immediately above the troposphere) to cool. If carbon dioxide and other greenhouse gases continue to increase, the stratosphere will continue to cool and this will favour a positive AO index (Thomson and Wallace, 2000 and Shindell *et al.*, 2001 as cited in Hansen *et al.*, 1998). A positive AO index in the future would indicate storm tracks being displaced poleward. As a result, the mid-latitudes, including Toronto, would experience fewer storms, which is consistent with future climate change projections as outlined in Section 6.3.2 Storms in a Future Climate).

Figure 54 Historical Winter Arctic Oscillation Index



Source: NOAA, 2009c

Yin (2005), along with the IPCC (2007de), has also highlighted that climate models are projecting that the Arctic Oscillation will shift towards a positive phase in future climate scenarios. As a result, mean sea level pressure will be lower over the northern pole resulting in a poleward shift in the storm track. As highlighted previously, this could lead to warmer temperatures in Southern Ontario as well as a lower frequency of occurrence of mid-latitude storms. However, it should be noted that there is some disagreement among climate models with regards to how the Arctic Oscillation will respond to climate change. As a result, there still remains much uncertainty pertaining to future changes in the AO and the magnitude of the resulting shift of the northern hemisphere's storm track patterns (IPCC, 2007d).

6.3.4 Summary

There is observational evidence to suggest that the frequency of mid-latitude storms is decreasing as storm tracks shift poleward and that storms are becoming more intense. Climate models also predict that this trend will continue into the future - meaning that Toronto is likely to experience fewer, but more intense storms in the future. This suggests that more extreme rainfall events and more extreme snowfall events could occur in Toronto in a future climate.

A possible explanation for the shift in Northern Hemisphere storm tracks is the Arctic Oscillation. Storm tracks and temperature are known to be affected by the AO and it has been suggested that the AO will remain in its positive phase in all foreseeable future climates. As a result, storm frequency will decrease in Toronto as the track shifts poleward as temperatures become warmer.

6.4 LOSS OF ARCTIC SEA ICE

Recent observations show that there has been a decline in Arctic sea ice over the last few decades (WWF, 2005; Singarayer *et al.*, 2006). There are several Arctic climate feedback mechanisms that play a critical role in regional as well as the global climate system and there is evidence emerging which shows that melting sea ice is accelerating global warming (WWF, 2005). This section provides a discussion of the main Arctic climate feedback mechanisms and what the implications of each feedback are with regards to climate. Where possible, the impacts on Toronto's climate have been examined, however, there remains much uncertainty about what the implications of melting Arctic sea ice are, so the impacts cannot always be concretely stated.

6.4.1 The Ice-Albedo Feedback Mechanism

One of the most significant climate feedback mechanisms in the Arctic is the ice-albedo feedback. Albedo is simply a measure of how reflective a surface is. A surface with a high albedo, like ice, reflects large amounts of solar radiation back into space and as a result, the surface temperature is lower. When sea ice melts, the once reflective surface is replaced by liquid water which is capable of absorbing a large amount of solar energy. As a result, temperatures begin to rise at a much quicker rate which further erodes existing ice and prevents new sea ice from forming.

At northern and mid-latitudes, including Canada and Toronto, it is anticipated that the warming trend will be amplified as a result of the ice-albedo feedback mechanism (Singarayer *et al.*, 2006). In fact, there is now observational evidence which suggests that temperatures are increasing faster at northern locations within Canada due to the melting of sea ice (IPCC, 2007b). Therefore, in a future climate, locations such as Toronto may experience a greater increase in temperature than subtropical locations due to the amplifying effect of melting sea ice in the Arctic.

6.4.2 Carbon Feedback Mechanisms

Other significant climate feedback mechanisms in the Arctic include two types of carbon feedbacks: a marine-carbon feedback and a sediment-carbon feedback. Open ocean waters are both a sink and a source of carbon dioxide (CO_2), but there is currently a net uptake of CO_2 (WWF, 2005). In the short term, it is expected that melting sea ice will cause a further uptake of CO_2 in Arctic Ocean waters since they will initially have a low CO_2 concentration relative to the atmosphere. In the long term, however, it is expected that the rise in the Arctic Ocean's temperature will cause a net release of CO_2 because warm water can hold less gas. But, due to the complexity of the physical and biological processes controlling the carbon cycle, the nature, and thus the consequences of the marine-carbon feedback for a future climate, remains largely uncertain (WWF, 2005).

Within ocean sediments, particularly along continental (coastal) shelves, a large amount of methane (CH_4) is stored. Methane is a greenhouse gas that is at least 21 times more effective than CO_2 with regards to its warming potential. Recent research has provided evidence to show that methane is being released from Arctic waters into the atmosphere as a result of thawing subsurface sediments (WWF, 2005). Although there is strong observational evidence showing that methane is released from the Arctic Ocean, it is unknown how much of this release will contribute to regional and global atmospheric methane concentrations. If significant, the released methane could also amplify warming in the northern latitudes and increase temperatures at mid-latitude locations such as Toronto more quickly than once thought.

6.4.3 The Arctic and Atmospheric Circulation Patterns

Additional warming in the Arctic is thought have an impact on regional circulation (and thus weather) patterns, however, there is conflicting evidence with regards to what this impact will be in a future climate. For instance, Magnusdottir *et al.* (2004) found that disappearing sea ice will result in a southward shift in the storm track, that is, a negative Arctic Oscillation index, see Section

Possible Causes of a Poleward Shift in Storm Tracks). On the other hand, the same study also showed that increased sea surface temperatures (another anticipated change in the Arctic) will shift the Arctic Oscillation into its positive phase. In contrast to Magnusdottir *et al.* (2004), Singarayer *et al.* (2006) showed that declining sea ice results in decreased sea level pressure near the northern pole, or a positive AO. Conflicting evidence shows that the impact of melting sea ice on regional and global atmospheric circulations and storm tracks is, at present, highly uncertain (WWF, 2005).

6.4.4 Summary

Overall, it is expected that melting Arctic sea ice will amplify warming in northern latitudes as a result of the ice-albedo feedback and that mid-latitude locations such as Toronto will observe a greater increase in temperature than more southern locations in the subtropics. Feedback mechanisms such as the marine- and sediment-carbon feedback impacts on future climate are less certain. It is expected, however, that increasing sea surface temperatures in the Arctic and the subsequent release of ocean-sediment bound methane gas will also amplify warming in northern latitudes.

Other effects of melting sea ice in the Arctic such as changes to weather patterns are highly uncertain. Conflicting evidence towards the impact of melting sea ice on the Arctic Oscillation index, for example, indicates that additional studies are required.

6.5 CLIMATE OSCILLATIONS

Simply put, climate oscillations are recurring anomalies in large-scale atmospheric pressure patterns observed over a given region of the globe. Sometimes, the changes in atmospheric pressure are coupled with changes in sea surface temperature in the same area. Together, these changes affect climate not only in the regions in which the oscillations occur, but all over the globe. Since their impacts can be felt in faraway places, climate oscillations are sometimes referred to as "teleconnections".

The most commonly known climate oscillation is the El Niño Southern Oscillation (ENSO) where changes in sea surface temperature and mean sea level pressure are observed in the tropical Pacific Ocean. Other oscillations which can affect North America's climate include the Arctic Oscillation/North Atlantic Oscillation (AO/NAO) and the Pacific Decadal Oscillation (PDO). Each oscillation and its effect on the Canadian climate, where known, are discussed below.

6.5.1 El Niño Southern Oscillation

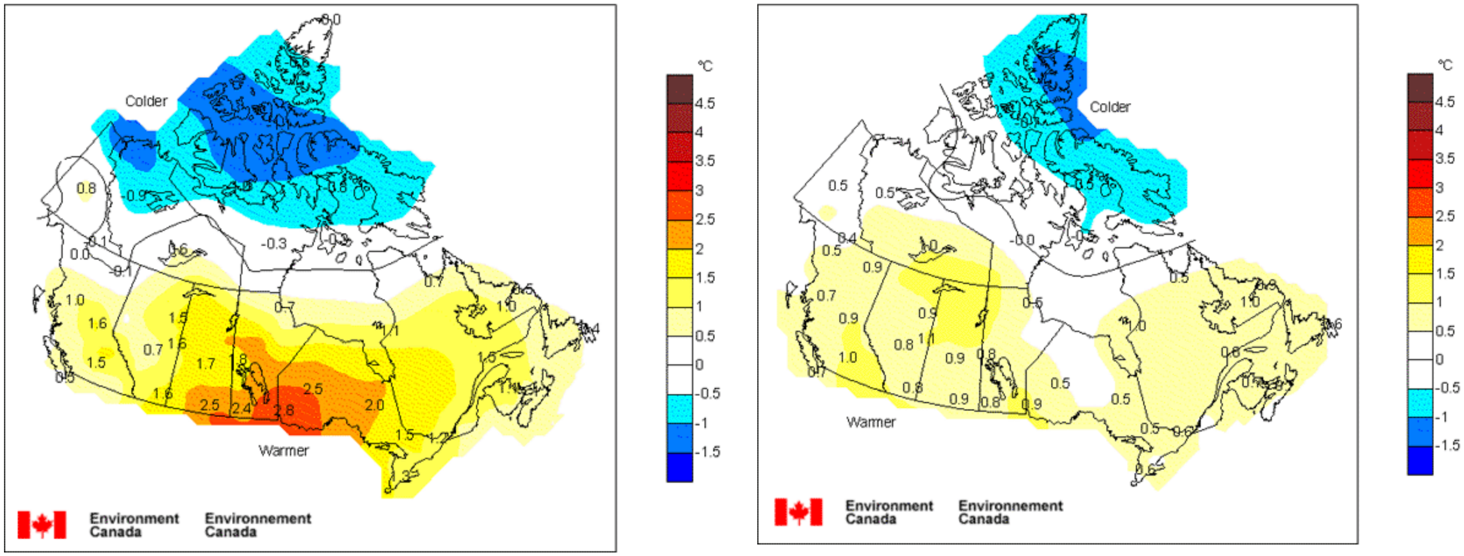
The most well-known (and understood) climate oscillation is the El Niño Southern Oscillation (ENSO) which occurs about every 2 to 7 years. As described by Environment Canada (2010), under normal climatic conditions in the tropical Pacific Ocean, trade winds blow from east to west between South America and Australia/Indonesia allowing cool water to upwell along the west coast of South America.

During an ENSO event, sea level pressure over the western Pacific and Australia tends to be a little higher than normal and the easterly trade winds are weakened. Subsequently, warmer waters move toward the west coast of South America bringing more precipitation and storms with it. The added heat to the eastern Pacific also affects the westerly flow in the mid-latitudes by forming a wave train of alternating high and low pressure that curves eastward in the northern hemisphere due to the Coriolis Effect. As a result, an anomalous high pressure feature develops over Canada, and a corresponding low pressure anomaly occurs in the Gulf of Alaska. These changes to the pressure pattern inherently alter the course of the jet stream (especially the winter jet), shifting it further south into the United States (Cook-Anderson, 2008) and significantly affecting Canada's temperature and precipitation patterns while the phenomenon remains.

Figure 55a to Figure 55d from Environment Canada (2010abc) show the effect of ENSO on winter and springtime temperatures and precipitation departures from normal in Canada. The figure is a plot of the impact of the El Niño effect with the seasonal warming trend removed. As can be seen in the figures, the largest temperature anomalies occur over central Canada during the winter with a 0.5 to 1 degree temperature increase in Southern Ontario. Most of Canada experiences above normal temperatures in the spring as well. During the winter, below normal precipitation occurs in the Great Lakes Region since the jet stream is mostly kept to the south of Canada resulting in fewer winter storms (see Figure 56). There is little to no effect of ENSO on precipitation during the spring in Southern Ontario.

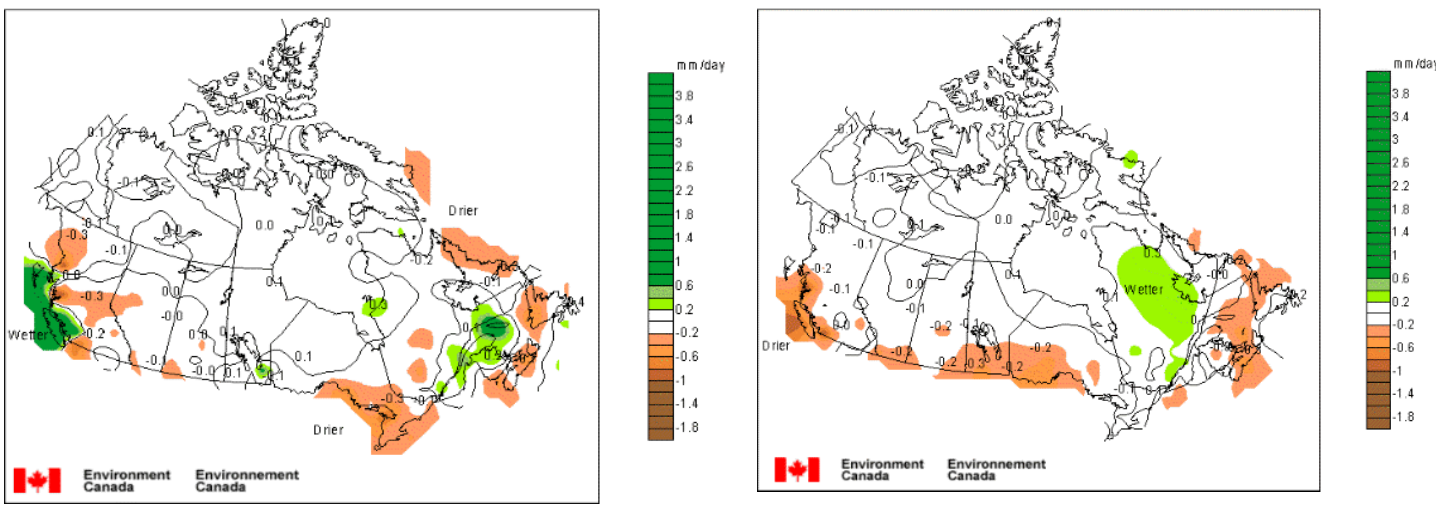
La Niña is the counterpart to El Niño. It occurs when the trade winds are strengthened resulting in more cold water upwelling on the west coast of South America. An anomalous low pressure feature develops over Canada and most of the country experiences colder, wetter winters.

Figure 55 Temperature and Precipitation Departure from Normal



A: Dec-Jan-Feb Temperature (Source: EC, 2010b)

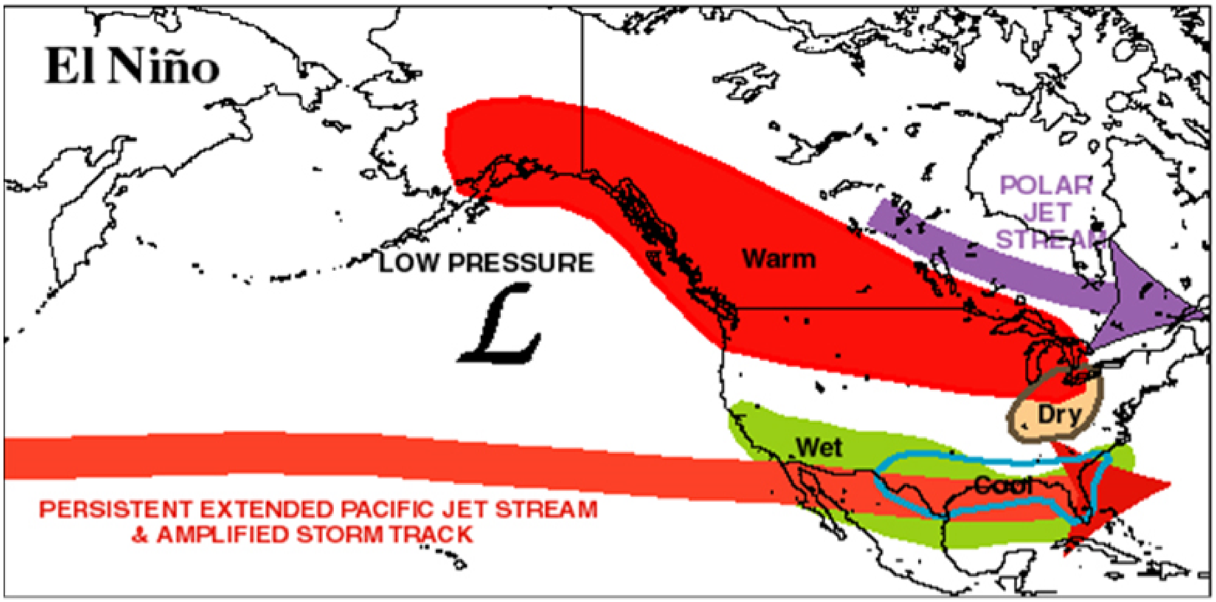
B: Mar-Apr-May Temperature (Source: EC, 2010b)



C: Dec-Jan-Feb Precipitation (Source: EC, 2010c)

D: Mar-Apr-May Temperature (Source: EC, 2010c)

Figure 56 January-March Weather Anomalies and Atmospheric Circulation Pattern



Source: Cook-Anderson (NASA), 2008

6.5.2 Arctic Oscillation/North Atlantic Oscillation

The Arctic Oscillation (AO) is a fluctuation in sea level pressure over the northern latitudes. The AO is said to be in its positive phase when anomalously low pressure occurs over the mid- to high latitudes. In its negative phase, the pressure pattern is reversed. When the AO index[9] is positive, upper-level winds are stronger and keep cold air in place around the poles making areas to the east of the Rockies warmer than normal (NSIDC, No Date). Storms are steered further north during this phase bringing wetter weather to northern locations such as Alaska and Scandinavia. In contrast, during the negative phase of the AO upper level winds are weaker (NSIDC, No Date) and as a result, cold Arctic air can plunge into North America and storm tracks are maintained over the mid-latitudes (NOAA, 2009b).

The North Atlantic Oscillation (NAO) is sometimes used as a separate term to describe the AO; however, some controversy still remains about how the AO and the NAO are related, if at all. The NAO, which has been recognized for some time, is the alternating pattern between an intensified subtropical high (Bermuda High) and an intensified polar low (Icelandic Low). This oscillation mostly affects the eastern United States and Europe (NOAA, 2009b).

[9] Climate indices are used to characterize the phase of a climate oscillation. For example, a positive AO index would indicate that the AO is in its positive phase (i.e., anomalously low pressure); the magnitude of the AO index quantifies how much the mean sea level pressure deviates from the norm.

6.5.3 Pacific Decadal Oscillation

The Pacific Decadal Oscillation (PDO) is a 20-30 year cycle in sea surface temperature and sea level pressure in the northern Pacific Ocean. This oscillation was first identified in the late 1990's when oscillations in salmon production in the northwest Pacific Ocean were identified by a fisheries scientist (Mantua *et al.*, 1997). The PDO warm (positive) phase is characterized by cooler sea surface temperatures in the central North Pacific Ocean and warm sea surface temperatures along the west coast of North America. Sea level pressure is anomalously low in the North Pacific and high over western North America and the sub-tropical Pacific during the positive PDO phase (Mantua, No Date).

Since this oscillation is not yet well understood, its effects on climate remain unclear; however, many consider this oscillation to be a long-lived ENSO like event and for it to have similar impacts on North America's climate. Recent studies actually show that ENSO events are dependent on the PDO and that they must be in-phase for a strong ENSO event to occur (Mantua, 1997).

7.0 WHAT DOES IT ALL MEAN?

7.1 CERTAINTY IN FUTURE CLIMATE CHANGE AND ITS DIRECTION

Observations of the Earth's climate show that it has warmed by an average value of 0.76ºC since preindustrial times, and Arctic temperatures have increased at nearly twice the global average rate. Water vapour levels have risen since the 1980s (and possibly earlier), and are broadly consistent with the observed rises in air temperatures. Glaciers have retreated and melted, and snow cover has fallen in many areas. Sea levels have risen by an average of 1.7 mm per year between 1950 and 2009 with an overall rise of almost 20 cm since 1900. A comparison of current temperatures with those derived from proxy data (such as tree rings and corals) shows that average temperatures in the Northern Hemisphere between 1950 and 2000 were almost certainly higher than any other 50 year period since 1500, and are likely the highest over the last 1,300 years. These observed rises in temperature have occurred since the beginning of the industrial revolution, when fossil fuels were burned in large quantities.

Climate model simulations of observed temperatures on the continents between 1900 and 2000 have been made using natural climate forcings only (solar output changes and volcanic eruptions) and then repeated including forcing due to anthropogenic emissions of greenhouse gases. The two sets of simulations diverge after about 1960, and only the simulations which include anthropogenic emissions reproduce the observed temperature changes. The simulations which only consider natural climate forcings are too cool, and project a climate for 2000 similar to that of 1900. For this reason, we can be confident that anthropogenic emissions are responsible for the recent observed global warming.

The Intergovernmental Panel on Climate Change (IPCC) 4^{th} Assessment Report only considered the Special Report on Emission Scenarios (SRES) of future greenhouse gas emissions. An extra simulation, where greenhouse gas levels were held at 2000 levels showed that global temperatures continued to rise by about 0.35ºC throughout the 21^{st} century. More recently, an aggressive mitigation scenario has been developed which assumes continuous reductions in greenhouse gas emissions from about 2015 (Lowe *et al*., 2009; Moss *et al*., 2010). Even under this scenario, global temperatures are projected to increase by 2ºC compared to preindustrial levels by 2100.

Carbon dioxide and other greenhouse gases have long lifetimes in the atmosphere, which means, even if CO_2 and other gases were stabilised in the atmosphere, climate change would continue for 100s if not 1,000s of years. This is known as committed climate change. The climate system does not respond instantly to additional levels of greenhouse gases, owing to the thermal inertia of the oceans. This inertia means that the full impact of emissions will not be realised until many years later, even if the levels of greenhouse gases are stabilised. Models have been used to study committed climate change resulting from past greenhouse emissions. The results show that climate change continues for more than 1000 years, and even on these timescales temperatures and sea levels do not return to preindustrial levels. The uptake of CO_2 by the oceans and creation of calcium carbonate sediments takes place over 30,000 – 35,000 years.

CO_2 emissions would need to be reduced by 50% to stabilise CO_2 levels in the atmosphere, but this would only last for about a decade owing to a decline in land and ocean removal rates. Other greenhouse gases have different lifetimes. Nitrous Oxide (N_2O) would require a reduction of over 50% of its emissions to stabilise its concentrations at present day levels, whereas for methane (CH_4), a 30% or greater reduction in its emissions would stabilise its concentrations at levels significantly below those at present.

In summary, climate change will continue into the future, because of the thermal inertia of the oceans, even if very large cuts in greenhouse gas emissions are made in the very near future. Climate simulations using a recent aggressive mitigation scenario, which uses plausible and significant reductions of greenhouse gas emissions, show that global temperatures continue to rise to 2100. No plausible future scenarios of greenhouse gas emissions produce a cooling of the earth. These results mean we can be confident that the Earth's climate will continue to warm throughout the 21st century. What we can control is by how much the climate warms. The Copenhagen Accord agreed in December 2009 has the stated aim of limiting global warming to 2.0°C above preindustrial temperatures. This target may be technically possible to achieve but will require substantial cuts in global greenhouse gas emissions in the very near future (Meinshausen *et al*., 2009). However, current national emissions-reduction pledges appear to be insufficient to keep global warming below 2.0°C (Rogelj *et al.,* 2010).

7.2 OVERVIEW

Locally we can expect larger changes as a result of the local weather drivers. In this study, the 10-year climatology of weather elements for current period (2000-2009) was compared with the same weather elements for a future 10-year climatology (2040-2049). Hourly data was produced for 36 surface locations for each 10-year period and the data from the Pearson Airport location was analyzed in some detail to show the magnitude of the expected climate warming impact across the GTA.

7.3 FUTURE (2040-2049) PERIOD

Figure 57 presents the expected changes in rainfall and snowfall by month between the current and future periods. Using Pearson Airport as an example, the future period (2040-2049) is predicted to have almost the same amount of precipitation on a month-by-month basis except in June, July, August, September and November. The figure shows increased rainfall in both summer and winter months and decreasing snowfall in the future winter months.

Figure 58 presents the changes in the number of days per month that rain or snow will occur.

Figure 57 Monthly Precipitation Difference 2000-2009 to 2040-2049

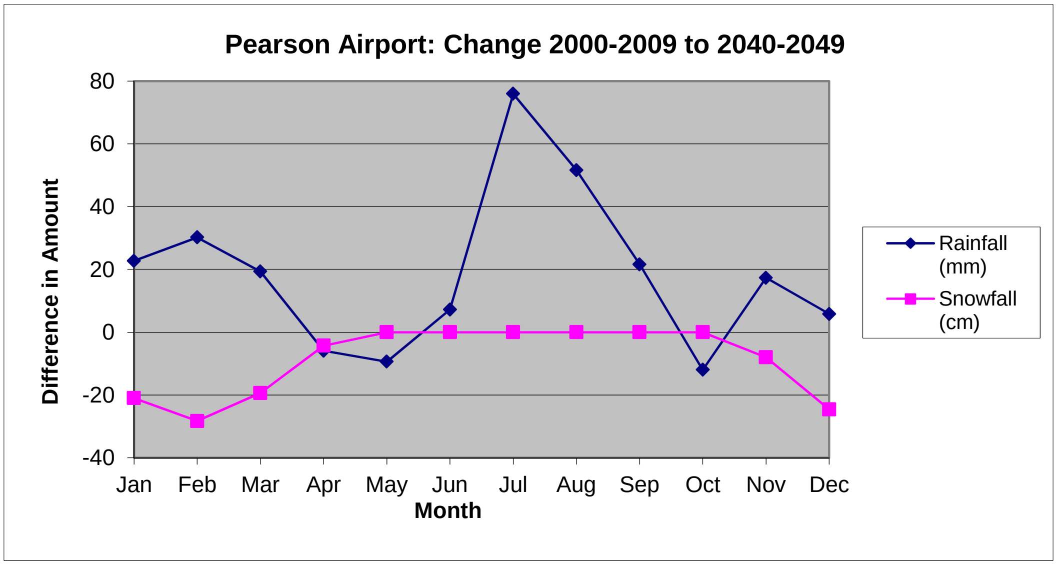


Figure 58 shows that, in the future period, fewer days with precipitation are anticipated, except in July and August where there will be approximately 2 additional days of rain in each month. It is also expected that the number of snow days will be reduced by up to 9 days in the worst month (December) and overall by 26 days a year.

Figure 58 Monthly Difference in the Number of Precipitation Days

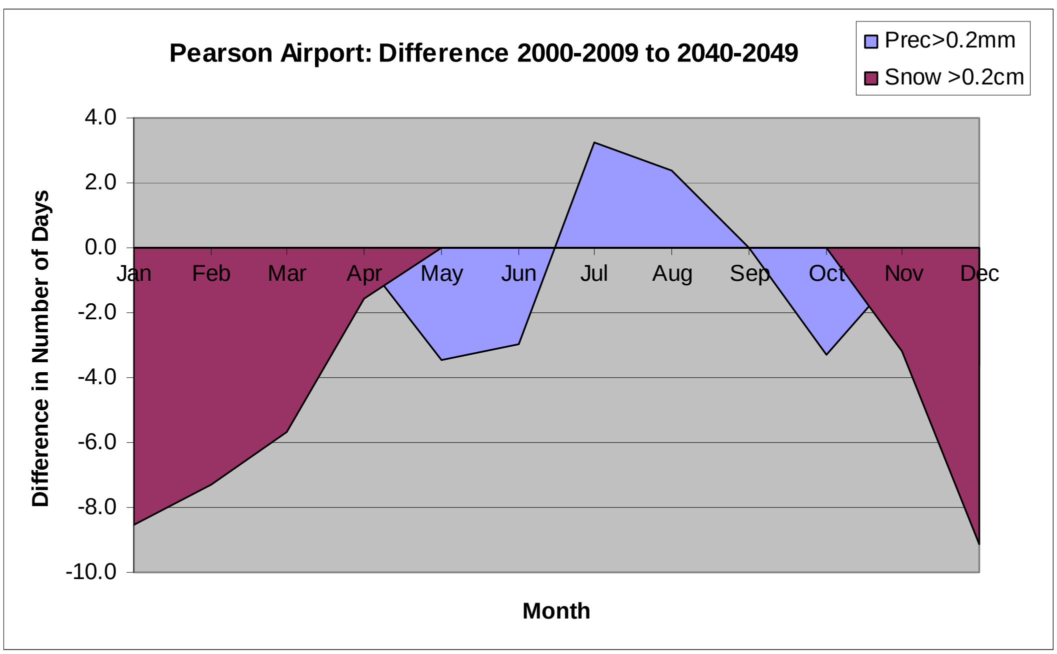


Figure 59 presents the expected change in extreme rainfall and snowfall by month. It shows, on average, an almost insignificant change in the number of days with heavy precipitation (>50 mm of rain and 25 cm of snow) in the future period (2040-2049).

But the results also show that extreme events will be more severe in the future. Figure 60 and Figure 61 present a monthly comparison of the extreme daily precipitation amounts and the extreme daily snowfall amounts, respectively. Figure 60 shows a large increase in the July extreme events. Figure 61, on the other hand, shows a significant decrease in the occurrence of extreme snow events during all months that typically have such snowfall events in the current period.

Figure 59 Monthly Difference in the Number of Heavy Precipitation Days

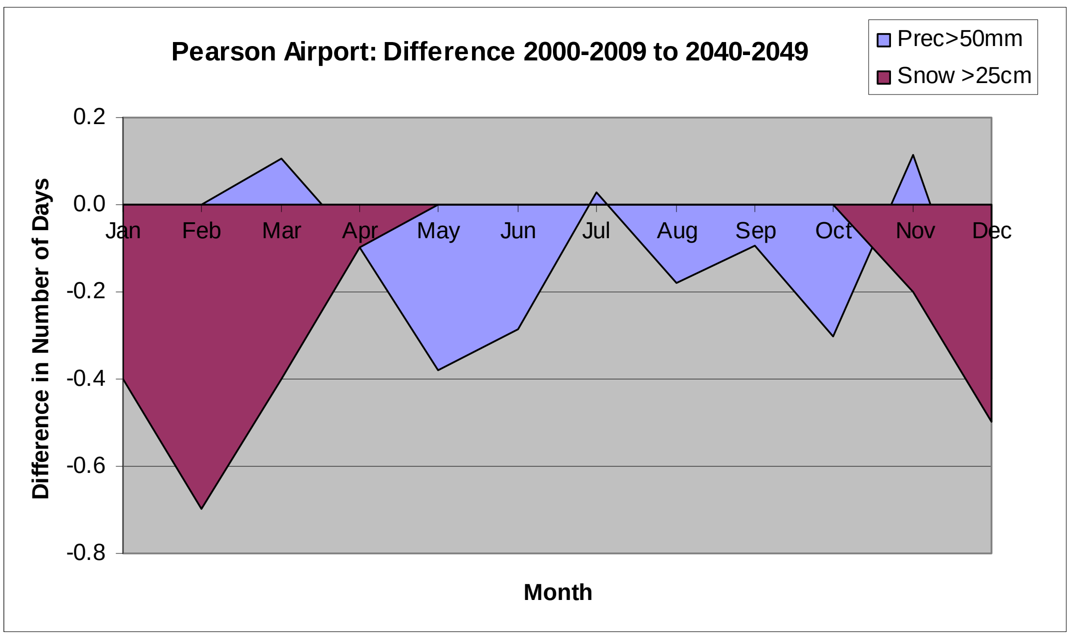


Figure 60 Month-by-Month Extreme Daily Precipitation

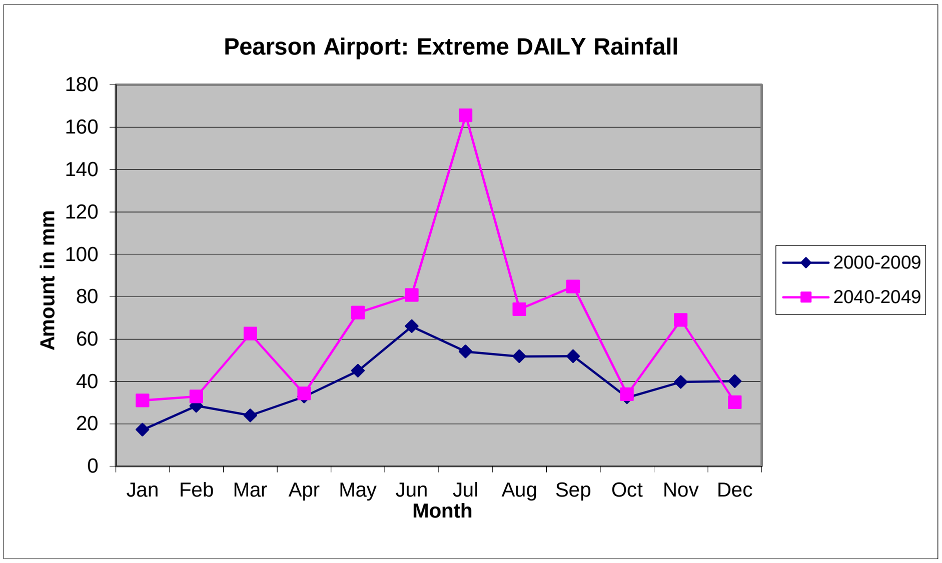
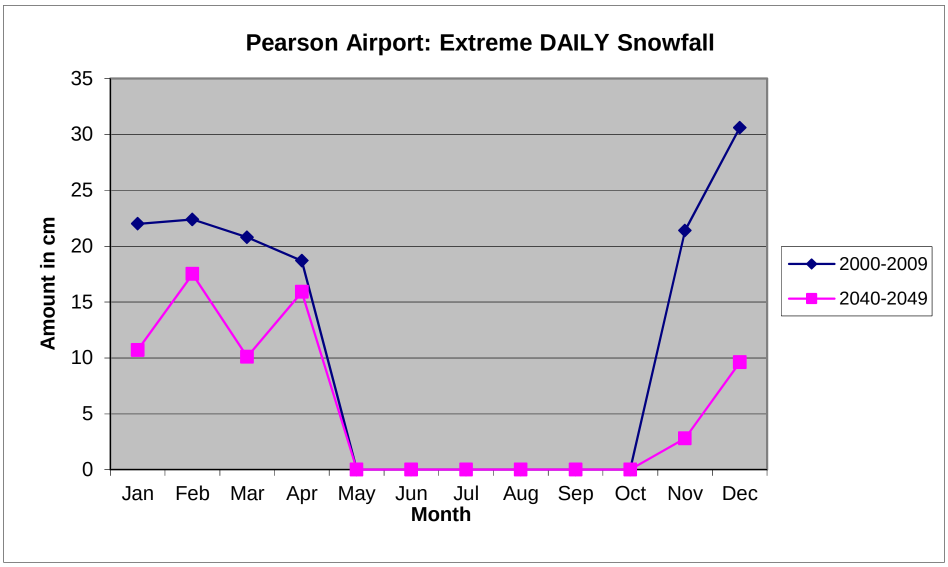


Figure 61 Month-by-Month Extreme Daily Snowfall



While there are variations in the changes of climate predicted among the different areas of the GTA, analysis of the model results indicates future temperature increases and a warmer future than is experienced today. Basing conclusions only on analyses of results respecting Pearson Airport reveals that the future average temperature will be 4.4ºC warmer. The predicted future month-by-month temperature differences are presented in Figure 62, and show, for Pearson Airport, a maximum increase of 7.2º in February and a minimum of 2.4º in April. If we look at extremes, Figure 63 shows the differences in extreme maximum and extreme minimum temperature between 2000-2009 and 2040-2049 at Pearson Airport. The figure shows an expected reduction in extreme minimum temperature of almost 7ºC on average but an expected increase in extreme maximum temperature of about 3ºC on average.

Figure 62 Month-by-Month Temperature Differences

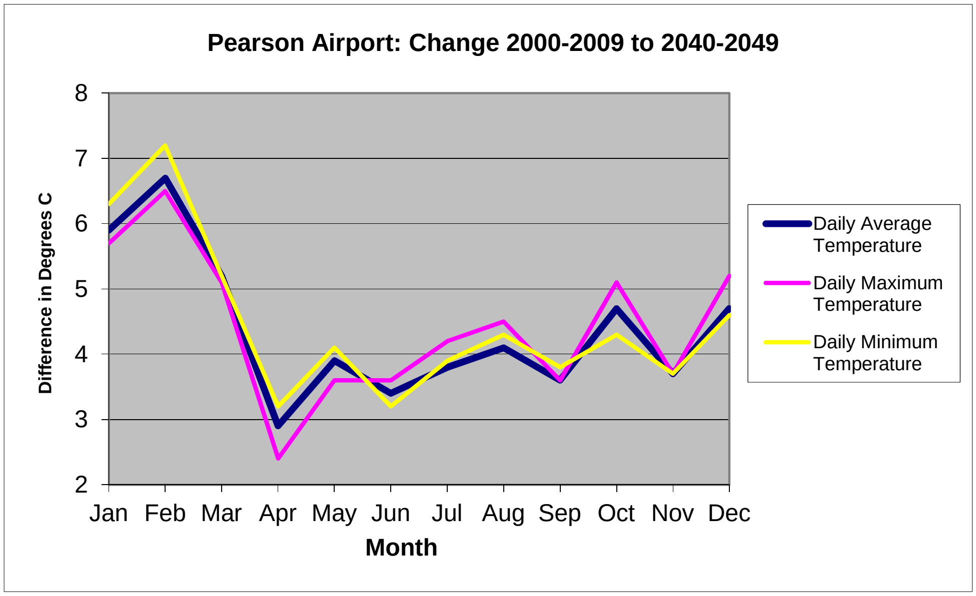


Figure 63 Monthly Differences in Temperature Extremes

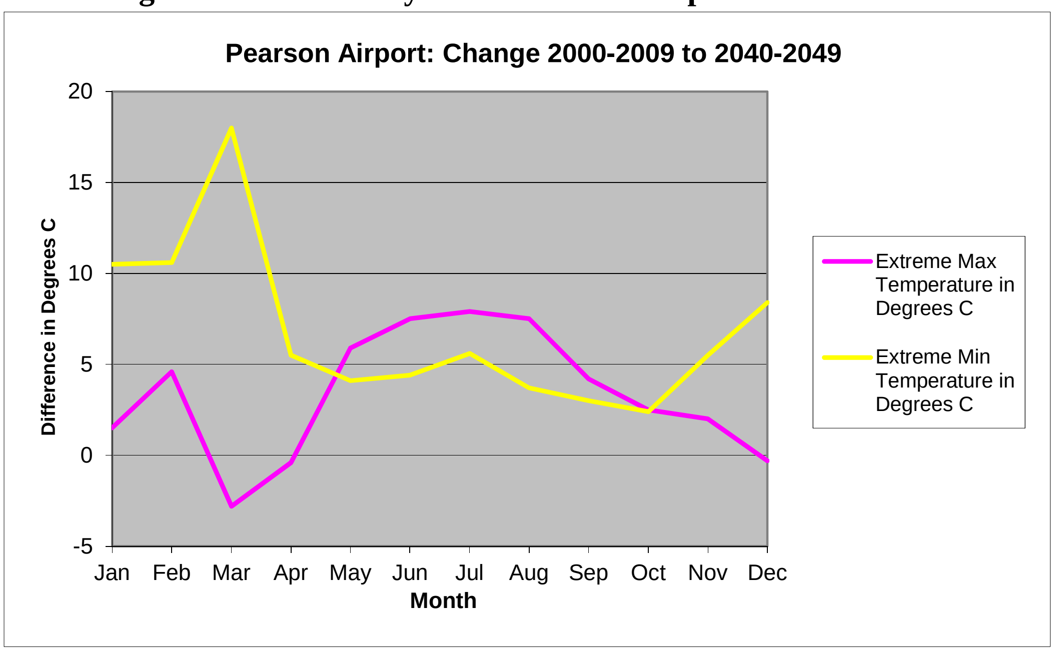


Figure 64 plots the differences in the number of days above and below zero between now and the future period. The figure shows virtually no change in the summer but a significant change in the spring, fall and winter seasons. The figure shows a significant reduction in the number of days that the maximum temperature will be below zero and a significant increase in the number of days that the minimum temperature will be above the freezing point.

Figure 64 Monthly Differences in Number of days Above and Below Zero

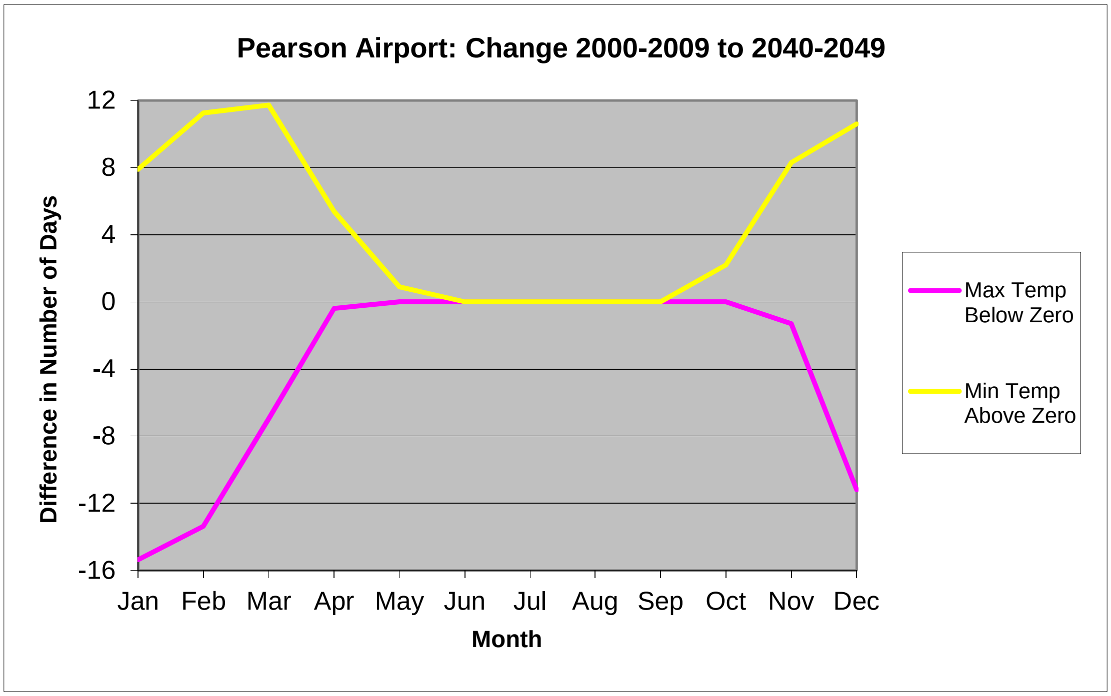


Figure 65 presents the changes in wind speed by month expected to occur by the future period. It shows that the future will have about the same average speed but that the maximum hourly and maximum gust wind speeds are expected to be significantly reduced especially in the Spring, Fall and Winter seasons. This will be the result of more vertical and less horizontal motion on average because there will be more clear skies and, hence, calmer periods between storms. The maximum winds will increase slightly as a result of gusts from increased convective storms.

Figure 65 Monthly Differences in Winds

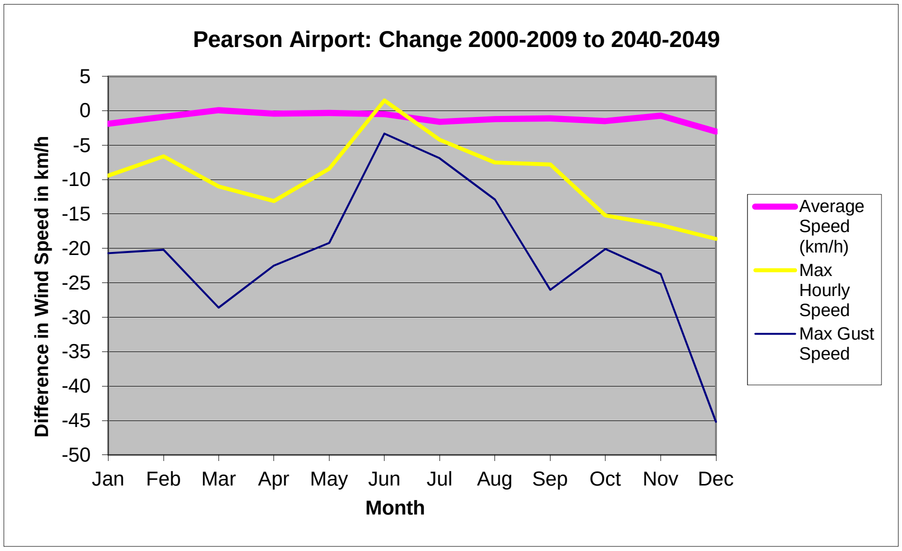
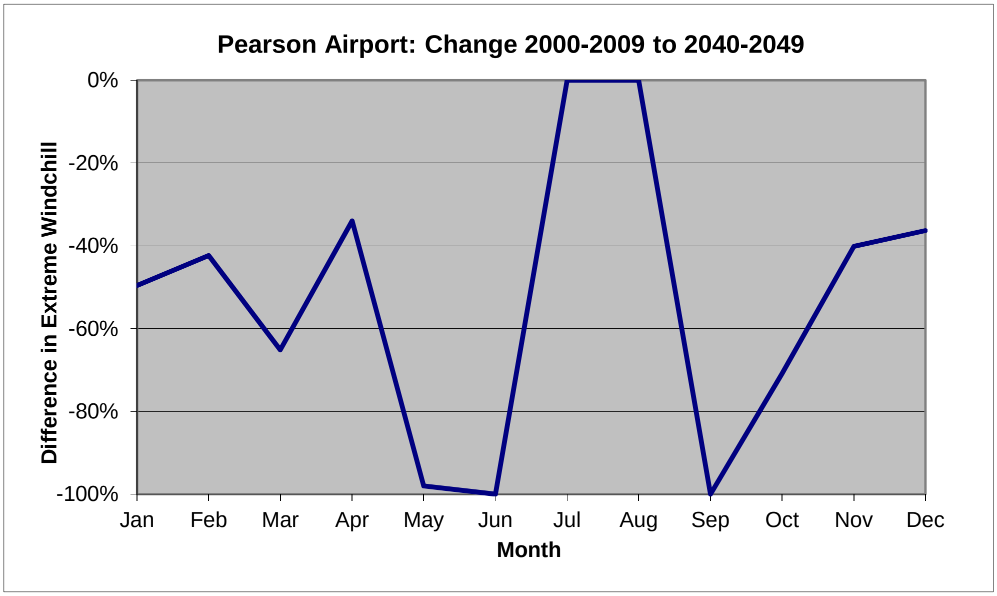


Figure 66 presents the changes in extreme humidex by month. The figure shows increases in every month, except March and April, with an average increase of 11% and a maximum increase in February of 38%.

Figure 66 Monthly Changes in Extreme Humidex

Figure 67 presents the predicted change in wind chill between now and the future (2040-2049). It shows on average about a 53% reduction in wind chill varying from a high of 100% in June to a low of 36% in December.

Figure 67 Monthly Changes in Extreme Wind Chill



7.4 FINAL FINDINGS

The significance of the findings from this study relate to the underlying purpose of the study and the methods by which results were sought and obtained.

The City of Toronto very specifically sought future climate information that could not be reliably provided by GCMs and RCMs as these did not include "weather-vital" features such as the Great Lakes or other "weather-significant" local topographic features such as the Oak Ridges Moraine and the Niagara Escarpment. The City did not have the resources available to address 30-year normal climate depictions, or the resources to undertake "ensembles".

What the City wanted to obtain was data and information concerning the future extremes-of-weather rather than the future means-of-climate which could be used for departmental planning.

The City wanted use local weather modeling at a much finer resolution, i.e. using 1x1 km gridded data, to include the influences of local features rather than 50x50 km coarse gridded data, "driven" by GCM/RCM model output. Effectively, time appropriate climate model output was used as the input to a state-of-the-science weather model to depict the present 2000-2009 (as an accuracy and validation check) and future 2040-2049 conditions.

The City needed to know the scale and significance of climate and weather changes, of both means and extremes. Extremes are more significant for public operations and service provision regarding such basics as flood appropriate sewer and culvert pipe sizing, heat wave appropriate load-bearing resistance of road surface materials, and heat appropriate public services for the elderly and disadvantaged.

Just as climate models around the world have different "regional" characteristics (e.g. Canadian RCMs are honed to address snow and ice coverage), they are also "run" with different scenarios relating to different assumptions of global population growth and fossil fuel use (and carbon dioxide releases). These scenarios range from those that portray slower growth rates and peaking points of population growth and carbon based fuel consumption, to those that portray a much more rapid rate of growth and earlier peaking points.

The City, as part of this study, looked at 10-year climate periods rather than 30-year periods and looked at the potential consequences of scenario A1B for 2040-2049, which examines the extreme convection case (biggest storminess) impact during the future period. The A1B scenario is considered as the "middle of the road" scenario given current data and trends, and the QUMP-15 variation is also a potential upper extreme to better inform the City's adaptation and operational sizing and response limit needs.

The following findings are based on a preliminary analysis of the data produced by the combined climate-weather model runs. The focus in this report has been to look at the data representing Toronto Pearson International Airport (Pearson Airport) rather than predicted data from across the GTA, or predicted data solely within Toronto, as recent and present data from Pearson Airport represents the best quality standard meteorological record in the area of study. Data is also presented in Volume 2 for other City and GTA locations.

7.4.1 Predicted/Expected Weather Changes

Table 40 presents a summary of the changes that can be expected locally by 2040-2049. While the database is extensive, and much more can be extracted from it for Pearson Airport and other locations around the GTA, this project points out what is possible by way of examples of some of the more common types of analyses.

7.4.1.1 Future Period: 2040-2049 Compared to 2000-2009

The following summarizes the predicted Pearson Airport weather for the near-future period:

- **Less snow and more rain during the winter**
- **Slightly more precipitation (snow and rainfall) overall**
  - precipitation amounts remain similar to present for about 8 months of the year
  - precipitation increases markedly in July and August (with 80% and 50% increases respectively over present values)
  - the number of days of precipitation per month decrease (except in July and August)
  - 26 fewer snow days per year (9 less in December)
- **Extreme rainstorm events will be more intense**
  - large increase in size of extreme (daily) rain events in July (almost threefold)

Table 40 Summary of Extremes at Pearson Airport

Weather Type	Parameter	2000-2009	2040-2049
Extreme Precipitation	Maximum in One Day (in mm)	66	166
	Number of Days with more than 25 mm	19	9
	Mean Annual Daily Maximum in mm	48	86
	100 year Return Period Maximum Daily (in mm)*	81	204
	10 year Return Period Maximum Daily (in mm)	62	135
	10 year Return Period Maximum Hourly (in mm)	20	39
Extreme Rain	Maximum in One Day (in mm)	66	166
	Number of Days with more than 25 mm	16	9
Extreme Snowfall	Maximum in One Day (in cm)	24	18
	Number of Days with more than 5 cm	16	3
Extreme Heat	Maximum Daily (in °C)	33	44
	Number of Day with more than 30 °C	20	66
Extreme Cold	Minimum Daily (in °C)	-17	-11
	Number of Days with less than -10 °C	24.6	0.3
	Number of Days with minimum less than 0 °C (frost days)	128	70
Wind Chill	Extreme Daily	-24	-17
	Number of Days with less than -20 °C	12	0
Degree Days	Number of Degree Days Greater than 24 °C (air conditioning required)	10	180
	Number of Degree Days Greater than 0 °C	3452	4857
	Number of Degree Days Less than 0 °C (extra heating required)	440	66
Extreme Wind	Maximum Hourly Speed in km/hour	92	48
	Maximum Gust Speed in km/hour	130	75
	Number of Days with Wind Speed Greater than 52 km/hour	0.9	0.0
	Number of Days with Wind Speed Greater than 63 km/hour	0.3	0.0
Humidex	Maximum (in °C)	48	57
	Number of Days greater than 40 °C	9	39
Storms	Average Number of Storms per Year	30	23
	Average Number of Summer Storms in One Year	17	17
	Average Number of Winter Storms in One Year	14	6
	Average SRH (vortices potential) in One Year	1281	691
	Average CAPE (convective energy potential) in One Year	3841	4097
	Average EHI (combination if SRH and CAPE) in One Year	3.6	4.3

* underestimate due to length of record

- **Average annual temperatures increase of 4.4oC**
  - average winter temperatures increase by 5.7°C
  - average summer temperatures increase by 3.8°C
  - extreme daily minimum temperature "becomes less cold " by 13°C
  - extreme daily maximum temperature "becomes warmer " by 7.6°C
- **Average Wind Speed Unchanged**
  - maximum hourly winds reduced
  - maximum wind gusts reduced
- **"Comfort" Better in Winter, Slightly Worse in the Summer**
  - Humidity and temperature taken together as the Humidex remains similar (within 10% of present) for most of the year but shows increases in July through to September (up 20%)
  - Wind Chill is reduced by over 50% on average

7.4.1.2 Within the City of Toronto Itself

As a further example of how the data base can be used, a downtown Toronto location (Trinity-Spadina) was also examined for changes between now and the future (2040-2049). The following summarizes the projected Trinity-Spadina weather, where we can expect to see:

1. fewer snow events, and reduced snow clearing requirements;
2. much more summer storm precipitation during July and August and increased likelihoods of culvert and sewer capacity exceedances and basement flooding, and
3. higher summer temperatures, more frequent heat waves and increased heat alert response requirements as follows:
   - **average annual temperatures increase of 4.2^{o}C**
     i. average winter temperatures increase by 6.0^{o}C
     ii. average summer temperatures increase by 2.6^{o}C
     iii. extreme daily minimum temperature "becomes less cold " by 14.6^{o}C
     iv. extreme daily maximum temperature "becomes warmer " by 9.2^{o}C

8.0 POTENTIAL NEXT STEPS

The database created for this project encompasses about 50 Terabytes of hourly information for 2 10-year periods for 36 different locations across the GTA. In addition all of the raw model output parameters are available on an hourly basis on a 1x1 kilometre grid over the GTA as shown on Figure 32. And finally, all parameters of interest are available on an hourly basis on a 4x4 kilometre grid over an area upwind of the GTA encompassing the area shown in Figure 31 that covers the area from about southern New York State on the south to James Bay on the north and New England on the east to Manitoba on the west.

This data represents a GTA resource that can be mined for years by university students and other interested parties.

While this report demonstrated the wealth of the data set by looking in some detail at the Pearson Airport data, even that sub-set of data was not mined to the fullest extent possible due to budget and time limitations. In Volume 2 of this report, the same results, which are presented here in Volume 1 for Pearson Airport, are available for the 35 other locations across the GTA. All of this data could be more fully analyzed to optimize future City operations.

This study created a new concept for looking at details of future weather. As a result of this work the U.S. has undertaken a nation-wide 4x4 kilometre grid spacing study using the same weather model that was used for the 1x1 kilometre grid spacing that was used for this study. We also understand that the MOE and the University of Toronto is also undertaking a fine scale analysis based on this new concept.

The field of weather forecasting itself is also moving in a new direction in that there is under test today the Non-hydrostatic Multi-scale Model on a B-grid (NMMB) Model which is the first time that the global and local scales are directly linked in one model. This concept should allow a different more scientifically vigorous approach to future climate analyses as the local weather will be able to be driven directly by global changes without the need for "nesting".

The following additional analyses are suggested for future work:

1. Extend the data archive to 30 years for the future period so that a true climatology can be produced for the periods 2040-2069. This will put to rest the potential argument that a sufficiently long period of time has not been examined for the future cases;
2. Analyse the current data sets for those combinations of parameters that will inform City decision makers. This could include, but not be limited to:
    a. freezing rain statistics for various locations across the GTA;
    b. freeze-thaw cycles;
    c. combined periods of rain and freezing rain;

   d. extreme temperature fluctuations through the freezing point (say greater than 15 degrees over a 24-hour period);
   e. droughts; and

3. An analysis of the jet stream for both the current 10-year period and the two future periods using the 4x4 kilometre output to explore how the average jet stream position will change as climate warms thereby connecting, with hard data, the impact of the position of the jet stream on climate variability in Canada.

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APPENDIX A

Significant Weather Events from 2000-2009

APPENDIX A: SIGNIFICANT WEATHER EVENTS FROM 2000-2009

The information below was adapted from information developed by Environment Canada and available in the following website: http://ontario.hazards.ca/docs/collected-docs-e.html.

2000: The heavy rainfall in spring and early summer caused a temporary pause in the decline of lake water levels on Superior and Michigan-Huron, water levels on the upper lakes continued to decline in 2000. Lakes Michigan-Huron were the lowest since 1964. Superior was at its lowest level since 1925. Lakes Erie and Ontario experienced a reprieve in their declines; however, scanty rains in the fall dropped year-end levels close to their low marks of 1999. Depressed water levels were a hardship for recreational boaters. Several marinas undertook dredging to accommodate their clientele, while many owners of private docks were left high and dry. Commercial navigation also found this year to be a challenge, necessitating reduced loads to avoid running aground. Hydroelectric generation at Niagara Falls during the first half of 2000 was significantly reduced from the previous year.

Nationally, it was the third wettest summer on record in 53 years - some 13% more precipitation than normal. In Ontario, there was no day in June when rain didn't fall somewhere in the province. On average, every location had about 19 days with measurable rainfall, although a few had as many as 25 - normal is 10 to 13 days. Weekends were particularly nasty and this helped to magnify the wetness. The soggy, cool and cloudy weather wreaked havoc on the recreation and retail sectors. Business at marinas in the Great Lakes was down 25%, and park visitations in Quebec were off as much as 20%.

The summer featured fewer severe weather events in Ontario - 96 compared to the 150+ events in recent years. However, twisters and hailers gave way to an unprecedented number of heavy rainfall events, sometimes known as gully washers, accounting for more than a quarter of the severe weather episodes. Day-long torrential rains lashed parts of Ontario on numerous occasions - washing out roads, filling underpasses, cutting power and flooding basements to the rafters. Local and provincial authorities tending to the Walkerton E. coli outbreak in the local water supply suggested that heavy rains flushing cattle manure into the town's water supply might have been a factor. A rainstorm struck Muskoka on July 31 dumping rain in excess of 150 mm over four to five hours. Even greater amounts were unofficially recorded in Bracebridge - some 275 mm - more rain than Hurricane Hazel yielded in 1954.

Canadian farmers had a tough year. Another mild winter failed to kill off bothersome diseases and insects. And going into the growing season, most farmers were concerned by the lack of winter precipitation in recharging soil moisture and other water reserves. The wet conditions created an ideal breeding ground for insects and diseases like stem rot and blight. Virtually every major crop was affected by some type of virus, bacteria or fungi. Farmers everywhere became desperate for sunshine and growing heat units. The excessive moisture and disease not only reduced yields, but they also reduced the quality of most of the crop. Grain corn producers in Ontario had a disappointing year despite a record planted acreage. Production was 15% less than the previous year. Some farmers gave up planting and returned their seed; some growers resorted to chopping up hay and blowing it back on the field because it was worth more as fertilizer than feed.

On May 12, a tornado-like two-minute downburst tore into Niagara-on-the-Lake, Ontario. The storm brought hail, 140 km/ h winds and 40 to 50 mm of rain. Winds brought down 200-year old trees. Winds destroyed the roof and four of five chimneys in an 1832 historic inn. Total repair cost of the inn was at $1.5 million. Live hydro wires and poles were downed, blocking roads all over town. The storm disrupted a performance at the Shaw Festival, and knocked out power to the floral clock in Queenston.

2001: In downtown Toronto, the snow cover finally disappeared on the first day of spring, marking the end of a 104-day stretch of snow on the ground - the longest on record in 130 years.

Drought is a chronic concern in Canada but rarely has it been as serious or extensive as in 2001. The growing season across southern Canada was its driest in 34 years. The first day of summer seemed to promise Ontario farmers the best crop in years - seed was already in the ground, there was no early freeze or severe storms, and moisture and heat were adequate. Yet, just two weeks later, and then for six more weeks, the dry weather and heat desiccated virtually every crop except grapes. In the Great Lakes/ St. Lawrence region, it was the driest summer in 54 years of records. Right in the middle of the growing season, some of the best farmland in Canada (between Windsor and Kitchener) endured its driest eight weeks on record.

While wildfire potential across Canada was astronomical, actual fire losses were never lower. From Central Ontario east to Newfoundland, the weather remained hot and dry through the summer and the potential for wildfires increased daily. By the end of July, the drought code in Ontario was at record high ratings. Record heat and dryness in August only worsened the fire potential. Provinces moved quickly to impose open fire bans, limit logging operations and mobilize fire management resources.

On June 29, Toronto City issued its first ever "heat alert", warning of a 65 to 90% chance of increased mortality due to heat. The program puts emergency services on watch to assist those most vulnerable to heat spells - the homeless, elderly and the infirm. The program was just in time for one of the hottest summers on record for the city. The airport had 24 days above 30°C. More significantly, however, were the hot nights - there were 14 nights when the temperature stayed above 20°C -- the normal is five per year.

In the middle of the growing season, from June 23 to August 15, parts of southwestern Ontario experienced their driest eight weeks on record. Some areas received less than 15% of their normal rainfall during the 54 days. Over a stretch of 82 days, several communities in southern

Ontario had no significant rainfall (10 mm or less). To add to their misery, during the same period, some localities had 21 days with temperatures above 30°C, compared to the normal summer total of seven.

Record high temperatures across Ontario also saw the summer become the highest electricity-use season ever, with the top three electricity-use days on record on July 24, August 7 and 8. Pearson Airport reached its second warmest day ever with 37.9°C on August 8, and the city established new all-time records for both water and energy consumption.

Commercial navigation was brought to a virtual stand-still for two days after a major Great Lakes storm on October 25. Sustained southwesterly winds of 75 to 100 km/ h reduced the already low water levels by 1.5 m on the St. Clair and Detroit Rivers and the western end of Lake Erie, draining local marinas and causing over 50 ships to drop anchor or remain tied up at docks. Upbound traffic on the Welland Canal was also halted by the high winds.

2002: On January 31, a killer storm in southwestern Ontario brought a messy mix of snow, ice pellets, freezing rain and rain. Fierce winds with gusts up to 110 km/ h and a quick freeze turned the region into a skating rink. Five deaths across the province were directly attributed to the storm.

On March 9, a powerful weekend wind storm with peak winds to 138 km/ h hit southern Ontario. The winds toppled signs, broke tree branches and triggered power outages and accidents. Temperatures dropped from 21° to -7°C in just a few hours. Snow squalls aggravated the situation, creating whiteout conditions. In Toronto, the debris littered some city streets making driving difficult. Outside the city, 100,000 homes were left in the dark after eight hydro-tower lines broke.

Overall, Canada had its fifth coldest spring. Across southern Ontario and Quebec, a mid-April heat wave shattered high temperature records but it turned out to be a false spring. Just a week later, a wind-whipped storm left the Great Lakes region covered in snow, cold rain and ice pellets. Across the two provinces, a frosty Victoria Day weekend felt more like Remembrance Day as cold arctic air hung overhead bringing in a mixture of rain, ice pellets and snow as far south as Sarnia. Die-hard campers stocked up on blankets, hand warmers, toques and parkas.

The unseasonably cold weather critically delayed farmers planting their crops. In southern Ontario, farmers planted corn three weeks later which created problems when mid-season rains failed. Strawberry farmers irrigated around the clock in an attempt to save the plants from frost. The cold also delayed the forest fire season by up to two weeks in areas from Ontario westward.

Golfers and gardeners had been teased all winter by little snow and balmy temperatures and had hoped for an earlier spring. Garden centres and outdoor attractions were virtually empty for much of the spring. Retailers blamed the persistent cool weather for a 30% drop in the sales of weather-sensitive goods and services, such as pools, air conditioners and warm season apparel with many Canadians putting off or outright canceling purchases.

Pearson Airport had its driest August ever since 1937. For the Great Lakes region, concerns were escalated because five of the last six summers had been drier than normal. Most crops were late getting into the ground because of the cool, wet spring. And while hot dry conditions early on helped corn and soybean production, the lack of rain meant plants couldn't sustain their growth. In the cities, scant precipitation ravaged thousands of trees. Many died, while others just hung on or were badly stressed which made them vulnerable to pests and disease.

At Toronto, the average June 1 to September 30 temperature was 21.5°- a whopping 3.2 degrees warmer than normal and the warmest ever in 63 years. The number of hot days above 32°C was 23 (normal is 5) and hot nights above 20°C a record 19 (normal is 5). Life in the big city was not only hot and steamy, but also downright stinky because of a ten-day garbage strike. Toronto declared 15 heat-alert days and two heat emergencies, the third greatest number of heat days with records dating back to 1955. The blistering heat prompted people to crank up air conditioners, leading to record energy consumption.

2003: On April 3 to 4, a rare mid-spring ice storm struck southern Ontario. The storm was the most damaging of the winter because of its duration and the amount of ice accumulation. Adding to the chaos, most private snow-clearing contracts had expired April 1. The Ontario Provincial Police fielded 900 calls from Toronto-area highways alone. Pearson Airport became a parking lot of grounded planes with ice-caked wings. Ground crews used up a month's supply of glycol de-icer in just 24 hours.

A fierce windstorm on November 12 and13 blew across most of the province felling trees and cutting power to 100,000 customers. The Georgian Bay-Muskoka area was the hardest hit because lake snow squalls produced zero visibility in whiteouts and made restoring service difficult.

2004: In Hamilton, 137.6 mm of rain fell in May breaking the 2003 record of 129.4 mm. For farming communities, it was the third year in a row that spring weather had hit hard. Heavy rains, little sunshine and few warm days in May left fields across Ontario soggy and muddy. Many farmers had still not planted and several growers decided it was best to switch to soybeans instead of more profitable corn.

Following torrential rains early on July 15, a flood swamped Peterborough's downtown. Elements of the large weather system could be traced back to the storm that flooded Edmonton five days earlier. That storm worked its way slowly across the continent and locked in just east of Peterborough on July 14. Energized by cool air from the north and re-supplied by cargoes of moisture from the south, the storm unleashed an intense thunderstorm that continued for several hours.

Official rainfall amounts were quite variable ranging from 100 mm at the airport to 240 mm at Trent University. Much of the rain fell in less than five hours in the early morning, forcing many residents out of bed and into the street. Bucket surveys using exposed plastic pails, garbage cans and other previously empty vessels revealed rainfall totals exceeding 235 mm in many neighbourhoods. And rain fell for the next five days. Observers at the Trent University weather station recorded 409 mm of rain in July, smashing the total precipitation for any month of the year.

The volume of water proved too much for Peterborough's drains and sewers, some of them built a century ago. However, few cities in North America could have handled the phenomenal 14 billion litres of water that arrived at Peterborough in less than five hours. That's enough water to flow over Niagara Falls in about 40 minutes or to fill almost nine SkyDomes. It was one of the wettest days ever in Canada east of the Rocky Mountains and likely the wettest day ever in Ontario, estimated to be a one-in-200-year event. At the height of the Peterborough storm, water in the city's wastewater system was five times the average capacity. With backed up storm sewers, much of the downtown core and a third of the city proper was under a metre or more of water. The Mayor declared a state of emergency that stayed in effect for 15 days. Hundreds of residents fled to shelters when roofs collapsed or water filled basements. Muddy waters turned streets into rivers, closed businesses and left cars floating. Power and telephone outages lasted for days and the clean-up took weeks to months. Some roadways and sidewalks had to be completely rebuilt.

An early estimate of insured losses exceeded $88 million. In addition, the Province of Ontario provided $25 million for emergency repair and restoration costs for city infrastructure. Consultants recommended that Peterborough spend upwards of $30 million for possible storm water and sanitary sewer system improvements over the next five years.

In November, a young boy died on a trip to the Royal Botanical Gardens in Hamilton when a falling tree struck and fatally injured him. The tree was 10 metres tall and a metre around at the base. It had been windy and cold that morning, but the weather was not severe. Sustained winds were clocked at 44 km/ h, gusting as high as 52 km/ h.

2005: Across southern and eastern Ontario, January 17 felt more like April or May when temperatures rose briefly to 18°C. In Toronto and Niagara the temperatures shattered previous high temperature records for January. In fact, at Toronto - in the midst of the usual dead of winter - the city experienced its warmest day ever in any January or February, with records dating back to 1840. The last time the city came close was 16.7°C on January 25, 1950. People savoured the moment, unzipped their coats, and left hats and mitts at home. The crazy temperatures were enough to close some Ottawa area ski resorts and further damage snowmobile trails.

A vigorous Alberta clipper which swept through southern Ontario on January 22 brought treacherous blizzards, blinding whiteouts and dangerously low wind chills. The highest snowfall totals were recorded near the west end of Lake Ontario where easterly winds blew embedded lake-effect squalls inland. Blowing snow created large drifts and reduced visibility to near zero. The OPP reported more than 800 accidents, mostly in the Toronto and Niagara region, and stretches of Highway 401 were closed with whiteouts and black ice.

A belated April Fool's Day storm lashed southern Ontario with upwards of 35 cm of heavy wet snow and 50 mm of rain, along with winds from the northeast gusting between 50 and 80 km/h. The blast of winter-like weather created traffic chaos. The mixed precipitation event led to 500 accidents. Further, the storm knocked down power lines in several areas of southern Ontario, leaving thousands of people in the dark. The highest amounts of precipitation occurred over the Niagara Peninsula.

The summer of summers began with the warmest June ever, and the record-breaking trend continued into July, August and beyond. For traditional hot spots such as Windsor and Toronto, June-to-August was the warmest on record. Of significance was the number of hot days (>30°C) in Toronto. Normally, the city gets approximately 14 hot days a year. In 2004 there were only 3 hot days, but in 2005 there were 41! Toronto issued eight heat alerts and 18 extreme heat alerts for a total of 26 heat days. The previous record was 19 in 1991.

At Toronto, the number of days with humidex values greater than an uncomfortable 35 reached 44, tying the record in 1955 and 2002. The summer also featured the longest-ever bout of jungle-like humidity lasting 13 consecutive days beginning on July 10. In Toronto, minimum temperatures were a sweltering four degrees warmer than normal. Further, there were 25 nights in which the minimum temperature did not drop below 20°C (i.e. tropical nights), breaking the previous record of 19 in 2002.

On the afternoon of August 19, a line of severe thunderstorms tracked eastward across southern Ontario from Kitchener to Oshawa, including the northern half of Toronto. In its wake, the storm left a trail of damage that, according to the Insurance Bureau of Canada, represented the highest insured loss in the province's history, exceeding $500 million. That's more than two and a half times Ontario's losses during the ice storm of 1998 and the second largest loss event in Canadian history.

Literally dozens of thunderstorms were popping up at any one time. At its worst, the system spawned two F2 tornadoes with gusts between 180 and 250 km/ h. The first tornado tracked through Milverton to Conestogo Lake (west of Elmira). The second moved from Salem to Lake Bellwood (north of Guelph). The twisters uprooted hundreds of trees, chewed the limbs off of countless others, downed power lines, tossed cars and trucks aside, and ripped into several homes, cottages and barns. To illustrate the storm's incredible force, at one farm, the twisting winds drove a ballpoint pen seven centimetres deep into a tree, splitting the trunk.

Although a rare tornado warning was issued for Toronto, the storm packed a different wallop as it approached from the northwest. The storm featured torrential rains, quarter- to golf-ball size hail, strong straight-line winds and flash flooding. During the height of the tempest, wind gusts peaked at 72 km/ h and there were 1,400 lightning strikes per minute. However, it was the flash flooding that caused the greatest destruction. The storm dumped 103 mm of rain in one hour across a swath of North York and surrounding area. That compares to 53 mm in one hour from Hurricane Hazel in 1954. At Environment Canada's Downsview offices, 130 mm of rain fell - 100 mm in less than an hour - an unprecedented amount for any storm in Toronto, and easily greater than the one in one hundred years storm. The deluge flooded two floors of the Downsview building, prompting employees to huddle in the basement and interior auditorium in order to ride out the storm. A block or two to the north in Thornhill, a weather watcher emptied her rain gauge at 175 mm. Around the city, torrential rains snarled traffic and stranded drivers. Fire services responded to more than 1,000 calls. In one dramatic scene, marine services personnel rescued four people who fell into the fast-moving currents of the Don River.

An early tally found that there were over 15,000 insurance claims submitted for sewer backups caused by torrential rains and for structural wind damage. Not included in the insured losses were enormous infrastructure damages across the city. For example, about 30 m of Finch Avenue West was washed out.

At the end of August, the remnants of Hurricane Katrina tracked parallel to the axis of the Lower Great Lakes and the St. Lawrence River drenching a narrow swath of southern Ontario from Long Point to near Hamilton with 100 mm of rain.

At times during the summer, residents across Ontario and southern Quebec either enjoyed or endured bouts of torrid heat and insufferable humidity. Combined with a record number of smog days, it was easily one of the hottest, sweatiest and dirtiest summers ever. And what a contrast to 2004 when summer went missing - it was either too cool, too wet or too cloudy for the likes of most people. If 2004 was the year without summer, 2005 was the year summer wouldn't end.

With excessive heat, loads of sunshine and sluggish air circulation, frequent smog days occurred. At times, the smog was so thick that the CN Tower was only partially visible from a distance. The Ontario Ministry of Environment issued a record-breaking number of smog advisories from May 1 to September 30, covering 42 days across the province. There were 38 advisories in Toronto. June had exceptionally bad air, with smog advisories covering 20 days (two-thirds of the month). One episode lasted an unprecedented eight days.

At least six deaths in Toronto were blamed on the relentlessly hot summer, and that's likely just a fraction of the real mortality rate due to heat and smog. It was no surprise that power consumption was at an all-time high. Ontario's electricity manager issued more than a dozen emergency appeals to reduce power consumption in order to avoid rotating blackouts. With megawatts of power flowing at record levels, the province had to dim voltage by 5%.

By Labour Day, summer came in as the warmest on record. But it didn't stop. The 6-month period from June to November turned out to be the warmest on record across parts of Ontario and Quebec.

November is one of the windiest months on the Great Lakes. Gales of November have accounted for nearly half of the ship wrecks in those waters. The location of the lakes in the interior of North America, between the source regions for contrasting arctic and tropical air masses, often brings the region rapidly changing and explosive weather systems. In November, along the overriding jet stream, developing cyclones track eastward into the Great Lakes where they often get an extra shot of energy from the relatively warm lake waters. Lows are often stronger than at other times of the year. These nasty storms are called "witches of November".

In the first week of November 2005, a vicious "witches" storm hit the lower Great Lakes region packing wind gusts of 90 km/ h. South of the Great Lakes, the storm spawned a deadly tornado in Indiana that killed 22 people. In Ontario, damage was - for the most part - minor and localized. In Hamilton, the storm tore down trees, ripped hydro lines, blew around recycling boxes and debris, and downed traffic lights. The strongest winds were generally reported over higher ground and in exposed areas to the lee of the Great Lakes. Hydro One reported up to 70,000 customers without power across the province.

On November 9, another line of storms moved through the province. The day proved to be one of the wackiest weather days ever in Ontario. Temperatures climbed to a balmy 20°C in Windsor, Ottawa experienced freezing rain, Barrie had snow and Hamilton saw a rare tornado. The Hamilton twister struck about 4 p.m. and lasted 10 minutes. As an F-1 category tornado, it packed winds up to 180 km/ h, giving it the strength to pick up and toss around dumpsters, cause walls to buckle, roofs to peel back and cars to flip over. The tornado carved a narrow 7-km path through the city, causing extensive damage to some homes but sparing their next door neighbours. The twister damaged a school and lifted the gym's roof off its foundation. At least a dozen homes were so badly damaged that residents couldn't move back in. Miraculously, only two children suffered minor injuries. The twister was only the third to touch down in Canada later than November 9 since record-keeping began in the early 1900s. The other two Ontario tornadoes touched down in the southwestern communities of Leamington (November 29, 1919) and Exeter (December 12, 1946).

A third major "witches" brew struck southern and central Ontario on November 16 and 17. Wind gusts reached as high as 100 km/ h. Hydro One reported that fierce winds knocked out power to more than 50,000 customers across the province. Power restoration was difficult because in some instances sustained winds felled power lines two or more times. Roads in Toronto were flooded and houses in one neighbourhood were evacuated when a retaining wall weakened. South of the Great Lakes in the United States, the weather again caused more serious damage, triggering 35 tornadoes. In Hamilton, the sound of the wind only reminded some residents of the tornado just a week before.

2006: An extensive area of freezing rain moved across Southern Ontario on January 17-18. Several locations reported between 2 and 5 mm of ice accretion. Surfaces from Kitchener to Muskoka to Ottawa were coated with glaze for up to 8 hours. Untreated icy surfaces resulted in a plethora of traffic accidents and nasty slips and falls. Many hydro customers lost power as freezing rain and wet, heavy snow combined with high winds to take down power lines.

On February 5-6, an intense, long-lived snow squall howled on for 48 hours across Southwestern Ontario. The storm closed highways, toppled trees and hydro poles and left thousands of hydro customers without power.

A large but not powerful storm struck southern portions of Ontario and Quebec from Windsor north to Sudbury and east to Gaspe on February 16-17. Its impact was enormous because the storm featured an array of severe weather conditions: high winds, a flash freeze, brutal wind chill, black ice, whiteouts, drifting and blowing snow, a rare thundersnow, and an incredible variety of precipitation types: rain, freezing rain, wet snow, ice pellets and a congealed mixture of all of the above. The nasty weather led to massive multi-vehicle crashes killing at least five people and leaving highways strewn with a trail of smashed cars and trucks.

In total, 23 tornadoes struck the province - more than the normal 14. But it was three big summer wind blows that created unprecedented havoc across Ontario.

On July 17, 2006, a series of powerful storms ripped from Manitoulin Island to North Bay and Mattawa, then on to Deep River and into Quebec. The hot, moist air mass that had been baking residents for days lifted as a cold front approached. The atmosphere exploded, firing off a myriad of wild winds - funnel clouds, straight-line winds, microbursts and tornadoes. The fast-moving, well-organized storm dealt a large swath of damage nearly 400 km long. While intermittent, a Warning Preparedness Meteorologist in Ontario stated the storm track was one of the longest in Ontario's history. The storms scythed across the province, splintering trees, snapping hydro poles and downing power lines. The combination of strong winds, lashing rain and thousands of lightning strikes left many communities in chaos, prompting several municipal leaders to declare states of emergency. At the end, two people had been killed and 250,000 people were without power. The region around North Bay, Callander and Mattawa was hit the hardest. North of Toronto in Newmarket, two tornadoes packing winds up to 180 km/ h did considerable damage to a factory and an apartment roof, and carried fencing more than 200 metres. Over all, though, it was the hydro outages that caused most of the grief across Ontario. High-voltage circuits were downed and electricity poles snapped like twigs. Numerous transformer stations were also damaged. More than 800 hydro workers were involved in the restoration effort and, according to the provincially-owned utility Hydro One, this series of storms inflicted the worst damage to the provincial power grid since the 1998 ice storm.

Sweaty Ontario residents struggling to keep cool in sweltering temperatures broke power consumption records on August 1. Demand hit 27,005 megawatts at 5 p.m., beating the old record of 26,160 megawatts set in July 2005. The maximum temperature at Pearson Airport was 36.6°C with a humidex of 45. At Buttonville Airport, north of Toronto, the mercury soared to 38. Records for the day were set at Hamilton. That night the temperature dropped to 26.3, setting an all-time nighttime heat record for the Toronto International Airport. Downtown Toronto's most sultry night was on July 5, 1999 at 26.4°. The normal nighttime low for late summer is about nine degrees cooler.

In Ontario, a second major storm hop-scotched through hundreds of kilometres of cottage country on August 2-3 leaving properties once again in shambles. At Combermere, north of Bancroft, an F2 category tornado packing winds between 180 km/ h to 240 km/ h inflicted extensive damage. Its twisting winds tossed docks on shore and pushed cottages off their foundations. Towering, century-old pines were reduced to stumps and de-barked. In Gravenhurst, the storm peeled back the roof of the local curling rink. It was a miracle that no one was killed or seriously injured. Environment Canada confirmed that the weather system on August 2 triggered 14 tornadoes, including two F2 touchdowns. It was the highest number of tornadoes for a single event ever in the province and represented what Ontario normally sees in one year.

Hydro One and the Insurance Bureau of Canada estimated that the two big summer storms cost nearly $100 million. The storms left hundreds of thousands of residents without power for five days and whole sections of the electrical grid needed reconstruction. Over 1,000 poles and more than 200 transformers had to be replaced.

On September 23-24, a third major storm left more than 90,000 Hydro One customers without power in the Georgian Bay area. More than half were still in the dark four days later. Like previous storms that summer, this one also inflicted damages and outages in Quebec. Gusts peaked at 93 km/ h in Montreal, knocking down trees, damaging buildings and leaving as many as 100,000 Hydro-Quebec customers without power for several hours.

A powerful pre-winter snowstorm on Friday, October 13 buried communities in the Niagara Peninsula of Ontario in 30 to 50 cm of wet snow. The surprise snow dump forced the closure of the Peace Bridge crossing to the United States. Officials in Fort Erie and Port Colborne declared states of emergency. The heavy snow and strong winds of up to 90 km/ h caused snow- and leaf-laden tree branches to snap onto power lines leaving more than 155,000 customers without electricity. In some pockets of the outage, it took up to five days to restore service. The amount of snow so early was an historical first. No snow had ever fallen at Fort Erie before October 13 and the previous heaviest October snowfall was a scanty 4.5 cm on October 31, 1993. In one day, it became the earliest and heaviest snow ever in October. At Welland, where weather records date back to 1872, the snowiest day prior to October 13 was 10.4 cm on October 11, 1906. The greatest October single-day accumulation was 20.3 cm on October 31, 1873.

2007: Owing to a persistent flow from the south and west, much of Canada experienced an incredibly mild beginning to winter. Until the third week of January, winter's temperatures were closer to those expected in fall and spring. In Niagara region, ice wine producers sat idly by as birds ate their grapes.

The beginning of winter in December 2006 was spectacularly mild across Canada, setting a record for the warmest in the past sixty years. By the first official day of winter, most Easterners still hadn't experienced any significant cold or snow. Less than a centimetre of snow had fallen in Toronto.

A protracted January thaw dealt a crippling blow to Ontario ski operators. Blue Mountain Resorts laid off over 1,300 seasonal and part-time employees for more than three weeks. It was the first time the resort had been forced to shut down after a season opening. With such mildness, a lot of mice, bats, rats and other pests were busy breeding not sleeping. Even frogs, flies and bees were out and about. African animals at the Toronto Zoo were spending hours outdoors. The mindset was that winter was cancelled. For beleaguered retailers, long underwear sales stalled and snow shovels and winter boots filled store shelves. The good news was that the mild weather meant lower heating bills. In the first half of winter, residents in Ontario and Quebec saved 15 to 20% on their home heating bills. Municipalities saved millions in snow removal costs and re-deployed workers for pothole repair. With air temperatures more like April than January and the ground free of frost, construction workers put in long hours in unseasonably mild and dry conditions. Paramedics reported fewer cases of frostbite and hypothermia. And it wasn't cold or snowy enough to warrant weather-induced heart attacks.

Apart from areas directly to the lee of the Great Lakes, total seasonal snow didn't amount to much. At Toronto, it was the second least snow amount ever in winter - 60.3 cm compared to a norm of 115.4 cm.

A massive winter storm stretching halfway across North America packed a lot of wicked weather - from terrible tornadoes in Louisiana to Paul Bunyan-sized snowfalls in southern Quebec - along with a good amount of rain, freezing rain, ice pellets and biting wind chills. The powerful winter storm slammed into Ontario and Quebec just prior to and on Valentine's Day, forcing the closing of schools and sending cars and trucks spinning into ditches. In Toronto the weather forced countless delays and flight cancellations, mostly to large American cities.

Hamilton-Burlington, Ontario took the brunt of the storm as frigid air blowing over warm lake waters created a narrow snow band aimed directly at the western end of Lake Ontario. It dumped between 40 and 70 cm of snow in the area. Environment Canada reported 30.4 cm on February 13, making it the snowiest February day on record; 16 cm the next day made it the snowiest Valentine's Day ever. The combination made for the greatest two-day snowfall in Hamilton's history. The storm caused nearly 1,000 accidents across southern Ontario, including a 70-car pile-up near Ancaster. More than 3,000 calls were made to road-side services, mostly for pulling cars from snow banks and fixing flat tires.

The first week of March brought with it a storm that raced from Windsor to Ottawa. The weather featured everything: heavy snow, ice pellets, rain, freezing rain and some accompanying thunder and lightning. Adding to the misery were some strong gusty winds that drove the stinging mixture into the faces of pedestrians and reduced visibility to zero for motorists. Those opting for public transit faced long waits and a 30-minute commute took three hours. The weather forced delays or cancellations to more than 100 flights at Pearson Airport. Toronto's Woodbine Racetrack cancelled its evening races and the University of Toronto shut its doors. Even Pizza Pizza stopped guaranteeing deliveries within a certain time.

During a wind storm (March 2), sheets of ice - some 2 cm thick and the size of table tops - blew off the CN Tower and other buildings in the heart of downtown Toronto. Ice chunks fell at speeds up to 360 km/h from more than 300 metres onto the Gardiner Expressway below. The falling ice damaged several parked cars, cracked windshields and dented roofs. Fortunately, no injuries were reported and most pedestrians seemed unfazed. One downtown hotel supplied guests with hardhats for the dangerous walk outside. Experts said this was the first time in the CN Tower's history that ice had built up on the structure. Winds gusting to 65 km/h smeared a wet snow-rain mixture across the concrete walls where it flash froze. Direct sunlight began melting the mass and helped by the wind, chunks of ice began breaking off the tower's frozen concrete walls.

On March 5, powerful winds whipped old and new snow into blinding whiteouts north of Toronto closing stretches of Highway 400 between Toronto and Barrie. One chain-reaction crash involved 75 cars, trucks, semi-trailers and a casino bus. Rescuers tried for hours to free two men who were trapped in mangled steel. Rural roads were treacherous, blocked by deep snow piled by strong gales and blizzard conditions. Officials halted school bus service, forcing parents to fetch their children. Even snow ploughs were taken off the roads.

On April 23, power was knocked out in areas from Windsor to Ottawa as a ferocious thunderstorm battered the southern half of the province. The brief but intense storm featured wind speeds up to 100 km/h and torrential rains. Hydro poles across the Greater Toronto Area snapped like twigs, leaving power lines dangling. Rush-hour traffic stalled when scores of traffic lights went out of service.

On June 8, the south got hit again as a fast-moving storm downed countless trees and power lines across the area. There were unconfirmed reports of funnel clouds near Brantford and Hamilton. With winds gusting above 100 km/h, the storm blew down huge trees, power lines and branches, leaving at least 130,000 Ontarians without power.

For the majority of city dwellers in southern Ontario, it was a summer to remember with record warmth, perfect weekends and little weather. The number of hot days above 30°C ranged between 20 and 30 -- two to three times the normal. On the 31 weekend days and holiday Mondays from June 1 to Labour Day, Toronto had only five wet ones (often just a sprinkle). Most residents in the south didn't want summer to end.

What was good for campers and beach bums was bad for farmers and gardeners. Although not a drought by Prairie standards, southern Ontario's drier weather could only be rivaled by conditions not seen in the region since the 1930s. Burned grass, cracked soil, curled up leaves, shriveled corn cobs, and dying trees - even dandelions were dying. Grass fires sparked by dry conditions prompted many local fire departments and bans on open fires. Water alerts were issued early and often.

Ontario farmers planted a record corn crop estimated at 880,000 ha. The results were disappointing but yields varied as much as the rainfall, ranging between 40 and 550 bushels per hectare just a few concession roads over. On the other hand, fruit and grape growers in Niagara were delighted by the warmth, abundant sunshine and disease-free conditions. They couldn't recall a year with better fruit flavour.

The prolonged drought prevailed across a broad swath of Ontario from Chatham north to Peterborough. No area showed the wear-and-tear of drought more than Toronto. Pearson Airport experienced its driest summer in nearly 50 years and a string of 95 consecutive days without a significant rainfall (above 12 mm) in the middle of summer. Between January 1 and October 31, the Greater Toronto Area (GTA) experienced its second driest on record. Toronto received only 413.2 mm of precipitation, which is about two-thirds of normal levels. To the north in York Region, it was even drier. In Hamilton, between May and August, 141 mm of rain fell, which is only 37 per cent of the normal accumulation. It was the lowest rainfall total since record-keeping began in 1959.

A narrow tongue of extremely warm air with sauna-like haze and humidity reached into southeastern Canada from the American south during early October, pushing temperatures 10°C above normal. On the Thanksgiving weekend, with turkeys roasting in many kitchens across Eastern Canada, outdoor temperatures soared to well above 25°C - unprecedented so late in the year.

Toronto was one of the hot spots at 31.5°C with a humidex reading of 39 - uncomfortable conditions for the dog days of summer let alone on Thanksgiving! Until 2007, the warmest Thanksgiving on record in Toronto was in 1949 when the temperature hit 26.1°C. Among the cities setting new records of 30°+ were Hamilton, Toronto and Niagara. Typically in southern Ontario, temperatures hover around 15°C on the Thanksgiving holiday weekend, making a reading of 32°C for four days in a row - a record for the latest-in-the-season, and the longest consecutive string of +30°C days in October on record for both locations. The Thanksgiving weekend was the hot mark for what became the warmest October and warmest September-October on record in southern Ontario.

On November 22, freezing rain and snow played a role in at least two highway deaths as the first major storm of the winter smacked the south. A crash-a-minute during the morning rush-hour was the going rate, not that unusual for the first winter storm. The combination of freezing rain mixed with snow and ice pellets in Arctic air created chaos on the roads, forcing temporary closures of many major highways. Several school boards north and east of Toronto cancelled buses. Toronto took the unusual step of issuing an extreme cold weather alert fearing homeless people had not yet acclimatized to sub-zero temperatures.

On December 3, Ontario struggled through its first big winter storm that featured a mixture of snow, freezing rain, ice pellets and rain.

2008: Early in January, a pronounced thaw enveloped Canada. The unusual prolonged and national meltdown sent temperatures soaring for millions of Canadians from Alberta to the Atlantic. Vineland, Ontario was the nation's hot spot with a record-setting 17.4°C on January 8 - warmer than San Francisco and Madrid.

On January 9, a fast-moving cold front ripped through southern Ontario, bringing an abrupt end to the winter thaw. At the Toronto Buttonville Municipal Airport winds flipped over two light planes. Fierce winds also sent spent Christmas trees airborne, scattered recycling boxes, and forced a large section of downtown Toronto to be closed when debris started plummeting from 58 stories above to the streets below. Tens of thousands of people who work in Toronto's financial district were forced underground. GO Transit commuters were also delayed because chain-link fencing and other debris blew onto tracks.

On January 20, a highly localized squall turned Highway 400 north of Toronto into a parking lot of twisted metal, trapping several people in their vehicles in bitter cold. More than 100 vehicles were involved in chain-reaction accidents caused by blinding, wind-whipped whiteouts. It was snowing so hard that conditions resembled dense fog. Dozens of people were injured in the crashes, but no one was killed, in part because poor visibility had already forced drivers to slow down. Buses were brought in to remove shivering folks stuck in sub-zero temperatures that were made even colder by fierce winds.

At the end of January, the combination of wicked winter chill, strong winds, and whiteout conditions left about 90,000 Hydro One customers in southern and central Ontario without electricity. The strongest winds were recorded in Niagara's Port Colborne at 126 km/h.

Following the passage of a sharp cold front on February 1, another "old-fashioned" winter storm walloped much of southern and eastern Ontario with 30 cm of snow, freezing rain, ice pellets, and wind gusts of 70 km/h in sub-zero temperatures on Groundhog Day. Ontario Provincial

Police responded to hundreds of minor crashes on area highways the vast majority single-car spinouts into ditches or guardrails. The storm forced the cancellation of more than 150 flights at Pearson Airport.

After enduring a particularly rough winter full of snow, slush and squalls, Hamilton was blessed with an entirely snow-free March and the lowest spring snowfall on record. The total March-to-May snowfall was 5.0 cm - all of it in April. The previous lowest snowy spring was in 1988 with 8.8 cm. In fact, there wasn't a measurable amount of snow from February 23 to April 6 - 42 consecutive days from the middle to the end of winter.

Ontario endured one of the longest and snowiest winters in years. At times, even snow enthusiasts had had enough and were desperate for spring. Every winter sees snow on the ground for weeks at a time, but not every winter has snow falling almost every day. Winter 2007-2008 was defined by the amount of snow and the record number of snow events. The Great Lakes and St. Lawrence River Basin registered its third-wettest winter in 61 years, with most of the precipitation falling as the white stuff. Among locations recording above 500 cm of snow was: Muskoka, 558 cm. Another location with a new seasonal snowfall records was Toronto's Buttonville Municipal Airport (250.8 cm).

Toronto's snow total was 194 cm, just 13 cm shy of the record set 70 years ago. Toronto's third-snowiest winter followed its second lowest the winter before of just 60 cm.

In Toronto it was record wet. Pearson Airport eclipsed its rainiest summer mark with more than three weeks left to the season. The total rainfall of 396.2 mm shattered the former high water mark by more than 60 mm. But it wasn't just Torontonians cursing the wet summer. Hamilton had the dubious honour of being the sound and light capital of Canada in 2008, with thunderstorms on 28 days and for 77 hours - well above the average of 16 days and 23 hours.

The incessant rains disappointed golfers, campers, fair-goers and picnickers. Golf course revenue was down by more than 15 per cent. And patio scene at bars and restaurants in urban Canada saw business plummet 25 per cent. At times, heavy rains flooded basements. In one incident in Toronto, a deluge in excess of 50 mm led to the fiery destruction of an apartment building's hydro vault, leaving 1,000 residents homeless for several weeks. Roofers and plumbers were never busier, but house painters sat it out or worked inside. For people allergic to pollen, ragweed, mould and other air-borne maladies, it was a terrible summer of wheezing, sneezing and sniffling. Excess moisture not only boosted volumes of grass pollen and ragweed, it also extended the growing season.

There were some who enjoyed the moist, temperate conditions because grass was lush, gardens were luxuriant and trees were healthier and less stressed than in recent years, leading to some spectacular fall colours. Forest fires were the lowest in number in 25 to 50 years. Wet weather helped reduce the threat of smog days and air conditioning bills were lower than in recent years.

Lake levels were up compared to recent years when levels were well-below average - a help for shipping, recreational boaters, marinas and hydro generation.

The rain spelled ruin for many growers in Eastern Canada in 2008. In Eastern Ontario and parts of southwestern Ontario, the first hay crop came in mid-August or later, never so late before and of poorer quality.

A couple of days before the end of October, thousands of residents in Ontario and Quebec woke up to between 10 and 20 cm of wet snow and strong winds. The storm was whipped up by a fierce nor'easter on the east coast of the United States that dragged arctic air across the Great Lakes. Driving conditions were treacherous in zero visibility; however, drivers seemed to exercise surprising care during winter's first blast. High winds and heavy snows falling on trees still thick with leaves wreaked havoc on hydro in eastern Ontario.

This year was the third snowiest winter on record and the rainiest summer. That meant it was the wettest year on record if you lived in Toronto. Annually, the city records 793 mm of rain and snow (water equivalent) on average. By September 13, Pearson Airport had already reached its normal 12-month moisture allotment. Precipitation totals from January 1 to August 31 and every month following broke the previous record. With only 21 mm needed in December, the wettest year record (971 mm in 1977) was also up for grabs. On December 10, total precipitation for the month amounted to 24.8 mm - enough to break the record for the wettest year on record at Pearson Airport. What was even more shocking was that the record wet year followed one of the top three driest years on record in 2007, when the yearly total precipitation amounted to 593 mm.

Up to the end of November, wet days numbered 145 in Toronto compared to an average of 130 days. The number of significant rain days with 25 mm or more numbered ten, compared to the norm of four.

2009: Across southwestern Ontario, the end of the second week of February featured around-the-clock warmth, copious rains and gusty winds that induced significant mid-winter snow melting leading to sudden flooding in low-lying areas. Two factors added to the problem: the ground was frozen and couldn't absorb the rain; and there was ice jamming on some rivers. In less than one week, the deep snow cover declined from 40 cm to bare ground in the midst of near double-digit temperatures and the third rainiest (41.2 mm) February day in 70 years.

On July 26, a huge storm cell stalled over the western end of Lake Ontario dumping copious amounts of rain. As lightning strikes shook the area, a growing deluge knocked out power and flooded streets. Hamilton was hard hit. Waves of thunderstorms pounded the city, leaving citizens with flooded basements and motorists stuck in traffic caused by road closures. The midday downpour turned Red Hill Creek near Stoney Creek into an angry brown torrent that forced the closure of nearby roads and highways. In intersections and parking garages, flood waters rose to the height of vehicle door handles. Water gushed into 7,000 basements and power was shut off to thousands of customers. While the Hamilton Airport observed only 28 mm of rain, radar estimates confirmed rainfall amounts in an unofficial gauge totaling 109 mm in two hours - worse than a 100-year storm and one of the most intense short-duration rainfalls on record in Canada. Conditions were made worse because the ground was super-saturated from storms two days earlier. Flooding turned streets into rivers and insurance losses totaled between $200 and $300 million.

In Toronto, parts of Lakeshore Boulevard near the Exhibition grounds were submerged. To the north, a pair of giant sinkholes swallowed part of Finch Avenue West - big enough to hold a fleet of cars and deep enough to cover a four-storey building. In places, water squirted through basement walls and gushed more than a metre high through manhole covers. In Oakville, the relentless rains played havoc with the Canadian Open Golf championship for the second year in a row.

During a severe thunderstorm on August 4, forecasters issued a rare tornado warning for Toronto. While no twister occurred, the weather brought heavy rains, hail, lightning and winds in excess of 100 km/h. The storm battered and flooded the city, leading to travel chaos with shut-down GO stations, diverted buses and disrupted flights. The weather even delayed the Atlantic premiers from boarding their connecting flights to the Saskatchewan meeting of Canadian premiers and territorial leaders.

For weeks, Ontarians had been bemoaning the absence of summer. Finally, on August 9, nature responded with a full suite of summer offerings. The day began with oppressive humidity and pounding thunderstorms across southern Ontario. In Kitchener, the temperature soared close to 30°C with a humidex value approaching 43. A severe line of storms darkened skies shortly before noon, sending people scrambling for cover as rain came down in sheets and lightning flashed every few seconds. Through Orangeville-Caledon-Barrie-Coldwater-Cookstown-Aurora, wind gusts peaked close to 100 km/h, downing several hydro poles, trees and flag poles. Storms left more than 40,000 Hydro One customers without power. Winds in Hamilton ripped the roof off of a house and the television antenna off another. Winds reached 96 km/h at Pearson Airport, where there was a brief power outage, reports of hail and dozens of cancelled or delayed flights.

A highly complex, severe weather outbreak struck the province on August 20. Shortly after noon, a supercell storm developed just south of Lake Huron and tracked northeastward for 200 km. The heat and humidity hanging over Ontario increased once the clouds disappeared. A low-level jet stream across the region fed more moisture into the storm; shearing winds helped trigger several violent vortices. At the same time, a squall line developed over Lower Michigan and travelled across Ontario. This system produced straight-line winds northeast of Toronto and destructive tornadoes in Vaughan and Newmarket. In total, the day's weather produced at least 18 tornadoes (a record for the most tornadoes in one day in Canada), including: four F0; ten F1; and four F2. That was the greatest number of F2 tornadoes in Ontario in one day since the Barrie/Central Ontario tornadoes of May 31, 1985. Violent winds snapped trees, lifted roofs, flattened cars, mowed down fences, collapsed farm buildings, and inflicted property losses around $100 million. After one of the wettest summers on record, Ontario residents finally got some decent weather in September with a sunny dry spell unmatched in more than 70 years. According to Environment Canada, there wasn't a trace of rain in Toronto from August 31 to September 18. A similar dry period hasn't happened since the fall of 1938, when Toronto enjoyed 26 days without a drop of precipitation - surprising because September usually has the most rainy days of any month. The dry spell was also sunny and warm, with 50% more sunshine and temperatures about 3 degrees higher than normal. In Hamilton, the record dry September (22 days straight with no measurable rain) came on the heels of its second wettest summer on record - 410.2 mm compared to the average of 251 mm.

An unusually mild and storm-free November in Toronto had no snow falling at a weather observing site. It was the first snow-free November recorded since 1937 at Pearson Airport. Even more remarkable, downtown at Canada's oldest weather station - where snowfall observing first began in 1847 - not even a trace of snow (less than 0.2 cm) fell, for the first time ever. Less than two hours after the close of November, a snow shower descended on Pearson Airport.

APPENDIX B

Specific Questions

APPENDIX B: SPECIFIC QUESTIONS

This appendix provides summary answers to all the specific questions asked in RFP.

1. What is Toronto's current weather and climate? And why?

What are the current, recent past and historical weather patterns that impact and have impacted Toronto? – This is documented in Chapters 2 and 3 of this report. Further information on the climatology across the GTA is also presented at 36 different locations in tabular form in Volume 2.

What are the causes of these weather patterns? – The factors causing Toronto's weather and climate are documented in Chapter 3 of this report.

What weather system patterns and local phenomena are associated with the following events:

- *(i)* *intense precipitation events (as may be associated with summer thunderstorms and other thunderstorms as from late spring to early fall as well as extra-tropical hurricanes and winter blizzards or snow storms)* see Chapter 3*;*
- *(ii)* *extreme wind events (including thunderstorms and tornadoes)*see Chapter 3*;*
- *(iii)* *extreme low pressure gradient events (as may impact tall office buildings)* nothing specific was done on this question after a change of focus, approved by the client, on a second future 10-year period*;*
- *(iv)* *ice storms* see (iii) above*;*
- *(v)* *droughts (as defined as stressing trees other natural vegetation and aquatic ecosystems)* see (iii) above*;*
- *(vi)* *cold snaps* see Chapter 6*;*
- *(vii)* *heat waves* see Chapter 6*;*
- *(viii)* *freeze-thaw cycles (both those that are of concern for Toronto's infrastructure as well as multi-day cycles that generate mid-winter flooding events)* see (iii) above*;*
- *(ix)* *freezing rain events* see (iii) above*; and*
- *(x)* *back-to-back combinations of any of the above* see (iii) above*?*

The details of which patterns and local phenomena cause specific events are part of the historical approach to weather forecasting. With today's weather forecasting models all of the large scale dynamics are included and when the models are run on a fine scale (1x1km as was done in this project) local phenomena that affect the forecast, as well as location specific output phenomena, are inherently captured within the model. The detailed climatologies (found in Volume 2) will allow City officials to develop changes to future infrastructure that can mitigate some of the extreme events.

What magnitudes, frequency and probability of occurrence do present extreme weather events and significant weather events have in Toronto? – Details of extreme events are given in the climatologies presented in Volume 2 of this report and presented as an example for Pearson Airport in Chapter 6, Section 6.1.6.

And what causalities can be linked with the magnitudes, frequencies and probabilities of occurrence? – This is documented in Chapter 6 of this report.

2. How are Toronto's current weather and climate drivers expected to change? And why?

This is documented in Chapters 4 of this report.

3. What will be Toronto's future weather and climate? And why?

Toronto's future weather and climate is covered in detail in Chapters 6 and 7 of this report for two 10-year periods 2040-2049 and 2071-2080. The "why" is covered in Chapter 4.

4. What tools, data and information can be used to adequately determine future climate and weather in Toronto? And why?

There are several different approaches that could have been used but the one selected is the state-of-the-science approach and is the only one that will give detailed hourly statistics for the future cases.

The methodology involves using a Regional Climate Model (RCM) simulating an IPCC future emission case in order to provide 6-hourly boundary driver data set for use for the future 10-year simulations. The PRECIS RCM using a minimum grid size is of 50x50 km was used to provide the boundary driver data set. The PRECIS system was run by the UK Met Office Hadley Centre for the period 2040-2049 for scenario SRES A1b and 2071-2080 for scenario A2. Both of these scenarios represent the worst case for the time periods selected.

The output from the PRECIS RCM was nested down using the FReSH Forecasting System (whose heart is the WRF-NMM) to 4x4km over a broad area of eastern North America and then to 1x1km over an area encompassing the GTA so that hourly data is available for two 10-year future periods as well as the current 10-year period 2000-2009. Both of these hourly data sets form part of the deliverable for this project.

The predicted averages and extremes from the two future periods were compared to the climate averages and extremes for the current climate period 2000-2009. The current period was run in exactly the same way except it used the observed analysis fields as the 6-hourly boundary driver set.

Details of the RCM and FReSH used are given in Appendix B2 and Chapter 5 of this report.

5. **What magnitudes, frequency and probability of occurrence do present extreme weather events and significant weather events have in Toronto? And why?**

These questions can be answered for the 36 locations examined across the GTA by referring to the Volume 2 data tables. The question is answered for Pearson Airport in Chapter 2 and Chapters 6 and 7 as an example of the data that can be extracted from the tables. The "why" for these extremes is covered in detail in Chapter 3.

6. **What magnitudes, frequency and probability of occurrence do future extreme weather events and significant weather events have in Toronto? And why?**

These questions can be answered for the 36 locations examined across the GTA by referring to the Volume 2 data tables. The question is answered for Pearson Airport in Chapters 6 and 7 as an example of the data that can be extracted from the tables. The "why" for these extremes is covered in detail in Chapter 4

Are the weather system patterns of the historical and recent past changing, and if so, how and why are they changing? Please see Chapter 4

And how are they changing especially with respect to spatial and temporal changes respecting event magnitude and frequency? (i.e. Are events more frequent? Do they occur closer together? The frequency and magnitude are all detailed for 36 different locations across the GTA in Volume 2 as well as illustratively in Chapter 7.

The following questions were addressed using the two 10-year hour-by-hour databases created from the FReSH system runs. Senior climate change expert members of the team have contributed their personal expertise and knowledge to clearly answer all questions posed. Since the FReSH system outputs hourly parameters, each of the questions below was addressed in specific quantitative terms where the budget allowed.

Will future extreme events be associated with the same weather system patterns and regional/local phenomena or will association variations occur? – This is answered in general in Chapter 4. The budget did not allow any of the big picture phenomena to be examined but it would be possible to look at the changes in jet stream for example by using the eastern North America 4x4 km output available as part of this project.

What is the current and future likelihood of similar and diverse extreme events occurring in similar spatial locations and with similar temporal return periods? – The details of extreme events for an example location, Pearson Airport, are given in Chapters 6 and 7.

How will recognized future global Climate Change (e.g. as predicted by the IPCC's GCM's) impact the weather system patterns that effect Toronto? – This is discussed in general terms in Chapter 4 and can be extracted in detail from the detailed climatologies presented in Volume 2.

How will anticipated climate change elsewhere - including disappearing Polar Ice Cap and flushing of Arctic Sea Ice; changes in the Siberian High; equilibrium "Flips" (e.g. as per Lorenz); and other similarly significant changes impact Toronto's weather? – This is detailed in Chapter 4.

What changes will the expected weather system changes in turn create for Toronto's general weather, and especially for Toronto's extreme events? – This is answered in detail at 36 individual locations documented in Volume 2 of this report. Chapters 6 and 7 show how the tables were used to provide a specific answer for the Pearson Airport location.

Based on all of the study's analysis' and assessments, what probabilities can be attached to future changes in the magnitudes and frequencies of extreme events? – This was specifically answered using the Pearson Airport data in Chapter 6, Section 6.1.6.

What changes in local climate normals can be expected to also stress the City's artificial infrastructure (e.g. roads, buildings, sewers) and natural infrastructure (e.g. the urban tree canopy, invasive species and disease vectors)? – While each receptor has its own unique characteristics, experts in those fields can use the future climatologies developed during this project and reported in Volume 2 for 36 different locations across the GTA to determine the impact on the artificial and natural infrastructure of the GTA.

7. **Which technology, or technologies, among (1) the one used for the study, (2) using a General Circulation Model (GCM), (3) using a Regional Climate Model (RCM) together with (4) downscaling and (5) other related techniques, holds the best promise of best understanding the future weather and climate of Toronto and the surrounding areas? And why?**

The approach used and a justification for it is presented in Chapter 5.

APPENDIX C

Detailed Maps for Period 2040-2049

APPENDIX C: DETAILED MAPS FOR PERIOD 2040-2049

Figure 68 presents the GTA temperature results based on the gridded output from the NMM model for the current and future period (2040-2049). It should be noted that a consistent temperature scale was used for all diagrams so that visually warmer temperatures are darker shades of red and colder temperatures are darker shades of blue.

Details of the GTA spatial distribution of the rainfall, snowfall and total precipitation for the current and future periods are presented in Figure 69.

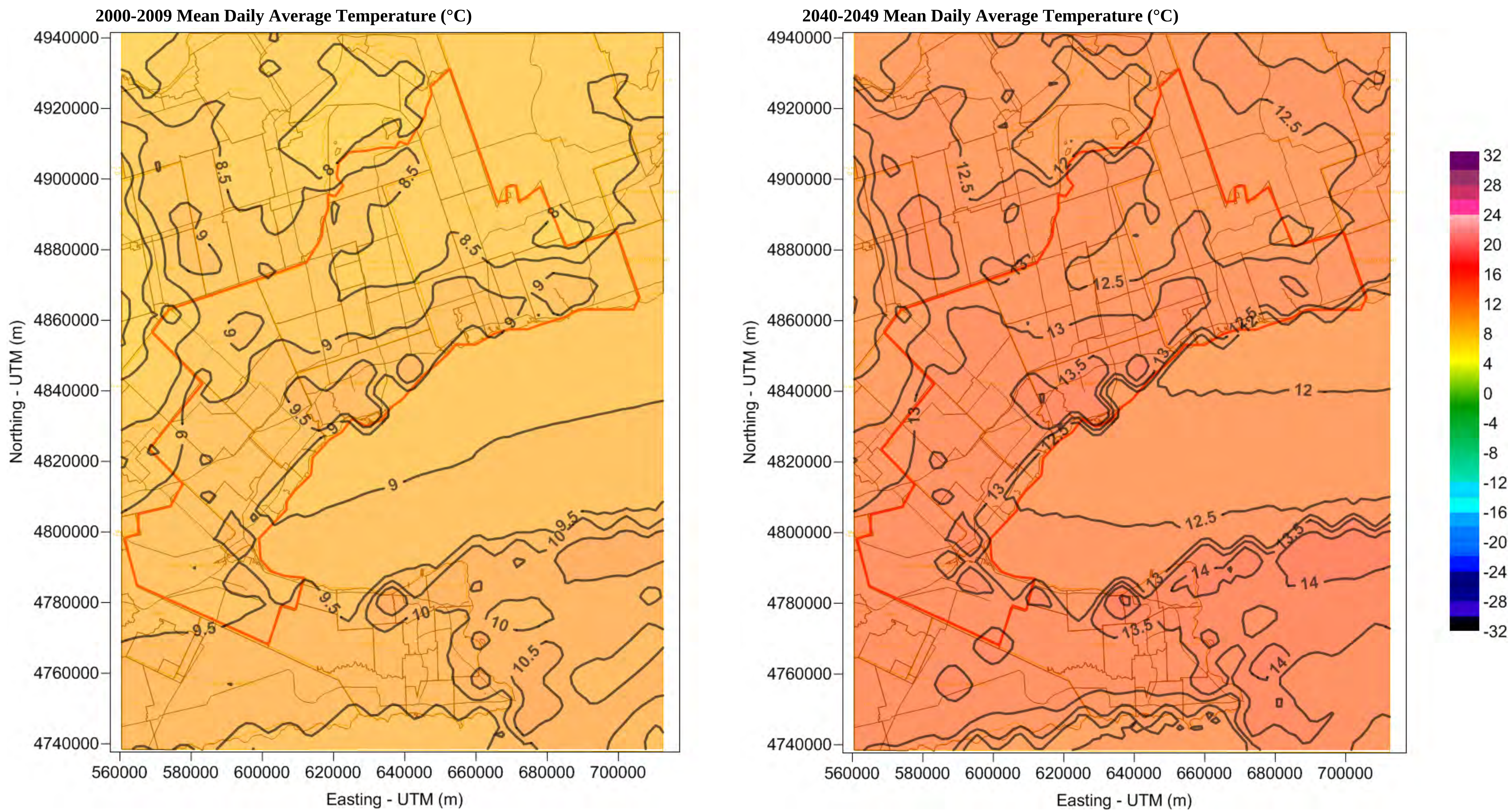
Figure 70 presents the average wind speed in the form of a contour plot.

Figure 71 shows maximum wind speed over the GTA, as a discrete variable, because for grid points the contour plots are difficult to read.

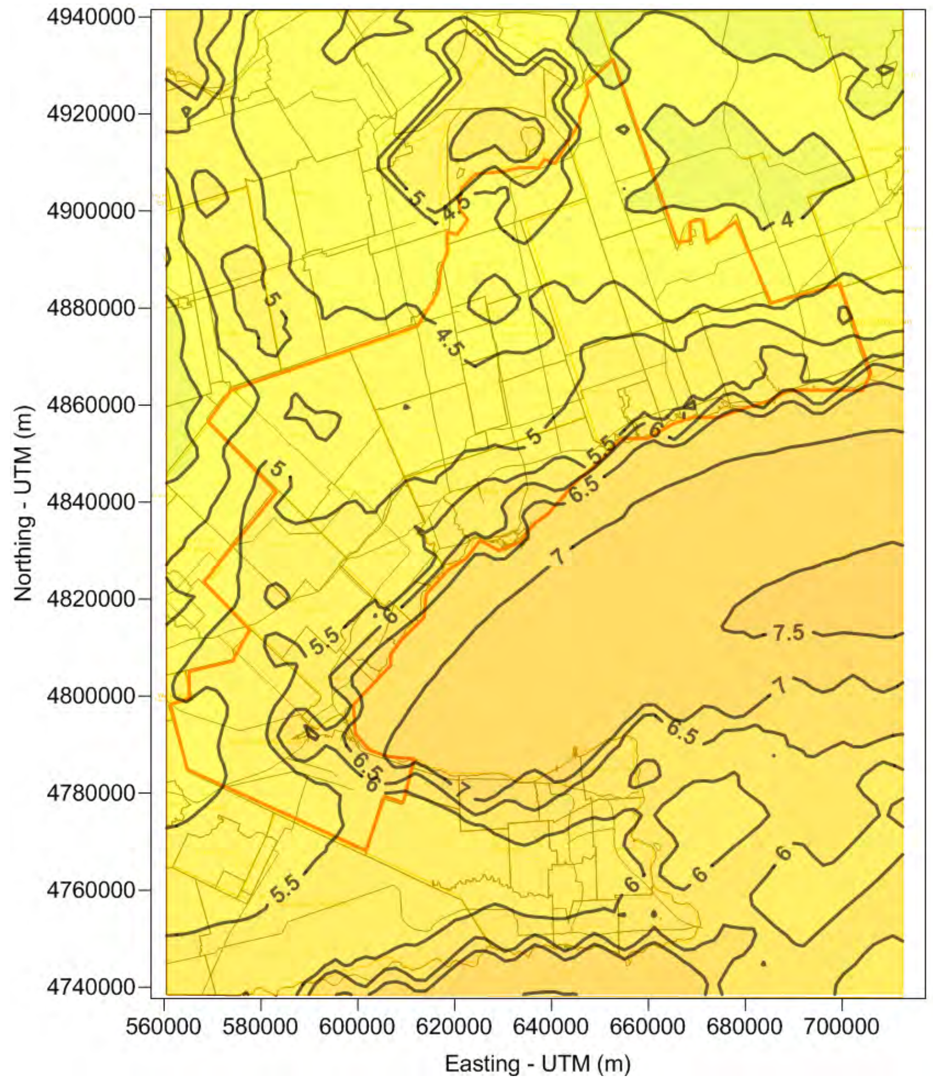
Figure 72 shows the gust wind speed over the GTA.

Based on Figure 73 though Figure 75, SENES has demonstrated that the index related to the wind (SRH) is decreasing, while CAPE (energy) is increasing over the land and decreasing over the water.

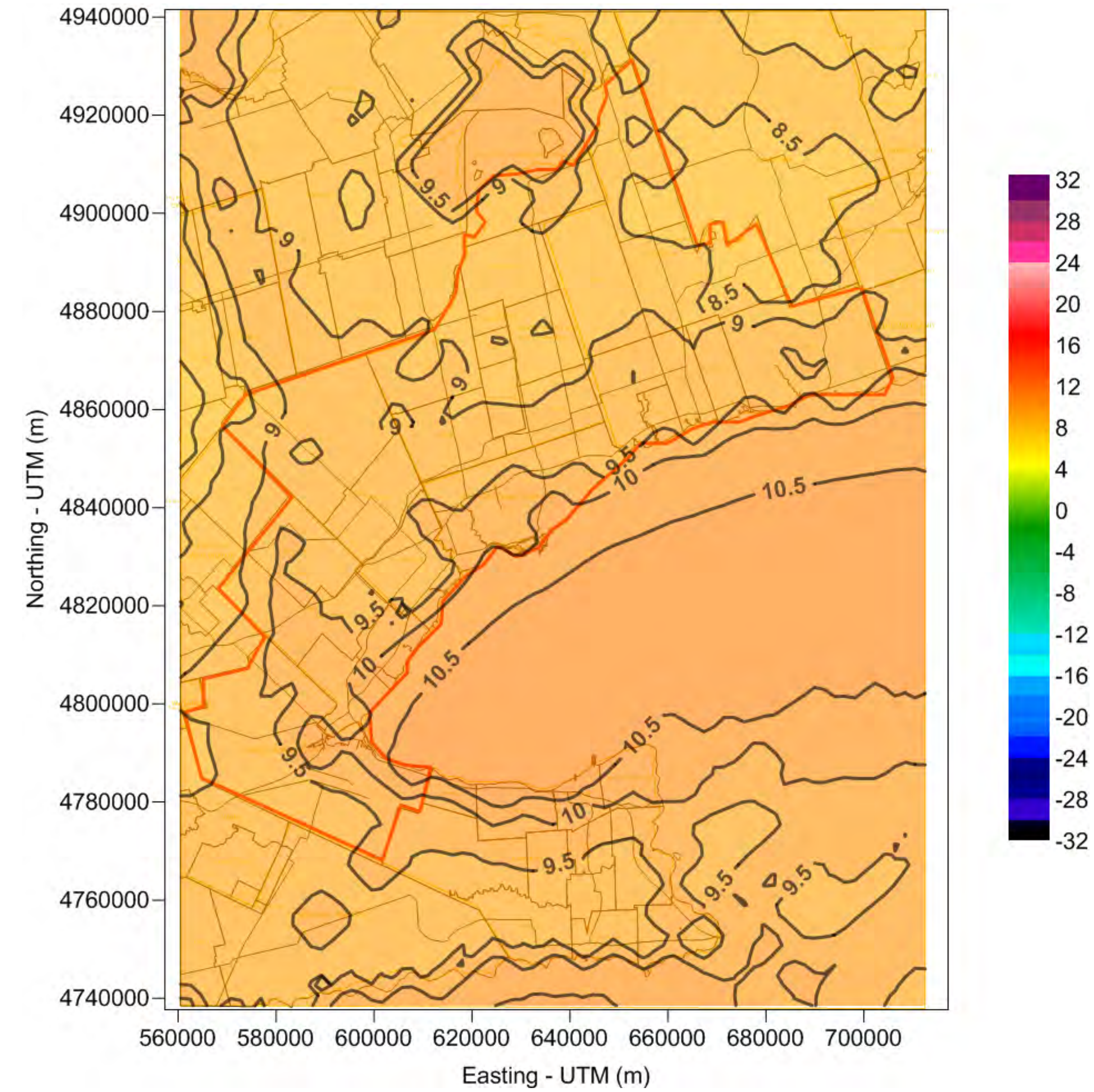
Figure 68 Mean Daily Average, Minimum and Maximum Temperature for the GTA



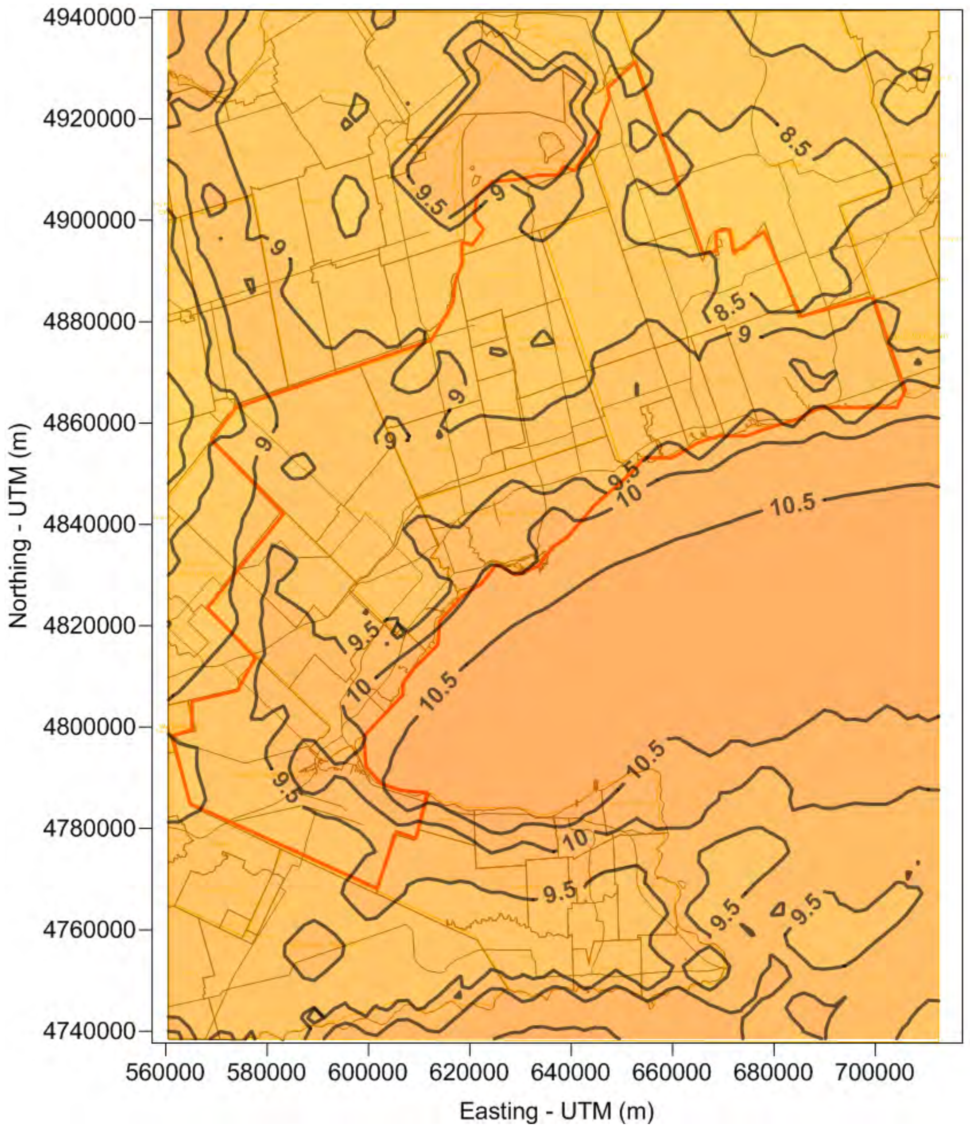
2000-2009 Mean Daily Minimum Temperature (°C)



2040-2049 Mean Daily Minimum Temperature (°C)



2000-2009 Mean Daily Maximum Temperature (°C)



2040-2049 Mean Daily Maximum Temperature (°C)

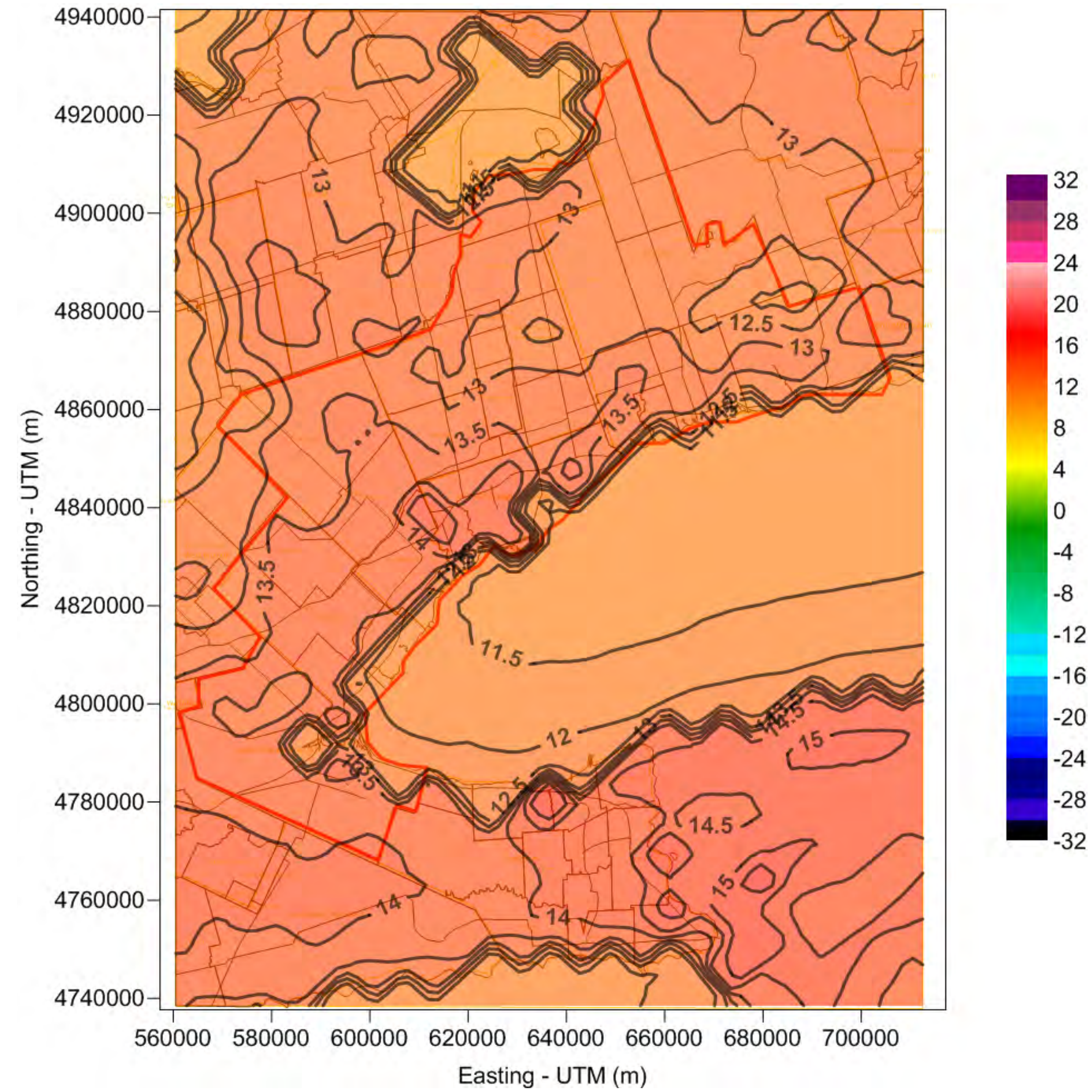
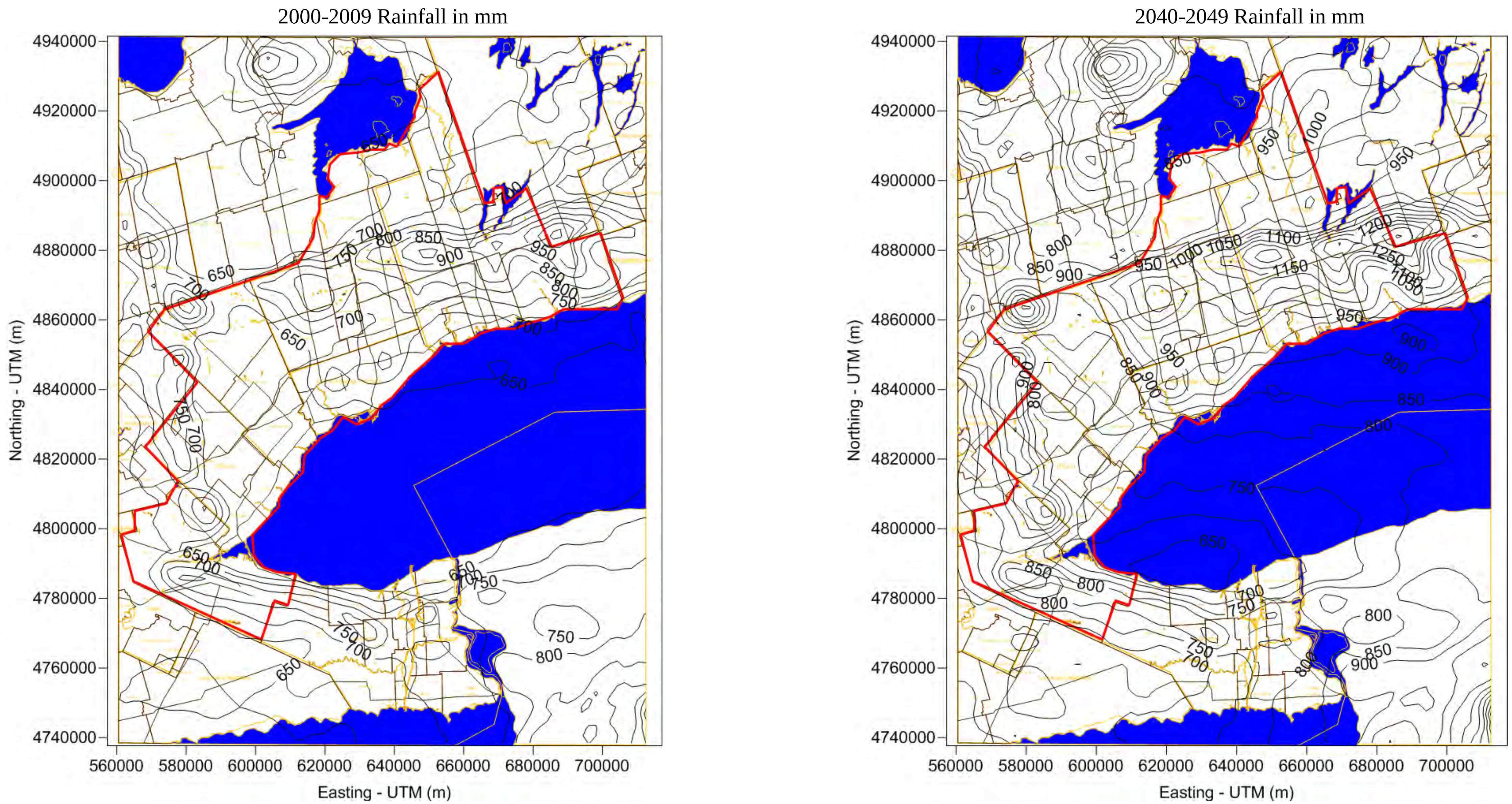
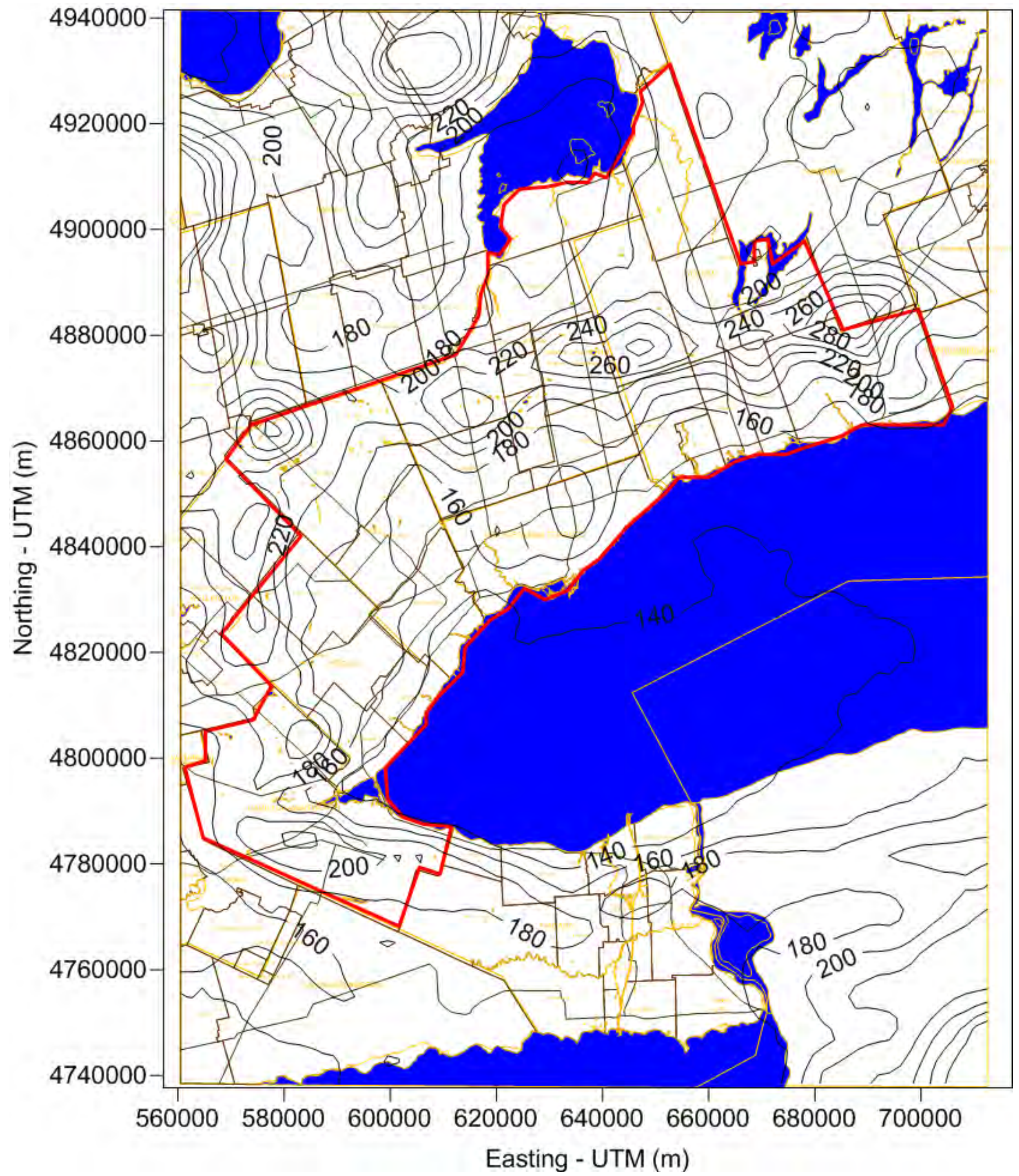


Figure 69 Rainfall, Snowfall and Total Precipitation over the GTA

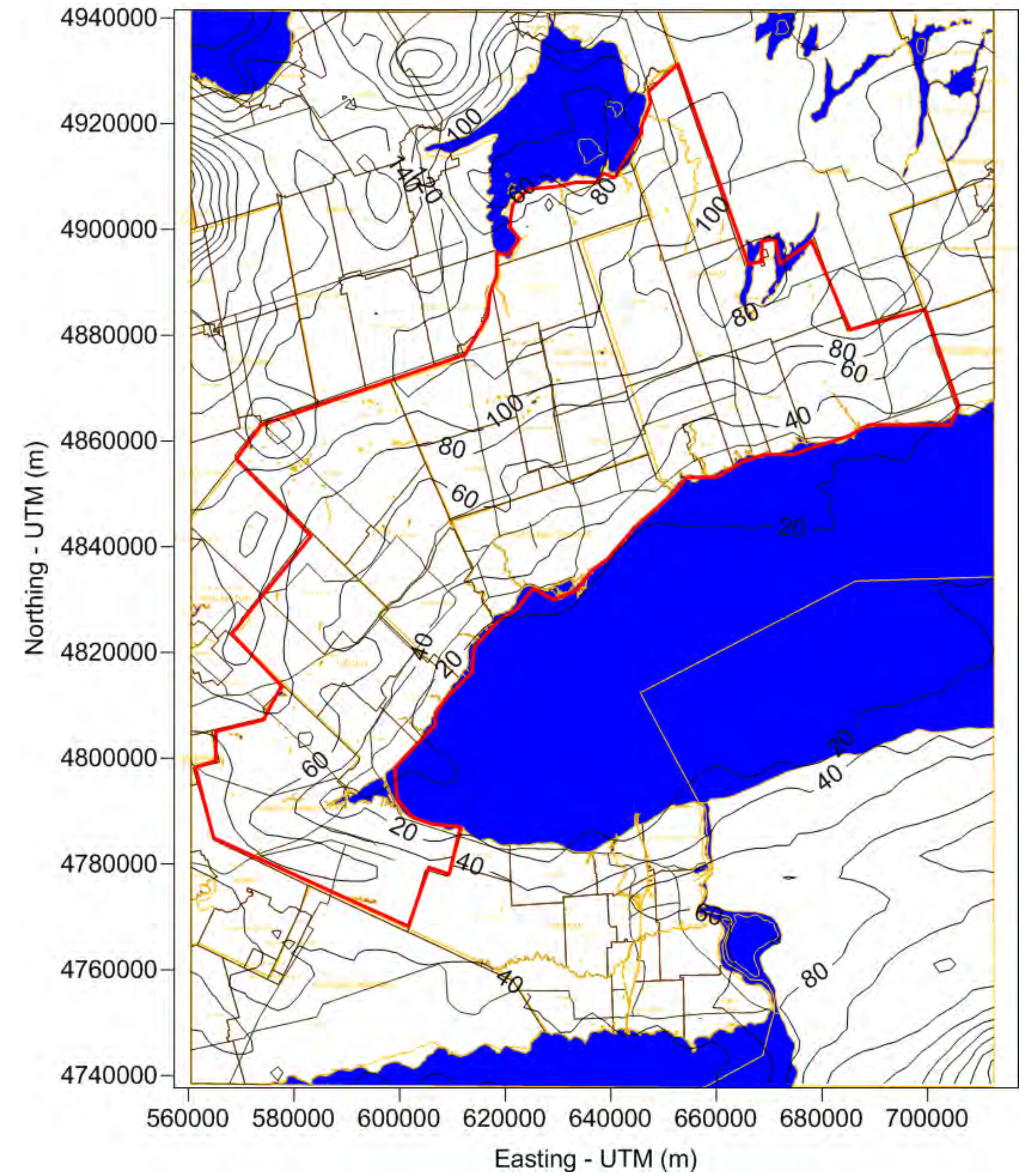


It is very clear in the left panel above that there is enhanced rainfall along the windward slopes and crest of the Niagara Escarpment with a rain shadow on the lee (East) side of the Escarpment. This panel provides much more specificity for the location of the rain shadow than the Atlas of Canada (Figure 21).

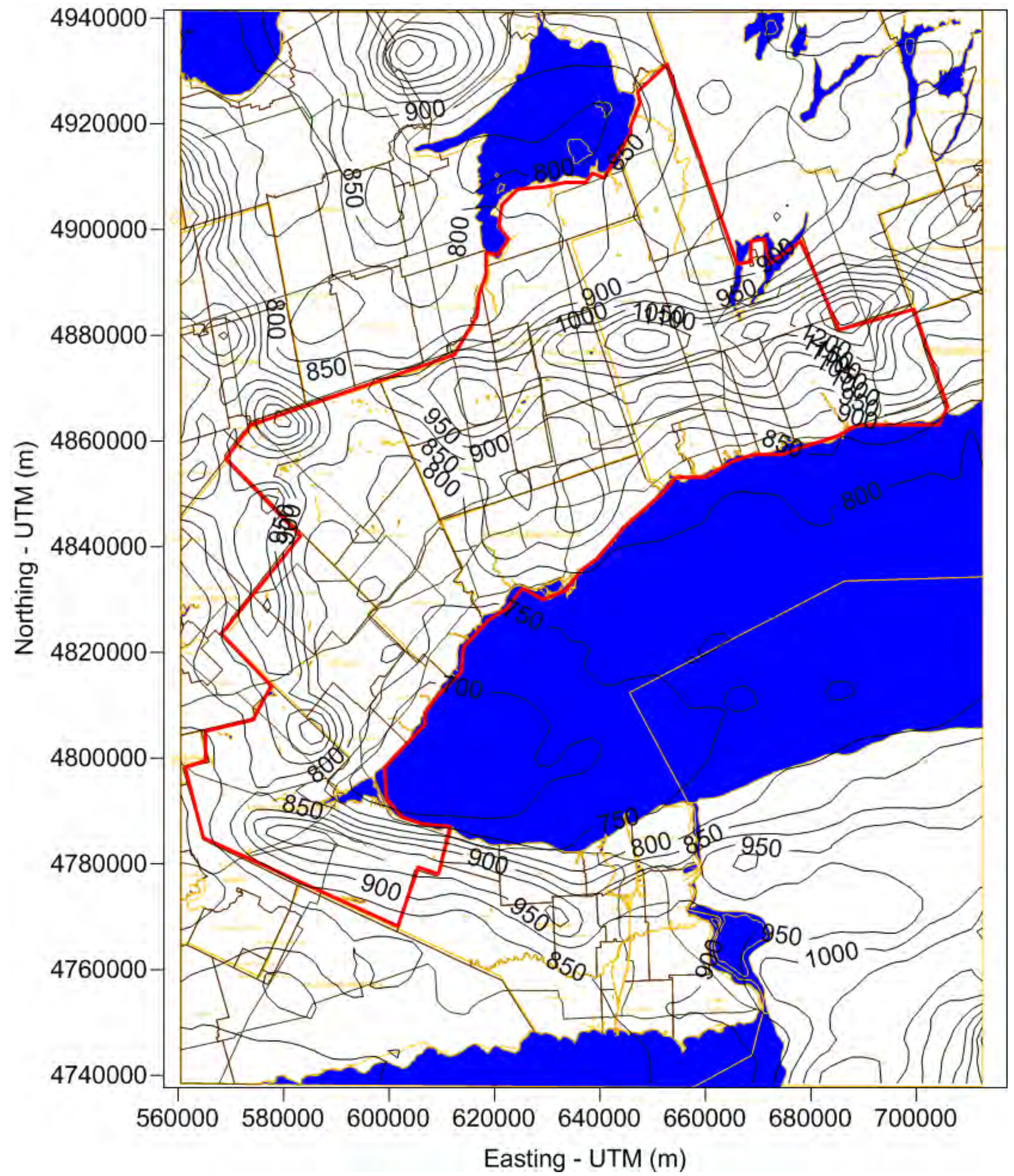
2000-2009 Snowfall in cm



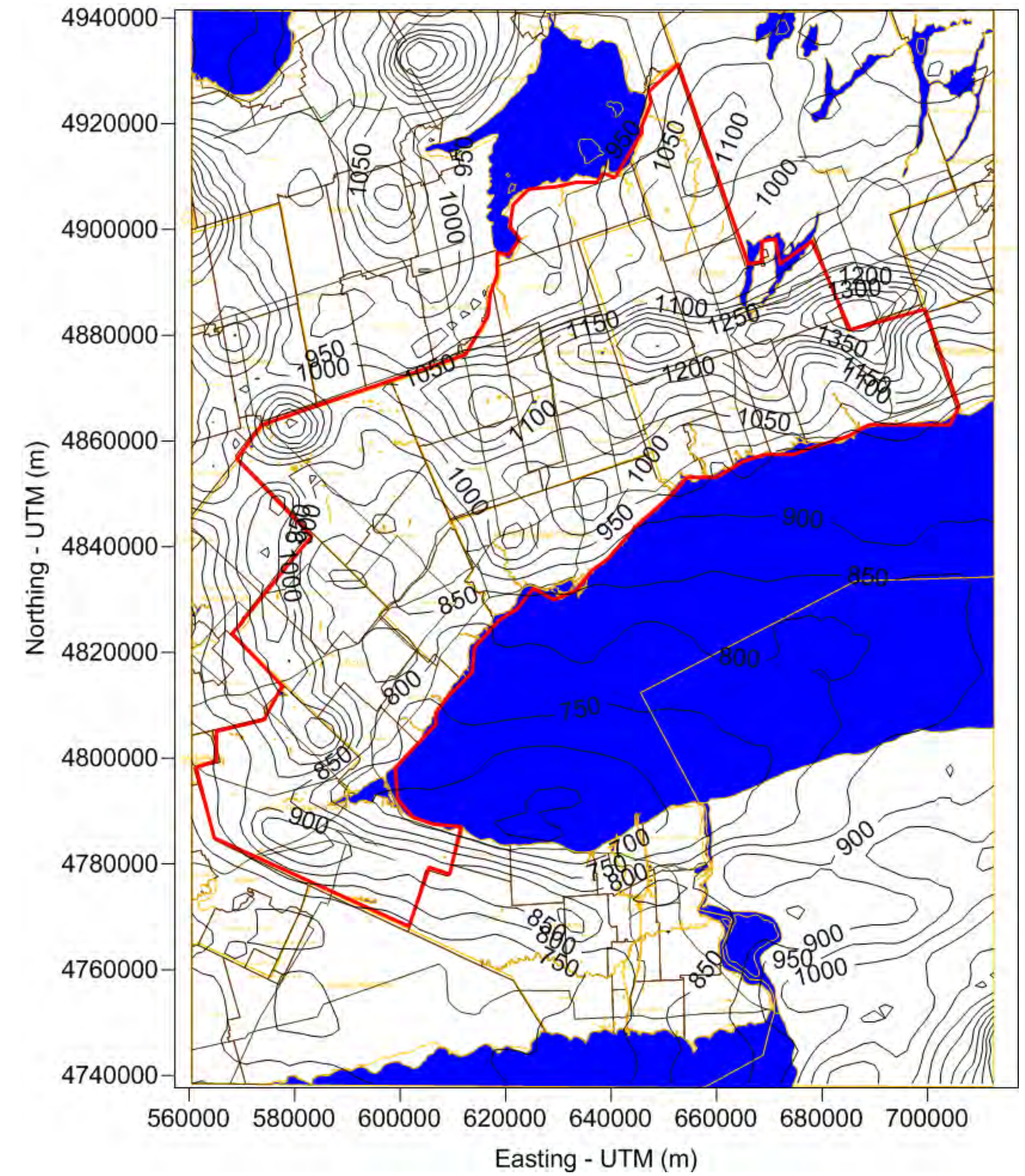
2040-2049 Snowfall in cm



2000-2009 Total Precipitation in mm



2040-2049 Total Precipitation in mm



Examination of these total precipitation figures shows higher values downwind of lakes and the city.

Figure 70 Average Wind Speed over the GTA

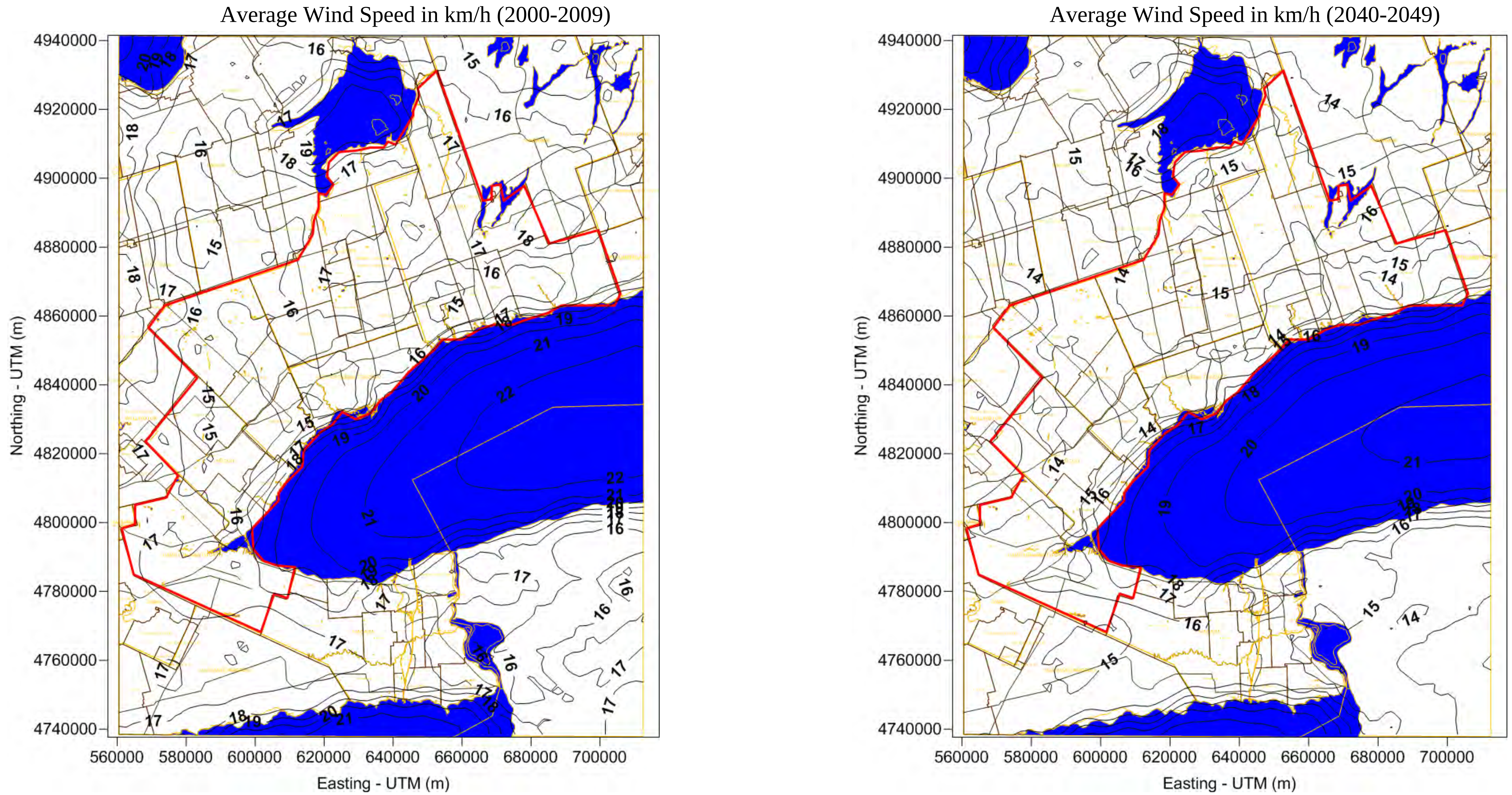


Figure 71 Maximum Wind Speed over the GTA

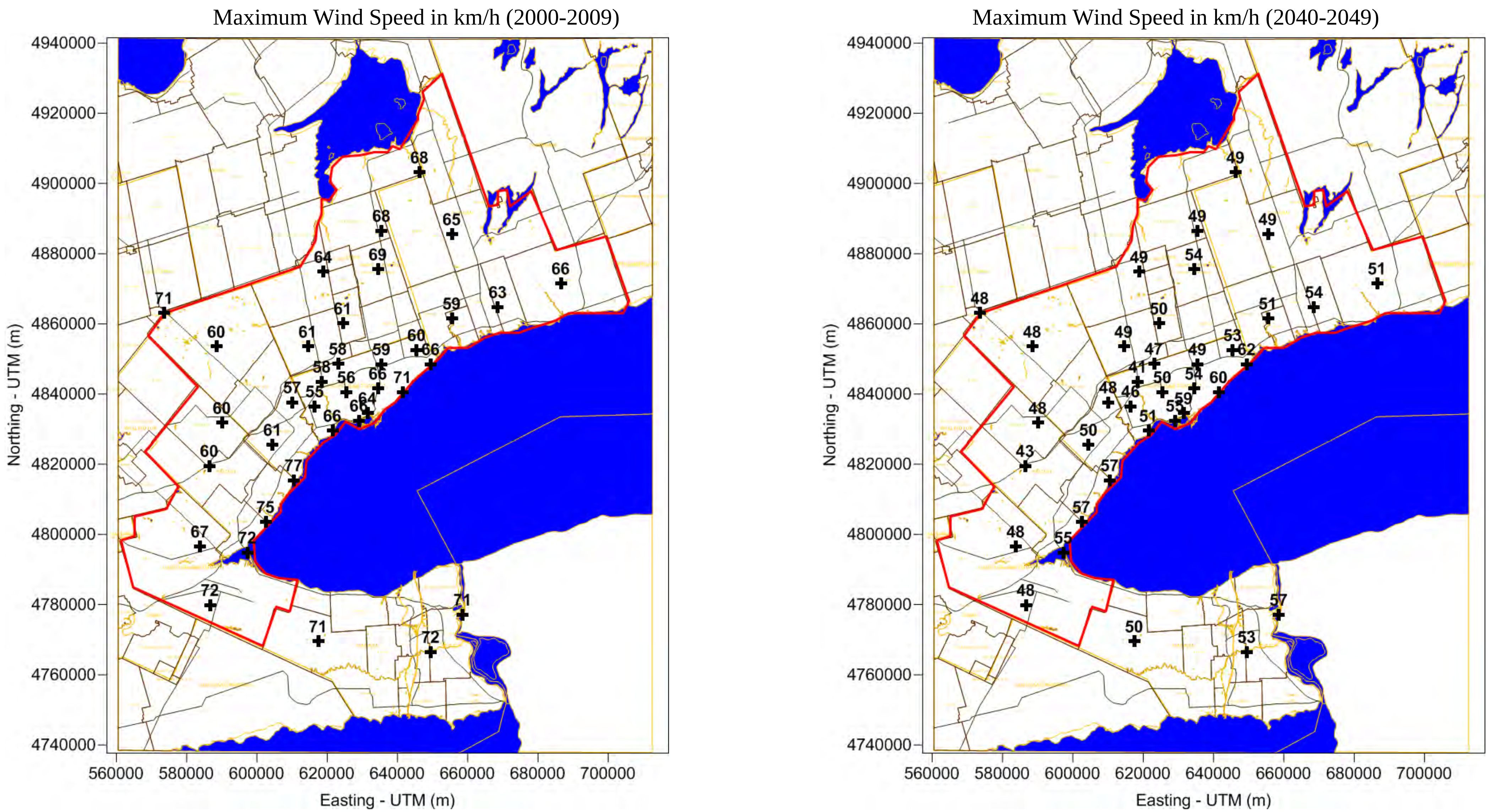


Figure 72 Gust Wind Speed over the GTA

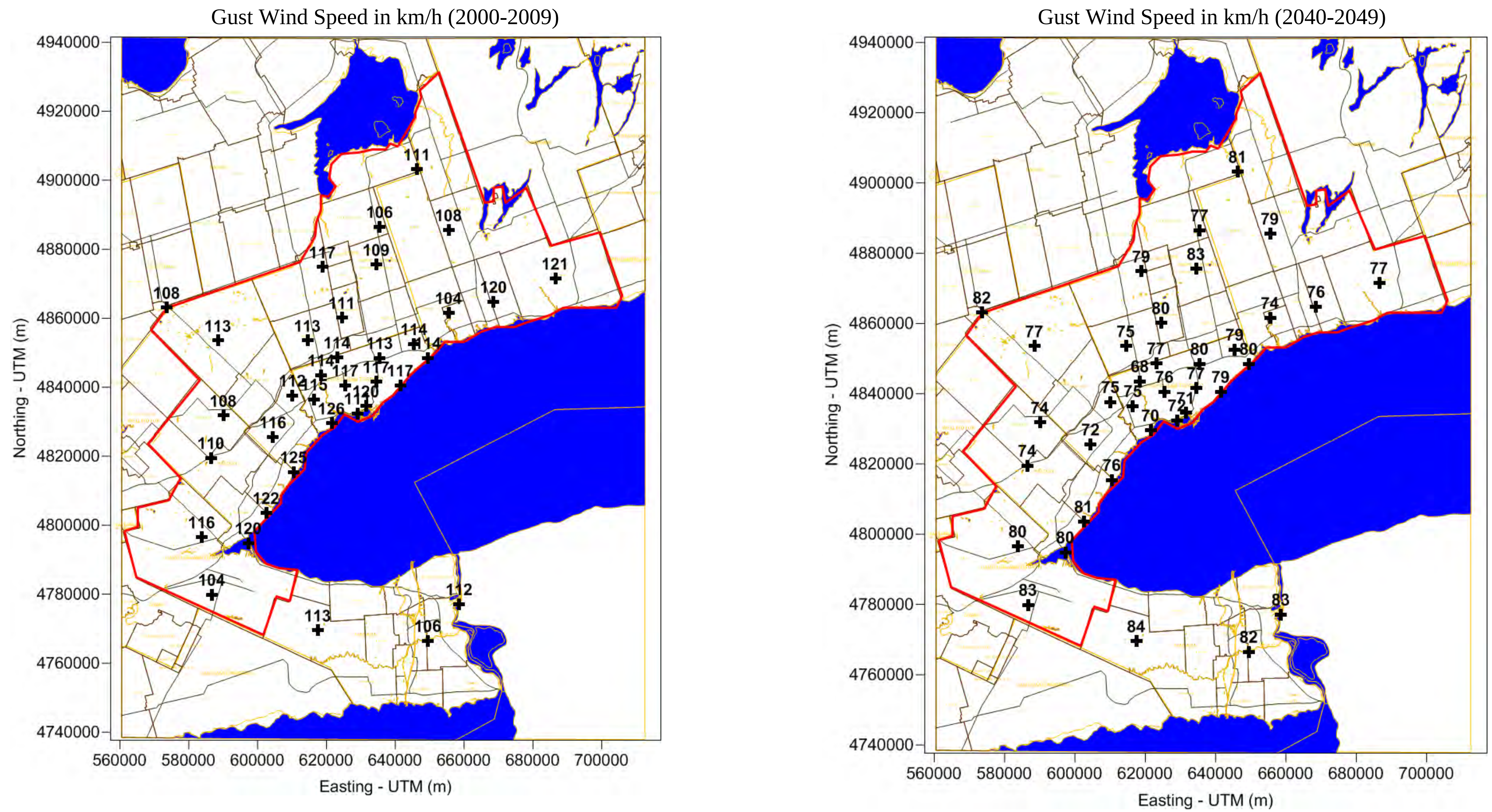


Figure 73 Spatial Distribution of SRH for Current and Future Period

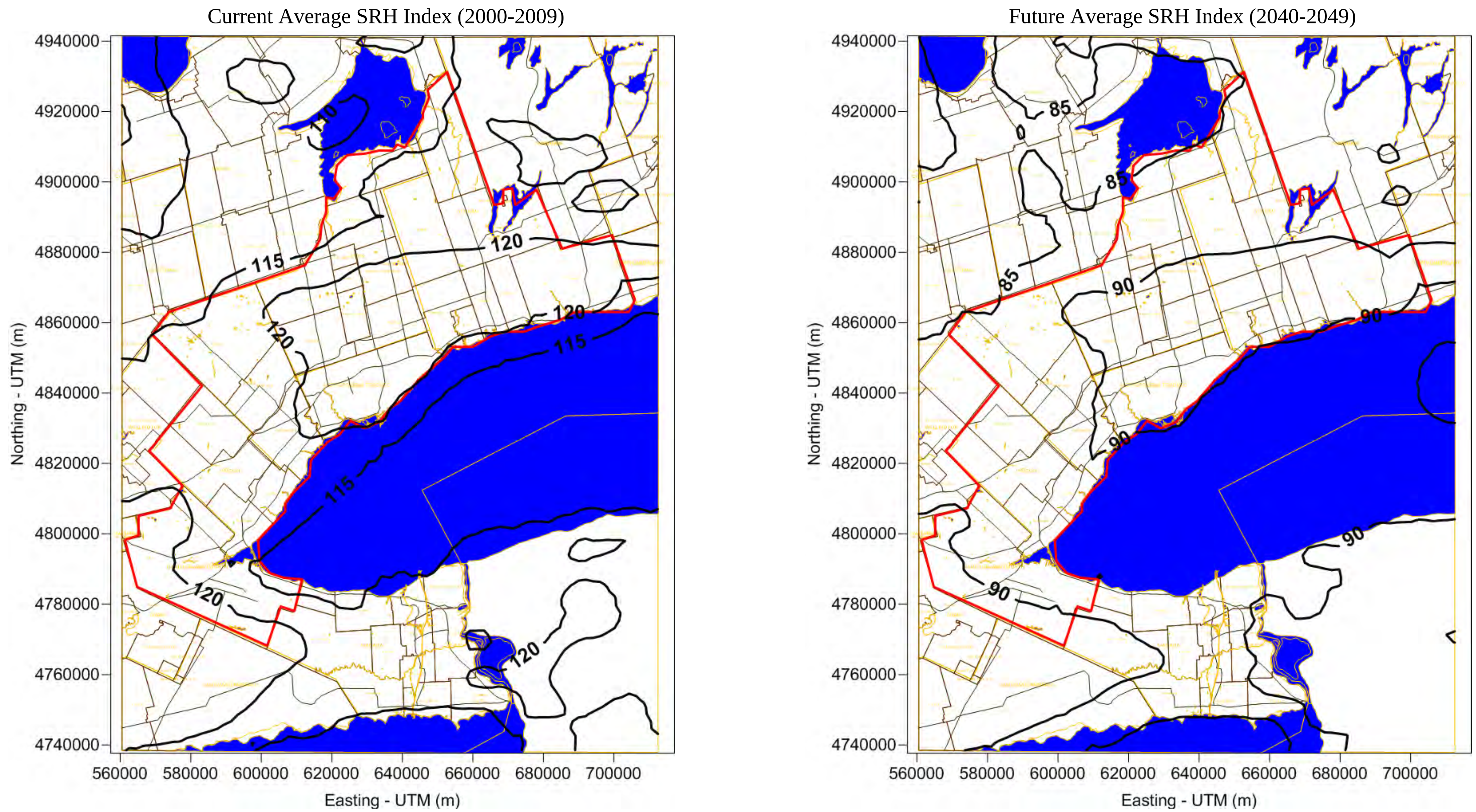


Figure 74 Spatial Distribution of CAPE for Current and Future Period

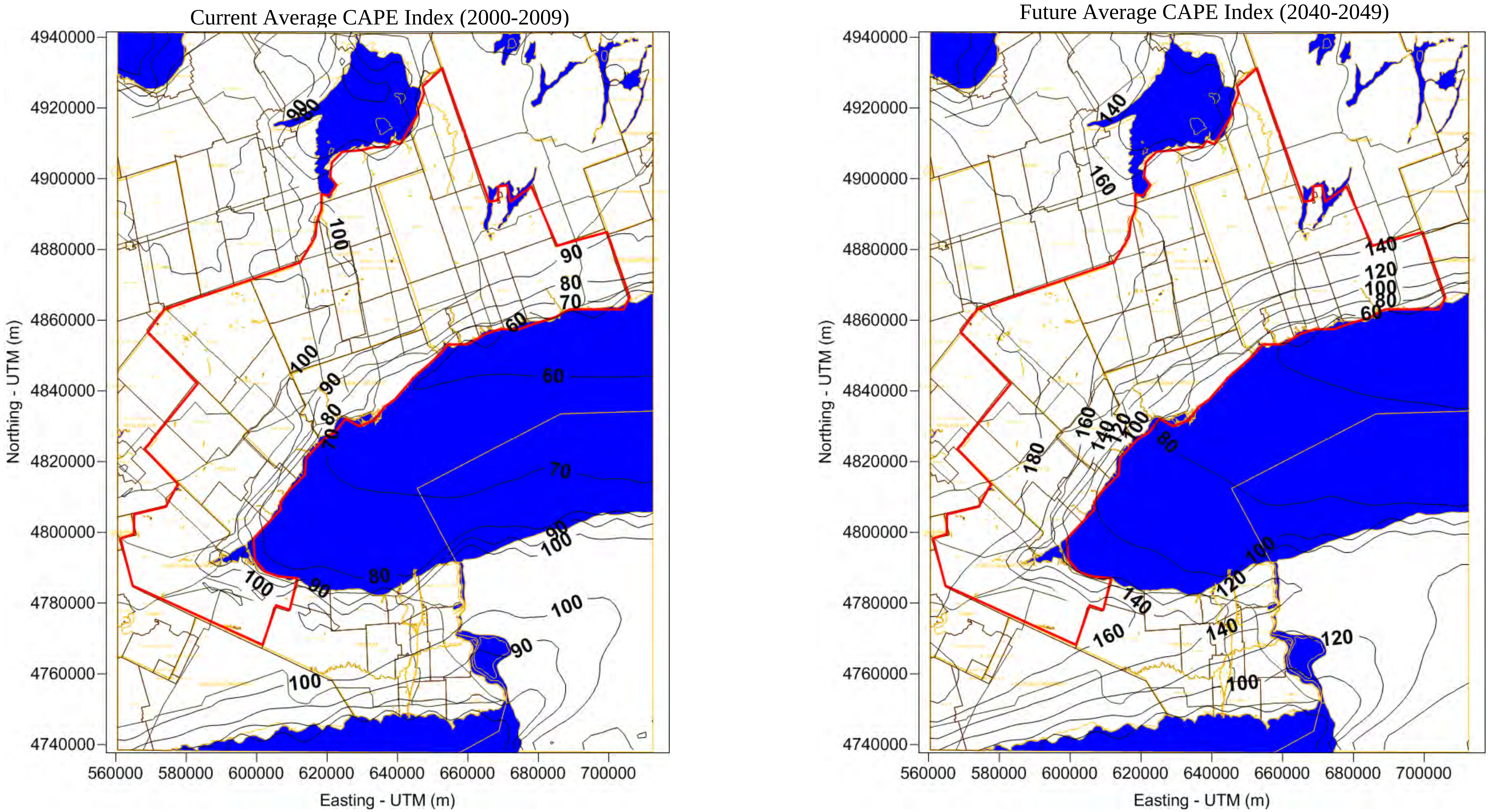
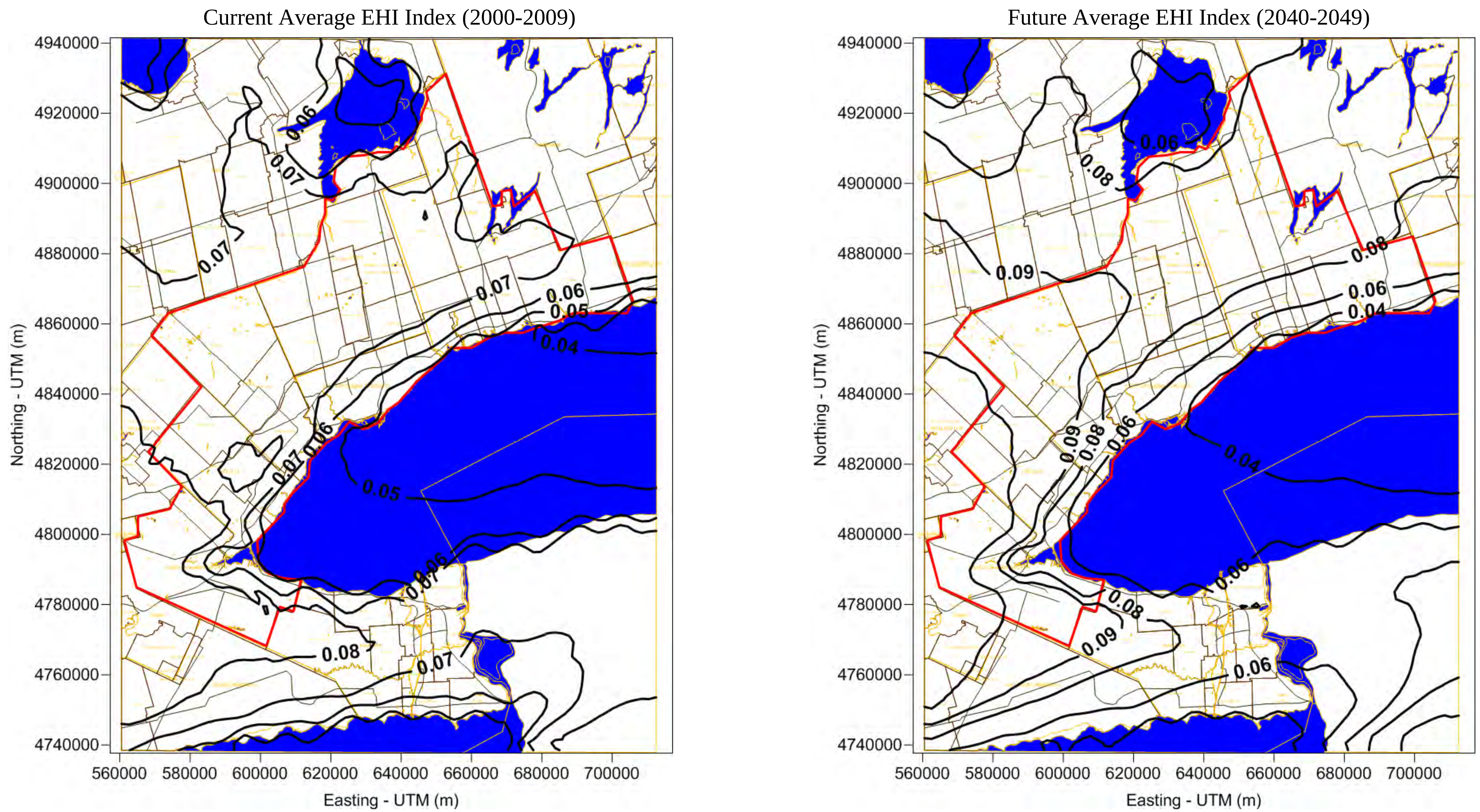
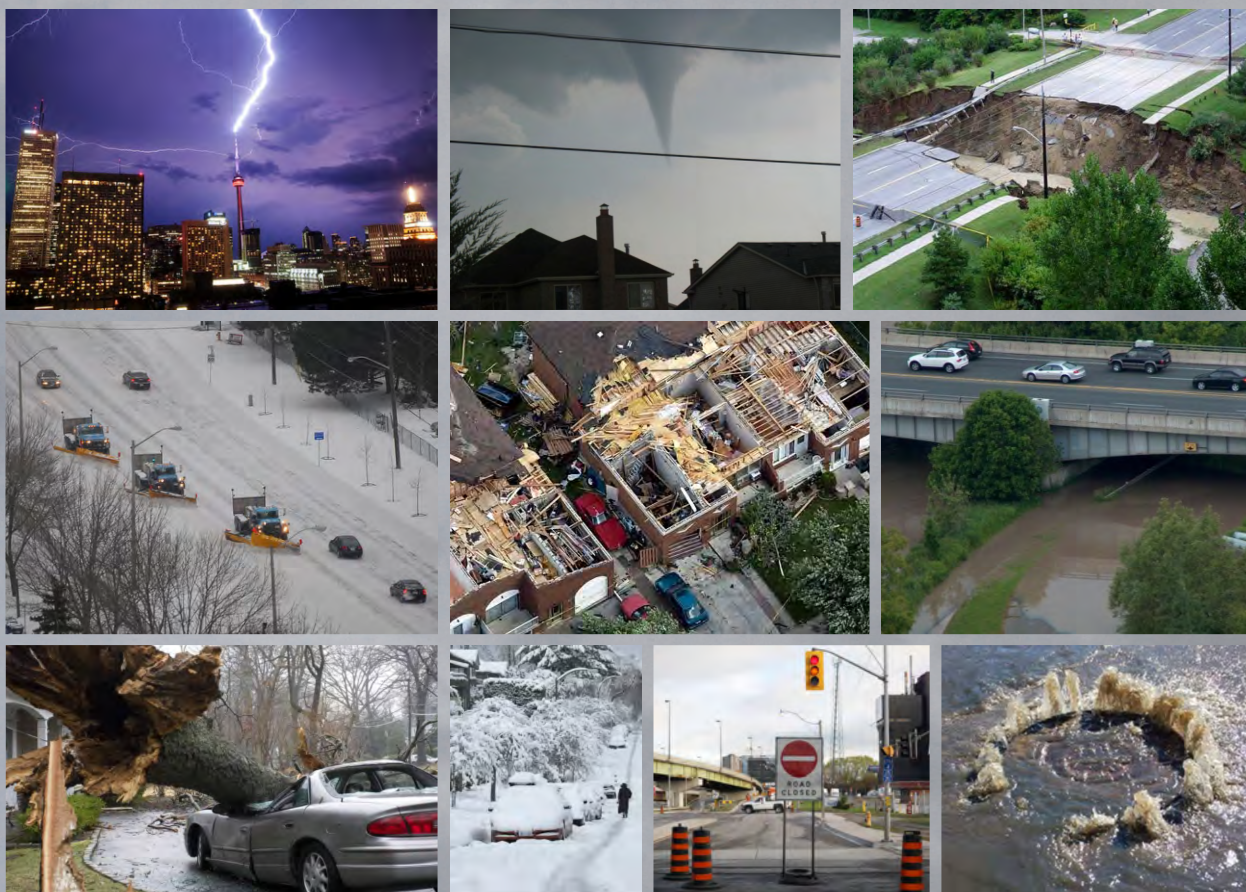


Figure 75 Spatial Distribution of EHI for Current and Future Period



TORONTO'S FUTURE WEATHER AND CLIMATE DRIVER STUDY

Volume 2 - Data Tables (2000-2009 and 2040-2049)



Prepared For:

The City of Toronto

Prepared By:

SENES Consultants Limited

December 2011

TORONTO'S FUTURE WEATHER
AND
CLIMATE DRIVER STUDY

Volume 2 – Data Tables (2000-2009 and 2040-2049)

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APPENDIX A: ASSESMENT OF THE SEVERE WEATHER ENVIROMENT IN NORTH AMERICA SIMULATED BY A GLOBAL CLIMATE MODEL

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1.0 MODEL RESULTS

1.1 INTRODUCTION

In the Volume I of this report only data for Pearson International Airport was used for the analysis, while all other points selected for results presentation are reported here in Volume II of the report. Figure 1 represents the selected locations for result presentation in the City of Toronto domain while Figure 2 represents points in the GTA domain.

Figure 1 Output Points Selected for City of Toronto Area

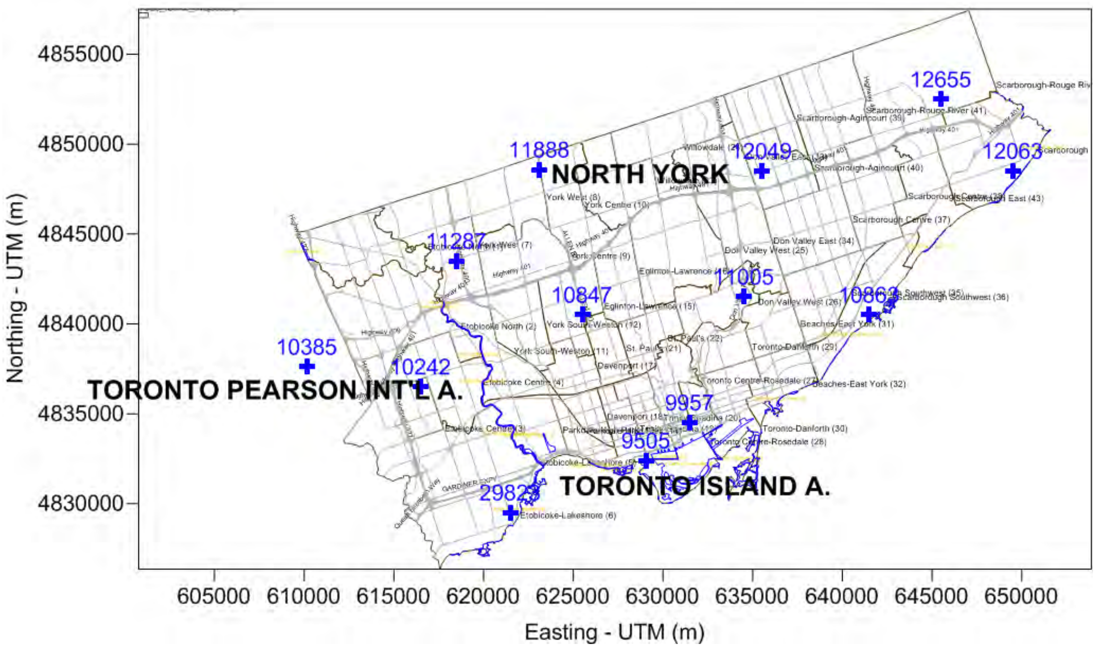

Figure 2 Output Points Selected for Greater Toronto Area

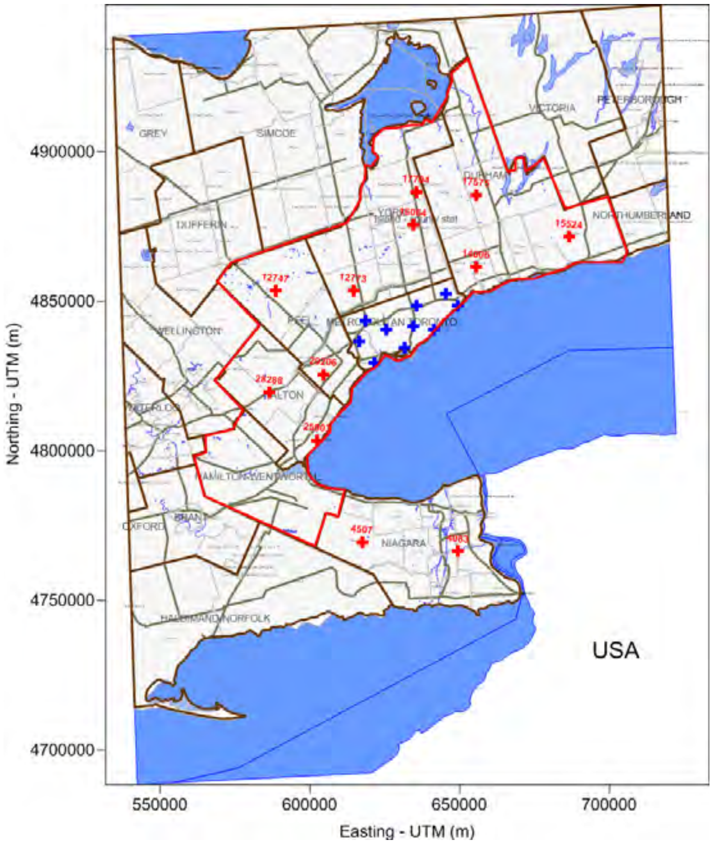

Table 1 List of Grid Points and Tables to be used for Presentation

Table	Name	Grid Point
1	***Toronto Pearson***	10385
2	***Hamilton***	5989
3	***Toronto North York***	11888
4	***Toronto Island***	9505
5	***Hwy 427-401***	10242
6	***Beaches-East York***	10863
7	***York South-Weston***	10847
8	***DVP-Don Mills Road***	11005
9	***Etobicoke North***	11287
10	***Scarborough***	12063
11	***Don Valley East***	12049
12	***Scarborough - Rouge River***	12655
13	***Mississauga***	29823
14	***Trinity Spadina***	9957
15	***Pelham -Thorold***	4083
16	***West Lincoln***	4507
17	***Caledon***	12747
18	***Vaughan***	12773
19	***Pickering***	14006
20	***Clarington***	15524
21	***Whitchurch Stouffville***	16064
22	***Uxbridge***	17575
23	***East Gwillimbury***	17704
24	***Burlington***	25903
25	***Milton***	28288
26	***Mississauga-Milton***	29206
27	***Richmond Hill***	13677
28	***Oshawa***	14317
29	***Udora***	20096
30	***Niagara Falls***	5608
31	***King Smoke Tree***	15752
32	***Orangeville MOE***	14073
33	***Georgetown WWTP***	29942
34	***Oakville Southeast WPCP***	27562
35	***Burlington Piers***	8114
36	***Millgrove***	8402

1.2 CLIMATOLOGICAL TABLES

This section presents tables of data for the current and future period for the 36 output locations listed in Table 1 as follows:

- Current Period 2000-2009; and
- Future Period 2040-2049.

1.3 WHY SOME TABLES ARE LISTED AS CORRECTED

It will be noticed that any tables that present the number of days that certain conditions are met are labelled as "corrected". The Region Climate Models use months of 29 days except for February which uses 27 days. In order to provide comparable statistics for number of days in any given year the results from the model were corrected to 30 or 31 days per month and to 28 days for February. This was done for all parameters which involved "day counts".

1.4 HUMIDEX

Typically humidex is not calculated during the winter months but since the climate is changing and the definition of when winter is actually occurring is changing with the climate. SENES, therefore, opted to report humidex for all months of the year. SENES has not screened out humidex parameters that are less than or equal to 25ºC when the air temperature is greater than 20ºC at which point humidex and air temperature are about the same. This means that for Table 8 Toronto Pearson, for example, there will be no humidex for January, February, November or December for the period 2000-2009. Compare this to Table 9 Toronto Pearson, which shows that November in the 2040-2049 period will have a valid humidex value in that month.

1.5 WIND CHILL

Wind chill is in some senses the opposite of humidex and is typically not calculated during the summer months. Again because we are looking at climate change, SENES opted to calculate values for wind chill for all months of the year to show how the definitions of seasons may vary into the future. For example, looking at Table 16 Toronto Pearson, we can see that the wind chill for July and August in the period 2000-2009 are listed as zero, when in reality they would just not be calculated and should show up in the table as "not available". If we now look at Table 17 Toronto Pearson for the 2040-2049 period we see that there are zeros listed in the months June through September, clearly demonstrating the effect of climate change. Again those values would typically be listed as "not available" but have been left as zero for comparison purposes.

Table 2 Temperature Summary for 2000-2009

Table 1. Toronto Pearson = 10385

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.6	-4.5	-0.1	7.3	13.4	19.5	21.7	21.4	17.4	10.2	4.5	-2.0	8.7
Standard Deviation of Daily Average (°C)	4.5	3.8	4.6	4.8	3.9	3.7	2.6	2.9	3.5	4.3	3.8	3.6	3.8
Daily Maximum (°C)	-1.6	-1.1	4.2	12.7	19.3	25.4	27.5	27.0	22.9	14.9	8.3	0.7	13.3
Standard Deviation of Daily Maximum (°C)	4.5	3.9	5.4	6.0	4.9	4.3	3.1	3.3	3.9	5.1	4.5	3.7	4.4
Daily Minimum (°C)	-7.2	-7.4	-3.6	2.4	7.5	13.5	15.8	15.8	12.4	6.2	1.5	-4.4	4.4
Standard Deviation of Daily Minimum (°C)	4.7	4.0	4.5	4.1	3.9	3.9	3.2	3.2	3.7	4.3	3.6	3.8	3.9
Extreme Maximum (°C)	14.5	13.1	23.9	29.6	34.0	35.2	36.2	36.9	32.7	31.2	19.3	16.4	36.9
Extreme Minimum (°C)	-20.5	-20.2	-24.4	-9.8	-1.2	0.7	6.1	8.0	0.7	-2.0	-11.2	-19.8	-24.4

Table 2. Hamilton = 5989

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.5	-4.4	0.1	6.9	12.7	18.5	20.6	20.5	16.7	9.9	4.5	-2.0	8.3
Standard Deviation of Daily Average (°C)	4.5	3.9	4.8	4.9	4.1	3.7	2.5	2.8	3.4	4.3	3.9	3.6	3.9
Daily Maximum (°C)	-1.6	-1.0	4.5	12.3	18.2	23.6	25.3	25.0	21.4	14.3	8.2	0.9	12.6
Standard Deviation of Daily Maximum (°C)	4.5	4.2	5.7	6.0	4.9	4.0	2.8	3.1	3.7	5.0	4.5	3.8	4.3
Daily Minimum (°C)	-7.1	-7.3	-3.4	2.4	7.3	13.3	15.7	16.0	12.4	6.1	1.4	-4.5	4.4
Standard Deviation of Daily Minimum (°C)	4.7	4.1	4.6	4.2	4.0	3.8	3.1	3.0	3.7	4.3	3.7	3.7	3.9
Extreme Maximum (°C)	15.5	17.3	25.5	27.7	31.3	32.9	32.8	32.9	30.9	30.0	20.4	16.7	32.9
Extreme Minimum (°C)	-19.4	-20.2	-22.2	-10.7	-2.1	3.3	4.5	7.1	1.7	-2.4	-11.5	-19.8	-22.2

Table 3. Toronto North York = 11888

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.0	-4.9	-0.5	6.8	12.8	18.6	20.8	20.6	16.8	9.7	4.1	-2.4	8.1
Standard Deviation of Daily Average (°C)	4.5	3.8	4.6	4.7	3.9	3.7	2.5	2.8	3.5	4.3	3.8	3.7	3.8
Daily Maximum (°C)	-2.0	-1.4	3.8	12.2	18.3	23.9	25.9	25.6	21.9	14.2	7.8	0.4	12.5
Standard Deviation of Daily Maximum (°C)	4.5	3.9	5.4	5.8	4.7	4.1	2.9	3.2	3.8	5.0	4.4	3.6	4.3
Daily Minimum (°C)	-7.6	-7.8	-4.0	2.1	7.3	13.3	15.6	15.7	12.2	6.0	1.1	-4.8	4.1
Standard Deviation of Daily Minimum (°C)	4.8	4.1	4.6	4.1	3.9	3.9	3.1	3.1	3.8	4.3	3.6	3.9	3.9
Extreme Maximum (°C)	13.8	12.6	22.4	28.3	32.4	33.4	34.1	35.0	31.8	30.0	18.7	15.4	35.0
Extreme Minimum (°C)	-21.3	-21.3	-25.3	-10.4	-1.5	1.4	5.9	7.4	-1.2	-2.1	-12.2	-20.4	-25.3

Table 4. Toronto Island = 9505

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.0	-4.1	-0.2	6.6	12.4	18.7	21.6	21.6	17.8	10.8	5.1	-1.2	8.8
Standard Deviation of Daily Average (°C)	4.4	3.6	4.2	4.1	3.4	3.3	2.2	2.5	3.2	4.0	3.6	3.6	3.5
Daily Maximum (°C)	-1.4	-1.2	3.4	11.1	17.5	23.9	26.6	26.3	22.1	14.5	8.1	1.2	12.7
Standard Deviation of Daily Maximum (°C)	4.2	3.6	4.7	5.0	4.3	3.9	2.7	3.0	3.5	4.5	4.0	3.5	3.9
Daily Minimum (°C)	-6.4	-6.6	-3.2	2.6	7.6	13.6	16.4	16.8	13.7	7.5	2.6	-3.4	5.1
Standard Deviation of Daily Minimum (°C)	4.7	4.0	4.3	3.6	3.4	3.5	3.0	3.0	3.6	4.2	3.6	3.8	3.7
Extreme Maximum (°C)	12.6	11.9	20.8	26.9	31.0	34.1	35.1	35.3	32.2	31.8	18.0	14.7	35.3
Extreme Minimum (°C)	-20.2	-20.1	-24.2	-9.1	-0.6	-1.4	6.8	9.2	2.0	-1.5	-11.5	-19.5	-24.2

Table 5. Hwy 427-401 = 10242

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.5	-4.4	-0.1	7.2	13.4	19.5	21.8	21.5	17.6	10.3	4.6	-1.9	8.8
Standard Deviation of Daily Average (°C)	4.5	3.8	4.6	4.7	3.8	3.6	2.5	2.8	3.5	4.3	3.8	3.7	3.8
Daily Maximum (°C)	-1.5	-1.1	4.2	12.6	19.3	25.5	27.7	27.1	22.9	15.0	8.3	0.9	13.4
Standard Deviation of Daily Maximum (°C)	4.5	3.9	5.3	5.9	4.8	4.3	3.1	3.3	3.9	5.1	4.4	3.6	4.3
Daily Minimum (°C)	-7.1	-7.3	-3.5	2.5	7.6	13.4	15.8	15.9	12.6	6.4	1.6	-4.3	4.5
Standard Deviation of Daily Minimum (°C)	4.7	4.1	4.5	4.0	3.8	3.9	3.3	3.3	3.8	4.4	3.7	3.9	3.9
Extreme Maximum (°C)	14.3	12.9	23.0	29.3	33.2	35.6	36.5	37.3	33.0	31.6	19.4	15.6	37.3
Extreme Minimum (°C)	-20.4	-20.2	-24.3	-9.6	-1.2	0.3	6.3	7.9	0.5	-2.1	-11.6	-19.7	-24.3

Table 6. Beaches-East York = 10863

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-3.9	-4.2	-0.8	5.3	10.7	17.0	20.3	20.6	17.3	10.6	5.2	-1.0	8.1
Standard Deviation of Daily Average (°C)	4.3	3.5	3.9	3.6	2.9	3.0	1.9	2.2	2.9	3.8	3.4	3.5	3.2
Daily Maximum (°C)	-1.5	-1.6	2.2	8.9	14.6	20.8	23.6	23.7	20.1	13.4	7.6	1.2	11.1
Standard Deviation of Daily Maximum (°C)	4.1	3.4	4.3	4.5	3.8	3.5	2.4	2.5	3.0	3.9	3.6	3.3	3.5
Daily Minimum (°C)	-6.1	-6.4	-3.2	2.5	7.5	13.6	16.8	17.3	14.2	8.1	3.0	-2.9	5.4
Standard Deviation of Daily Minimum (°C)	4.6	4.0	4.1	3.3	3.0	3.2	2.5	2.8	3.4	4.0	3.5	3.7	3.5
Extreme Maximum (°C)	11.4	10.5	16.4	23.0	26.7	30.0	31.8	31.1	29.5	28.9	16.1	13.6	31.8
Extreme Minimum (°C)	-20.0	-19.8	-23.9	-8.8	0.2	4.0	8.2	9.4	1.5	-0.5	-8.9	-19.3	-23.9

Table 7. York South-Weston = 10847

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.6	-4.5	-0.3	7.0	13.1	19.3	21.8	21.5	17.5	10.3	4.6	-1.9	8.7
Standard Deviation of Daily Average (°C)	4.5	3.8	4.5	4.6	3.8	3.7	2.5	2.9	3.4	4.2	3.8	3.7	3.8
Daily Maximum (°C)	-1.7	-1.3	3.8	12.1	18.7	25.0	27.3	26.9	22.5	14.6	8.0	0.7	13.1
Standard Deviation of Daily Maximum (°C)	4.4	3.8	5.2	5.7	4.8	4.4	3.1	3.4	3.8	5.0	4.3	3.7	4.3
Daily Minimum (°C)	-7.1	-7.3	-3.6	2.5	7.7	13.7	16.2	16.4	13.0	6.7	1.8	-4.2	4.6
Standard Deviation of Daily Minimum (°C)	4.7	4.1	4.5	3.9	3.6	3.7	3.0	3.0	3.7	4.3	3.6	3.8	3.8
Extreme Maximum (°C)	13.3	12.6	21.9	27.2	32.8	36.0	37.0	37.5	33.3	31.4	19.0	15.2	37.5
Extreme Minimum (°C)	-20.8	-20.8	-24.8	-9.9	-0.9	2.0	6.6	8.5	0.4	-1.7	-11.7	-20.0	-24.8

Table 8. DVP & Don Mills = 11005

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.2	-4.6	-1.2	4.9	10.2	16.4	19.6	20.1	16.8	10.3	4.9	-1.2	7.7
Standard Deviation of Daily Average (°C)	4.2	3.5	3.8	3.7	3.1	3.1	1.9	2.2	2.9	3.7	3.3	3.4	3.2
Daily Maximum (°C)	-1.8	-2.1	1.6	8.1	13.8	19.9	22.6	22.9	19.4	12.9	7.2	0.9	10.4
Standard Deviation of Daily Maximum (°C)	4.0	3.4	4.2	4.5	3.6	3.4	2.2	2.4	3.0	3.9	3.5	3.3	3.5
Daily Minimum (°C)	-6.2	-6.6	-3.3	2.4	7.4	13.5	16.9	17.4	14.3	8.0	2.9	-3.1	5.3
Standard Deviation of Daily Minimum (°C)	4.5	3.8	4.1	3.4	2.9	3.0	2.4	2.6	3.3	3.9	3.4	3.6	3.4
Extreme Maximum (°C)	10.8	9.8	16.7	19.8	25.9	28.9	29.7	31.5	28.1	26.2	15.3	13.1	31.5
Extreme Minimum (°C)	-20.2	-20.0	-24.0	-9.2	0.0	4.9	7.8	10.2	1.8	0.1	-7.8	-18.8	-24.0

Table 2 Temperature Summary for 2000-2009 (Continued)

Table 9. Etobicoke North = 11287

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.0	-4.9	-0.5	6.8	12.7	18.6	20.7	20.5	16.7	9.7	4.1	-2.4	8.1
Standard Deviation of Daily Average (°C)	4.5	3.8	4.7	4.7	3.9	3.7	2.6	2.9	3.5	4.3	3.8	3.7	3.8
Daily Maximum (°C)	-2.0	-1.5	3.8	12.1	18.2	23.8	25.8	25.5	21.8	14.2	7.7	0.4	12.5
Standard Deviation of Daily Maximum (°C)	4.5	3.9	5.4	5.8	4.7	4.1	2.9	3.2	3.8	5.0	4.4	3.6	4.3
Daily Minimum (°C)	-7.6	-7.8	-4.0	2.1	7.3	13.3	15.6	15.7	12.2	5.9	1.1	-4.9	4.1
Standard Deviation of Daily Minimum (°C)	4.8	4.1	4.6	4.1	3.9	3.9	3.1	3.1	3.8	4.3	3.6	3.9	3.9
Extreme Maximum (°C)	13.9	12.6	22.5	28.1	32.1	33.3	34.1	35.1	31.5	29.9	18.6	15.2	35.1
Extreme Minimum (°C)	-21.3	-21.2	-25.2	-10.4	-1.7	2.4	5.5	7.4	-0.9	-2.2	-12.3	-20.4	-25.2

Table 10. Scarborough = 12063

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.3	-4.4	-0.8	5.4	10.7	16.8	19.9	20.2	16.9	10.3	4.8	-1.3	7.9
Standard Deviation of Daily Average (°C)	4.4	3.6	4.0	3.7	3.1	3.1	2.1	2.4	3.0	3.9	3.5	3.6	3.4
Daily Maximum (°C)	-1.7	-1.6	2.3	9.1	14.7	20.7	23.2	23.5	20.0	13.3	7.5	1.0	11.0
Standard Deviation of Daily Maximum (°C)	4.2	3.5	4.3	4.6	3.8	3.6	2.4	2.6	3.1	4.0	3.7	3.4	3.6
Daily Minimum (°C)	-6.6	-6.9	-3.5	2.2	7.1	13.2	16.2	16.6	13.5	7.3	2.4	-3.5	4.8
Standard Deviation of Daily Minimum (°C)	4.8	4.0	4.3	3.5	3.3	3.4	2.9	3.0	3.8	4.2	3.6	3.9	3.7
Extreme Maximum (°C)	11.6	10.5	17.9	24.1	27.2	30.3	31.8	31.9	29.7	29.4	16.9	13.6	31.9
Extreme Minimum (°C)	-20.7	-20.3	-24.4	-9.3	-1.3	3.4	6.6	8.2	0.4	-1.1	-10.4	-19.7	-24.4

Table 11. Don Valley East = 12049

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.0	-4.9	-0.7	6.6	12.5	18.4	20.6	20.5	16.7	9.7	4.1	-2.3	8.0
Standard Deviation of Daily Average (°C)	4.5	3.8	4.5	4.6	3.8	3.6	2.5	2.9	3.4	4.2	3.8	3.7	3.8
Daily Maximum (°C)	-2.1	-1.5	3.5	11.7	17.7	23.5	25.5	25.3	21.5	14.0	7.6	0.4	12.3
Standard Deviation of Daily Maximum (°C)	4.5	3.9	5.2	5.6	4.5	4.0	2.9	3.2	3.7	4.8	4.3	3.7	4.2
Daily Minimum (°C)	-7.7	-7.8	-4.1	2.0	7.2	13.2	15.7	15.8	12.3	6.1	1.2	-4.8	4.1
Standard Deviation of Daily Minimum (°C)	4.8	4.1	4.5	4.0	3.8	3.8	3.1	3.2	3.8	4.3	3.6	3.9	3.9
Extreme Maximum (°C)	13.1	11.9	21.9	26.9	31.0	34.0	34.9	35.7	31.7	30.2	18.5	14.1	35.7
Extreme Minimum (°C)	-21.4	-21.4	-25.4	-10.3	-1.7	2.3	6.0	7.7	-1.3	-2.3	-12.2	-20.6	-25.4

Table 12. Scarborough - Rouge River = 12655

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.7	-4.6	-0.5	6.6	12.4	18.4	20.8	20.7	17.0	10.0	4.5	-1.9	8.2
Standard Deviation of Daily Average (°C)	4.5	3.7	4.4	4.3	3.6	3.5	2.4	2.8	3.4	4.1	3.7	3.7	3.7
Daily Maximum (°C)	-1.7	-1.2	3.6	11.6	17.5	23.3	25.4	25.4	21.5	14.3	7.9	0.8	12.4
Standard Deviation of Daily Maximum (°C)	4.5	3.8	5.0	5.3	4.4	4.0	2.8	3.1	3.6	4.7	4.1	3.7	4.1
Daily Minimum (°C)	-7.4	-7.5	-3.9	2.1	7.2	13.2	15.9	16.0	12.5	6.4	1.5	-4.4	4.3
Standard Deviation of Daily Minimum (°C)	4.8	4.0	4.5	3.8	3.7	3.6	3.0	3.0	3.8	4.3	3.6	3.9	3.8
Extreme Maximum (°C)	13.2	11.7	20.5	26.5	31.0	33.5	33.6	36.0	31.9	30.5	17.9	16.9	36.0
Extreme Minimum (°C)	-21.2	-21.1	-25.0	-9.8	-1.7	2.7	6.1	7.5	-0.4	-1.8	-11.9	-20.2	-25.0

Table 13. Mississauga = 29823

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-3.7	-4.2	-0.9	4.8	10.0	16.1	19.5	20.0	16.9	10.6	5.2	-0.8	7.8
Standard Deviation of Daily Average (°C)	4.1	3.4	3.7	3.5	2.9	2.9	1.9	2.1	2.8	3.6	3.2	3.4	3.1
Daily Maximum (°C)	-1.4	-1.7	1.9	8.3	13.7	19.9	22.6	22.9	19.6	13.2	7.5	1.3	10.7
Standard Deviation of Daily Maximum (°C)	3.9	3.3	4.1	4.4	3.5	3.3	2.2	2.4	2.8	3.8	3.4	3.2	3.4
Daily Minimum (°C)	-5.7	-6.2	-3.1	2.4	7.1	13.1	16.5	17.1	14.3	8.1	3.2	-2.6	5.3
Standard Deviation of Daily Minimum (°C)	4.4	3.8	4.0	3.2	2.9	3.1	2.7	2.7	3.4	3.9	3.3	3.6	3.4
Extreme Maximum (°C)	10.5	9.9	18.1	22.9	25.9	27.6	29.4	30.6	28.1	26.8	16.6	12.8	30.6
Extreme Minimum (°C)	-19.8	-18.7	-23.1	-8.4	-0.1	2.6	7.3	10.1	2.7	0.0	-7.6	-17.7	-23.1

Table 14. Trinity Spadina = 9957

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.1	-4.2	-0.2	6.6	12.6	18.9	21.7	21.7	17.9	10.7	5.1	-1.3	8.8
Standard Deviation of Daily Average (°C)	4.4	3.7	4.2	4.2	3.6	3.5	2.3	2.6	3.3	4.1	3.7	3.6	3.6
Daily Maximum (°C)	-1.4	-1.2	3.5	11.3	17.8	24.4	27.0	26.6	22.3	14.6	8.1	1.1	12.9
Standard Deviation of Daily Maximum (°C)	4.3	3.7	4.8	5.3	4.7	4.3	3.0	3.3	3.7	4.7	4.1	3.6	4.1
Daily Minimum (°C)	-6.5	-6.8	-3.3	2.5	7.6	13.6	16.4	16.8	13.7	7.5	2.5	-3.6	5.0
Standard Deviation of Daily Minimum (°C)	4.7	4.0	4.3	3.7	3.4	3.5	2.9	2.9	3.6	4.2	3.6	3.8	3.7
Extreme Maximum (°C)	12.9	11.9	20.6	27.1	32.5	34.4	35.4	35.9	33.0	32.1	18.4	15.2	35.9
Extreme Minimum (°C)	-20.2	-20.2	-24.3	-9.2	-0.8	1.0	6.7	9.1	2.4	-1.2	-11.4	-19.5	-24.3

Table 15. Pelham -Thorold = 4083

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.0	-3.6	0.8	7.7	13.4	18.9	21.1	21.1	17.5	10.6	5.2	-1.4	8.9
Standard Deviation of Daily Average (°C)	4.7	4.1	4.9	4.8	3.7	3.4	2.3	2.6	3.4	4.4	4.1	3.8	3.8
Daily Maximum (°C)	-1.0	-0.2	5.5	13.3	18.9	23.8	25.6	25.6	22.3	15.0	9.1	1.7	13.3
Standard Deviation of Daily Maximum (°C)	4.7	4.4	5.8	5.9	4.3	3.6	2.6	2.9	3.8	5.0	4.7	4.0	4.3
Daily Minimum (°C)	-6.8	-6.7	-3.0	2.8	7.8	13.7	16.4	16.8	13.0	6.9	1.9	-4.1	4.9
Standard Deviation of Daily Minimum (°C)	4.9	4.2	4.6	4.3	3.9	3.7	2.8	2.8	3.7	4.4	3.9	3.8	3.9
Extreme Maximum (°C)	15.9	17.9	24.2	28.4	30.1	33.3	33.3	32.9	31.5	28.6	23.7	18.2	33.3
Extreme Minimum (°C)	-19.9	-18.0	-22.4	-8.5	-3.1	2.6	5.9	9.2	2.0	-1.8	-10.3	-18.4	-22.4

Table 16. West Lincoln = 4507

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.1	-3.9	0.4	7.2	12.9	18.5	20.8	20.8	17.1	10.4	4.9	-1.5	8.6
Standard Deviation of Daily Average (°C)	4.6	4.0	4.7	4.7	3.8	3.5	2.4	2.7	3.3	4.3	4.0	3.6	3.8
Daily Maximum (°C)	-1.3	-0.6	4.8	12.3	18.3	23.4	25.2	25.1	21.6	14.5	8.5	1.3	12.8
Standard Deviation of Daily Maximum (°C)	4.6	4.2	5.5	5.7	4.4	3.7	2.6	2.9	3.7	4.9	4.5	3.8	4.2
Daily Minimum (°C)	-6.7	-6.7	-3.0	2.7	7.6	13.5	16.1	16.6	13.0	6.8	1.9	-4.0	4.8
Standard Deviation of Daily Minimum (°C)	4.8	4.1	4.5	4.1	3.8	3.7	2.9	2.9	3.6	4.3	3.7	3.7	3.8
Extreme Maximum (°C)	15.7	16.9	22.3	26.1	29.9	32.6	32.0	32.3	30.6	30.0	22.8	17.1	32.6
Extreme Minimum (°C)	-19.2	-18.5	-21.9	-9.3	-2.2	3.4	5.0	7.6	2.5	-1.6	-10.0	-18.6	-21.9

Table 2 Temperature Summary for 2000-2009 (Continued)

Table 17. Caledon = 12747

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.4	-5.2	-0.8	6.6	12.5	18.3	20.3	19.9	16.2	9.2	3.6	-2.9	7.7
Standard Deviation of Daily Average (°C)	4.4	3.9	4.9	5.0	4.0	3.7	2.6	2.9	3.5	4.4	3.9	3.6	3.9
Daily Maximum (°C)	-2.3	-1.7	3.7	11.9	17.9	23.2	25.0	24.7	21.2	13.7	7.4	-0.1	12.1
Standard Deviation of Daily Maximum (°C)	4.5	4.1	5.7	6.0	4.7	3.9	2.9	3.2	3.8	5.1	4.6	3.7	4.3
Daily Minimum (°C)	-8.0	-8.2	-4.4	1.9	7.2	13.3	15.5	15.4	11.8	5.4	0.6	-5.3	3.8
Standard Deviation of Daily Minimum (°C)	4.6	4.1	4.7	4.4	4.0	3.9	3.0	3.0	3.7	4.2	3.6	3.7	3.9
Extreme Maximum (°C)	14.4	13.0	24.8	28.4	31.9	32.2	32.8	33.9	31.3	29.3	18.4	16.9	33.9
Extreme Minimum (°C)	-20.8	-20.4	-25.0	-11.1	-1.7	2.9	5.4	7.1	-1.3	-2.7	-11.6	-20.2	-25.0

Table 18. Vaughan = 12773

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.3	-5.2	-0.7	6.7	12.6	18.4	20.5	20.3	16.5	9.4	3.8	-2.7	7.8
Standard Deviation of Daily Average (°C)	4.5	3.9	4.8	4.8	3.9	3.6	2.5	2.8	3.5	4.3	3.9	3.7	3.8
Daily Maximum (°C)	-2.3	-1.7	3.7	12.1	18.1	23.6	25.4	25.2	21.6	14.0	7.5	0.1	12.3
Standard Deviation of Daily Maximum (°C)	4.5	3.9	5.5	5.9	4.7	4.0	2.9	3.2	3.8	5.1	4.5	3.6	4.3
Daily Minimum (°C)	-8.0	-8.1	-4.3	2.0	7.3	13.3	15.6	15.7	12.0	5.7	0.7	-5.2	3.9
Standard Deviation of Daily Minimum (°C)	4.7	4.1	4.7	4.2	3.9	3.8	3.0	3.0	3.7	4.2	3.6	3.9	3.9
Extreme Maximum (°C)	13.8	12.6	25.3	28.7	32.1	32.9	33.6	34.6	31.2	29.7	18.5	15.3	34.6
Extreme Minimum (°C)	-21.9	-21.8	-25.8	-10.9	-1.8	2.6	5.8	7.7	-1.0	-2.6	-12.5	-20.8	-25.8

Table 19. Pickering = 14006

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.8	-4.6	-0.4	6.8	12.5	18.3	20.7	20.6	16.9	9.9	4.4	-2.1	8.2
Standard Deviation of Daily Average (°C)	4.5	3.7	4.5	4.3	3.4	3.2	2.3	2.6	3.3	4.1	3.7	3.7	3.6
Daily Maximum (°C)	-1.8	-1.1	3.7	11.8	17.6	23.2	25.2	25.1	21.4	14.2	7.9	0.7	12.3
Standard Deviation of Daily Maximum (°C)	4.4	3.9	5.0	5.2	4.1	3.7	2.6	2.9	3.4	4.5	4.1	3.7	4.0
Daily Minimum (°C)	-7.5	-7.5	-3.8	2.3	7.4	13.4	16.0	16.1	12.6	6.3	1.5	-4.5	4.3
Standard Deviation of Daily Minimum (°C)	4.8	4.0	4.6	3.9	3.6	3.5	2.9	2.9	3.8	4.3	3.6	3.9	3.8
Extreme Maximum (°C)	12.5	15.4	20.0	27.0	30.8	31.8	33.2	36.0	31.9	30.2	17.8	15.9	36.0
Extreme Minimum (°C)	-21.2	-21.1	-25.0	-9.8	-2.2	3.6	5.9	8.0	-0.7	-2.0	-10.8	-20.8	-25.0

Table 20. Clarington = 15524

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.2	-4.8	-0.4	6.8	12.7	18.4	20.6	20.6	16.8	9.7	4.1	-2.4	8.1
Standard Deviation of Daily Average (°C)	4.6	3.9	4.7	4.5	3.5	3.2	2.2	2.5	3.3	4.2	3.8	3.9	3.7
Daily Maximum (°C)	-2.2	-1.3	3.6	11.6	17.5	22.9	24.9	24.8	21.1	13.6	7.4	0.4	12.0
Standard Deviation of Daily Maximum (°C)	4.5	4.2	5.2	5.2	3.9	3.4	2.4	2.6	3.4	4.5	4.2	3.9	4.0
Daily Minimum (°C)	-7.8	-7.7	-3.8	2.5	8.0	14.0	16.5	16.6	13.0	6.4	1.4	-4.9	4.5
Standard Deviation of Daily Minimum (°C)	4.9	4.2	4.8	4.1	3.8	3.5	2.6	2.9	3.8	4.3	3.7	4.1	3.9
Extreme Maximum (°C)	12.6	31.1	19.7	24.3	30.0	31.5	32.6	31.5	29.8	28.2	18.2	24.3	32.6
Extreme Minimum (°C)	-21.6	-21.3	-25.0	-9.8	-1.1	4.6	7.0	8.0	-0.4	-2.5	-12.0	-23.7	-25.0

Table 21. Whitechurch Stouffville = 16064

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.4	-6.1	-1.6	5.9	11.9	17.6	19.6	19.4	15.7	8.5	3.0	-3.6	7.0
Standard Deviation of Daily Average (°C)	4.7	4.1	5.0	5.0	4.0	3.7	2.6	2.9	3.5	4.3	4.0	3.8	4.0
Daily Maximum (°C)	-3.3	-2.4	2.7	11.2	17.2	22.5	24.2	24.0	20.5	13.0	6.6	-0.8	11.3
Standard Deviation of Daily Maximum (°C)	4.6	4.2	5.6	5.9	4.6	4.0	2.9	3.1	3.8	5.0	4.5	3.8	4.3
Daily Minimum (°C)	-9.1	-9.1	-5.2	1.3	6.9	12.9	15.3	15.2	11.5	5.0	0.0	-6.1	3.2
Standard Deviation of Daily Minimum (°C)	4.9	4.4	5.0	4.5	4.1	3.9	3.0	3.2	3.8	4.3	3.8	4.0	4.1
Extreme Maximum (°C)	12.3	12.8	19.8	27.1	31.3	32.1	33.5	34.3	30.5	27.7	17.6	13.6	34.3
Extreme Minimum (°C)	-24.0	-23.7	-27.8	-12.7	-3.0	2.4	5.3	6.8	-3.1	-3.5	-13.2	-22.4	-27.8

Table 22. Uxbridge = 17575

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.1	-5.6	-1.3	6.2	12.3	17.9	20.0	19.8	16.0	8.9	3.3	-3.3	7.3
Standard Deviation of Daily Average (°C)	4.8	4.1	5.0	5.0	4.0	3.7	2.6	3.0	3.6	4.4	4.0	3.9	4.0
Daily Maximum (°C)	-2.9	-1.8	3.1	11.7	17.8	23.0	24.7	24.5	21.0	13.5	7.1	-0.3	11.8
Standard Deviation of Daily Maximum (°C)	4.6	4.6	5.6	6.0	4.6	3.9	2.9	3.1	3.8	5.0	4.5	4.0	4.4
Daily Minimum (°C)	-8.8	-8.8	-5.0	1.4	6.8	12.9	15.2	15.2	11.4	5.1	0.2	-5.8	3.3
Standard Deviation of Daily Minimum (°C)	5.1	4.4	4.9	4.5	4.3	4.1	3.1	3.4	4.0	4.4	3.8	4.1	4.2
Extreme Maximum (°C)	12.6	33.6	20.3	27.8	31.4	32.4	33.9	35.1	31.0	28.3	18.4	19.3	35.1
Extreme Minimum (°C)	-23.8	-23.3	-27.2	-11.8	-2.8	2.8	4.9	5.6	-3.9	-4.3	-13.4	-23.7	-27.2

Table 23. East Gwillimbury = 17704

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.0	-5.7	-1.3	6.2	12.2	17.8	19.9	19.6	16.0	8.9	3.4	-3.2	7.3
Standard Deviation of Daily Average (°C)	4.7	4.2	5.0	5.1	4.1	3.8	2.7	2.9	3.6	4.4	4.0	3.9	4.0
Daily Maximum (°C)	-2.9	-2.0	3.0	11.6	17.7	22.9	24.6	24.4	21.0	13.5	7.1	-0.4	11.7
Standard Deviation of Daily Maximum (°C)	4.6	4.5	5.8	6.1	4.7	4.0	3.0	3.2	3.9	5.1	4.6	3.9	4.4
Daily Minimum (°C)	-8.8	-8.9	-5.0	1.4	6.9	12.8	15.3	15.2	11.5	5.3	0.4	-5.7	3.4
Standard Deviation of Daily Minimum (°C)	5.0	4.4	5.0	4.5	4.3	4.2	3.3	3.3	3.9	4.3	3.8	4.0	4.2
Extreme Maximum (°C)	12.8	30.7	20.9	28.5	31.5	32.6	33.6	34.6	31.0	28.6	18.4	16.0	34.6
Extreme Minimum (°C)	-24.4	-23.7	-27.9	-13.1	-2.9	2.6	4.6	5.9	-3.4	-3.5	-12.3	-21.6	-27.9

Table 24. Burlington = 25903

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-3.3	-4.0	-0.7	4.8	10.0	16.2	19.6	20.2	17.1	10.9	5.5	-0.4	8.0
Standard Deviation of Daily Average (°C)	4.0	3.4	3.7	3.8	3.2	3.2	2.0	2.1	2.7	3.5	3.2	3.2	3.2
Daily Maximum (°C)	-1.0	-1.5	2.2	8.3	14.0	20.0	22.7	23.0	19.9	13.6	7.9	1.7	10.9
Standard Deviation of Daily Maximum (°C)	3.9	3.5	4.2	4.7	3.8	3.5	2.2	2.4	2.9	3.9	3.5	3.1	3.5
Daily Minimum (°C)	-5.1	-5.9	-2.8	2.5	7.1	13.3	16.8	17.6	14.5	8.5	3.6	-2.1	5.7
Standard Deviation of Daily Minimum (°C)	4.2	3.6	3.8	3.2	2.9	3.0	2.4	2.3	3.0	3.5	3.1	3.3	3.2
Extreme Maximum (°C)	11.3	10.7	16.6	20.6	25.7	29.0	29.3	30.1	28.2	26.5	16.4	14.5	30.1
Extreme Minimum (°C)	-18.5	-17.4	-21.4	-8.3	-0.6	4.6	7.6	11.9	4.5	1.5	-6.4	-16.1	-21.4

Table 2 Temperature Summary for 2000-2009 (Continued)

Table 25. Milton = 28288

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.5	-4.4	0.0	7.2	13.0	18.8	20.8	20.6	16.8	9.9	4.4	-2.1	8.4
Standard Deviation of Daily Average (°C)	4.4	3.8	4.7	4.9	4.1	3.7	2.6	2.9	3.5	4.3	3.9	3.6	3.9
Daily Maximum (°C)	-1.6	-1.0	4.4	12.4	18.3	23.8	25.6	25.4	21.7	14.4	8.1	0.7	12.7
Standard Deviation of Daily Maximum (°C)	4.4	4.0	5.6	5.9	4.8	4.0	2.9	3.2	3.7	5.1	4.5	3.7	4.3
Daily Minimum (°C)	-7.1	-7.3	-3.6	2.5	7.7	13.8	15.9	15.9	12.3	6.1	1.3	-4.5	4.4
Standard Deviation of Daily Minimum (°C)	4.6	4.0	4.6	4.3	4.1	3.9	3.1	3.1	3.8	4.3	3.6	3.6	3.9
Extreme Maximum (°C)	15.2	13.1	25.7	28.6	32.6	32.9	33.7	34.5	31.8	30.1	18.9	17.5	34.5
Extreme Minimum (°C)	-18.9	-18.8	-23.3	-10.5	-1.7	3.6	5.7	7.7	0.0	-1.8	-10.3	-18.7	-23.3

Table 26. Mississauga-Milton = 29206

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.4	-4.4	-0.2	6.9	12.7	18.5	20.8	20.6	16.8	10.0	4.5	-1.9	8.3
Standard Deviation of Daily Average (°C)	4.4	3.8	4.5	4.6	3.8	3.6	2.5	2.8	3.4	4.2	3.8	3.6	3.8
Daily Maximum (°C)	-1.5	-1.1	4.1	12.1	17.9	23.5	25.6	25.3	21.5	14.4	8.2	0.9	12.6
Standard Deviation of Daily Maximum (°C)	4.4	3.9	5.3	5.8	4.8	4.1	2.9	3.2	3.7	4.9	4.4	3.6	4.2
Daily Minimum (°C)	-7.1	-7.3	-3.6	2.4	7.4	13.4	15.7	15.8	12.2	6.1	1.4	-4.4	4.3
Standard Deviation of Daily Minimum (°C)	4.6	4.0	4.4	4.0	3.8	3.8	3.1	3.1	3.8	4.3	3.6	3.7	3.8
Extreme Maximum (°C)	14.8	13.1	23.4	29.2	31.8	33.3	33.9	35.0	31.0	30.4	19.2	17.2	35.0
Extreme Minimum (°C)	-19.5	-19.0	-23.4	-10.0	-1.2	2.5	5.9	7.9	0.1	-1.8	-11.4	-19.3	-23.4

Table 27. Richmond Hill = 13677

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.4	-5.2	-0.8	6.6	12.6	18.3	20.5	20.2	16.4	9.3	3.7	-2.8	7.8
Standard Deviation of Daily Average (°C)	4.5	3.9	4.7	4.8	3.8	3.6	2.5	2.8	3.5	4.2	3.8	3.7	3.8
Daily Maximum (°C)	-2.3	-1.7	3.6	12.0	18.0	23.5	25.4	25.1	21.5	13.9	7.5	0.1	12.2
Standard Deviation of Daily Maximum (°C)	4.5	4.0	5.5	5.9	4.6	4.1	2.9	3.2	3.8	5.0	4.4	3.7	4.3
Daily Minimum (°C)	-8.1	-8.3	-4.4	1.9	7.2	13.2	15.7	15.6	11.9	5.6	0.7	-5.3	3.8
Standard Deviation of Daily Minimum (°C)	4.8	4.1	4.7	4.1	3.9	3.8	2.9	3.1	3.7	4.2	3.6	3.9	3.9
Extreme Maximum (°C)	13.2	12.5	23.2	28.2	31.7	33.0	33.7	34.7	31.4	29.8	18.5	15.2	34.7
Extreme Minimum (°C)	-22.1	-22.1	-26.0	-11.1	-2.0	3.3	6.4	7.8	-1.0	-2.7	-12.5	-21.2	-26.0

Table 28. Oshawa = 14317

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.9	-4.6	-0.5	6.6	12.3	18.1	20.5	20.5	16.7	9.8	4.4	-2.1	8.1
Standard Deviation of Daily Average (°C)	4.6	3.8	4.5	4.2	3.3	3.1	2.2	2.5	3.3	4.1	3.7	3.8	3.6
Daily Maximum (°C)	-2.0	-1.3	3.5	11.3	17.1	22.6	24.7	24.7	21.0	13.8	7.6	0.6	12.0
Standard Deviation of Daily Maximum (°C)	4.4	3.8	4.9	4.9	3.8	3.5	2.4	2.7	3.3	4.4	4.0	3.7	3.8
Daily Minimum (°C)	-7.5	-7.5	-3.8	2.4	7.6	13.5	16.1	16.3	12.8	6.4	1.5	-4.5	4.4
Standard Deviation of Daily Minimum (°C)	4.9	4.1	4.6	3.9	3.6	3.5	2.8	3.0	3.8	4.3	3.6	4.0	3.9
Extreme Maximum (°C)	12.1	16.9	19.1	25.1	29.8	31.3	32.2	32.2	29.9	29.5	17.5	16.8	32.2
Extreme Minimum (°C)	-21.4	-21.3	-25.1	-9.7	-1.5	4.2	6.4	8.0	-0.4	-2.2	-12.3	-22.7	-25.1

Table 29. Udora = 20096

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.3	-6.0	-1.6	6.1	12.1	17.7	19.8	19.6	15.9	8.8	3.2	-3.4	7.2
Standard Deviation of Daily Average (°C)	4.8	4.2	5.0	5.1	4.0	3.7	2.5	2.8	3.6	4.4	4.0	3.9	4.0
Daily Maximum (°C)	-3.1	-2.1	2.9	11.5	17.6	22.8	24.5	24.3	20.9	13.4	7.0	-0.5	11.6
Standard Deviation of Daily Maximum (°C)	4.7	4.7	5.8	6.2	4.7	4.0	2.9	3.1	3.9	5.1	4.7	4.1	4.5
Daily Minimum (°C)	-9.1	-9.2	-5.3	1.2	6.7	12.8	15.2	15.1	11.3	5.1	0.2	-5.9	3.2
Standard Deviation of Daily Minimum (°C)	5.1	4.5	4.9	4.4	4.0	4.0	2.9	3.2	3.9	4.2	3.8	4.1	4.1
Extreme Maximum (°C)	13.6	40.9	21.1	28.5	31.2	32.2	33.3	34.5	31.1	28.3	18.8	32.8	40.9
Extreme Minimum (°C)	-25.1	-24.3	-28.2	-13.1	-3.4	2.4	6.9	7.0	-3.7	-4.2	-12.7	-23.3	-28.2

Table 30. Niagara Falls = 5608

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.0	-3.6	0.8	7.8	13.6	19.0	21.1	21.2	17.5	10.6	5.2	-1.4	9.0
Standard Deviation of Daily Average (°C)	4.7	4.1	5.0	5.0	3.9	3.5	2.4	2.6	3.4	4.4	4.2	3.8	3.9
Daily Maximum (°C)	-1.0	-0.1	5.4	13.2	19.0	23.9	25.6	25.5	22.2	14.9	9.0	1.6	13.3
Standard Deviation of Daily Maximum (°C)	4.8	4.5	5.9	6.0	4.5	3.8	2.8	3.0	3.8	5.2	4.8	4.1	4.4
Daily Minimum (°C)	-6.7	-6.6	-2.8	3.0	8.1	14.0	16.6	17.0	13.2	7.1	2.1	-4.1	5.1
Standard Deviation of Daily Minimum (°C)	4.8	4.2	4.7	4.4	4.0	3.7	2.7	2.7	3.6	4.3	3.9	3.8	3.9
Extreme Maximum (°C)	16.9	19.3	24.0	28.4	30.8	32.1	33.5	33.2	31.4	28.0	23.5	18.5	33.5
Extreme Minimum (°C)	-19.9	-17.5	-22.4	-8.6	-1.3	3.1	6.9	10.2	1.2	-1.5	-9.3	-18.8	-22.4

Table 31. King Smoke Tree = 15752

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-5.8	-5.6	-1.2	6.3	12.3	18.0	20.1	19.8	16.1	9.0	3.4	-3.1	7.4
Standard Deviation of Daily Average (°C)	4.6	4.1	5.0	5.0	4.1	3.8	2.7	3.0	3.6	4.4	4.0	3.8	4.0
Daily Maximum (°C)	-2.7	-1.9	3.3	11.7	17.8	23.2	24.9	24.7	21.2	13.6	7.2	-0.3	11.9
Standard Deviation of Daily Maximum (°C)	4.6	4.2	5.7	6.0	4.7	4.1	3.0	3.3	3.9	5.2	4.6	3.8	4.4
Daily Minimum (°C)	-8.6	-8.7	-4.8	1.5	7.0	13.0	15.5	15.3	11.7	5.4	0.4	-5.7	3.5
Standard Deviation of Daily Minimum (°C)	4.9	4.4	4.9	4.5	4.2	4.2	3.2	3.4	3.9	4.3	3.7	3.9	4.1
Extreme Maximum (°C)	13.5	12.7	23.7	28.6	31.7	33.1	34.2	35.0	31.2	29.5	18.5	14.6	35.0
Extreme Minimum (°C)	-23.6	-23.2	-27.2	-12.3	-2.4	1.8	5.8	6.6	-2.2	-3.7	-13.0	-22.2	-27.2

Table 32. Orangeville MOE = 14073

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.3	-6.1	-1.6	5.8	11.8	17.6	19.5	19.1	15.5	8.4	2.7	-3.8	6.9
Standard Deviation of Daily Average (°C)	4.5	4.2	5.2	5.3	4.2	3.8	2.7	2.9	3.6	4.6	4.1	3.7	4.1
Daily Maximum (°C)	-3.3	-2.6	2.7	10.9	17.0	22.4	24.0	23.7	20.3	12.6	6.4	-1.1	11.1
Standard Deviation of Daily Maximum (°C)	4.6	4.3	5.9	6.1	4.7	4.0	2.9	3.1	3.9	5.2	4.7	3.8	4.4
Daily Minimum (°C)	-8.9	-9.0	-5.1	1.4	7.1	13.1	15.2	15.0	11.5	4.9	-0.1	-6.1	3.2
Standard Deviation of Daily Minimum (°C)	4.7	4.4	5.0	4.8	4.3	4.0	3.1	3.1	3.8	4.3	3.8	3.8	4.1
Extreme Maximum (°C)	13.8	12.6	23.2	27.3	30.7	31.5	32.0	33.0	30.2	28.0	18.0	15.8	33.0
Extreme Minimum (°C)	-21.7	-21.8	-26.3	-12.5	-3.3	2.2	3.9	7.5	-2.0	-3.7	-11.6	-21.0	-26.3

Table 2 Temperature Summary for 2000-2009 (Continued)

Table 33. Georgetown WWTP = 29942

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.8	-4.7	-0.3	7.0	12.8	18.6	20.6	20.3	16.6	9.6	4.1	-2.3	8.1
Standard Deviation of Daily Average (°C)	4.4	3.8	4.7	4.9	4.0	3.7	2.6	2.9	3.5	4.3	3.9	3.6	3.8
Daily Maximum (°C)	-1.8	-1.3	4.2	12.3	18.2	23.6	25.4	25.2	21.6	14.3	7.9	0.5	12.5
Standard Deviation of Daily Maximum (°C)	4.4	4.0	5.6	5.9	4.7	4.0	2.9	3.2	3.8	5.1	4.5	3.6	4.3
Daily Minimum (°C)	-7.4	-7.6	-3.9	2.3	7.4	13.4	15.6	15.6	12.0	5.8	1.1	-4.7	4.1
Standard Deviation of Daily Minimum (°C)	4.6	4.0	4.6	4.3	4.0	3.9	3.1	3.1	3.7	4.2	3.5	3.7	3.9
Extreme Maximum (°C)	14.9	13.1	25.6	28.7	32.3	32.6	33.2	34.2	31.6	29.9	18.8	17.3	34.2
Extreme Minimum (°C)	-19.3	-19.0	-23.7	-10.7	-1.4	3.4	5.6	7.8	-0.9	-2.1	-10.9	-19.2	-23.7

Table 34. Oakville Southeast WPCP = 27562

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-3.4	-4.0	-0.8	4.7	9.9	16.0	19.5	20.1	17.1	10.8	5.4	-0.4	7.9
Standard Deviation of Daily Average (°C)	4.0	3.4	3.6	3.6	3.0	3.0	1.9	2.1	2.8	3.6	3.2	3.2	3.1
Daily Maximum (°C)	-1.2	-1.6	2.0	8.1	13.6	19.6	22.5	22.8	19.7	13.4	7.8	1.6	10.7
Standard Deviation of Daily Maximum (°C)	3.9	3.3	4.0	4.4	3.5	3.3	2.1	2.3	2.8	3.8	3.4	3.1	3.3
Daily Minimum (°C)	-5.2	-5.9	-2.9	2.4	7.1	13.2	16.7	17.3	14.5	8.4	3.5	-2.2	5.6
Standard Deviation of Daily Minimum (°C)	4.3	3.7	3.8	3.2	2.8	3.1	2.5	2.5	3.2	3.6	3.2	3.4	3.3
Extreme Maximum (°C)	10.7	10.3	15.8	20.2	25.5	27.9	29.3	29.5	28.1	26.3	15.9	13.8	29.5
Extreme Minimum (°C)	-18.6	-17.4	-22.1	-8.3	0.3	4.8	7.8	11.3	3.8	0.7	-7.2	-17.0	-22.1

Table 35. Burlington Piers = 8114

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-3.2	-3.9	-0.5	5.0	10.3	16.5	19.8	20.3	17.1	10.9	5.6	-0.4	8.1
Standard Deviation of Daily Average (°C)	4.1	3.5	3.8	3.9	3.4	3.3	2.1	2.2	2.8	3.6	3.3	3.2	3.3
Daily Maximum (°C)	-0.9	-1.3	2.7	8.8	14.6	20.5	23.1	23.4	20.2	13.8	8.1	1.7	11.2
Standard Deviation of Daily Maximum (°C)	4.0	3.6	4.4	4.9	4.0	3.6	2.3	2.5	3.0	4.1	3.7	3.2	3.6
Daily Minimum (°C)	-5.2	-5.9	-2.8	2.4	7.1	13.3	16.6	17.4	14.3	8.3	3.4	-2.2	5.6
Standard Deviation of Daily Minimum (°C)	4.2	3.6	3.8	3.3	3.0	3.2	2.6	2.5	3.1	3.6	3.2	3.3	3.3
Extreme Maximum (°C)	12.0	11.5	18.0	21.8	27.6	29.1	29.5	30.3	28.8	26.4	17.0	15.0	30.3
Extreme Minimum (°C)	-18.3	-17.2	-20.9	-8.4	-1.0	4.7	7.0	10.4	4.2	0.1	-6.5	-15.5	-20.9

Table 36. Millgrove = 8402

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.3	-4.3	0.2	7.1	12.9	18.7	20.9	20.7	16.9	10.0	4.6	-1.8	8.5
Standard Deviation of Daily Average (°C)	4.4	3.8	4.7	4.8	4.0	3.6	2.5	2.8	3.4	4.2	3.9	3.6	3.8
Daily Maximum (°C)	-1.3	-0.9	4.5	12.1	18.1	23.7	25.6	25.3	21.6	14.6	8.4	1.0	12.7
Standard Deviation of Daily Maximum (°C)	4.4	3.9	5.5	5.9	5.0	4.2	2.9	3.3	3.7	5.0	4.5	3.7	4.3
Daily Minimum (°C)	-7.1	-7.1	-3.3	2.8	7.8	13.8	16.1	16.2	12.5	6.1	1.5	-4.4	4.6
Standard Deviation of Daily Minimum (°C)	4.7	4.0	4.6	4.3	4.0	3.7	3.0	3.0	3.8	4.4	3.6	3.7	3.9
Extreme Maximum (°C)	15.6	13.0	26.0	28.6	32.3	33.2	33.4	34.2	31.6	30.6	19.2	17.7	34.2
Extreme Minimum (°C)	-20.1	-19.5	-22.1	-10.5	-1.5	3.5	5.1	7.6	0.9	-2.2	-10.2	-19.2	-22.1

Table 3 Temperature Summary for 2040-2049

Table 1. Toronto Pearson = 10385

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.3	2.2	5.1	10.2	17.3	22.9	25.5	25.5	21.0	14.9	8.2	2.7	13.1
Standard Deviation of Daily Average (°C)	3.1	3.3	3.3	4.2	3.7	3.6	2.7	2.8	3.9	4.1	3.3	3.1	3.4
Daily Maximum (°C)	4.1	5.4	9.3	15.1	22.9	29.0	31.7	31.5	26.5	20.0	12.0	5.9	17.8
Standard Deviation of Daily Maximum (°C)	3.3	3.8	4.0	5.0	4.5	4.4	3.3	3.3	4.4	4.8	3.4	3.2	4.0
Daily Minimum (°C)	-0.9	-0.2	1.6	5.6	11.6	16.7	19.7	20.1	16.2	10.5	5.2	0.2	8.9
Standard Deviation of Daily Minimum (°C)	3.2	3.4	3.1	4.1	3.7	3.5	2.7	2.9	4.0	4.2	3.6	3.2	3.5
Extreme Maximum (°C)	16.0	17.7	21.1	29.2	39.9	42.7	44.1	44.4	36.9	33.7	21.3	16.1	44.4
Extreme Minimum (°C)	-10.0	-9.6	-6.4	-4.3	2.9	5.1	11.7	11.7	3.7	0.4	-5.7	-11.4	-11.4

Table 2. Hamilton = 5989

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.1	2.2	4.8	9.8	16.4	21.8	24.3	24.2	20.0	14.2	7.9	2.6	12.4
Standard Deviation of Daily Average (°C)	3.3	3.4	3.2	4.4	3.8	3.7	2.8	2.7	3.7	3.9	3.3	3.1	3.4
Daily Maximum (°C)	3.9	5.5	9.0	14.7	21.7	27.3	29.5	29.3	24.5	18.7	11.4	5.9	16.8
Standard Deviation of Daily Maximum (°C)	3.4	3.9	3.9	5.3	4.4	4.3	3.4	3.1	4.2	4.4	3.4	3.2	3.9
Daily Minimum (°C)	-0.9	-0.3	1.4	5.2	11.2	16.3	19.4	19.7	15.9	10.4	5.0	0.1	8.6
Standard Deviation of Daily Minimum (°C)	3.4	3.4	3.1	4.2	3.9	3.7	2.7	2.9	4.0	4.1	3.6	3.2	3.5
Extreme Maximum (°C)	15.0	18.4	19.9	30.5	38.7	40.5	41.1	41.3	35.1	30.4	20.0	17.0	41.3
Extreme Minimum (°C)	-9.9	-8.8	-6.4	-4.4	2.2	5.2	9.7	10.8	5.8	-0.8	-4.0	-9.0	-9.9

Table 3 Temperature Summary for 2040-2049 (Continued)

Table 3. Toronto North York = 11888

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.9	1.9	4.7	9.8	16.7	22.0	24.5	24.6	20.4	14.4	7.8	2.3	12.5
Standard Deviation of Daily Average (°C)	3.1	3.4	3.3	4.2	3.7	3.5	2.6	2.8	3.9	4.1	3.3	3.1	3.4
Daily Maximum (°C)	3.7	5.1	9.0	14.7	22.0	27.7	30.3	30.2	25.5	19.3	11.6	5.5	17.0
Standard Deviation of Daily Maximum (°C)	3.2	3.7	4.0	4.9	4.5	4.3	3.2	3.3	4.4	4.8	3.4	3.2	3.9
Daily Minimum (°C)	-1.3	-0.6	1.3	5.3	11.2	16.4	19.3	19.8	15.9	10.3	4.8	-0.2	8.5
Standard Deviation of Daily Minimum (°C)	3.2	3.5	3.1	4.2	3.8	3.5	2.7	2.8	4.0	4.3	3.6	3.3	3.5
Extreme Maximum (°C)	15.0	16.8	20.2	29.2	37.9	40.4	42.7	43.3	35.7	32.3	20.7	16.0	43.3
Extreme Minimum (°C)	-9.8	-9.5	-7.5	-4.5	2.4	4.9	10.9	11.9	2.6	0.3	-5.8	-12.5	-12.5

Table 4. Toronto Island = 9505

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	2.1	2.9	5.3	9.6	15.8	20.6	23.8	24.7	21.2	15.6	9.2	3.7	12.9
Standard Deviation of Daily Average (°C)	3.0	3.1	2.8	3.3	2.7	2.6	2.1	2.3	3.2	3.6	3.1	3.1	2.9
Daily Maximum (°C)	4.5	5.5	8.8	14.0	20.7	26.5	29.4	29.9	25.6	19.6	12.2	6.5	16.9
Standard Deviation of Daily Maximum (°C)	3.0	3.3	3.3	4.1	3.7	3.8	2.9	3.0	3.6	4.1	3.0	3.0	3.4
Daily Minimum (°C)	0.2	0.7	2.2	5.7	11.0	15.2	18.8	20.3	17.1	11.9	6.7	1.3	9.3
Standard Deviation of Daily Minimum (°C)	3.1	3.3	2.8	3.3	2.8	2.4	2.0	2.3	3.7	4.0	3.6	3.3	3.0
Extreme Maximum (°C)	13.4	15.4	18.3	28.6	40.5	42.0	43.5	44.4	35.9	33.4	20.9	14.2	44.4
Extreme Minimum (°C)	-8.2	-8.3	-6.3	-3.6	4.2	4.7	11.1	12.3	6.7	0.7	-3.9	-10.5	-10.5

Table 5. Hwy 427-401 = 10242

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.4	2.4	5.2	10.2	17.2	22.7	25.4	25.5	21.2	15.1	8.4	2.8	13.1
Standard Deviation of Daily Average (°C)	3.1	3.3	3.2	4.0	3.5	3.4	2.6	2.8	3.8	4.1	3.3	3.1	3.4
Daily Maximum (°C)	4.3	5.5	9.3	15.1	22.8	28.9	31.6	31.5	26.6	20.1	12.1	6.1	17.8
Standard Deviation of Daily Maximum (°C)	3.2	3.7	3.9	4.9	4.4	4.4	3.2	3.3	4.4	4.8	3.4	3.2	3.9
Daily Minimum (°C)	-0.8	-0.1	1.7	5.6	11.5	16.3	19.6	20.2	16.2	10.6	5.3	0.2	8.9
Standard Deviation of Daily Minimum (°C)	3.3	3.4	3.1	4.0	3.5	3.2	2.6	2.9	4.1	4.3	3.8	3.3	3.5
Extreme Maximum (°C)	15.5	17.2	20.1	29.5	40.8	43.2	44.3	44.9	37.1	33.8	21.8	16.4	44.9
Extreme Minimum (°C)	-10.4	-9.2	-7.9	-4.2	2.6	4.8	10.7	11.7	3.6	-0.2	-5.9	-11.3	-11.3

Table 6. Beaches-East York = 10863

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	2.5	2.8	4.8	8.5	13.5	17.7	21.2	22.9	20.4	15.4	9.5	4.1	11.9
Standard Deviation of Daily Average (°C)	2.8	2.9	2.4	2.7	2.3	2.3	1.8	1.8	2.8	3.3	2.9	2.9	2.6
Daily Maximum (°C)	4.4	4.9	7.4	11.7	17.1	21.9	24.8	26.0	23.3	18.3	11.8	6.4	14.9
Standard Deviation of Daily Maximum (°C)	2.7	2.9	2.7	3.3	3.3	3.4	2.9	2.8	2.7	3.4	2.6	2.8	3.0
Daily Minimum (°C)	0.8	1.0	2.5	5.7	10.2	14.3	18.1	20.2	17.5	12.6	7.3	2.1	9.4
Standard Deviation of Daily Minimum (°C)	2.9	3.1	2.6	2.8	2.3	2.1	1.6	1.9	3.4	3.7	3.4	3.1	2.7
Extreme Maximum (°C)	11.5	12.2	16.0	24.6	36.0	37.5	39.5	39.8	31.0	30.5	18.9	13.2	39.8
Extreme Minimum (°C)	-7.2	-7.5	-5.7	-3.0	4.5	5.5	12.1	14.6	6.0	2.7	-3.8	-9.5	-9.5

Table 7. York South-Weston = 10847

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.3	2.3	5.0	10.0	16.9	22.3	25.1	25.3	21.1	15.2	8.5	2.9	13.0
Standard Deviation of Daily Average (°C)	3.1	3.3	3.1	3.9	3.4	3.3	2.5	2.7	3.7	4.0	3.2	3.1	3.3
Daily Maximum (°C)	4.0	5.3	9.0	14.7	22.3	28.5	31.3	31.2	26.3	19.9	11.9	5.9	17.5
Standard Deviation of Daily Maximum (°C)	3.2	3.6	3.8	4.8	4.4	4.3	3.3	3.4	4.4	4.7	3.3	3.1	3.9
Daily Minimum (°C)	-0.7	0.0	1.8	5.7	11.5	16.3	19.5	20.3	16.6	11.1	5.6	0.4	9.0
Standard Deviation of Daily Minimum (°C)	3.2	3.4	2.9	3.8	3.3	3.0	2.4	2.6	3.9	4.1	3.6	3.2	3.3
Extreme Maximum (°C)	14.3	16.7	19.2	29.2	39.8	43.2	44.8	45.1	37.1	33.1	21.8	15.1	45.1
Extreme Minimum (°C)	-9.3	-8.8	-7.0	-4.1	3.4	5.4	11.7	12.6	4.2	0.6	-4.8	-11.0	-11.0

Table 8. DVP & Don Mills = 11005

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	2.2	2.5	4.4	8.0	13.0	17.4	20.7	22.4	20.0	15.1	9.2	3.9	11.6
Standard Deviation of Daily Average (°C)	2.7	2.8	2.4	2.8	2.4	2.4	1.8	1.9	2.7	3.2	2.8	2.7	2.6
Daily Maximum (°C)	4.1	4.5	6.8	10.9	16.3	21.1	24.0	25.2	22.6	17.8	11.4	6.1	14.2
Standard Deviation of Daily Maximum (°C)	2.7	2.8	2.7	3.3	3.1	3.2	2.7	2.7	2.8	3.4	2.6	2.8	2.9
Daily Minimum (°C)	0.6	0.9	2.4	5.6	10.3	14.4	18.0	20.1	17.6	12.6	7.2	2.1	9.3
Standard Deviation of Daily Minimum (°C)	2.8	3.0	2.5	2.8	2.2	2.2	1.6	1.8	3.2	3.5	3.2	2.9	2.6
Extreme Maximum (°C)	11.1	11.7	14.5	21.2	31.7	34.9	36.3	37.2	30.4	29.2	18.6	12.7	37.2
Extreme Minimum (°C)	-6.2	-7.3	-5.5	-2.9	4.7	6.3	12.3	14.3	7.0	4.2	-3.1	-7.5	-7.5

Table 9. Etobicoke North = 11287

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.8	1.8	4.7	9.8	16.6	22.0	24.5	24.6	20.3	14.4	7.8	2.3	12.5
Standard Deviation of Daily Average (°C)	3.1	3.4	3.3	4.2	3.8	3.6	2.6	2.8	3.9	4.1	3.3	3.1	3.4
Daily Maximum (°C)	3.7	5.0	8.9	14.6	21.9	27.6	30.2	30.1	25.4	19.2	11.5	5.5	17.0
Standard Deviation of Daily Maximum (°C)	3.2	3.7	4.0	5.0	4.4	4.2	3.2	3.3	4.3	4.7	3.4	3.2	3.9
Daily Minimum (°C)	-1.4	-0.6	1.3	5.3	11.3	16.5	19.4	19.8	15.8	10.2	4.8	-0.2	8.5
Standard Deviation of Daily Minimum (°C)	3.3	3.5	3.1	4.2	3.8	3.6	2.7	2.9	4.1	4.2	3.7	3.3	3.5
Extreme Maximum (°C)	15.2	16.9	20.1	28.7	38.0	40.5	42.5	43.0	35.7	32.5	21.2	15.9	43.0
Extreme Minimum (°C)	-10.4	-9.6	-7.6	-4.6	2.3	4.1	11.2	11.0	3.0	-0.6	-5.7	-11.2	-11.2

Table 10. Scarborough = 12063

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	2.0	2.6	4.8	8.6	13.6	17.7	21.1	22.6	20.0	14.9	8.9	3.5	11.7
Standard Deviation of Daily Average (°C)	2.9	3.0	2.6	2.9	2.4	2.4	1.8	1.9	3.0	3.5	3.0	3.1	2.7
Daily Maximum (°C)	4.3	5.0	7.7	12.1	17.4	21.8	24.7	25.8	23.2	18.2	11.7	6.2	14.9
Standard Deviation of Daily Maximum (°C)	2.8	3.0	2.8	3.5	3.4	3.5	2.9	2.7	3.0	3.5	2.8	2.9	3.1
Daily Minimum (°C)	0.0	0.6	2.1	5.2	9.9	14.0	17.9	19.8	16.7	11.6	6.3	1.2	8.8
Standard Deviation of Daily Minimum (°C)	3.2	3.3	2.7	3.1	2.5	2.3	1.7	2.2	3.8	4.1	3.6	3.4	3.0
Extreme Maximum (°C)	12.2	12.5	16.6	26.1	35.6	38.5	39.4	39.8	31.3	29.8	19.7	13.3	39.8
Extreme Minimum (°C)	-9.2	-8.1	-6.1	-3.0	3.1	3.3	10.8	12.7	4.3	1.7	-4.1	-12.1	-12.1

Table 3 Temperature Summary for 2040-2049 (Continued)

Table 11. Don Valley East = 12049

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.9	1.9	4.7	9.6	16.3	21.4	24.0	24.2	20.2	14.5	7.9	2.4	12.3
Standard Deviation of Daily Average (°C)	3.1	3.3	3.2	4.0	3.5	3.3	2.4	2.7	3.7	4.1	3.3	3.1	3.3
Daily Maximum (°C)	3.8	5.0	8.8	14.4	21.5	26.9	29.4	29.4	25.1	19.1	11.5	5.5	16.7
Standard Deviation of Daily Maximum (°C)	3.2	3.6	3.8	4.7	4.2	4.2	3.0	3.3	4.2	4.6	3.3	3.1	3.8
Daily Minimum (°C)	-1.3	-0.6	1.3	5.2	11.0	16.0	19.0	19.7	15.9	10.4	4.9	-0.1	8.5
Standard Deviation of Daily Minimum (°C)	3.2	3.5	3.0	4.0	3.6	3.3	2.6	2.7	4.0	4.2	3.7	3.3	3.4
Extreme Maximum (°C)	14.3	16.3	19.2	28.9	37.7	41.4	42.7	42.9	35.7	32.0	21.4	14.8	42.9
Extreme Minimum (°C)	-9.4	-9.6	-7.3	-4.3	2.7	4.1	10.8	12.0	3.3	0.3	-5.3	-12.7	-12.7

Table 12. Scarborough - Rouge River = 12655

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.3	2.3	5.0	9.8	16.0	20.5	23.4	24.0	20.4	14.7	8.3	2.8	12.4
Standard Deviation of Daily Average (°C)	3.1	3.2	3.0	3.7	3.1	2.9	2.1	2.5	3.6	4.0	3.2	3.1	3.1
Daily Maximum (°C)	4.2	5.5	9.1	14.5	21.1	26.1	28.7	29.1	25.1	19.3	11.9	6.0	16.7
Standard Deviation of Daily Maximum (°C)	3.1	3.5	3.7	4.5	4.0	3.9	2.9	3.2	4.0	4.5	3.2	3.1	3.6
Daily Minimum (°C)	-1.0	-0.2	1.6	5.3	10.7	15.2	18.6	19.7	16.1	10.7	5.2	0.2	8.5
Standard Deviation of Daily Minimum (°C)	3.3	3.4	2.9	3.7	3.2	2.8	2.3	2.5	3.9	4.3	3.7	3.4	3.3
Extreme Maximum (°C)	14.5	16.1	19.7	29.1	38.2	41.3	42.6	42.7	34.1	31.8	22.2	15.2	42.7
Extreme Minimum (°C)	-10.7	-9.3	-6.7	-3.6	3.1	3.6	11.3	12.0	3.6	0.9	-4.8	-13.7	-13.7

Table 13. Mississauga = 29823

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	2.6	3.0	4.7	8.1	12.6	16.7	20.2	22.2	20.1	15.2	9.5	4.3	11.6
Standard Deviation of Daily Average (°C)	2.7	2.7	2.3	2.5	2.2	2.2	1.7	1.8	2.5	3.0	2.7	2.7	2.4
Daily Maximum (°C)	4.6	5.0	7.1	11.1	16.1	21.0	23.8	25.1	22.8	18.1	11.8	6.7	14.4
Standard Deviation of Daily Maximum (°C)	2.6	2.7	2.5	3.2	3.2	3.6	2.9	2.7	2.6	3.1	2.5	2.7	2.9
Daily Minimum (°C)	1.0	1.3	2.7	5.5	9.9	13.6	17.7	20.0	17.5	12.6	7.5	2.4	9.3
Standard Deviation of Daily Minimum (°C)	2.8	2.9	2.4	2.7	2.1	1.9	1.4	1.9	3.2	3.5	3.2	2.9	2.6
Extreme Maximum (°C)	11.3	11.7	15.0	23.8	32.7	35.3	36.3	37.5	30.6	29.2	19.0	12.9	37.5
Extreme Minimum (°C)	-6.0	-6.9	-5.2	-2.6	4.0	5.6	11.0	13.6	7.5	3.5	-2.3	-6.1	-6.9

Table 14. Trinity Spadina = 9957

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	2.0	2.8	5.3	9.7	16.0	21.0	24.1	25.0	21.3	15.6	9.1	3.5	13.0
Standard Deviation of Daily Average (°C)	3.0	3.1	2.9	3.4	3.0	2.9	2.3	2.4	3.3	3.7	3.0	3.0	3.0
Daily Maximum (°C)	4.4	5.5	8.9	14.2	21.1	27.1	30.0	30.4	26.0	19.8	12.2	6.4	17.2
Standard Deviation of Daily Maximum (°C)	3.1	3.4	3.5	4.4	4.0	4.2	3.3	3.3	4.0	4.4	3.1	3.0	3.6
Daily Minimum (°C)	0.1	0.6	2.2	5.7	11.0	15.3	18.9	20.3	17.1	11.9	6.6	1.1	9.2
Standard Deviation of Daily Minimum (°C)	3.2	3.3	2.8	3.3	2.8	2.5	2.0	2.4	3.6	3.9	3.5	3.2	3.1
Extreme Maximum (°C)	14.2	16.2	19.0	29.2	40.1	43.3	44.4	45.1	36.0	33.9	21.1	14.6	45.1
Extreme Minimum (°C)	-8.4	-8.2	-6.2	-3.6	4.1	4.8	11.1	12.6	7.4	1.0	-3.5	-9.7	-9.7

Table 15. Pelham -Thorold = 4083

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.6	2.7	5.1	9.8	16.1	20.8	24.0	24.4	20.6	14.9	8.4	3.2	12.6
Standard Deviation of Daily Average (°C)	3.3	3.6	3.2	4.0	3.3	2.8	2.2	2.3	3.6	3.8	3.2	3.0	3.2
Daily Maximum (°C)	4.4	6.1	9.3	14.7	21.8	26.8	29.8	29.7	25.3	19.4	11.9	6.1	17.1
Standard Deviation of Daily Maximum (°C)	3.3	4.0	3.9	4.8	4.0	3.4	2.8	2.6	4.0	4.3	3.4	3.2	3.7
Daily Minimum (°C)	-0.6	0.0	1.6	5.3	10.6	14.9	18.6	19.9	16.6	11.2	5.5	0.7	8.7
Standard Deviation of Daily Minimum (°C)	3.5	3.5	3.1	4.1	3.5	3.0	2.3	2.4	3.8	3.9	3.5	3.1	3.3
Extreme Maximum (°C)	14.0	18.9	20.3	29.1	37.3	35.3	39.2	36.6	34.3	28.8	21.4	15.6	39.2
Extreme Minimum (°C)	-9.7	-8.6	-5.7	-6.1	1.4	4.9	10.5	11.8	4.3	0.7	-2.6	-9.0	-9.7

Table 16. West Lincoln = 4507

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.6	2.6	5.0	9.7	16.0	21.0	23.9	24.2	20.3	14.7	8.3	3.0	12.5
Standard Deviation of Daily Average (°C)	3.2	3.4	3.1	4.1	3.4	3.1	2.4	2.4	3.5	3.7	3.2	3.0	3.2
Daily Maximum (°C)	4.2	5.8	9.1	14.5	21.4	26.6	29.2	29.2	24.6	19.0	11.6	6.0	16.8
Standard Deviation of Daily Maximum (°C)	3.3	3.9	3.8	4.8	4.1	3.7	3.0	2.7	4.0	4.2	3.4	3.2	3.7
Daily Minimum (°C)	-0.5	0.1	1.7	5.4	10.8	15.5	19.0	19.8	16.5	11.1	5.5	0.7	8.8
Standard Deviation of Daily Minimum (°C)	3.4	3.3	3.0	3.9	3.5	3.0	2.3	2.6	3.8	3.9	3.5	3.0	3.3
Extreme Maximum (°C)	13.8	18.8	20.0	28.9	37.6	40.6	38.9	37.2	33.2	29.0	20.3	16.7	40.6
Extreme Minimum (°C)	-9.6	-8.4	-5.2	-4.3	2.2	5.4	10.2	11.5	5.5	-0.3	-2.0	-8.3	-9.6

Table 17. Caledon = 12747

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.3	1.2	4.2	9.4	16.5	21.9	24.3	24.1	19.7	13.8	7.2	1.7	12.0
Standard Deviation of Daily Average (°C)	3.1	3.5	3.4	4.5	4.1	3.8	2.9	2.9	3.9	4.2	3.3	3.1	3.5
Daily Maximum (°C)	3.1	4.4	8.4	14.2	21.5	27.1	29.5	29.2	24.6	18.5	10.8	4.9	16.3
Standard Deviation of Daily Maximum (°C)	3.2	3.9	4.1	5.2	4.5	4.2	3.4	3.3	4.4	4.8	3.5	3.3	4.0
Daily Minimum (°C)	-1.9	-1.3	0.9	5.2	11.6	16.9	19.5	19.7	15.5	9.8	4.3	-0.7	8.3
Standard Deviation of Daily Minimum (°C)	3.2	3.5	3.1	4.4	4.2	3.8	2.9	3.0	4.0	4.2	3.5	3.2	3.6
Extreme Maximum (°C)	15.6	18.6	20.6	28.7	37.6	39.2	41.8	41.5	36.0	31.3	20.0	15.2	41.8
Extreme Minimum (°C)	-11.8	-11.6	-7.8	-5.2	2.5	4.7	11.6	11.3	2.4	-0.2	-6.3	-12.0	-12.0

Table 18. Vaughan = 12773

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.5	1.5	4.5	9.6	16.6	21.9	24.3	24.4	20.1	14.1	7.5	1.9	12.2
Standard Deviation of Daily Average (°C)	3.1	3.4	3.3	4.3	3.9	3.6	2.6	2.8	3.9	4.1	3.3	3.1	3.5
Daily Maximum (°C)	3.4	4.8	8.7	14.5	21.8	27.3	29.8	29.8	25.1	18.9	11.2	5.1	16.7
Standard Deviation of Daily Maximum (°C)	3.2	3.8	4.1	5.1	4.5	4.2	3.2	3.3	4.4	4.8	3.4	3.3	3.9
Daily Minimum (°C)	-1.7	-1.0	1.1	5.3	11.4	16.7	19.4	19.8	15.7	10.1	4.5	-0.6	8.4
Standard Deviation of Daily Minimum (°C)	3.2	3.5	3.1	4.3	3.9	3.6	2.7	2.8	4.0	4.2	3.6	3.3	3.5
Extreme Maximum (°C)	15.6	17.8	20.9	28.8	37.4	40.2	42.0	42.5	35.3	32.2	20.3	15.6	42.5
Extreme Minimum (°C)	-10.6	-9.9	-7.9	-4.9	2.6	4.8	11.6	11.7	3.1	0.3	-5.9	-12.5	-12.5

Table 3 Temperature Summary for 2040-2049 (Continued)

Table 19. Pickering = 14006

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.2	2.3	5.1	9.8	16.0	20.4	23.3	23.8	20.3	14.6	8.1	2.7	12.3
Standard Deviation of Daily Average (°C)	3.0	3.3	3.0	3.6	2.9	2.5	1.9	2.2	3.5	3.9	3.2	3.1	3.0
Daily Maximum (°C)	4.2	5.5	9.2	14.7	21.1	25.7	28.3	28.7	24.9	19.1	11.8	5.9	16.6
Standard Deviation of Daily Maximum (°C)	3.1	3.5	3.6	4.4	3.7	3.4	2.4	2.8	3.8	4.3	3.2	3.0	3.4
Daily Minimum (°C)	-1.0	-0.3	1.6	5.5	10.9	15.3	18.8	19.7	16.2	10.6	5.0	0.2	8.5
Standard Deviation of Daily Minimum (°C)	3.2	3.4	2.9	3.7	3.0	2.6	2.1	2.4	3.9	4.3	3.6	3.2	3.2
Extreme Maximum (°C)	14.1	15.6	19.4	29.3	38.1	40.9	39.6	43.8	34.1	31.4	21.9	15.0	43.8
Extreme Minimum (°C)	-9.9	-9.8	-6.7	-4.0	2.9	4.1	12.0	11.4	2.7	0.4	-5.1	-12.6	-12.6

Table 20. Clarington = 15524

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.7	1.7	4.7	9.6	16.3	21.0	23.7	23.9	20.0	14.3	7.7	2.3	12.2
Standard Deviation of Daily Average (°C)	3.1	3.5	3.1	3.8	3.2	2.8	2.1	2.2	3.5	3.9	3.2	3.1	3.1
Daily Maximum (°C)	3.4	4.8	8.6	14.1	21.0	25.9	28.5	28.5	24.3	18.3	11.1	5.1	16.1
Standard Deviation of Daily Maximum (°C)	3.0	3.6	3.5	4.4	3.7	3.4	2.5	2.5	3.7	4.1	3.2	3.1	3.4
Daily Minimum (°C)	-1.4	-0.8	1.5	5.7	11.8	16.3	19.5	20.0	16.4	10.8	5.0	0.0	8.7
Standard Deviation of Daily Minimum (°C)	3.2	3.7	3.0	3.8	3.4	2.9	2.3	2.3	3.8	4.1	3.6	3.2	3.3
Extreme Maximum (°C)	12.7	16.4	17.7	26.5	37.6	39.5	36.9	40.4	32.6	30.0	19.9	14.1	40.4
Extreme Minimum (°C)	-10.1	-10.8	-8.2	-4.1	3.1	5.3	13.1	12.8	3.6	1.0	-5.6	-10.3	-10.8

Table 21. Whitechurch Stouffville = 16064

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-0.5	0.6	3.5	8.7	15.6	20.9	23.4	23.4	19.1	13.2	6.6	1.0	11.3
Standard Deviation of Daily Average (°C)	3.2	3.6	3.4	4.4	4.0	3.7	2.7	2.9	3.9	4.2	3.4	3.2	3.5
Daily Maximum (°C)	2.2	3.7	7.6	13.4	20.7	25.9	28.5	28.5	23.8	17.7	10.2	3.9	15.5
Standard Deviation of Daily Maximum (°C)	3.2	3.8	4.1	5.1	4.5	4.2	3.1	3.4	4.3	4.8	3.5	3.3	3.9
Daily Minimum (°C)	-2.7	-1.9	0.3	4.7	10.8	16.1	18.9	19.3	15.1	9.5	3.8	-1.3	7.7
Standard Deviation of Daily Minimum (°C)	3.4	3.8	3.2	4.4	4.1	3.8	2.9	2.9	4.0	4.2	3.6	3.4	3.6
Extreme Maximum (°C)	14.1	18.0	20.2	27.9	35.2	39.6	41.2	42.1	34.2	29.3	19.4	14.2	42.1
Extreme Minimum (°C)	-12.8	-12.2	-9.0	-6.7	1.9	3.9	11.1	11.7	1.6	0.1	-7.3	-14.8	-14.8

Table 22. Uxbridge = 17575

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-0.1	1.0	4.1	9.3	16.1	21.2	23.7	23.7	19.4	13.6	7.0	1.5	11.7
Standard Deviation of Daily Average (°C)	3.2	3.7	3.4	4.4	4.0	3.7	2.6	2.8	3.9	4.2	3.4	3.2	3.5
Daily Maximum (°C)	2.7	4.3	8.3	14.0	21.2	26.3	28.8	28.8	24.1	18.1	10.7	4.5	16.0
Standard Deviation of Daily Maximum (°C)	3.2	3.9	4.2	5.1	4.4	4.1	3.0	3.3	4.2	4.7	3.5	3.3	3.9
Daily Minimum (°C)	-2.3	-1.5	0.6	4.9	10.9	16.1	18.9	19.3	15.3	9.7	4.0	-0.9	7.9
Standard Deviation of Daily Minimum (°C)	3.4	3.8	3.2	4.4	4.3	3.9	2.9	2.9	4.2	4.5	3.7	3.3	3.7
Extreme Maximum (°C)	14.4	18.7	20.0	28.5	35.5	39.7	41.0	43.2	33.1	29.4	20.0	14.2	43.2
Extreme Minimum (°C)	-13.4	-12.8	-8.8	-6.0	2.1	3.3	11.1	11.2	-0.2	-1.0	-7.2	-13.5	-13.5

Table 23. East Gwillimbury = 17704

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.0	1.1	4.0	9.2	16.0	21.1	23.7	23.7	19.4	13.6	7.0	1.4	11.7
Standard Deviation of Daily Average (°C)	3.2	3.7	3.5	4.5	4.1	3.9	2.8	3.0	3.9	4.2	3.4	3.2	3.6
Daily Maximum (°C)	2.7	4.3	8.1	13.9	21.2	26.3	28.9	28.9	24.1	18.1	10.7	4.4	16.0
Standard Deviation of Daily Maximum (°C)	3.3	4.0	4.2	5.3	4.6	4.2	3.2	3.4	4.4	4.8	3.6	3.3	4.0
Daily Minimum (°C)	-2.2	-1.5	0.6	4.9	10.8	16.1	18.9	19.4	15.3	9.8	4.1	-0.9	7.9
Standard Deviation of Daily Minimum (°C)	3.3	3.8	3.2	4.5	4.5	4.2	3.1	3.1	4.2	4.3	3.6	3.4	3.8
Extreme Maximum (°C)	14.9	19.6	21.1	29.5	35.1	39.7	41.4	42.8	34.7	29.6	20.3	15.2	42.8
Extreme Minimum (°C)	-12.6	-12.4	-8.5	-6.2	1.2	2.8	10.8	11.3	0.4	-0.1	-7.0	-15.0	-15.0

Table 24. Burlington = 25903

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	3.1	3.4	5.0	8.2	12.6	17.2	20.4	22.5	20.3	15.5	9.9	4.8	11.9
Standard Deviation of Daily Average (°C)	2.6	2.7	2.3	2.7	2.7	3.0	2.2	2.0	2.5	2.9	2.5	2.6	2.5
Daily Maximum (°C)	4.9	5.4	7.3	11.1	16.0	21.3	23.9	25.5	23.0	18.4	12.1	7.1	14.7
Standard Deviation of Daily Maximum (°C)	2.6	2.8	2.8	3.5	3.6	4.0	3.2	2.7	2.8	3.2	2.5	2.7	3.0
Daily Minimum (°C)	1.6	1.8	3.1	5.7	9.8	13.8	17.8	20.2	17.9	13.1	8.0	3.1	9.7
Standard Deviation of Daily Minimum (°C)	2.7	2.8	2.2	2.5	2.4	2.3	1.6	1.8	2.8	3.1	2.9	2.7	2.5
Extreme Maximum (°C)	13.4	15.0	16.2	22.1	32.1	33.9	35.1	35.8	29.8	27.8	18.5	14.0	35.8
Extreme Minimum (°C)	-5.6	-5.8	-3.9	-2.0	5.0	7.4	12.2	14.3	9.0	4.8	-1.2	-4.5	-5.8

Table 25. Milton = 28288

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.0	2.1	4.9	10.0	17.0	22.4	24.7	24.5	20.2	14.4	7.9	2.6	12.7
Standard Deviation of Daily Average (°C)	3.2	3.4	3.3	4.4	3.9	3.8	2.9	2.9	3.8	4.0	3.2	3.0	3.5
Daily Maximum (°C)	3.8	5.4	9.1	14.8	21.9	27.6	29.7	29.5	24.9	19.0	11.5	5.9	16.9
Standard Deviation of Daily Maximum (°C)	3.3	3.8	3.9	5.2	4.5	4.3	3.4	3.2	4.2	4.6	3.4	3.1	3.9
Daily Minimum (°C)	-1.1	-0.4	1.5	5.6	12.1	17.3	20.0	20.1	16.0	10.4	5.0	0.1	8.9
Standard Deviation of Daily Minimum (°C)	3.3	3.3	3.1	4.3	4.0	3.8	2.9	3.0	4.1	4.1	3.5	3.1	3.5
Extreme Maximum (°C)	15.8	18.0	20.1	28.9	38.9	40.4	41.6	41.9	35.9	31.2	20.9	15.5	41.9
Extreme Minimum (°C)	-12.4	-9.4	-6.1	-4.7	3.5	5.7	11.7	11.1	3.6	0.1	-4.9	-9.6	-12.4

Table 26. Mississauga-Milton = 29206

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.4	2.3	5.1	10.0	16.5	21.5	24.0	24.3	20.3	14.6	8.2	2.7	12.6
Standard Deviation of Daily Average (°C)	3.1	3.3	3.2	4.1	3.6	3.5	2.5	2.8	3.7	4.0	3.2	3.0	3.3
Daily Maximum (°C)	4.3	5.6	9.3	14.8	21.5	26.9	29.1	29.3	25.1	19.3	11.8	6.2	16.9
Standard Deviation of Daily Maximum (°C)	3.2	3.7	3.9	4.9	4.3	4.5	3.3	3.3	4.1	4.6	3.3	3.1	3.8
Daily Minimum (°C)	-0.8	-0.1	1.6	5.4	11.4	16.2	19.2	19.9	15.9	10.4	5.1	0.2	8.7
Standard Deviation of Daily Minimum (°C)	3.3	3.3	3.0	4.0	3.6	3.3	2.6	2.9	4.0	4.2	3.6	3.2	3.4
Extreme Maximum (°C)	16.0	18.1	20.8	29.2	38.7	40.6	41.8	42.9	35.1	32.1	21.5	16.3	42.9
Extreme Minimum (°C)	-10.3	-9.5	-6.2	-4.1	3.4	4.3	11.6	11.5	3.0	-0.2	-5.3	-10.5	-10.5

Table 3 Temperature Summary for 2040-2049 (Continued)

Table 27. Richmond Hill = 13677

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.4	1.5	4.5	9.6	16.5	21.8	24.2	24.3	20.0	14.1	7.4	1.9	12.2
Standard Deviation of Daily Average (°C)	3.1	3.4	3.3	4.3	3.8	3.6	2.6	2.8	3.8	4.1	3.3	3.1	3.4
Daily Maximum (°C)	3.3	4.8	8.7	14.5	21.8	27.2	29.6	29.7	25.0	18.9	11.2	5.1	16.7
Standard Deviation of Daily Maximum (°C)	3.2	3.8	4.1	5.1	4.5	4.2	3.2	3.4	4.4	4.8	3.4	3.3	3.9
Daily Minimum (°C)	-1.9	-1.0	1.0	5.3	11.2	16.5	19.2	19.7	15.7	10.0	4.4	-0.6	8.3
Standard Deviation of Daily Minimum (°C)	3.3	3.5	3.1	4.2	3.8	3.5	2.7	2.8	3.9	4.2	3.5	3.3	3.5
Extreme Maximum (°C)	15.1	17.6	20.8	28.9	36.9	40.9	42.2	42.6	35.4	31.8	20.2	15.6	42.6
Extreme Minimum (°C)	-11.0	-10.4	-7.9	-4.9	2.6	4.6	11.8	11.8	3.1	0.1	-6.1	-13.7	-13.7

Table 28. Oshawa = 14317

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.1	2.1	4.8	9.5	15.7	20.2	23.1	23.6	20.0	14.4	8.0	2.6	12.1
Standard Deviation of Daily Average (°C)	3.1	3.3	3.0	3.6	2.8	2.5	1.9	2.1	3.4	3.8	3.2	3.1	3.0
Daily Maximum (°C)	3.9	5.1	8.8	14.1	20.6	25.3	27.8	28.1	24.4	18.6	11.5	5.6	16.2
Standard Deviation of Daily Maximum (°C)	3.0	3.5	3.4	4.2	3.4	3.2	2.3	2.5	3.6	4.1	3.1	3.0	3.3
Daily Minimum (°C)	-1.1	-0.4	1.5	5.4	11.0	15.4	18.8	19.7	16.2	10.7	5.1	0.2	8.5
Standard Deviation of Daily Minimum (°C)	3.3	3.5	3.0	3.7	3.1	2.6	2.1	2.3	3.8	4.3	3.7	3.3	3.2
Extreme Maximum (°C)	13.4	14.7	18.0	27.9	37.9	39.6	37.3	38.5	32.3	31.2	20.0	13.8	39.6
Extreme Minimum (°C)	-10.6	-9.4	-7.5	-5.0	3.4	4.2	12.6	11.3	3.6	-0.3	-5.0	-11.3	-11.3

Table 29. Udora = 20096

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-0.3	0.9	3.9	9.2	15.9	20.9	23.5	23.6	19.3	13.4	6.9	1.4	11.6
Standard Deviation of Daily Average (°C)	3.2	3.7	3.4	4.5	4.1	3.7	2.7	2.8	3.8	4.1	3.4	3.1	3.5
Daily Maximum (°C)	2.4	4.1	8.0	13.9	21.1	26.0	28.6	28.6	23.9	17.9	10.6	4.4	15.8
Standard Deviation of Daily Maximum (°C)	3.3	4.0	4.3	5.3	4.6	4.1	3.2	3.4	4.3	4.8	3.5	3.4	4.0
Daily Minimum (°C)	-2.4	-1.7	0.6	4.9	10.8	16.0	18.8	19.3	15.2	9.5	3.9	-0.9	7.8
Standard Deviation of Daily Minimum (°C)	3.4	3.8	3.1	4.3	4.2	3.9	2.9	2.9	4.1	4.3	3.6	3.2	3.7
Extreme Maximum (°C)	14.6	19.6	21.2	30.4	34.3	37.4	40.8	42.7	34.0	29.4	20.3	15.1	42.7
Extreme Minimum (°C)	-14.5	-13.4	-8.8	-5.7	1.9	4.3	11.1	11.6	0.6	-0.4	-7.2	-13.4	-14.5

Table 30. Niagara Falls = 5608

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.5	2.7	5.2	10.0	16.5	21.4	24.4	24.6	20.6	15.0	8.4	3.2	12.8
Standard Deviation of Daily Average (°C)	3.3	3.6	3.3	4.2	3.6	3.2	2.4	2.4	3.6	3.8	3.2	3.0	3.3
Daily Maximum (°C)	4.3	6.0	9.2	14.7	21.9	27.1	29.8	29.7	25.0	19.3	11.9	6.0	17.1
Standard Deviation of Daily Maximum (°C)	3.4	4.1	4.0	4.9	4.2	3.7	2.9	2.8	4.1	4.4	3.5	3.3	3.8
Daily Minimum (°C)	-0.6	0.1	1.8	5.6	11.1	15.8	19.2	20.1	16.7	11.3	5.6	0.8	9.0
Standard Deviation of Daily Minimum (°C)	3.5	3.5	3.1	4.2	3.9	3.4	2.6	2.5	3.6	3.9	3.4	3.0	3.4
Extreme Maximum (°C)	14.7	19.2	20.4	30.0	37.1	36.3	38.3	36.7	34.4	29.6	21.6	15.7	38.3
Extreme Minimum (°C)	-10.1	-8.3	-5.8	-5.6	1.7	5.1	11.3	11.7	5.0	2.3	-2.7	-9.7	-10.1

Table 31. King Smoke Tree = 15752

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.0	1.0	3.9	9.2	16.1	21.5	23.9	24.0	19.6	13.7	7.1	1.4	11.8
Standard Deviation of Daily Average (°C)	3.2	3.6	3.4	4.5	4.1	3.9	2.8	3.0	4.0	4.3	3.4	3.3	3.6
Daily Maximum (°C)	2.8	4.3	8.1	13.9	21.3	26.8	29.3	29.3	24.5	18.4	10.8	4.5	16.2
Standard Deviation of Daily Maximum (°C)	3.3	3.9	4.2	5.2	4.6	4.3	3.3	3.5	4.5	4.9	3.6	3.4	4.0
Daily Minimum (°C)	-2.2	-1.5	0.6	4.9	10.9	16.3	19.1	19.6	15.4	9.9	4.2	-1.0	8.0
Standard Deviation of Daily Minimum (°C)	3.4	3.7	3.2	4.5	4.3	4.1	3.0	3.0	4.1	4.4	3.6	3.4	3.7
Extreme Maximum (°C)	15.0	18.9	20.9	29.5	35.7	40.4	42.1	42.6	35.2	30.5	19.9	15.4	42.6
Extreme Minimum (°C)	-12.1	-11.5	-8.5	-5.5	1.5	4.0	10.7	12.2	2.0	-1.0	-7.1	-14.2	-14.2

Table 32. Orangeville MOE = 14073

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-0.8	0.1	3.0	8.4	15.7	21.2	23.6	23.4	18.8	12.9	6.2	0.8	11.1
Standard Deviation of Daily Average (°C)	3.2	3.8	3.5	4.7	4.3	3.9	3.1	3.1	4.0	4.2	3.3	3.2	3.7
Daily Maximum (°C)	1.7	3.1	6.9	12.9	20.4	26.1	28.5	28.3	23.4	17.3	9.6	3.7	15.1
Standard Deviation of Daily Maximum (°C)	3.2	3.9	4.1	5.4	4.5	4.2	3.5	3.4	4.5	4.8	3.5	3.3	4.0
Daily Minimum (°C)	-2.9	-2.3	0.0	4.5	11.2	16.5	19.3	19.2	15.0	9.4	3.6	-1.5	7.7
Standard Deviation of Daily Minimum (°C)	3.4	3.8	3.3	4.6	4.4	4.1	3.2	3.1	4.1	4.2	3.5	3.3	3.8
Extreme Maximum (°C)	14.0	18.8	19.3	30.2	36.1	37.9	40.1	40.3	35.9	30.0	19.3	14.5	40.3
Extreme Minimum (°C)	-12.0	-12.0	-8.2	-6.5	0.7	3.6	10.3	11.1	2.6	-0.6	-8.0	-12.5	-12.5

Table 33. Georgetown WWTP = 29942

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.9	1.9	4.8	9.9	16.8	22.2	24.5	24.4	20.0	14.2	7.7	2.4	12.5
Standard Deviation of Daily Average (°C)	3.1	3.4	3.3	4.4	3.9	3.8	2.8	2.9	3.9	4.1	3.2	3.0	3.5
Daily Maximum (°C)	3.7	5.2	9.1	14.7	21.9	27.5	29.7	29.5	24.9	18.9	11.4	5.7	16.9
Standard Deviation of Daily Maximum (°C)	3.2	3.9	4.0	5.2	4.4	4.2	3.3	3.2	4.2	4.6	3.4	3.2	3.9
Daily Minimum (°C)	-1.3	-0.6	1.3	5.4	11.7	17.0	19.7	19.9	15.7	10.2	4.7	-0.1	8.6
Standard Deviation of Daily Minimum (°C)	3.2	3.4	3.1	4.3	4.1	3.8	2.8	3.0	4.1	4.1	3.6	3.1	3.5
Extreme Maximum (°C)	15.8	17.9	20.3	28.6	38.3	40.0	41.4	42.2	34.4	31.5	20.7	15.5	42.2
Extreme Minimum (°C)	-11.2	-10.0	-6.3	-4.3	2.9	4.6	11.6	11.4	3.3	-0.5	-5.2	-9.8	-11.2

Table 34. Oakville Southeast WPCP = 27562

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	3.0	3.2	4.8	8.0	12.4	16.8	20.1	22.4	20.1	15.5	9.8	4.7	11.7
Standard Deviation of Daily Average (°C)	2.6	2.7	2.3	2.5	2.3	2.5	1.9	1.8	2.5	2.9	2.6	2.6	2.4
Daily Maximum (°C)	4.8	5.2	7.2	10.8	15.7	20.7	23.4	25.1	22.8	18.3	12.0	7.0	14.4
Standard Deviation of Daily Maximum (°C)	2.6	2.7	2.6	3.2	3.1	3.6	2.9	2.5	2.6	3.0	2.5	2.7	2.8
Daily Minimum (°C)	1.5	1.7	2.9	5.6	9.8	13.7	17.7	20.1	17.7	13.0	7.9	2.9	9.5
Standard Deviation of Daily Minimum (°C)	2.8	2.8	2.3	2.5	2.2	2.1	1.5	1.8	3.0	3.3	3.0	2.8	2.5
Extreme Maximum (°C)	12.1	13.9	14.6	23.4	31.1	33.7	35.4	35.8	29.9	27.9	18.3	13.3	35.8
Extreme Minimum (°C)	-6.5	-6.2	-4.5	-2.2	4.5	7.0	11.8	14.4	8.0	3.8	-1.7	-5.4	-6.5

Table 3 Temperature Summary for 2040-2049 (Continued)

Table 35. Burlington Piers = 8114

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	3.1	3.4	5.0	8.4	12.9	17.6	20.8	22.7	20.3	15.5	9.8	4.8	12.0
Standard Deviation of Daily Average (°C)	2.7	2.8	2.4	2.9	2.9	3.2	2.4	2.1	2.6	3.0	2.6	2.6	2.7
Daily Maximum (°C)	5.0	5.6	7.5	11.5	16.6	22.1	24.7	26.0	23.3	18.5	12.1	7.1	15.0
Standard Deviation of Daily Maximum (°C)	2.7	3.0	2.9	3.7	3.9	4.1	3.4	2.7	3.0	3.3	2.6	2.7	3.2
Daily Minimum (°C)	1.5	1.7	2.9	5.6	9.8	14.0	17.9	20.1	17.7	12.8	7.7	2.9	9.6
Standard Deviation of Daily Minimum (°C)	2.8	2.8	2.4	2.7	2.5	2.5	1.8	2.0	3.0	3.2	3.0	2.7	2.6
Extreme Maximum (°C)	13.3	16.2	16.3	21.8	33.5	33.7	35.3	35.8	31.5	27.3	18.4	14.3	35.8
Extreme Minimum (°C)	-5.9	-6.1	-3.8	-2.4	4.5	7.1	11.6	13.7	9.0	3.7	-1.2	-4.5	-6.1

Table 36. Millgrove = 8402

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.4	2.5	5.2	10.1	16.8	22.1	24.4	24.5	20.2	14.5	8.2	2.8	12.7
Standard Deviation of Daily Average (°C)	3.2	3.4	3.2	4.3	3.7	3.8	2.8	2.8	3.7	3.9	3.2	3.0	3.4
Daily Maximum (°C)	4.3	5.8	9.4	14.9	21.6	27.3	29.3	29.3	24.8	19.1	11.8	6.4	17.0
Standard Deviation of Daily Maximum (°C)	3.3	3.8	3.9	5.1	4.5	4.6	3.6	3.3	4.1	4.4	3.3	3.2	3.9
Daily Minimum (°C)	-0.8	-0.1	1.7	5.7	11.9	16.9	19.8	20.1	16.1	10.4	5.1	0.2	8.9
Standard Deviation of Daily Minimum (°C)	3.5	3.4	3.1	4.2	3.7	3.4	2.7	2.8	4.0	4.1	3.7	3.2	3.5
Extreme Maximum (°C)	15.8	18.7	20.9	29.3	39.3	41.3	41.8	42.1	36.2	31.3	20.9	16.1	42.1
Extreme Minimum (°C)	-10.7	-9.1	-6.1	-4.2	3.5	5.9	11.4	10.8	4.7	-0.3	-4.5	-9.8	-10.7

Table 4 Degree Days Summary for 2000-2009

Table 1. Toronto Pearson = 10385

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.9	7.2	12.1	10.6	1.7	0.0	0.0	0.0	32.5
Above 22 C	0.0	0.0	0.0	0.0	2.7	19.5	33.4	28.8	5.7	0.1	0.0	0.0	90.3
Above 18 C	0.0	0.0	0.0	1.2	12.4	73.5	119.0	110.5	35.8	3.6	0.0	0.0	356.0
Above 15 C	0.0	0.0	0.0	5.3	31.4	141.6	208.1	197.2	90.6	14.2	0.0	0.0	688.4
Above 10 C	0.2	0.1	1.4	28.9	119.4	284.4	363.0	352.1	223.7	60.5	5.6	0.4	1439.6
Above 5 C	2.7	0.7	13.7	97.6	260.9	434.4	518.0	507.1	372.1	166.2	42.9	2.8	2419.1
Above 0C	16.3	9.4	61.5	222.1	415.6	584.4	673.0	662.1	522.1	315.5	143.5	26.7	3652.1
Below0 C	158.1	136.6	65.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	8.6	88.7	462.2
Below5 C	299.0	269.4	172.8	30.1	0.3	0.0	0.0	0.0	0.0	5.8	58.0	219.8	1055.2
Below10 C	450.9	410.3	315.5	111.4	13.8	0.0	0.0	0.0	1.7	55.0	170.7	372.4	1901.7
Below15 C	605.2	551.7	469.1	237.8	80.8	7.2	0.2	0.1	18.6	163.7	315.2	527.0	2976.5
Below18 C	697.9	636.6	562.1	323.7	154.8	29.0	4.1	6.4	53.8	246.1	405.2	620.0	3739.7

Table 2. Hamilton = 5989

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.3	2.4	5.6	5.1	0.8	0.0	0.0	0.0	14.2
Above 22 C	0.0	0.0	0.0	0.0	1.3	11.9	19.4	18.1	3.3	0.2	0.0	0.0	54.2
Above 18 C	0.0	0.0	0.0	1.1	9.9	56.8	90.4	87.7	26.4	3.1	0.0	0.0	275.5
Above 15 C	0.0	0.0	0.1	4.7	27.4	118.4	174.6	170.6	75.2	13.0	0.0	0.0	583.8
Above 10 C	0.3	0.1	2.5	28.1	105.2	255.8	329.0	324.9	203.4	57.0	6.1	0.4	1312.7
Above 5 C	3.1	1.5	16.5	92.7	240.3	405.7	484.0	479.9	351.0	158.9	43.6	3.0	2280.0
Above 0C	18.1	11.6	65.2	213.4	394.7	555.7	639.0	634.9	501.0	306.6	142.8	27.3	3510.3
Below0 C	157.3	135.7	63.4	5.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	88.6	458.4
Below5 C	296.7	267.1	169.7	34.3	0.6	0.0	0.0	0.0	0.0	7.3	59.2	219.3	1054.2
Below10 C	448.5	407.3	310.7	119.8	20.5	0.1	0.0	0.0	2.4	60.4	171.8	371.7	1912.9
Below15 C	602.7	548.6	463.2	246.3	97.7	12.7	0.5	0.7	24.2	171.4	315.6	526.3	3009.9
Below18 C	695.4	633.5	556.2	332.7	173.2	41.1	9.4	10.8	65.5	254.5	405.6	619.3	3797.3

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 3. Toronto North York = 11888

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.7	3.5	6.3	6.4	1.2	0.0	0.0	0.0	17.9
Above 22 C	0.0	0.0	0.0	0.0	1.8	12.8	20.8	20.1	4.0	0.0	0.0	0.0	59.6
Above 18 C	0.0	0.0	0.0	0.7	9.9	57.7	94.1	90.6	28.3	2.7	0.0	0.0	284.0
Above 15 C	0.0	0.0	0.0	3.9	25.3	119.5	179.5	173.3	77.4	11.6	0.0	0.0	590.4
Above 10 C	0.1	0.1	1.1	24.3	104.0	258.2	334.0	327.8	206.0	53.5	4.3	0.3	1313.6
Above 5 C	2.3	0.6	11.6	87.7	241.9	408.2	489.0	482.8	354.0	153.9	37.6	2.4	2272.0
Above 0C	14.1	8.3	56.0	209.2	396.5	558.2	644.0	637.8	504.0	301.3	133.3	23.5	3486.0
Below0 C	168.0	145.5	71.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0	10.0	96.6	497.2
Below5 C	310.7	279.3	182.5	33.6	0.5	0.0	0.0	0.0	0.0	7.7	64.3	230.6	1109.1
Below10 C	463.1	420.2	327.1	120.2	17.5	0.0	0.0	0.0	2.0	62.2	181.0	383.5	1976.8
Below15 C	617.5	561.7	480.9	249.8	93.8	11.3	0.5	0.5	23.3	175.4	326.7	538.2	3079.6
Below18 C	710.2	646.6	573.9	336.6	171.5	39.6	8.1	10.8	64.2	259.4	416.7	631.2	3868.7

Table 4. Toronto Island = 9505

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.2	1.9	8.7	8.5	1.3	0.0	0.0	0.0	20.5
Above 22 C	0.0	0.0	0.0	0.0	0.7	9.1	27.2	27.4	5.0	0.0	0.0	0.0	69.4
Above 18 C	0.0	0.0	0.0	0.0	5.6	55.3	112.8	114.1	37.7	3.2	0.0	0.0	328.7
Above 15 C	0.0	0.0	0.0	0.9	17.7	120.6	203.4	203.4	97.7	14.4	0.0	0.0	658.2
Above 10 C	0.0	0.0	0.2	15.9	90.2	261.4	358.3	358.4	235.0	67.4	5.6	0.4	1392.8
Above 5 C	2.3	0.5	8.5	76.8	231.1	411.3	513.3	513.4	384.1	182.1	49.0	3.6	2375.9
Above 0C	18.5	9.1	53.3	200.7	385.9	561.3	668.3	668.4	534.1	333.9	160.1	34.4	3627.9
Below0 C	141.7	125.1	59.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0	5.9	72.0	407.9
Below5 C	279.9	258.0	169.7	29.8	0.2	0.0	0.0	0.0	0.0	3.2	44.7	196.2	981.8
Below10 C	432.1	399.0	316.4	119.0	14.3	0.1	0.0	0.0	0.9	43.5	151.4	348.0	1824.6
Below15 C	586.6	540.5	471.2	254.0	96.8	9.3	0.1	0.0	13.7	145.5	295.8	502.6	2916.1
Below18 C	679.3	625.4	564.2	343.1	177.6	34.1	2.6	3.6	43.6	227.3	385.8	595.6	3682.2

Table 5. HWY 427-401 = 10242

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.9	6.9	12.8	11.4	1.7	0.0	0.0	0.0	33.6
Above 22 C	0.0	0.0	0.0	0.0	2.5	19.3	35.0	30.7	6.0	0.1	0.0	0.0	93.6
Above 18 C	0.0	0.0	0.0	0.8	11.6	73.8	122.2	114.4	37.7	3.8	0.0	0.0	364.1
Above 15 C	0.0	0.0	0.0	4.5	30.3	142.5	211.9	202.0	94.2	14.6	0.0	0.0	699.9
Above 10 C	0.2	0.1	1.0	27.4	118.3	285.7	366.8	356.9	228.3	62.4	5.8	0.4	1453.0
Above 5 C	2.7	0.7	13.2	96.2	260.4	435.7	521.8	511.9	376.8	169.7	44.5	3.0	2436.4
Above 0C	17.0	9.6	61.3	221.3	415.2	585.7	676.8	666.9	526.8	319.5	147.3	28.1	3675.4
Below0 C	155.4	133.7	63.7	4.2	0.0	0.0	0.0	0.0	0.0	0.0	8.0	86.1	451.0
Below5 C	295.6	266.3	170.6	29.2	0.2	0.0	0.0	0.0	0.0	5.1	55.2	215.9	1038.1
Below10 C	447.6	407.1	313.4	110.3	13.1	0.0	0.0	0.0	1.5	52.8	166.5	368.3	1880.6
Below15 C	601.9	548.5	467.4	237.4	80.0	6.8	0.1	0.1	17.5	160.1	310.7	522.9	2953.4
Below18 C	694.6	633.4	560.4	323.7	154.4	28.2	3.4	5.5	50.9	242.2	400.7	615.9	3713.3

Table 6. Beaches-East York = 10863

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.1	2.8	2.5	0.3	0.0	0.0	0.0	5.8
Above 22 C	0.0	0.0	0.0	0.0	0.1	1.6	12.0	13.1	2.0	0.0	0.0	0.0	28.7
Above 18 C	0.0	0.0	0.0	0.0	1.4	26.2	76.4	87.3	26.2	1.9	0.0	0.0	219.4
Above 15 C	0.0	0.0	0.0	0.0	6.6	77.3	163.2	174.7	82.8	10.8	0.0	0.0	515.4
Above 10 C	0.0	0.0	0.0	6.7	50.0	209.1	318.0	329.7	218.6	62.2	4.0	0.2	1198.4
Above 5 C	1.6	0.4	3.6	50.2	178.4	358.7	473.0	484.7	367.7	177.7	46.6	3.3	2145.8
Above 0C	17.3	7.6	39.4	164.6	332.8	508.7	628.0	639.7	517.7	330.1	160.2	36.2	3382.3
Below0 C	138.4	127.0	63.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	5.2	66.1	403.9
Below5 C	277.2	261.3	182.3	39.9	0.6	0.0	0.0	0.0	0.0	2.6	41.6	188.1	993.5
Below10 C	430.1	402.3	333.7	146.4	27.2	0.3	0.0	0.0	0.9	42.1	149.0	340.1	1872.0
Below15 C	584.6	543.8	488.7	289.7	138.8	18.5	0.2	0.0	15.1	145.7	295.0	494.9	3015.0
Below18 C	677.3	628.7	581.7	379.7	226.7	57.5	6.4	5.6	48.5	229.8	385.0	587.9	3814.5

Table 7. York South-Weston = 10847

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.8	6.2	12.5	11.8	1.7	0.0	0.0	0.0	33.0
Above 22 C	0.0	0.0	0.0	0.0	2.3	18.1	33.5	31.1	5.9	0.1	0.0	0.0	90.8
Above 18 C	0.0	0.0	0.0	0.4	10.7	70.8	120.1	115.0	37.2	3.3	0.0	0.0	357.4
Above 15 C	0.0	0.0	0.0	3.4	27.8	138.0	209.8	202.7	93.6	14.1	0.0	0.0	689.5
Above 10 C	0.1	0.0	0.8	24.4	110.7	279.9	364.7	357.6	227.8	61.8	5.3	0.3	1433.3
Above 5 C	2.4	0.6	11.5	90.0	252.0	429.9	519.7	512.6	376.4	169.5	43.3	2.9	2410.7
Above 0C	16.1	8.9	57.3	213.5	406.8	579.9	674.7	667.6	526.4	319.5	146.2	27.9	3644.8
Below0 C	157.4	136.4	65.9	4.4	0.0	0.0	0.0	0.0	0.0	0.0	8.1	86.5	458.6
Below5 C	298.1	269.6	175.0	30.9	0.2	0.0	0.0	0.0	0.0	5.1	55.1	216.5	1050.5
Below10 C	450.4	410.5	319.4	115.3	13.8	0.0	0.0	0.0	1.4	52.3	167.2	368.9	1899.1
Below15 C	604.8	552.0	473.6	244.3	86.0	8.1	0.2	0.1	17.2	159.6	311.9	523.6	2981.3
Below18 C	697.5	636.9	566.6	331.3	161.9	30.9	3.4	5.3	50.8	241.8	401.9	616.6	3744.8

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 8. DVP-Don Mills Road = 11005

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.8	0.3	0.0	0.0	0.0	3.4
Above 22 C	0.0	0.0	0.0	0.0	0.2	1.3	8.4	9.5	1.5	0.0	0.0	0.0	21.0
Above 18 C	0.0	0.0	0.0	0.0	1.9	21.4	61.6	73.4	20.7	1.5	0.0	0.0	180.4
Above 15 C	0.0	0.0	0.0	0.1	6.4	65.5	143.7	158.2	72.2	9.0	0.0	0.0	455.0
Above 10 C	0.0	0.0	0.0	5.9	42.7	191.7	298.1	313.2	205.8	55.5	3.0	0.1	1115.9
Above 5 C	1.4	0.4	2.7	44.1	163.0	340.7	453.1	468.2	354.6	167.3	41.0	2.7	2039.1
Above 0C	14.6	6.4	34.2	151.4	317.0	490.7	608.1	623.2	504.6	319.5	150.9	31.8	3252.3
Below0 C	143.6	135.7	70.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0	5.4	69.9	430.4
Below5 C	284.8	271.2	193.7	48.4	1.0	0.0	0.0	0.0	0.0	2.8	45.5	195.7	1043.0
Below10 C	437.9	412.3	346.0	160.3	35.7	1.0	0.0	0.0	1.2	46.1	157.5	348.1	1946.0
Below15 C	592.4	553.8	501.0	304.4	154.4	24.7	0.6	0.1	17.6	154.5	304.5	503.0	3111.0
Below18 C	685.1	638.7	594.0	394.4	242.9	70.6	11.5	8.3	56.1	240.1	394.5	596.0	3932.0

Table 9. Etobicoke North = 11287

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	3.3	6.1	6.2	1.1	0.0	0.0	0.0	17.4
Above 22 C	0.0	0.0	0.0	0.0	1.8	12.7	20.3	19.7	3.8	0.0	0.0	0.0	58.4
Above 18 C	0.0	0.0	0.0	0.7	10.0	57.1	92.9	89.2	27.5	2.6	0.0	0.0	280.1
Above 15 C	0.0	0.0	0.0	4.0	25.1	118.6	177.8	171.7	76.1	11.5	0.0	0.0	584.7
Above 10 C	0.1	0.1	1.2	24.4	103.1	257.2	332.2	326.1	204.2	52.9	4.2	0.3	1305.9
Above 5 C	2.3	0.6	11.9	87.5	240.4	407.2	487.2	481.1	352.1	152.6	37.1	2.4	2262.3
Above 0C	14.0	8.3	56.2	208.5	394.8	557.2	642.2	636.1	502.1	299.6	132.0	23.1	3474.0
Below0 C	168.5	146.5	72.5	5.3	0.0	0.0	0.0	0.0	0.0	0.0	10.1	97.4	500.3
Below5 C	311.3	280.3	183.2	34.3	0.5	0.0	0.0	0.0	0.0	8.0	65.3	231.7	1114.7
Below10 C	463.6	421.2	327.5	121.2	18.3	0.0	0.0	0.0	2.1	63.3	182.4	384.6	1984.3
Below15 C	618.0	562.7	481.3	250.8	95.3	11.4	0.6	0.6	24.0	176.9	328.2	539.4	3089.1
Below18 C	710.7	647.6	574.3	337.5	173.1	40.0	8.7	11.2	65.4	261.1	418.2	632.4	3880.1

Table 10. Scarborough = 12063

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.1	2.4	2.1	0.3	0.0	0.0	0.0	4.8
Above 22 C	0.0	0.0	0.0	0.0	0.2	1.7	10.6	11.4	1.9	0.0	0.0	0.0	25.8
Above 18 C	0.0	0.0	0.0	0.0	1.9	25.6	68.3	77.6	23.1	1.8	0.0	0.0	198.3
Above 15 C	0.0	0.0	0.0	0.0	7.2	74.8	151.8	161.9	74.6	9.9	0.0	0.0	480.2
Above 10 C	0.0	0.0	0.0	7.6	51.2	205.6	306.4	316.6	206.8	57.4	3.7	0.2	1155.4
Above 5 C	1.6	0.4	3.9	52.0	178.8	355.1	461.4	471.6	355.5	167.5	42.8	3.0	2093.5
Above 0C	16.2	7.5	40.0	166.8	333.2	505.1	616.4	626.6	505.5	318.5	151.5	32.5	3319.8
Below0 C	147.7	132.1	66.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	6.3	74.2	430.6
Below5 C	287.5	266.5	184.9	39.5	0.6	0.0	0.0	0.0	0.0	3.9	47.6	199.7	1030.3
Below10 C	440.4	407.6	336.0	145.1	28.0	0.5	0.0	0.0	1.2	48.9	158.6	351.9	1918.2
Below15 C	594.9	549.1	491.0	287.6	139.0	19.7	0.4	0.3	19.0	156.4	304.8	506.7	3068.9
Below18 C	687.6	634.0	584.0	377.6	226.7	60.5	9.9	9.0	57.6	241.3	394.8	599.7	3882.7

Table 11. Don Valley East = 12049

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	2.8	6.0	6.3	1.0	0.0	0.0	0.0	16.6
Above 22 C	0.0	0.0	0.0	0.0	1.7	10.6	19.4	19.7	3.5	0.0	0.0	0.0	54.9
Above 18 C	0.0	0.0	0.0	0.3	8.6	52.8	90.2	89.0	26.8	2.3	0.0	0.0	269.9
Above 15 C	0.0	0.0	0.0	2.8	22.0	113.4	175.3	171.5	75.3	11.0	0.0	0.0	571.4
Above 10 C	0.1	0.0	0.6	21.2	95.2	251.1	329.9	325.9	203.9	53.3	4.1	0.3	1285.6
Above 5 C	2.1	0.5	9.9	81.6	232.4	401.1	484.9	480.9	351.9	154.3	37.4	2.5	2239.4
Above 0C	14.0	8.0	52.3	201.9	386.9	551.1	639.9	635.9	501.9	301.8	133.9	23.8	3451.4
Below0 C	168.8	145.7	72.5	5.1	0.0	0.0	0.0	0.0	0.0	0.0	9.8	96.0	497.8
Below5 C	311.3	279.8	185.0	34.8	0.5	0.0	0.0	0.0	0.0	7.5	63.3	229.6	1111.8
Below10 C	463.8	420.8	330.8	124.4	18.3	0.1	0.0	0.0	2.0	61.4	179.9	382.4	1983.9
Below15 C	618.2	562.3	485.2	256.1	100.1	12.4	0.5	0.5	23.4	174.2	325.9	537.1	3095.7
Below18 C	710.9	647.2	578.2	343.5	179.6	41.8	8.3	11.1	64.9	258.5	415.9	630.1	3889.9

Table 12. Scarborough - Rouge River = 12655

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	2.4	6.4	6.1	1.0	0.0	0.0	0.0	16.3
Above 22 C	0.0	0.0	0.0	0.0	1.3	9.1	19.7	20.5	3.8	0.0	0.0	0.0	54.3
Above 18 C	0.0	0.0	0.0	0.1	7.0	50.6	92.0	93.3	28.4	2.3	0.0	0.0	273.6
Above 15 C	0.0	0.0	0.0	1.9	19.2	112.2	178.6	177.7	79.4	11.5	0.0	0.0	580.3
Above 10 C	0.1	0.0	0.5	19.1	91.2	250.8	333.3	332.4	210.2	56.7	4.6	0.3	1299.0
Above 5 C	2.1	0.5	8.9	80.3	229.7	400.7	488.3	487.4	358.7	162.0	40.7	2.8	2262.0
Above 0C	15.6	8.4	52.5	203.2	384.5	550.7	643.3	642.4	508.7	311.3	142.3	27.2	3489.9
Below0 C	160.3	137.2	66.8	4.1	0.0	0.0	0.0	0.0	0.0	0.0	8.2	87.5	464.1
Below5 C	301.3	270.8	178.3	31.3	0.3	0.0	0.0	0.0	0.0	5.6	56.6	218.2	1062.3
Below10 C	453.8	411.8	324.8	120.1	16.7	0.1	0.0	0.0	1.5	55.4	170.5	370.6	1925.3
Below15 C	608.2	553.3	479.3	252.8	99.8	11.5	0.3	0.3	20.7	165.1	315.9	525.3	3032.6
Below18 C	700.9	638.2	572.3	341.1	180.5	40.0	6.7	8.9	59.7	249.0	405.9	618.3	3821.5

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 13. Mississauga = 29823

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	0.1	0.0	0.0	0.0	2.3
Above 22 C	0.0	0.0	0.0	0.0	0.0	0.5	6.6	7.8	1.1	0.0	0.0	0.0	16.1
Above 18 C	0.0	0.0	0.0	0.0	1.1	16.9	57.2	70.7	20.4	1.6	0.0	0.0	167.9
Above 15 C	0.0	0.0	0.0	0.0	4.5	58.3	138.6	156.5	73.9	9.2	0.0	0.0	441.0
Above 10 C	0.0	0.0	0.0	4.2	36.9	183.0	293.0	311.4	209.1	58.2	3.4	0.2	1099.2
Above 5 C	1.5	0.4	2.4	41.0	155.4	332.0	448.0	466.4	358.1	173.9	45.2	3.1	2027.2
Above 0C	17.0	7.2	35.1	149.3	309.0	482.0	603.0	621.4	508.1	327.1	160.1	37.1	3256.2
Below0 C	131.3	126.5	64.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	61.1	392.6
Below5 C	270.2	261.2	186.8	46.8	1.4	0.0	0.0	0.0	0.0	1.9	39.2	182.1	989.6
Below10 C	423.3	402.4	339.4	160.0	37.9	1.0	0.0	0.0	1.0	41.2	147.4	334.1	1887.6
Below15 C	577.8	543.9	494.4	305.8	160.5	26.3	0.6	0.1	15.8	147.2	294.0	489.0	3055.3
Below18 C	670.5	628.8	587.4	395.8	250.2	74.9	12.2	7.3	52.3	232.6	384.0	582.0	3877.8

Table 14. Trinity Spadina = 9957

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.4	3.3	11.2	10.6	1.6	0.0	0.0	0.0	27.2
Above 22 C	0.0	0.0	0.0	0.0	1.2	12.4	31.2	30.7	5.8	0.1	0.0	0.0	81.3
Above 18 C	0.0	0.0	0.0	0.1	7.6	61.7	118.2	118.4	39.0	3.4	0.0	0.0	348.4
Above 15 C	0.0	0.0	0.0	1.6	21.1	127.3	209.0	208.0	99.3	14.7	0.0	0.0	681.1
Above 10 C	0.1	0.0	0.3	18.1	94.5	267.8	363.9	363.0	236.6	67.3	5.7	0.4	1417.8
Above 5 C	2.5	0.6	8.9	79.2	235.4	417.8	518.9	518.0	385.7	181.3	48.4	3.6	2400.2
Above 0C	18.3	9.1	53.3	202.8	390.3	567.8	673.9	673.0	535.7	333.2	158.1	33.1	3648.6
Below0 C	144.7	127.0	60.4	3.9	0.0	0.0	0.0	0.0	0.0	0.0	6.1	74.6	416.7
Below5 C	283.4	259.9	171.0	30.3	0.1	0.0	0.0	0.0	0.0	3.1	46.4	200.1	994.2
Below10 C	435.5	400.9	317.4	119.2	14.1	0.0	0.0	0.0	0.9	44.1	153.8	351.9	1845.5
Below15 C	589.9	542.4	472.1	252.6	95.9	9.4	0.1	0.0	13.6	146.5	298.0	506.6	2927.2
Below18 C	682.6	627.3	565.1	341.2	175.2	33.8	2.3	3.4	43.3	228.2	388.0	599.6	3690.0

Table 15. Pelham -Thorold = 4083

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.1	2.1	5.2	5.8	1.3	0.0	0.0	0.0	14.6
Above 22 C	0.0	0.0	0.0	0.0	0.8	10.8	21.2	23.0	4.9	0.1	0.0	0.0	60.8
Above 18 C	0.0	0.0	0.0	0.8	8.2	58.6	100.9	102.7	35.4	4.7	0.0	0.0	311.1
Above 15 C	0.0	0.0	0.0	5.3	29.1	125.0	188.3	189.6	91.0	17.4	0.1	0.0	645.8
Above 10 C	0.5	0.1	2.5	32.4	118.4	266.4	342.9	344.4	225.0	69.5	10.2	0.5	1412.7
Above 5 C	3.9	2.3	20.8	109.2	259.8	416.4	497.9	499.4	373.7	178.6	56.3	4.1	2422.4
Above 0C	22.9	15.6	77.9	234.5	414.5	566.4	652.9	654.4	523.7	328.8	162.1	34.7	3688.4
Below0 C	147.1	118.8	53.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	6.8	78.1	407.4
Below5 C	282.5	246.9	151.3	28.1	0.4	0.0	0.0	0.0	0.0	4.9	51.1	202.5	967.5
Below10 C	433.6	386.2	288.0	101.3	13.9	0.0	0.0	0.0	1.3	50.7	154.9	353.9	1783.8
Below15 C	587.6	527.6	440.4	224.2	79.6	8.5	0.4	0.2	17.3	153.7	294.9	508.4	2842.9
Below18 C	680.3	612.5	533.4	309.7	151.7	32.2	5.9	6.3	51.6	234.0	384.7	601.4	3603.8

Table 16. West Lincoln = 4507

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.2	1.7	4.9	5.4	0.9	0.0	0.0	0.0	13.0
Above 22 C	0.0	0.0	0.0	0.0	0.8	9.8	19.3	20.1	3.8	0.1	0.0	0.0	53.9
Above 18 C	0.0	0.0	0.0	0.7	8.2	54.5	93.5	94.5	30.4	3.8	0.0	0.0	285.6
Above 15 C	0.0	0.0	0.0	3.9	26.0	117.8	179.7	179.6	83.0	15.2	0.0	0.0	605.2
Above 10 C	0.4	0.1	2.3	27.8	107.5	256.5	334.3	334.2	215.6	64.1	7.8	0.4	1350.9
Above 5 C	3.4	1.8	17.3	96.4	245.9	406.5	489.3	489.2	364.0	171.9	50.3	3.5	2339.5
Above 0C	20.9	13.7	69.9	219.5	400.5	556.5	644.3	644.2	514.0	321.6	154.7	31.8	3591.6
Below0 C	148.3	124.0	56.7	4.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8	79.3	419.1
Below5 C	285.3	253.6	159.2	30.9	0.4	0.0	0.0	0.0	0.0	5.3	52.3	206.1	993.0
Below10 C	436.8	393.3	299.1	112.3	17.1	0.0	0.0	0.0	1.6	52.5	159.9	357.9	1830.4
Below15 C	590.9	534.7	451.8	238.4	90.5	11.4	0.4	0.4	19.0	158.6	302.1	512.5	2910.6
Below18 C	683.6	619.6	544.8	325.2	165.7	38.0	7.3	8.3	56.4	240.1	392.1	605.5	3686.7

Table 17. Caledon = 12747

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	2.6	4.4	4.5	0.9	0.0	0.0	0.0	12.8
Above 22 C	0.0	0.0	0.0	0.0	1.6	11.5	16.3	14.6	3.1	0.0	0.0	0.0	47.1
Above 18 C	0.0	0.0	0.0	1.3	10.0	52.3	81.7	75.5	22.6	2.7	0.0	0.0	246.0
Above 15 C	0.0	0.0	0.1	5.2	25.2	110.7	163.9	154.4	65.9	10.4	0.0	0.0	535.7
Above 10 C	0.1	0.1	1.9	26.4	98.5	247.7	318.0	308.3	188.8	47.9	3.7	0.3	1241.7
Above 5 C	2.3	0.7	12.8	86.9	232.8	397.5	473.0	463.3	335.9	140.4	33.1	2.1	2180.9
Above 0C	12.2	7.9	55.3	204.3	387.0	547.5	628.0	618.3	485.9	284.5	120.4	19.3	3370.7
Below0 C	177.5	156.2	79.8	6.7	0.0	0.0	0.0	0.0	0.0	0.0	13.0	108.2	541.3
Below5 C	322.1	290.4	192.3	39.2	0.8	0.0	0.0	0.0	0.0	10.9	75.7	246.0	1177.3
Below10 C	474.4	431.3	336.3	128.7	21.4	0.2	0.0	0.0	2.9	73.4	196.3	399.2	2064.2
Below15 C	628.8	572.7	489.6	257.6	103.1	13.2	0.9	1.1	30.0	190.9	342.6	553.9	3184.3
Below18 C	721.5	657.6	582.5	343.7	180.9	44.8	11.7	15.2	76.7	276.2	432.6	646.9	3990.2

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 18. Vaughan = 12773

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	2.7	5.0	5.3	0.9	0.0	0.0	0.0	14.5
Above 22 C	0.0	0.0	0.0	0.0	1.7	11.5	17.8	17.0	3.3	0.0	0.0	0.0	51.2
Above 18 C	0.0	0.0	0.0	0.8	9.6	53.9	87.0	83.1	24.5	2.4	0.0	0.0	261.4
Above 15 C	0.0	0.0	0.0	4.2	24.1	114.2	171.2	164.5	70.5	10.3	0.0	0.0	559.0
Above 10 C	0.1	0.1	1.4	24.4	100.6	251.9	325.6	318.8	196.4	49.1	3.5	0.2	1271.9
Above 5 C	2.1	0.6	11.7	86.6	237.1	401.8	480.6	473.8	344.0	144.9	33.8	2.1	2219.0
Above 0C	12.4	7.7	54.7	206.2	391.5	551.8	635.6	628.8	494.0	290.7	124.5	20.4	3418.2
Below0 C	176.6	153.6	77.2	5.9	0.0	0.0	0.0	0.0	0.0	0.0	11.8	105.1	530.2
Below5 C	320.9	288.0	189.2	36.3	0.6	0.0	0.0	0.0	0.0	9.3	71.1	241.8	1157.1
Below10 C	473.4	428.9	333.9	124.1	19.1	0.1	0.0	0.0	2.4	68.4	190.8	394.9	2036.0
Below15 C	627.8	570.4	487.5	253.8	97.6	12.4	0.7	0.8	26.5	184.6	337.3	549.7	3149.0
Below18 C	720.5	655.3	580.5	340.5	176.1	42.1	9.5	12.4	70.5	269.7	427.3	642.7	3947.1

Table 19. Pickering = 14006

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.3	1.5	4.7	4.4	0.6	0.0	0.0	0.0	11.5
Above 22 C	0.0	0.0	0.0	0.0	0.8	7.0	16.9	17.4	2.9	0.0	0.0	0.0	44.9
Above 18 C	0.0	0.0	0.0	0.0	5.3	47.6	89.5	89.9	26.1	2.1	0.0	0.0	260.5
Above 15 C	0.0	0.0	0.0	1.4	17.6	110.3	176.0	174.6	77.0	10.6	0.0	0.0	567.4
Above 10 C	0.0	0.0	0.4	19.1	93.9	250.1	330.7	329.3	207.3	54.3	4.2	0.2	1289.5
Above 5 C	1.9	0.5	9.9	83.0	233.0	400.0	485.7	484.3	355.7	158.4	39.7	2.7	2254.8
Above 0C	15.1	8.4	54.6	207.0	387.8	550.0	640.7	639.3	505.7	307.8	140.9	26.2	3483.3
Below0 C	163.3	137.7	66.5	4.1	0.0	0.0	0.0	0.0	0.0	0.0	8.4	90.0	470.0
Below5 C	304.7	271.3	176.8	30.1	0.2	0.0	0.0	0.0	0.0	5.7	57.3	221.4	1067.6
Below10 C	457.3	412.3	322.3	116.2	16.1	0.1	0.0	0.0	1.6	56.6	171.8	374.0	1928.2
Below15 C	611.8	553.8	476.9	248.5	94.7	10.3	0.3	0.3	21.3	167.8	317.6	528.8	3032.0
Below18 C	704.5	638.7	569.9	337.1	175.5	37.6	6.8	8.6	60.4	252.4	407.6	621.8	3820.7

Table 20. Clarington = 15524

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.4	1.5	3.3	3.4	0.7	0.0	0.0	0.0	9.3
Above 22 C	0.0	0.0	0.0	0.0	0.9	7.0	15.4	15.7	2.7	0.0	0.0	0.0	41.7
Above 18 C	0.0	0.0	0.0	0.2	6.0	47.9	88.7	89.0	25.8	2.2	0.0	0.0	259.7
Above 15 C	0.0	0.0	0.0	2.2	19.1	111.1	175.1	173.5	75.9	10.2	0.0	0.0	567.0
Above 10 C	0.0	0.0	0.6	21.3	99.1	251.0	329.7	328.0	205.6	52.3	3.6	0.2	1291.5
Above 5 C	1.8	0.6	11.3	85.8	237.6	400.9	484.7	483.0	354.0	152.9	37.8	2.4	2252.7
Above 0C	13.7	8.4	56.4	207.7	392.3	550.9	639.7	638.0	504.0	300.5	134.7	23.7	3469.9
Below0 C	173.2	143.2	70.1	4.8	0.0	0.0	0.0	0.0	0.0	0.0	10.5	99.4	501.1
Below5 C	315.8	276.8	180.1	32.9	0.3	0.0	0.0	0.0	0.0	7.4	63.6	233.0	1109.9
Below10 C	468.5	417.8	324.4	118.4	16.8	0.1	0.0	0.0	1.7	61.8	179.4	385.9	1977.5
Below15 C	623.0	559.3	478.7	249.3	91.8	10.2	0.4	0.5	21.9	174.7	325.8	540.7	3076.2
Below18 C	715.7	644.2	571.7	337.3	171.7	37.1	7.0	8.9	61.8	259.7	415.8	633.7	3864.4

Table 21. Whitechurch Stouffville = 16064

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.4	1.4	2.6	3.3	0.5	0.0	0.0	0.0	8.1
Above 22 C	0.0	0.0	0.0	0.0	1.2	7.6	11.7	10.9	2.1	0.0	0.0	0.0	33.6
Above 18 C	0.0	0.0	0.0	0.5	8.0	42.3	67.9	64.3	17.9	1.6	0.0	0.0	202.4
Above 15 C	0.0	0.0	0.0	3.4	19.8	95.6	146.1	139.4	56.1	7.6	0.0	0.0	468.1
Above 10 C	0.0	0.0	0.9	20.6	86.9	227.9	299.0	292.1	173.9	40.3	2.2	0.1	1144.0
Above 5 C	1.5	0.5	9.4	74.9	216.0	377.3	454.0	447.1	320.0	125.2	26.9	1.6	2054.3
Above 0C	9.1	6.3	46.1	186.0	369.4	527.3	609.0	602.1	469.9	264.9	106.8	14.9	3211.8
Below0 C	206.0	177.6	96.0	9.0	0.0	0.0	0.0	0.0	0.0	0.1	18.2	128.0	634.8
Below5 C	352.9	313.2	214.3	48.0	1.6	0.0	0.0	0.0	0.1	15.4	88.3	269.6	1303.3
Below10 C	506.0	454.3	360.7	143.7	27.4	0.6	0.0	0.0	4.1	85.5	213.5	423.2	2219.0
Below15 C	660.4	595.8	514.9	276.4	115.4	18.4	2.1	2.3	36.2	207.8	361.3	578.1	3369.1
Below18 C	753.1	680.7	607.9	363.5	196.5	55.0	16.9	20.1	88.0	294.8	451.3	671.1	4199.0

Table 22. Uxbridge = 17575

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	2.7	3.6	4.3	0.7	0.0	0.0	0.0	11.8
Above 22 C	0.0	0.0	0.0	0.0	1.6	9.9	14.3	13.9	2.8	0.0	0.0	0.0	42.5
Above 18 C	0.0	0.0	0.0	0.7	9.1	47.8	75.7	72.8	21.4	2.0	0.0	0.0	229.5
Above 15 C	0.0	0.0	0.0	4.2	22.2	103.8	156.0	149.8	62.3	9.0	0.0	0.0	507.3
Above 10 C	0.0	0.0	0.9	23.4	94.8	238.7	309.5	302.8	182.7	44.8	2.8	0.2	1200.8
Above 5 C	1.5	0.6	10.4	81.1	226.9	388.4	464.5	457.8	329.5	134.0	30.6	1.9	2127.2
Above 0C	10.4	7.2	49.3	195.2	380.9	538.4	619.5	612.8	479.4	275.6	114.6	17.7	3300.9
Below0 C	197.1	166.4	89.0	7.7	0.0	0.0	0.0	0.0	0.0	0.1	15.7	119.6	595.6
Below5 C	342.7	301.3	205.2	43.6	1.0	0.0	0.0	0.0	0.1	13.4	81.8	258.8	1247.9
Below10 C	495.7	442.2	350.7	135.9	23.9	0.4	0.0	0.0	3.4	79.3	204.0	412.1	2147.6
Below15 C	650.2	583.7	504.8	266.7	106.3	15.5	1.5	2.0	32.9	198.5	351.2	566.9	3280.1
Below18 C	742.9	668.6	597.8	353.3	186.1	49.4	14.2	18.0	82.0	284.5	441.2	659.9	4097.8

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 23. East Gwillimbury = 17704

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	2.5	3.4	4.0	0.7	0.0	0.0	0.0	11.0
Above 22 C	0.0	0.0	0.0	0.0	1.6	10.2	14.1	12.9	2.7	0.0	0.0	0.0	41.5
Above 18 C	0.0	0.0	0.0	0.9	9.2	47.7	74.8	69.8	21.7	2.2	0.0	0.0	226.2
Above 15 C	0.0	0.0	0.0	4.6	22.7	102.3	153.8	145.9	62.7	9.7	0.0	0.0	501.7
Above 10 C	0.1	0.0	1.2	24.0	94.8	235.2	306.8	299.1	183.0	45.8	3.3	0.2	1193.3
Above 5 C	1.8	0.6	11.2	81.9	225.0	384.7	461.8	454.1	329.7	135.3	31.9	1.9	2120.0
Above 0C	10.8	7.3	50.4	194.7	378.8	534.7	616.8	609.1	479.6	277.4	116.6	17.8	3293.9
Below0 C	196.6	169.7	91.3	8.5	0.0	0.0	0.0	0.0	0.0	0.0	15.3	118.3	599.8
Below5 C	342.1	304.6	207.2	45.6	1.2	0.0	0.0	0.0	0.1	12.9	80.7	257.5	1251.8
Below10 C	494.8	445.4	352.1	137.7	26.0	0.5	0.0	0.0	3.4	78.4	202.0	410.8	2151.2
Below15 C	649.3	586.9	506.0	268.4	108.9	17.6	2.0	1.8	33.0	197.3	348.7	565.6	3285.6
Below18 C	742.0	671.8	599.0	354.6	188.5	53.0	16.0	18.7	82.1	282.9	438.7	658.6	4105.7

Table 24. Burlington = 25903

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.1	1.2	1.5	0.2	0.0	0.0	0.0	3.1
Above 22 C	0.0	0.0	0.0	0.0	0.1	1.2	8.1	9.8	1.8	0.0	0.0	0.0	21.1
Above 18 C	0.0	0.0	0.0	0.0	2.0	22.3	61.4	75.6	22.5	2.3	0.0	0.0	186.0
Above 15 C	0.0	0.0	0.0	0.3	7.5	65.0	143.1	162.5	77.5	10.5	0.0	0.0	466.4
Above 10 C	0.0	0.0	0.0	6.3	42.7	187.0	297.5	317.4	214.2	62.0	4.3	0.3	1131.8
Above 5 C	2.1	0.5	4.0	44.0	157.2	336.0	452.5	472.4	363.5	182.4	49.5	3.6	2067.9
Above 0C	19.6	8.4	37.5	149.3	311.0	486.0	607.5	627.4	513.5	336.4	168.8	40.7	3306.3
Below0 C	120.7	121.3	60.7	5.4	0.0	0.0	0.0	0.0	0.0	0.0	2.9	52.8	363.7
Below5 C	257.7	254.9	182.2	50.1	1.2	0.0	0.0	0.0	0.0	0.9	33.7	170.6	951.3
Below10 C	410.1	395.9	333.1	162.5	41.7	0.9	0.0	0.0	0.7	35.6	138.5	322.4	1841.3
Below15 C	564.6	537.4	488.1	306.4	161.5	29.0	0.6	0.0	13.9	139.1	284.2	477.1	3001.8
Below18 C	657.3	622.3	581.1	396.1	249.0	76.2	11.8	6.2	48.9	223.9	374.2	570.1	3817.0

Table 25. Milton = 28288

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	4.3	7.4	6.9	1.3	0.0	0.0	0.0	20.6
Above 22 C	0.0	0.0	0.0	0.0	2.4	15.4	22.5	20.6	4.1	0.3	0.0	0.0	65.3
Above 18 C	0.0	0.0	0.0	1.7	12.0	62.0	95.9	91.5	28.2	3.4	0.0	0.0	294.7
Above 15 C	0.0	0.0	0.2	6.0	30.2	125.1	181.7	174.3	77.1	13.0	0.0	0.0	607.4
Above 10 C	0.3	0.1	2.4	30.0	109.9	264.7	336.3	328.9	205.7	56.6	5.7	0.4	1341.0
Above 5 C	3.0	0.8	16.0	96.4	248.2	414.7	491.3	483.9	353.7	158.4	41.3	2.8	2310.3
Above 0C	16.6	10.0	64.2	219.3	402.8	564.7	646.3	638.9	503.7	306.5	139.7	25.6	3538.1
Below0 C	156.6	135.3	64.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0	8.8	90.0	460.2
Below5 C	297.4	267.7	171.5	31.9	0.5	0.0	0.0	0.0	0.0	6.9	60.4	222.1	1058.4
Below10 C	449.2	408.5	312.9	115.5	17.2	0.0	0.0	0.0	1.9	60.1	174.8	374.8	1915.1
Below15 C	603.5	549.9	465.7	241.5	92.4	10.4	0.4	0.4	23.4	171.5	319.2	529.4	3007.4
Below18 C	696.2	634.8	558.5	327.2	167.3	37.4	7.6	10.6	64.5	254.9	409.2	622.4	3790.3

Table 26. Mississauga-Milton = 29206

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	3.4	6.9	6.5	0.9	0.0	0.0	0.0	18.1
Above 22 C	0.0	0.0	0.0	0.0	1.9	12.0	21.2	19.8	3.6	0.1	0.0	0.0	58.6
Above 18 C	0.0	0.0	0.0	1.1	9.8	55.4	92.9	89.9	26.5	2.9	0.0	0.0	278.4
Above 15 C	0.0	0.0	0.0	4.5	24.5	116.5	179.0	173.2	76.1	12.0	0.0	0.0	585.7
Above 10 C	0.2	0.1	1.3	25.0	99.2	255.3	333.6	327.8	205.0	55.9	5.2	0.4	1308.9
Above 5 C	2.9	0.7	12.3	88.2	237.5	405.2	488.6	482.8	353.1	159.7	41.5	2.9	2275.3
Above 0C	16.8	9.4	58.7	211.5	392.2	555.2	643.6	637.8	503.1	308.5	142.2	27.1	3506.0
Below0 C	153.9	134.0	64.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	8.2	85.7	450.1
Below5 C	294.5	266.9	172.6	31.1	0.3	0.0	0.0	0.0	0.0	6.2	57.4	216.4	1045.4
Below10 C	446.3	407.8	316.6	117.9	17.0	0.0	0.0	0.0	2.0	57.4	171.2	369.0	1905.0
Below15 C	600.6	549.2	470.3	247.3	97.3	11.3	0.3	0.4	23.1	168.5	316.0	523.6	3007.9
Below18 C	693.3	634.1	563.3	334.0	175.6	40.2	7.2	10.1	63.4	252.3	406.0	616.6	3796.1

Table 27. Richmond Hill = 13677

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	2.6	5.0	5.1	0.8	0.0	0.0	0.0	14.2
Above 22 C	0.0	0.0	0.0	0.0	1.6	10.9	17.7	16.7	3.2	0.0	0.0	0.0	50.2
Above 18 C	0.0	0.0	0.0	0.7	9.3	52.7	86.0	82.2	23.9	2.2	0.0	0.0	256.9
Above 15 C	0.0	0.0	0.0	3.9	23.2	112.6	170.3	163.2	69.7	9.7	0.0	0.0	552.6
Above 10 C	0.1	0.0	1.1	23.5	98.8	249.9	324.7	317.3	195.3	48.1	3.3	0.2	1262.3
Above 5 C	2.0	0.6	11.0	85.0	235.3	399.8	479.7	472.3	342.9	143.5	33.3	2.0	2207.3
Above 0C	12.0	7.4	53.1	204.5	389.7	549.8	634.7	627.3	492.9	289.2	123.7	20.0	3404.4
Below0 C	179.5	155.1	78.4	5.9	0.0	0.0	0.0	0.0	0.0	0.0	12.1	106.3	537.3
Below5 C	324.0	289.8	191.2	36.5	0.6	0.0	0.0	0.0	0.0	9.3	71.6	243.3	1166.2
Below10 C	476.6	430.7	336.4	125.0	19.1	0.1	0.0	0.0	2.4	68.9	191.6	396.5	2047.2
Below15 C	631.0	572.2	490.3	255.4	98.5	12.8	0.6	0.8	26.8	185.5	338.3	551.3	3163.5
Below18 C	723.7	657.1	583.3	342.1	177.5	42.9	9.3	12.8	71.1	270.9	428.3	644.3	3963.3

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 28. Oshawa = 14317

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.2	0.7	3.2	3.0	0.6	0.0	0.0	0.0	7.6
Above 22 C	0.0	0.0	0.0	0.0	0.6	4.9	14.1	14.5	2.6	0.0	0.0	0.0	36.7
Above 18 C	0.0	0.0	0.0	0.0	3.9	42.0	83.8	85.6	24.4	1.9	0.0	0.0	241.6
Above 15 C	0.0	0.0	0.0	1.2	14.8	102.9	169.8	169.7	74.5	9.8	0.0	0.0	542.6
Above 10 C	0.0	0.0	0.3	17.4	88.4	241.8	324.4	324.2	204.0	53.0	3.8	0.2	1257.6
Above 5 C	1.8	0.5	9.4	79.5	226.5	391.7	479.4	479.2	352.5	156.3	39.0	2.5	2218.3
Above 0C	14.6	8.2	53.0	202.3	381.3	541.7	634.4	634.2	502.5	304.8	139.4	26.0	3442.4
Below0 C	165.7	139.5	67.7	4.2	0.0	0.0	0.0	0.0	0.0	0.0	8.8	91.5	477.3
Below5 C	307.4	273.4	179.1	31.3	0.2	0.0	0.0	0.0	0.0	6.5	58.4	223.0	1079.3
Below10 C	460.1	414.4	325.0	119.2	17.1	0.2	0.0	0.0	1.5	58.3	173.2	375.7	1944.6
Below15 C	614.6	555.9	479.7	253.0	98.5	11.2	0.4	0.5	22.0	170.1	319.4	530.5	3055.6
Below18 C	707.3	640.8	572.7	341.8	180.7	40.3	7.4	9.4	61.9	255.1	409.4	623.5	3850.2

Table 29. Udora = 20096

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.3	2.1	2.6	3.4	0.6	0.0	0.0	0.0	9.0
Above 22 C	0.0	0.0	0.0	0.0	1.2	8.9	12.1	11.4	2.5	0.0	0.0	0.0	36.2
Above 18 C	0.0	0.0	0.0	0.8	8.3	44.8	70.7	67.7	20.1	1.8	0.0	0.0	214.2
Above 15 C	0.0	0.0	0.0	4.2	20.8	99.0	150.2	144.7	59.8	8.7	0.0	0.0	487.4
Above 10 C	0.0	0.0	1.0	22.8	90.7	232.1	303.6	297.8	179.2	43.6	2.8	0.2	1173.7
Above 5 C	1.6	0.5	9.9	79.0	220.8	381.5	458.6	452.8	325.8	131.0	30.0	2.0	2093.5
Above 0C	10.0	6.6	46.6	190.7	374.6	531.5	613.6	607.8	475.7	272.8	112.6	17.1	3259.6
Below0 C	203.3	175.5	94.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0	16.0	123.0	621.4
Below5 C	349.5	310.8	213.1	47.2	1.3	0.0	0.0	0.0	0.1	13.3	83.3	262.9	1281.4
Below10 C	502.4	451.8	359.1	141.0	26.1	0.5	0.0	0.0	3.5	80.8	206.2	416.1	2187.6
Below15 C	656.8	593.3	513.2	272.4	111.2	17.5	1.6	1.8	34.2	201.0	353.3	570.9	3327.2
Below18 C	749.5	678.2	606.2	359.1	191.7	53.3	15.1	17.8	84.4	287.1	443.3	663.9	4149.7

Table 30. Niagara Falls = 5608

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.3	3.3	6.3	6.7	1.5	0.0	0.0	0.0	18.1
Above 22 C	0.0	0.0	0.0	0.0	1.3	13.8	23.2	24.4	5.5	0.1	0.0	0.0	68.2
Above 18 C	0.0	0.0	0.0	1.5	10.5	63.5	103.3	104.4	36.4	5.2	0.0	0.0	324.6
Above 15 C	0.0	0.0	0.0	7.0	33.3	129.7	190.9	191.5	92.0	18.1	0.2	0.0	662.7
Above 10 C	0.6	0.2	3.4	35.3	123.9	271.3	345.6	346.3	226.3	69.9	10.7	0.6	1434.1
Above 5 C	4.2	2.7	22.4	111.5	265.3	421.3	500.6	501.3	375.1	178.8	56.8	4.4	2444.4
Above 0C	23.1	16.5	79.5	236.6	420.1	571.3	655.6	656.3	525.1	329.3	162.2	34.5	3710.0
Below0 C	147.6	119.1	54.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0	6.9	79.2	410.5
Below5 C	283.2	246.8	152.0	28.5	0.2	0.0	0.0	0.0	0.0	4.6	51.5	204.1	970.9
Below10 C	434.1	385.7	288.0	102.4	13.7	0.0	0.0	0.0	1.3	50.6	155.5	355.3	1786.5
Below15 C	588.0	527.1	439.7	224.0	78.2	8.4	0.3	0.1	16.9	153.8	294.9	509.7	2841.1
Below18 C	680.7	612.0	532.7	308.5	148.4	32.2	5.7	6.1	51.3	233.9	384.7	602.7	3598.7

Table 31. King Smoke Tree = 15752

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	2.9	4.6	5.0	0.9	0.0	0.0	0.0	13.9
Above 22 C	0.0	0.0	0.0	0.0	1.9	11.3	16.4	15.0	3.2	0.0	0.0	0.0	47.8
Above 18 C	0.0	0.0	0.0	1.0	10.0	50.4	79.7	73.9	22.9	2.4	0.0	0.0	240.2
Above 15 C	0.0	0.0	0.1	4.8	23.8	106.6	160.3	150.9	64.5	10.0	0.0	0.0	520.9
Above 10 C	0.1	0.0	1.4	24.1	96.2	240.6	313.8	304.2	186.2	46.7	3.2	0.3	1216.8
Above 5 C	2.0	0.6	11.4	82.1	228.3	390.1	468.8	459.2	332.9	137.6	31.9	2.0	2147.0
Above 0C	11.3	7.5	51.6	196.9	382.3	540.1	623.8	614.2	482.9	280.2	116.9	18.2	3325.8
Below0 C	191.2	165.7	87.4	7.8	0.0	0.0	0.0	0.0	0.0	0.0	14.9	115.6	582.7
Below5 C	336.4	300.4	202.2	43.0	1.0	0.0	0.0	0.0	0.1	12.5	79.9	254.5	1229.8
Below10 C	489.0	441.2	347.2	135.1	23.9	0.4	0.0	0.0	3.3	76.6	201.2	407.7	2125.6
Below15 C	643.4	582.7	500.9	265.7	106.5	16.5	1.5	1.6	31.7	194.9	348.0	562.5	3255.8
Below18 C	736.1	667.6	593.8	352.0	185.7	50.3	13.9	17.7	80.0	280.2	438.0	655.5	4070.7

Table 32. Orangeville MOE = 14073

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.3	1.3	2.4	2.6	0.4	0.0	0.0	0.0	7.0
Above 22 C	0.0	0.0	0.0	0.0	1.2	8.9	10.9	9.5	2.1	0.0	0.0	0.0	32.6
Above 18 C	0.0	0.0	0.0	0.8	8.5	44.7	65.6	58.5	17.7	2.4	0.0	0.0	198.1
Above 15 C	0.0	0.0	0.1	4.3	22.3	97.6	141.6	131.9	54.9	9.3	0.0	0.0	461.9
Above 10 C	0.1	0.0	1.7	23.9	87.9	228.7	293.4	283.3	170.0	41.3	2.5	0.2	1133.0
Above 5 C	1.9	0.8	11.8	77.8	214.9	378.2	448.4	438.3	315.3	123.2	26.7	1.7	2038.9
Above 0C	9.7	7.2	49.4	186.0	367.3	528.2	603.4	593.3	465.2	259.4	102.7	14.2	3186.0
Below0 C	203.7	179.4	98.1	10.6	0.0	0.0	0.0	0.0	0.0	0.2	20.2	132.1	644.3
Below5 C	350.4	314.5	215.5	52.3	2.6	0.0	0.0	0.0	0.1	19.0	94.3	274.7	1323.3
Below10 C	503.2	455.2	360.4	148.5	30.6	0.6	0.0	0.0	4.7	92.1	220.0	428.1	2243.4
Below15 C	657.6	596.7	513.7	278.9	120.0	19.5	3.2	3.6	39.7	215.0	367.5	583.0	3398.3
Below18 C	750.3	681.6	606.7	365.4	199.2	56.5	20.1	23.2	92.4	301.2	457.5	676.0	4230.1

Table 4 Degree Days Summary for 2000-2009 (Continued)

Table 33. Georgetown WWTP = 29942

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	3.4	6.0	5.7	1.1	0.0	0.0	0.0	16.7
Above 22 C	0.0	0.0	0.0	0.0	2.0	13.2	19.8	18.1	3.6	0.2	0.0	0.0	56.9
Above 18 C	0.0	0.0	0.0	1.4	10.9	57.3	89.5	84.8	25.6	3.0	0.0	0.0	272.5
Above 15 C	0.0	0.0	0.1	5.5	27.4	118.4	173.9	166.0	72.3	11.6	0.0	0.0	575.1
Above 10 C	0.2	0.1	2.2	28.1	104.8	257.0	328.4	320.4	199.1	52.9	4.9	0.4	1298.5
Above 5 C	2.7	0.7	14.5	92.2	242.0	406.9	483.4	475.4	346.8	152.1	38.3	2.5	2257.5
Above 0C	15.0	9.0	60.7	213.9	396.5	556.9	638.4	630.4	496.8	299.2	133.5	23.5	3473.7
Below0 C	162.2	141.6	69.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	9.8	94.8	482.7
Below5 C	304.4	274.8	177.8	33.6	0.5	0.0	0.0	0.0	0.0	7.9	64.7	228.8	1092.5
Below10 C	456.4	415.7	320.4	119.4	18.4	0.1	0.0	0.0	2.3	63.8	181.3	381.7	1959.4
Below15 C	610.7	557.1	473.4	246.8	95.9	11.5	0.5	0.6	25.5	177.4	326.4	536.3	3062.1
Below18 C	703.4	642.0	566.3	332.8	172.5	40.3	9.1	12.5	68.9	261.8	416.4	629.3	3855.1

Table 34. Oakville Southeast WPCP = 27562

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.3	0.1	0.0	0.0	0.0	2.4
Above 22 C	0.0	0.0	0.0	0.0	0.0	0.6	6.8	8.3	1.5	0.0	0.0	0.0	17.2
Above 18 C	0.0	0.0	0.0	0.0	1.2	18.2	57.8	72.4	22.0	2.0	0.0	0.0	173.6
Above 15 C	0.0	0.0	0.0	0.0	5.5	59.5	138.8	158.4	76.6	9.9	0.0	0.0	448.8
Above 10 C	0.0	0.0	0.0	4.7	37.0	181.0	293.2	313.4	212.7	61.1	3.8	0.3	1107.0
Above 5 C	1.8	0.5	2.9	40.3	152.1	329.9	448.2	468.4	361.9	180.3	48.3	3.5	2037.8
Above 0C	18.8	7.8	35.3	146.2	305.9	479.9	603.2	623.4	511.9	333.8	166.8	40.5	3273.4
Below0 C	122.9	122.0	61.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0	3.4	54.0	369.1
Below5 C	260.4	256.2	184.2	49.3	1.2	0.0	0.0	0.0	0.0	1.4	34.9	172.0	959.5
Below10 C	413.1	397.2	336.3	163.8	41.1	1.0	0.0	0.0	0.8	37.2	140.4	323.8	1854.7
Below15 C	567.6	538.7	491.3	309.1	164.6	29.6	0.6	0.1	14.8	141.1	286.6	478.5	3022.5
Below18 C	660.3	623.6	584.3	399.1	253.3	78.2	12.6	7.1	50.2	226.2	376.6	571.5	3843.0

Table 35. Burlington Piers = 8114

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.0	0.1	1.6	2.1	0.4	0.0	0.0	0.0	4.3
Above 22 C	0.0	0.0	0.0	0.0	0.2	1.8	9.8	11.4	2.3	0.0	0.0	0.0	25.5
Above 18 C	0.0	0.0	0.0	0.0	2.5	26.7	66.0	78.9	23.8	2.6	0.0	0.0	200.6
Above 15 C	0.0	0.0	0.0	0.6	8.9	71.9	148.1	165.4	78.5	11.6	0.0	0.0	485.1
Above 10 C	0.0	0.0	0.0	8.2	49.4	195.7	302.6	320.3	214.8	63.4	5.1	0.4	1159.9
Above 5 C	2.4	0.5	5.4	48.5	166.4	345.0	457.6	475.3	364.1	183.2	51.1	3.9	2103.4
Above 0C	21.0	9.3	41.8	155.5	320.3	495.0	612.6	630.3	514.1	336.8	169.7	41.3	3347.6
Below0 C	120.6	119.4	58.7	5.3	0.0	0.0	0.0	0.0	0.0	0.0	3.0	53.4	360.4
Below5 C	256.6	252.2	177.4	48.3	1.2	0.0	0.0	0.0	0.0	1.4	34.4	171.0	942.3
Below10 C	408.7	393.2	327.0	158.0	39.1	0.8	0.0	0.0	0.7	36.6	138.4	322.5	1832.8
Below15 C	563.1	534.7	482.0	300.3	153.7	27.0	0.6	0.1	14.4	139.8	283.3	477.1	2975.9
Below18 C	655.8	619.6	575.0	389.8	240.3	71.7	11.5	6.6	49.7	223.8	373.3	570.1	3787.0

Table 36. Millgrove = 8402

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	3.3	7.4	6.3	1.2	0.0	0.0	0.0	18.7
Above 22 C	0.0	0.0	0.0	0.0	1.9	13.8	22.4	20.5	3.9	0.3	0.0	0.0	62.6
Above 18 C	0.0	0.0	0.0	1.2	11.3	60.4	96.8	93.7	27.8	3.4	0.0	0.0	294.5
Above 15 C	0.0	0.0	0.1	5.0	29.1	123.2	183.4	178.2	78.7	12.9	0.0	0.0	610.6
Above 10 C	0.3	0.2	2.4	29.1	107.1	262.4	338.1	332.7	208.7	57.9	6.1	0.4	1345.4
Above 5 C	3.2	0.8	16.0	94.5	245.5	412.3	493.1	487.7	356.7	162.3	44.3	3.1	2319.6
Above 0C	18.5	10.6	65.5	218.3	400.2	562.3	648.1	642.7	506.7	311.3	146.1	28.3	3558.6
Below0 C	151.6	130.9	60.7	4.5	0.0	0.0	0.0	0.0	0.0	0.0	7.6	85.1	440.5
Below5 C	290.9	262.6	166.3	30.6	0.3	0.0	0.0	0.0	0.0	5.9	55.8	215.0	1027.4
Below10 C	442.5	403.5	307.7	115.2	16.9	0.0	0.0	0.0	2.0	56.5	167.6	367.3	1879.3
Below15 C	596.7	544.8	460.4	241.1	93.9	10.9	0.3	0.4	22.0	166.6	311.5	521.9	2970.4
Below18 C	689.4	629.7	553.3	327.3	169.1	38.1	6.7	8.9	61.1	250.0	401.5	614.9	3750.0

Table 5 Corrected Degree days Summary for 2040-2049

Table 1. Toronto Pearson = 10385

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	3.8	33.5	62.5	64.7	15.3	0.1	0.0	0.0	179.9
Above 22 C	0.0	0.0	0.0	0.3	9.4	63.1	111.7	113.4	37.5	1.8	0.0	0.0	337.1
Above 18 C	0.0	0.0	0.0	2.7	40.3	153.0	231.7	231.2	112.0	22.0	0.0	0.0	793.0
Above 15 C	0.0	0.0	0.1	10.4	90.4	238.8	324.6	324.2	186.3	56.2	0.5	0.0	1231.7
Above 10 C	0.5	1.6	6.1	59.4	226.4	387.9	479.6	479.2	331.1	159.7	23.3	1.1	2156.1
Above 5 C	9.8	18.4	50.5	165.0	381.2	537.9	634.6	634.2	481.1	307.9	108.8	18.5	3348.0
Above 0C	64.5	83.5	162.0	306.2	536.2	687.9	789.6	789.2	631.1	462.9	247.2	96.4	4856.7
Below0 C	25.6	21.1	4.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	13.8	65.9
Below5 C	125.8	96.0	48.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	12.2	91.0	382.1
Below10 C	271.6	219.3	158.5	53.4	0.2	0.0	0.0	0.0	0.0	6.8	76.8	228.6	1015.2
Below15 C	426.0	357.6	307.6	154.4	19.2	0.9	0.0	0.0	5.2	58.4	204.0	382.5	1915.9
Below18 C	519.0	441.6	400.5	236.8	62.1	5.2	0.1	0.0	20.8	117.1	293.5	475.5	2572.1

Table 5 Corrected Degree days Summary for 2040-2049 (Continued)

Table 2. Hamilton = 5989

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	3.0	23.7	42.8	42.2	7.6	0.0	0.0	0.0	119.3
Above 22 C	0.0	0.0	0.0	0.3	6.9	47.1	83.0	83.0	22.9	0.3	0.0	0.0	243.6
Above 18 C	0.0	0.0	0.0	2.8	32.0	123.6	196.4	194.0	86.8	12.7	0.0	0.0	648.3
Above 15 C	0.0	0.0	0.1	11.0	73.5	205.3	288.6	286.7	157.0	42.8	0.7	0.0	1065.7
Above 10 C	0.5	2.3	5.5	54.1	199.8	353.6	443.6	441.7	299.1	140.1	20.3	1.4	1962.0
Above 5 C	10.2	18.6	46.5	154.3	354.2	503.6	598.6	596.7	449.1	285.8	99.3	19.1	3136.0
Above 0C	63.7	83.0	154.4	294.0	509.2	653.6	753.6	751.7	599.1	440.8	236.8	94.7	4634.7
Below0 C	28.6	21.4	5.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	13.5	69.4
Below5 C	130.1	97.0	52.4	10.5	0.0	0.0	0.0	0.0	0.0	0.0	12.7	92.9	395.7
Below10 C	275.4	220.7	166.4	60.3	0.6	0.0	0.0	0.0	0.0	9.3	83.7	230.3	1046.6
Below15 C	429.9	358.4	316.0	167.2	29.3	1.8	0.0	0.0	7.9	66.9	214.2	383.8	1975.3
Below18 C	522.9	442.4	408.9	249.1	80.8	10.0	0.8	0.3	27.7	129.9	303.5	476.8	2653.1

Table 3. Toronto North York = 11888

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	2.7	23.2	44.3	48.1	9.5	0.0	0.0	0.0	127.8
Above 22 C	0.0	0.0	0.0	0.1	6.9	48.2	87.2	91.5	28.2	0.9	0.0	0.0	262.9
Above 18 C	0.0	0.0	0.0	2.0	33.4	129.3	203.2	205.5	97.2	18.0	0.0	0.0	688.5
Above 15 C	0.0	0.0	0.0	8.6	78.6	212.4	296.0	298.3	168.8	49.7	0.3	0.0	1112.7
Above 10 C	0.3	1.3	4.7	53.4	207.5	361.0	451.0	453.3	311.4	147.3	20.0	0.9	2012.1
Above 5 C	8.0	16.0	45.3	154.7	361.9	510.9	606.0	608.3	461.3	292.9	99.6	16.2	3181.3
Above 0C	56.9	76.9	152.5	294.7	516.9	660.9	761.0	763.3	611.3	447.8	235.4	88.2	4666.0
Below0 C	30.5	24.2	5.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	17.7	79.3
Below5 C	136.5	103.3	53.5	10.4	0.0	0.0	0.0	0.0	0.0	0.1	14.9	100.8	419.6
Below10 C	283.9	228.6	167.9	59.0	0.6	0.0	0.0	0.0	0.1	9.5	85.4	240.4	1075.5
Below15 C	438.6	367.3	318.2	164.3	26.7	1.5	0.0	0.0	7.4	66.8	215.6	394.6	2001.0
Below18 C	531.6	451.3	411.2	247.7	74.5	8.4	0.2	0.1	25.9	128.1	305.3	487.6	2671.8

Table 4. Toronto Island = 9505

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.0	6.5	25.5	43.4	8.7	0.0	0.0	0.0	85.0
Above 22 C	0.0	0.0	0.0	0.0	1.7	16.6	63.7	89.8	31.1	0.8	0.0	0.0	203.7
Above 18 C	0.0	0.0	0.0	0.2	12.1	87.5	178.9	208.3	110.1	20.2	0.0	0.0	617.3
Above 15 C	0.0	0.0	0.0	1.9	48.3	170.2	271.6	301.3	187.9	60.0	0.5	0.0	1041.8
Above 10 C	0.2	0.7	2.7	38.2	178.7	319.0	426.6	456.3	335.9	177.1	31.5	1.7	1968.7
Above 5 C	12.4	18.7	47.4	146.2	333.5	469.0	581.6	611.3	485.9	328.9	133.4	27.4	3195.9
Above 0C	82.3	94.2	165.8	289.4	488.5	619.0	736.6	766.3	635.9	483.9	277.1	122.4	4761.5
Below0 C	15.9	14.4	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	8.1	41.3
Below5 C	100.9	78.9	39.2	6.9	0.0	0.0	0.0	0.0	0.0	0.0	6.5	68.1	300.6
Below10 C	243.7	201.0	149.5	48.9	0.2	0.0	0.0	0.0	0.0	3.2	54.5	197.4	898.4
Below15 C	398.5	340.2	301.8	162.7	24.8	1.1	0.0	0.0	2.0	41.0	173.6	350.7	1796.5
Below18 C	491.5	424.2	394.8	250.9	81.6	8.4	0.3	0.0	14.2	94.2	263.1	443.7	2467.0

Table 5. HWY 427-401 = 10242

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	3.0	27.7	59.3	64.8	15.5	0.1	0.0	0.0	170.3
Above 22 C	0.0	0.0	0.0	0.1	7.4	56.0	108.7	113.9	38.3	1.8	0.0	0.0	326.1
Above 18 C	0.0	0.0	0.0	1.9	36.4	146.2	229.0	232.5	114.3	22.3	0.0	0.0	782.5
Above 15 C	0.0	0.0	0.0	8.9	86.4	231.9	321.8	325.5	189.3	57.6	0.7	0.0	1222.2
Above 10 C	0.4	1.5	5.5	58.0	223.7	381.1	476.8	480.5	334.8	163.3	25.1	1.3	2152.0
Above 5 C	10.2	18.7	50.9	165.0	378.6	531.1	631.8	635.5	484.8	311.9	112.8	20.2	3351.5
Above 0C	67.1	86.2	164.0	306.9	533.6	681.1	786.8	790.5	634.8	466.9	252.0	99.7	4869.7
Below0 C	24.6	19.5	4.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	13.1	62.2
Below5 C	122.7	92.0	46.1	8.3	0.0	0.0	0.0	0.0	0.0	0.0	11.4	88.6	369.0
Below10 C	267.9	214.8	155.7	51.2	0.1	0.0	0.0	0.0	0.0	6.4	73.7	224.8	994.6
Below15 C	422.5	353.3	305.2	152.1	17.8	0.8	0.0	0.0	4.5	55.7	199.3	378.5	1889.8
Below18 C	515.5	437.3	398.2	235.1	60.8	5.0	0.1	0.0	19.5	113.4	288.5	471.5	2545.0

Table 6. Beaches-East York = 10863

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.6	0.8	3.9	14.0	1.6	0.0	0.0	0.0	21.0
Above 22 C	0.0	0.0	0.0	0.0	0.8	3.3	15.0	42.4	14.2	0.3	0.0	0.0	76.1
Above 18 C	0.0	0.0	0.0	0.0	2.3	24.8	100.3	152.8	87.2	13.4	0.0	0.0	380.8
Above 15 C	0.0	0.0	0.0	0.3	14.1	86.3	191.1	245.8	165.0	51.6	0.2	0.0	754.3
Above 10 C	0.0	0.0	0.4	16.0	109.9	232.0	346.1	400.8	312.6	170.3	31.3	1.4	1620.9
Above 5 C	12.0	15.5	35.2	112.3	263.3	382.0	501.1	555.8	462.6	322.8	138.5	30.0	2831.2
Above 0C	87.3	92.0	152.2	255.2	418.3	532.0	656.1	710.8	612.6	477.8	283.7	132.7	4410.8
Below0 C	10.9	12.5	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.4	31.4
Below5 C	90.6	76.0	40.4	7.1	0.0	0.0	0.0	0.0	0.0	0.0	5.0	57.6	276.8
Below10 C	233.6	200.5	160.6	60.9	1.6	0.0	0.0	0.0	0.0	2.4	47.8	184.1	891.5
Below15 C	388.6	340.5	315.2	195.2	60.7	4.3	0.0	0.0	2.3	38.7	166.6	337.7	1849.9
Below18 C	481.6	424.5	408.2	284.9	141.9	32.8	2.2	0.0	14.6	93.5	256.4	430.7	2571.3

Table 5 Corrected Degree days Summary for 2040-2049 (Continued)

Table 7. York South-Weston = 10847

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	2.3	23.3	52.7	61.0	14.2	0.1	0.0	0.0	153.7
Above 22 C	0.0	0.0	0.0	0.0	5.6	48.3	100.6	109.5	36.5	1.8	0.0	0.0	302.3
Above 18 C	0.0	0.0	0.0	1.2	31.2	135.9	220.1	227.7	112.7	22.5	0.0	0.0	751.3
Above 15 C	0.0	0.0	0.0	6.8	78.7	221.0	312.9	320.7	188.2	58.3	0.5	0.0	1187.2
Above 10 C	0.2	1.0	4.4	52.2	213.6	370.0	467.9	475.7	334.0	166.0	25.1	1.1	2111.3
Above 5 C	9.5	17.2	47.9	158.0	368.4	520.0	622.9	630.7	484.0	315.2	114.9	19.9	3308.6
Above 0C	66.3	84.2	160.2	299.6	523.4	670.0	777.9	785.7	634.0	470.2	254.9	101.0	4827.3
Below0 C	24.7	20.3	4.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	12.4	62.2
Below5 C	122.9	93.3	46.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0	10.5	86.3	368.5
Below10 C	268.6	217.1	158.3	52.8	0.2	0.0	0.0	0.0	0.0	5.8	70.7	222.6	996.2
Below15 C	423.3	356.1	309.0	157.4	20.4	1.0	0.0	0.0	4.2	53.1	196.2	376.4	1897.0
Below18 C	516.3	440.1	402.0	241.8	65.8	5.9	0.2	0.0	18.7	110.4	285.6	469.4	2556.2

Table 8. DVP-Don Mills Road = 11005

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.3	1.0	3.4	11.5	0.9	0.0	0.0	0.0	17.0
Above 22 C	0.0	0.0	0.0	0.0	0.5	3.2	12.3	33.9	10.0	0.2	0.0	0.0	60.0
Above 18 C	0.0	0.0	0.0	0.0	2.3	23.0	86.0	135.2	76.9	11.2	0.0	0.0	334.7
Above 15 C	0.0	0.0	0.0	0.3	12.4	78.3	176.0	228.2	153.1	45.5	0.1	0.0	694.0
Above 10 C	0.0	0.1	0.3	13.7	96.8	222.3	331.0	383.2	300.3	160.4	26.8	1.0	1535.7
Above 5 C	9.8	12.9	28.7	100.0	248.6	372.2	486.0	538.2	450.3	313.0	129.8	25.7	2715.0
Above 0C	80.4	84.8	139.8	241.3	403.6	522.2	641.0	693.2	600.3	468.0	275.1	126.1	4275.7
Below0 C	12.4	14.2	3.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	34.5
Below5 C	96.8	82.3	46.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0	4.7	59.3	298.8
Below10 C	242.0	209.4	173.5	72.5	3.2	0.1	0.0	0.0	0.0	2.4	51.7	189.7	944.4
Below15 C	397.0	349.3	328.2	209.2	73.8	6.1	0.0	0.0	2.8	42.6	175.1	343.6	1927.7
Below18 C	490.0	433.3	421.2	298.9	156.7	40.9	3.0	0.0	16.7	101.2	264.9	436.6	2663.5

Table 9. Etobicoke North = 11287

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	2.7	23.7	44.5	47.7	9.4	0.0	0.0	0.0	128.0
Above 22 C	0.0	0.0	0.0	0.1	6.9	48.5	87.1	90.9	27.8	0.7	0.0	0.0	262.0
Above 18 C	0.0	0.0	0.0	2.1	33.2	129.3	203.0	204.4	96.0	17.2	0.0	0.0	685.2
Above 15 C	0.0	0.0	0.0	8.8	78.0	212.1	295.8	297.2	167.0	48.5	0.4	0.0	1107.8
Above 10 C	0.3	1.3	4.6	52.7	206.5	360.6	450.8	452.2	309.2	145.5	19.7	0.9	2004.1
Above 5 C	7.9	15.9	44.6	153.4	360.8	510.6	605.8	607.2	459.1	290.8	98.1	15.9	3170.2
Above 0C	56.0	76.0	151.1	293.0	515.8	660.6	760.8	762.2	609.1	445.8	233.3	86.9	4650.6
Below0 C	31.7	25.0	6.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	17.1	81.1
Below5 C	138.6	105.0	54.6	10.9	0.0	0.0	0.0	0.0	0.0	0.1	15.5	101.0	425.7
Below10 C	286.0	230.3	169.6	60.1	0.7	0.1	0.0	0.0	0.1	9.7	87.2	241.0	1084.6
Below15 C	440.7	369.0	320.1	166.2	27.2	1.6	0.0	0.0	7.8	67.8	217.8	395.1	2013.3
Below18 C	533.7	453.0	413.0	249.6	75.4	8.8	0.2	0.2	26.8	129.5	307.5	488.1	2685.8

Table 10. Scarborough = 12063

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.5	1.0	3.8	12.2	1.6	0.0	0.0	0.0	19.1
Above 22 C	0.0	0.0	0.0	0.0	0.7	3.5	14.7	38.3	12.7	0.3	0.0	0.0	70.2
Above 18 C	0.0	0.0	0.0	0.0	2.6	25.3	97.8	143.6	80.6	12.2	0.0	0.0	362.0
Above 15 C	0.0	0.0	0.0	0.5	16.3	85.5	188.5	236.5	154.6	47.0	0.3	0.0	729.1
Above 10 C	0.0	0.1	0.7	18.7	113.5	230.6	343.5	391.5	300.5	157.1	27.1	1.4	1584.5
Above 5 C	11.1	15.2	35.8	114.7	266.7	380.6	498.5	546.5	450.5	307.5	124.9	26.0	2777.8
Above 0C	78.6	87.8	150.1	256.9	421.7	530.6	653.5	701.5	600.5	462.5	268.0	118.4	4330.0
Below0 C	17.3	14.8	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	8.6	43.8
Below5 C	104.8	82.2	43.4	7.8	0.0	0.0	0.0	0.0	0.0	0.0	7.2	71.2	316.6
Below10 C	248.7	207.1	163.3	61.9	1.8	0.0	0.0	0.0	0.0	4.7	59.4	201.5	948.3
Below15 C	403.7	347.0	317.7	193.6	59.6	4.9	0.0	0.0	4.1	49.5	182.6	355.2	1917.9
Below18 C	496.7	431.0	410.7	283.2	139.0	34.8	2.3	0.0	20.0	107.7	272.3	448.2	2645.9

Table 11. Don Valley East = 12049

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.9	16.3	32.3	39.8	7.2	0.0	0.0	0.0	97.6
Above 22 C	0.0	0.0	0.0	0.0	4.8	35.6	71.2	80.5	24.7	0.8	0.0	0.0	217.5
Above 18 C	0.0	0.0	0.0	1.4	26.3	111.6	185.5	193.1	92.9	17.0	0.0	0.0	627.9
Above 15 C	0.0	0.0	0.0	6.5	68.3	193.8	278.3	285.9	164.4	48.8	0.3	0.0	1046.1
Above 10 C	0.2	0.8	3.7	48.0	195.4	342.1	433.3	440.9	307.1	147.5	20.3	0.9	1940.2
Above 5 C	8.1	15.1	43.1	149.3	349.7	492.1	588.3	595.9	457.1	293.4	101.7	17.0	3110.7
Above 0C	57.9	76.4	150.5	289.5	504.7	642.1	743.3	750.9	607.1	448.3	237.8	90.5	4599.0
Below0 C	29.7	24.0	5.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	16.6	76.9
Below5 C	134.9	102.7	53.3	10.1	0.0	0.0	0.0	0.0	0.0	0.1	14.6	98.1	413.7
Below10 C	281.9	228.4	168.8	58.8	0.7	0.0	0.0	0.0	0.1	9.2	83.2	237.0	1068.2
Below15 C	436.7	367.6	320.1	167.3	28.6	1.7	0.0	0.0	7.3	65.4	213.2	391.1	1999.0
Below18 C	529.7	451.6	413.1	252.2	79.6	9.5	0.3	0.2	25.8	126.7	302.9	484.1	2675.8

Table 5 Corrected Degree days Summary for 2040-2049 (Continued)

Table 12. Scarborough - Rouge River = 12655

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.2	8.2	23.0	33.9	6.8	0.0	0.0	0.0	73.2
Above 22 C	0.0	0.0	0.0	0.0	2.7	19.7	56.8	73.6	24.8	0.9	0.0	0.0	178.5
Above 18 C	0.0	0.0	0.0	0.6	18.6	85.9	169.0	187.0	95.0	17.5	0.0	0.0	573.6
Above 15 C	0.0	0.0	0.0	4.5	57.3	167.5	261.8	280.0	168.0	51.2	0.5	0.0	990.8
Above 10 C	0.2	0.7	3.6	45.6	185.8	316.0	416.8	435.0	312.4	154.5	23.0	1.3	1894.9
Above 5 C	9.9	17.1	46.6	150.8	340.2	466.0	571.8	590.0	462.4	302.2	110.0	20.3	3087.2
Above 0C	66.3	84.1	159.6	292.7	495.2	616.0	726.8	745.0	612.4	457.2	248.6	100.7	4604.4
Below0 C	25.9	19.2	3.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.5	62.9
Below5 C	124.5	92.3	45.6	8.2	0.0	0.0	0.0	0.0	0.0	0.0	11.9	88.1	370.7
Below10 C	269.8	215.9	157.6	53.0	0.6	0.0	0.0	0.0	0.0	7.4	75.0	224.1	1003.4
Below15 C	424.6	355.2	309.0	161.9	27.1	1.6	0.0	0.0	5.6	59.0	202.5	377.8	1924.3
Below18 C	517.6	439.2	402.0	248.0	81.3	9.9	0.2	0.1	22.6	118.4	292.0	470.8	2602.1

Table 13. Mississauga = 29823

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.4	0.7	2.0	9.6	0.7	0.0	0.0	0.0	13.4
Above 22 C	0.0	0.0	0.0	0.0	0.6	2.3	8.0	30.2	8.4	0.1	0.0	0.0	49.5
Above 18 C	0.0	0.0	0.0	0.0	1.5	14.6	71.1	131.0	76.4	9.4	0.0	0.0	304.0
Above 15 C	0.0	0.0	0.0	0.2	7.5	60.3	159.8	224.0	153.7	45.4	0.2	0.0	651.1
Above 10 C	0.0	0.0	0.3	10.8	84.0	202.5	314.7	379.0	302.0	164.0	30.4	1.5	1489.2
Above 5 C	12.5	14.6	30.7	98.9	236.0	352.4	469.7	534.0	452.0	317.3	139.0	30.4	2687.4
Above 0C	91.5	93.3	146.7	241.6	391.0	502.4	624.7	689.0	602.0	472.3	285.7	137.2	4277.3
Below0 C	9.4	10.5	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	25.3
Below5 C	85.5	71.8	40.9	7.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	51.5	260.4
Below10 C	227.9	197.2	165.5	69.3	3.0	0.1	0.0	0.0	0.0	1.7	44.7	177.7	887.2
Below15 C	382.9	337.2	320.2	208.7	81.6	7.8	0.1	0.0	1.7	38.1	164.5	331.1	1874.0
Below18 C	475.9	421.2	413.2	298.5	168.5	52.2	4.4	0.0	14.4	95.1	254.3	424.1	2621.9

Table 14. Trinity Spadina = 9957

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.2	9.3	32.4	50.3	11.1	0.1	0.0	0.0	104.4
Above 22 C	0.0	0.0	0.0	0.0	2.4	23.4	73.2	97.6	34.3	1.2	0.0	0.0	232.1
Above 18 C	0.0	0.0	0.0	0.4	16.3	98.5	188.8	216.3	113.6	22.0	0.0	0.0	655.8
Above 15 C	0.0	0.0	0.0	2.8	55.4	181.4	281.4	309.3	191.5	61.4	0.7	0.0	1083.9
Above 10 C	0.3	0.8	3.2	40.9	185.7	330.2	436.4	464.3	339.5	177.9	30.5	1.5	2011.4
Above 5 C	12.1	18.6	48.0	148.6	340.4	480.2	591.4	619.3	489.5	329.7	130.9	25.5	3234.2
Above 0C	80.0	93.1	166.4	291.7	495.4	630.2	746.4	774.3	639.5	484.7	274.4	117.3	4793.5
Below0 C	17.8	14.9	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	8.1	43.7
Below5 C	104.8	80.3	39.4	6.9	0.0	0.0	0.0	0.0	0.0	0.0	6.6	71.2	309.3
Below10 C	247.9	202.6	149.6	49.3	0.3	0.0	0.0	0.0	0.0	3.3	56.2	202.3	911.5
Below15 C	402.7	341.8	301.4	161.1	24.9	1.2	0.0	0.0	2.0	41.7	176.4	355.8	1809.1
Below18 C	495.7	425.8	394.4	248.7	78.9	8.3	0.4	0.0	14.0	95.3	265.8	448.8	2476.0

Table 15. Pelham -Thorold = 4083

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	0.2	5.9	32.7	40.8	9.3	0.0	0.0	0.0	89.0
Above 22 C	0.0	0.0	0.0	0.0	2.6	21.2	72.6	84.7	27.2	0.6	0.0	0.0	208.8
Above 18 C	0.0	0.0	0.0	1.8	22.0	94.1	187.0	199.7	98.8	16.6	0.0	0.0	620.0
Above 15 C	0.0	0.0	0.1	8.4	62.4	175.8	279.9	292.6	172.3	51.6	0.6	0.0	1043.6
Above 10 C	0.5	3.0	7.1	52.1	190.3	323.8	434.9	447.6	317.6	158.2	25.1	1.4	1961.5
Above 5 C	12.7	22.5	52.9	154.4	344.5	473.7	589.9	602.6	467.6	308.5	111.0	22.8	3162.9
Above 0C	72.7	92.4	164.0	294.8	499.5	623.7	744.9	757.6	617.6	463.5	250.7	107.0	4688.3
Below0 C	23.4	18.1	4.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	8.5	54.9
Below5 C	118.4	88.1	48.6	9.8	0.0	0.0	0.0	0.0	0.0	0.0	10.3	79.3	354.4
Below10 C	261.1	208.7	157.7	57.6	0.8	0.2	0.0	0.0	0.0	4.8	74.4	212.8	978.1
Below15 C	415.7	345.7	305.8	163.8	28.0	2.1	0.0	0.0	4.7	53.2	200.0	366.4	1885.3
Below18 C	508.7	429.7	398.7	247.3	80.5	10.4	0.1	0.1	21.3	111.2	289.3	459.4	2556.6

Table 16. West Lincoln = 4507

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.1	9.8	31.9	38.1	7.6	0.0	0.0	0.0	88.6
Above 22 C	0.0	0.0	0.0	0.0	3.1	27.5	71.0	79.6	23.9	0.4	0.0	0.0	205.6
Above 18 C	0.0	0.0	0.0	1.8	22.5	100.2	183.7	192.2	91.7	14.6	0.0	0.0	606.7
Above 15 C	0.0	0.0	0.1	8.1	61.6	181.6	276.4	285.0	163.9	47.3	0.6	0.0	1024.6
Above 10 C	0.4	2.6	5.3	50.1	187.6	329.8	431.4	440.0	308.9	151.8	23.5	1.3	1932.8
Above 5 C	12.2	21.2	48.4	151.9	341.9	479.7	586.4	595.0	458.9	301.1	107.9	21.4	3125.8
Above 0C	71.5	90.7	159.9	292.5	496.9	629.7	741.4	750.0	608.9	456.1	247.9	103.8	4649.3
Below0 C	22.8	17.7	4.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	54.4
Below5 C	118.4	88.2	47.9	9.5	0.0	0.0	0.0	0.0	0.0	0.0	10.0	81.9	355.9
Below10 C	261.7	209.6	159.8	57.8	0.7	0.1	0.0	0.0	0.0	5.7	75.7	216.9	987.9
Below15 C	416.3	347.0	309.6	165.7	29.7	1.9	0.0	0.0	4.9	56.2	202.8	370.6	1904.7
Below18 C	509.3	431.0	402.5	249.5	83.6	10.4	0.3	0.1	22.8	116.5	292.2	463.6	2581.8

Table 5 Corrected Degree days Summary for 2040-2049 (Continued)

Table 17. Caledon = 12747

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	3.4	26.8	43.2	41.2	7.2	0.0	0.0	0.0	121.8
Above 22 C	0.0	0.0	0.0	0.3	8.3	51.0	83.1	80.3	22.2	0.6	0.0	0.0	245.6
Above 18 C	0.0	0.0	0.0	3.1	35.6	128.5	194.9	190.3	83.7	14.2	0.0	0.0	650.4
Above 15 C	0.0	0.0	0.1	10.1	78.2	209.8	287.6	282.7	152.3	42.0	0.2	0.0	1063.0
Above 10 C	0.4	1.6	4.7	52.0	202.1	358.0	442.6	437.7	291.4	131.0	15.0	0.4	1937.0
Above 5 C	6.6	14.9	40.0	147.6	355.8	507.9	597.6	592.7	441.1	271.9	84.5	11.6	3072.3
Above 0C	47.2	66.8	138.8	284.3	510.8	657.9	752.6	747.7	591.1	426.7	215.7	74.8	4514.5
Below0 C	39.1	33.1	9.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.1	21.3	104.8
Below5 C	153.5	121.2	65.5	14.2	0.0	0.0	0.0	0.0	0.0	0.1	20.0	113.1	487.7
Below10 C	302.2	248.0	185.3	68.6	1.2	0.1	0.0	0.0	0.3	14.3	100.5	256.9	1177.3
Below15 C	456.9	386.4	335.6	176.7	32.4	1.9	0.0	0.0	11.2	80.3	235.6	411.5	2128.3
Below18 C	549.9	470.4	428.5	259.7	82.7	10.6	0.2	0.6	32.6	145.5	325.5	504.5	2810.6

Table 18. Vaughan = 12773

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	3.0	23.6	41.5	43.5	8.2	0.0	0.0	0.0	119.8
Above 22 C	0.0	0.0	0.0	0.1	7.4	48.0	82.6	85.1	25.3	0.6	0.0	0.0	249.1
Above 18 C	0.0	0.0	0.0	2.5	34.1	127.4	196.9	197.4	90.7	15.7	0.0	0.0	664.7
Above 15 C	0.0	0.0	0.1	9.3	78.3	209.8	289.8	290.1	160.9	45.1	0.2	0.0	1083.5
Above 10 C	0.3	1.4	4.5	53.0	205.0	358.1	444.8	445.1	302.1	138.3	17.5	0.6	1970.9
Above 5 C	6.9	15.1	42.6	151.3	359.2	508.0	599.8	600.1	452.0	281.8	91.2	13.5	3121.6
Above 0C	50.3	70.9	145.4	289.9	514.2	658.0	754.8	755.1	602.0	436.7	224.5	79.4	4581.2
Below0 C	35.6	28.5	7.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.9	21.4	94.3
Below5 C	147.2	112.6	59.6	12.1	0.0	0.0	0.0	0.0	0.0	0.1	17.6	110.6	459.7
Below10 C	295.5	238.9	176.4	63.8	0.9	0.1	0.0	0.0	0.1	11.7	93.9	252.7	1134.0
Below15 C	450.2	377.6	327.0	170.1	29.2	1.7	0.0	0.0	8.9	73.4	226.6	407.0	2071.6
Below18 C	543.2	461.6	419.9	253.2	77.9	9.4	0.2	0.3	28.7	137.0	316.4	500.0	2747.8

Table 19. Pickering = 14006

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.0	5.0	19.5	28.4	5.8	0.0	0.0	0.0	59.7
Above 22 C	0.0	0.0	0.0	0.0	2.1	14.6	53.3	67.1	22.1	0.6	0.0	0.0	159.8
Above 18 C	0.0	0.0	0.0	0.5	16.7	80.5	165.3	180.5	91.4	14.9	0.0	0.0	549.8
Above 15 C	0.0	0.0	0.0	4.2	55.7	163.0	258.3	273.4	164.3	47.4	0.3	0.0	966.6
Above 10 C	0.1	0.9	3.3	47.8	187.3	311.6	413.3	428.4	308.4	149.0	21.6	1.0	1872.8
Above 5 C	8.8	17.3	47.2	153.3	341.9	461.6	568.3	583.4	458.3	296.1	105.8	18.3	3060.3
Above 0C	63.1	83.2	160.6	295.4	496.9	611.6	723.3	738.4	608.3	451.1	243.7	96.6	4572.4
Below0 C	25.6	20.2	3.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.0	62.9
Below5 C	126.2	94.3	45.0	8.1	0.0	0.0	0.0	0.0	0.0	0.1	12.6	89.7	375.9
Below10 C	272.6	217.9	156.1	52.6	0.4	0.0	0.0	0.0	0.0	8.0	78.5	227.4	1013.4
Below15 C	427.4	357.0	307.8	159.0	23.8	1.4	0.0	0.0	6.0	61.3	207.1	381.3	1932.2
Below18 C	520.4	441.0	400.8	245.3	77.8	8.9	0.0	0.1	23.0	121.9	296.8	474.3	2610.4

Table 20. Clarington = 15524

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.2	7.9	27.1	28.6	4.7	0.0	0.0	0.0	69.5
Above 22 C	0.0	0.0	0.0	0.0	3.4	24.0	64.2	69.1	19.3	0.3	0.0	0.0	180.3
Above 18 C	0.0	0.0	0.0	0.9	22.6	97.8	177.8	181.8	86.4	11.9	0.0	0.0	579.1
Above 15 C	0.0	0.0	0.0	4.7	65.0	180.5	270.7	274.7	158.3	42.5	0.1	0.0	996.6
Above 10 C	0.1	1.1	2.5	47.1	195.3	329.0	425.7	429.7	301.4	141.8	18.7	0.7	1893.0
Above 5 C	6.9	16.1	42.3	149.0	349.8	478.9	580.7	584.7	451.3	287.2	97.5	15.4	3059.7
Above 0C	53.6	75.3	150.5	289.8	504.8	628.9	735.7	739.7	601.3	442.0	232.3	88.2	4542.1
Below0 C	31.7	27.4	6.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.7	17.1	83.4
Below5 C	140.0	108.3	52.8	9.7	0.0	0.0	0.0	0.0	0.0	0.2	15.9	99.3	426.0
Below10 C	288.2	233.2	167.9	57.8	0.5	0.0	0.0	0.0	0.0	9.8	87.1	239.6	1084.2
Below15 C	443.1	372.1	320.5	165.4	25.3	1.6	0.0	0.0	7.0	65.5	218.5	393.9	2012.9
Below18 C	536.1	456.1	413.5	251.5	75.8	8.8	0.1	0.1	25.1	127.9	308.4	486.9	2690.4

Table 21. Whitechurch Stouffville = 16064

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0.0	0.0	0.0	0.0	1.9	16.3	26.9	30.1	4.0	0.0	0.0	0.0	79.2
Above 22 C	0.0	0.0	0.0	0.1	4.6	35.4	61.6	64.2	15.3	0.1	0.0	0.0	181.3
Above 18 C	0.0	0.0	0.0	1.9	26.3	105.0	167.6	169.4	71.6	10.7	0.0	0.0	552.5
Above 15 C	0.0	0.0	0.0	6.9	63.3	180.8	259.9	261.0	136.9	35.9	0.0	0.0	944.8
Above 10 C	0.1	1.0	3.0	42.9	178.3	327.7	414.9	416.0	273.1	118.9	13.1	0.2	1789.3
Above 5 C	5.2	12.1	32.3	131.3	329.9	477.5	569.9	571.0	422.6	255.2	74.7	9.4	2891.2
Above 0C	38.1	58.1	122.7	264.1	484.9	627.5	724.9	726.0	572.6	409.7	200.4	63.4	4292.5
Below0 C	53.4	41.8	13.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	2.1	32.3	144.9
Below5 C	175.5	135.9	78.0	18.8	0.0	0.0	0.0	0.0	0.0	0.5	26.5	133.3	568.5
Below10 C	325.4	264.8	203.7	80.5	3.4	0.2	0.0	0.0	0.5	19.1	114.9	279.2	1291.7
Below15 C	480.3	403.7	355.8	194.5	43.4	3.3	0.0	0.0	14.2	91.2	251.8	433.9	2272.1
Below18 C	573.3	487.7	448.8	279.4	99.3	17.5	0.7	1.4	39.0	158.9	341.8	526.9	2974.9