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Proposed Change 1979

Code Reference(s):	**NBC20 Div.B Appendix C (first printing)**
Subject:	Climatic Loads
Title:	Updated Climatic Data
Description:	This proposed change updates Appendix C, including Table-C2, to incorporate the effects of climate change.
Related Code Change Request(s):	CCR 1639
Related Proposed Change(s):	PCF 1980, PCF 2018, PCF 2048

This change could potentially affect the following topic areas:

- [ ] Division A
- [x] Division B
- [ ] Division C
- [ ] Design and Construction
- [ ] Building operations
- [x] Housing
- [x] Small Buildings
- [x] Large Buildings
- [ ] Fire Protection
- [ ] Occupant safety in use
- [ ] Accessibility
- [x] Structural Requirements
- [ ] Building Envelope
- [x] Energy Efficiency
- [x] Heating, Ventilating and Air Conditioning
- [x] Plumbing
- [ ] Construction and Demolition Sites

Problem

In previous editions of the National Building Code of Canada (NBC) climatic data provided in Table C-2 in Appendix C were based on historical weather observations collected and analyzed by Environment and Climate Change Canada (ECCC). It was assumed that climatic data were time-independent (or stationary). However, in the face of extensive evidence that the climate is changing across Canada, this practice raises real safety concerns for the design of buildings.

To assess the impacts of climate change trends on the climatic data and their associated climatic loads and load combinations specified in the NBC, future climatic data sets have been developed by ECCC [1] based on the current body of research in climate modelling. These models simulate how the climate statistics are likely to change in various regions of Canada between 2024 and 2100 under various greenhouse gas (GHG) emissions scenarios called representative concentration pathways (RCPs). An

RCP is a greenhouse gas concentration time profile. Four RCPs were used for the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) in 2014: RCP2.6, RCP4.5, RCP6 and RCP8.5 (corresponding to radiative forcing values of 2.6 W/m^2, 4.5 W/m^2, 6 W/m^2 and 8.5 W/m^2, respectively, in 2100). These pathways represent different future greenhouse gas concentration time profiles that are possible depending on the volume of greenhouse gases emitted.

There has been international recognition in recent decades that the earth’s climate is changing, with the potential to create higher structural loads and more adverse environmental conditions than currently specified based on historical observations. The consequences of this pose an increased risk to building structural integrity and functionality, and occupant life safety. More frequent high-heat events also increase risk to occupant life safety.

In addition to the need to update NBC Table C-2 to account for climate change effects, it was recognized that the current approach to establishing design wind and snow loads, referred to as the "uniform hazard" approach, does not result in uniform reliability of building performance across the country. In order to harmonize performance expectations of buildings under these load effects, a new methodology is proposed to define the climatic loads, called the "uniform risk" approach, in which the ultimate load is specified directly with an implied load factor of 1.0, similar to current earthquake design practice.

Justification

The results of targeted research conducted by ECCC [1] specifically designed to address the effect of future projections of climatic conditions were accounted for in the update of each parameter of NBC Table C-2. The proposed approach for building design is based on a 50-year time horizon (from 2025 to 2075) and the RCP8.5 future emissions scenario, corresponding to a 2.5°C global warming compared to the 1986-2016 baseline period. The projected future values are applied to the parameters in NBC Table C-2 using the following approach.

For parameters used for structural and building envelope design, such as the effects of snow, rain, wind and moisture, if the projected future value in the 50-year time horizon is greater than the current updated value calculated from historical observations, the projected value is used. If the future value is projected to decrease, the current value is retained. This approach, called the "Minimax Method," assures that over the 50-year time horizon the annual risk of failure does not exceed that which has historically been considered as acceptable. For some variables, such as temperature, the governing case for design may be the minimum, while for others, such as wind and snow, it is the maximum. For instance, for wind, projections mostly show increases in reference pressure in the future, making the last year of service life the governing case; for snow, projections mostly show decreases in snow load in the future, making the first year of service life the worst case. This is deemed an appropriate approach that ensures that the NBC Table C-2 values reflect the maximum loads expected that correspond to the specified annual probability of exceedance.

The non-stationarity of future climate due to the impact of climate change is embedded in NBC Table C-2 using climate change factors derived from regional averages using the Minimax approach [2], [3]. For reference design wind pressures, most areas in Canada have a climate change factor of 1.05, while locations in Ontario, the Atlantic provinces and west of 120°W in British Columbia have a climate change factor of 1.1. For ground snow loads, excepting the northern territories where a climate change factor of 1.05 applies, most regions have a climate change factor of 1.0, as the governing scenario is based on the present climate. The Minimax approach to adopt future values is also applied to the other parameters, using the future change factors from the targeted research results. For some parameters, such as the one-day and 15-minute rainfalls, there are increases at all locations. For the moisture index, future values are applied at locations where the moisture load increases, and the values remain unchanged elsewhere.

In future updates of NBC Table C-2 values, it is expected that current values at that time will be updated to a new baseline period. Projected future values, based on ongoing research, will also be updated and referenced to the same new baseline period. In this way, both the current and future values will be reset to reflect current knowledge at the time of the future update, and the future values using the Minimax Method for this update will not be compounded in future updates.

Terminology is also affected by the effects of a changing climate. Low-probability events have often been described as having a return period which, in a stationary (non-changing) climate, is defined as the average interval in years between such events. The reciprocal of the return period is defined as the annual exceedance probability. For instance, a 50-year return period event has an annual probability of 1/50 or 0.02. In a changing climate, the definition of the return period as an interval between events is not accurate. As a result, low-probability events are now identified with their annual exceedance probability rather than return period, since the annual probability can and often will change over time. For instance, a 50-year return period event is now described as a "1/50 annual probability event," or sometimes just as the "1/50 value."

The uniform risk approach for wind results in a new 1/500 annual probability wind pressure value to reflect the ultimate load. In thunderstorm-prone regions, for wind values at low probabilities such as 1/500, the separate analysis of convective (e.g., thunderstorm) and synoptic (e.g., active low-pressure system with an embedded weather front) wind events generally results in higher wind values than the usual (up to the 2020 edition of the NBC) approach of analyzing the commingled convective and synoptic wind events as a single data set. This effect is not significant at higher annual probabilities, such as 1/10 and 1/50. In addition to future values applied with the Minimax approach, the 500-year wind pressure values also account for the separate analysis of convective and synoptic wind events.

For parameters related to temperature and heating and cooling loads, such as degree-days below 18°C and 15°C, and January and July design temperatures, future values corresponding to a 50-year time horizon and RCP8.5 emissions scenario are applied in a similarly appropriate approach. Since warming is projected to occur for all locations, the current values for degree-day data and January design temperatures are all retained.

Analysis of the energy performance of buildings does not indicate an increased risk of overheating in buildings when cooling systems are provided and sized using historical July temperature data, in the context of a future climate scenario.

However, sizing mechanical cooling systems based on future 50-year July temperature projections could result in oversized cooling equipment, which could increase construction costs. Also, the equipment may never experience the elevated temperature condition during its service life, which is considerably less than 50 years. Oversized cooling equipment can decrease energy efficiency and increase energy costs. The resulting oversizing could make equipment short-cycling worse and lead to inability of the equipment to meet latent loads, resulting in potentially excessive indoor humidity levels. In addition, short-cycling will decrease the service life of equipment. For the purpose of cooling system equipment design, NBC Table C-2 provides July temperature data based on historical observations.

Further work is proposed on the use of future climatic data in energy codes.

Extensive changes to the climatic design data in NBC Table C-2 and related documentation in NBC Appendix C implement the approach described above.

References

[1] Cannon, A.J., Jeong, D.I., Zhang, X., and Zwiers, F. W. Climate-Resilient Buildings and Core Public Infrastructure: An Assessment of the Impact of Climate Change on Climatic Design Data in Canada. Environment and Climate Change Canada, Ottawa, ON, 2020.

[2] Hong, H.P., Tang, Q., Yang, S.C., Cui, X.Z., Cannon, A.J., Lounis, Z., and Irwin, P. Calibration of the design wind load and snow load considering the historical climate statistics and climate change effects. Structural Safety, Vol. 93, 10213, 2021.

[3] Li, S.H., Irwin, P., Lounis, Z., Attar, A., Dale, J., Gibbons, M., and Beaulieu, S. Effects of Nonstationarity of Extreme Wind Speeds and Ground Snow Loads in a Future Canadian Changing Climate. Natural Hazards Review, Vol. 23, No. 4, 04022022, 2022.

PROPOSED CHANGE

Appendix C Climatic and Seismic Information for Building Design in Canada

Footnote: This information is included for explanatory purposes only and does not form part of the requirements.

Introduction

~~The great diversity of climate in Canada has a considerable effect on the performance of buildings; consequently, building design must reflect this diversity.~~ This Appendix briefly describes how climatic design values are computed and provides recommended design data for ~~a number of cities, towns, and lesser populated~~680 locations across Canada. Through the use of such data, appropriate allowances can be made for climate variations in different localities of Canada and the National Building Code can be applied nationally.

The climatic design data presented in Table C-2 are based on weather observations collected by the Meteorological Service of Canada, Environment and Climate Change Canada (ECCC), and include the effects of future projections of climatic conditions where appropriate. The data were researched and analyzed for the ~~Canadian Commission on Building and Fire Codes~~Canadian Board for Harmonized Construction Codes by ~~Environment and Climate Change~~ ~~Canada~~ECCC (they also include results from projects by other agencies).

As it is not practical to list values for all ~~municipalities~~locations in Canada, recommended climatic design values for locations not listed can be obtained by e-mail from the Engineering Climate Services Unit of ECCC~~Environment and Climate Change Canada~~ at scg-ecs@ec.gc.ca. It should be noted~~, however,~~ that these recommended values may differ from the legal requirements set by provincial, territorial or municipal building authorities.

The information on seismic hazard given in this Appendix has been provided by Natural Resources Canada.

General

The choice of climatic elements tabulated in this Appendix and the form in which they are expressed have been dictated largely by the requirements for specific values in several sections of this Code. These elements include ground snow loads, wind pressures, design temperatures, heating degree-days, one-day and 15-minute rainfalls, ~~and~~ annual total precipitation values, and winter average temperatures and wind speeeds. The following notes briefly explain the significance of these particular elements in building design, and indicate which weather observations were used and how they were analyzed to yield the required design values.

Table C-2 lists design weather recommendations and elevations for over ~~600~~ 680 locations, which have been chosen based on a variety of reasons. Many incorporated cities and towns with significant populations are included unless located close to larger cities. For sparsely populated areas, many smaller towns and villages are listed. Other locations have been added to the list when the demand for climatic design recommendations at these sites has been significant. The named locations refer to the specific latitude and longitude defined by the Gazetteer of Canada (Natural Resources Canada), available from ~~Publishing and Depository Services Canada~~the Government of Canada Publications Directorate, ~~Public Works and Government Services Canada~~Public Services and Procurement Canada~~,~~ ~~Ottawa, Ontario K1A 0S5~~ (www.publications.gc.ca). The elevations are given in metres and refer to heights above sea level.

Almost all of the weather observations used in preparing Table C-2 were, of necessity, observed at inhabited locations. To estimate design values for arbitrary locations, the observed or computed values for the weather stations were mapped and interpolated appropriately. Where possible, adjustments have been applied for the influence of elevation and known topographical effects. Such influences include the tendency of cold air to collect in depressions, for precipitation to increase with elevation, and for generally stronger winds near large bodies of water. Elevations have been added to Table C-2 because of their potential to significantly influence climatic design values.

Since interpolation from the values in Table C-2 to other locations may not be valid due to local and other effects, Environment and Climate Change Canada will provide climatic design element recommendations for locations not listed in Table C-2. Local effects are particularly significant in mountainous areas, where the values apply only to populated valleys and not to the mountain slopes and high passes, where very different conditions are known to exist.

Changing and Variable Climates

Climate is not static. At any location, weather and climatic conditions vary from season to season, year to year, and over longer time periods (climate cycles). This has always been the case. In fact, evidence is mounting that the climates of Canada are changing and will continue to change significantly into future. When estimating climatic design loads, this variability can be considered using appropriate statistical analysis, data records spanning sufficient periods, and meteorological judgement. ~~The analysis generally assumes that the past climate will be representative of the future climate.~~

Past and ongoing modifications to atmospheric chemistry (from greenhouse gas emissions and land use changes) are expected to alter most climatic regimes in the future despite the success of the most ambitious greenhouse gas mitigation plans.[(1)] Some regions could see an increase in the frequency and intensity of many weather extremes, which will accelerate weathering processes. Consequently, many buildings will need to be designed, maintained and operated to adequately withstand ever changing climatic loads.

Similar to global trends, the last decade in Canada was noted as the warmest in instrumented record. Canada has warmed, on average, at almost twice the rate of the global average increase, while the western Arctic is warming at a rate that is unprecedented over the past 400 years.[(1)] Mounting evidence from Arctic communities indicates that rapid changes to climate in the North have resulted in melting permafrost and impacts from other climate changes have affected nearly every type of built structure. Furthermore, analyses of Canadian precipitation data shows that many regions of the country have, on average, also been tending towards wetter conditions.[(1)] In the United States, where the density of climate monitoring stations is greater, a number of studies have found an unambiguous upward trend in the frequency of heavy to extreme precipitation events, with these increases coincident with a general upward trend in the total amount of precipitation. Climate change model results, based on an ensemble of global climate models worldwide, project that future climate warming rates will be greatest in higher latitude countries such as Canada.[(2)]

The analysis used to estimate the climatic design data for previous editions of the NBC assumed that the past climate would be representative of the future climate. Starting in the 2025 edition, the climatic design data incorporate the effects of future projections of climatic conditions that are based on the current body of research in climate modeling. The models used in the analysis simulate how the climate statistics are likely to change in various regions of Canada from the present to 2100 under various greenhouse gas emissions scenarios called representative concentration pathways (RCPs).

An RCP is a greenhouse gas concentration time profile. Four RCPs were used for the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report in 2014:

RCP2.6, RCP4.5, RCP6 and RCP8.5 (corresponding to radiative forcing values of 2.6 W/m^2, 4.5 W/m^2, 6 W/m^2 and 8.5 W/m^2, respectively, in 2100). These pathways represent different future greenhouse gas concentration time profiles that are possible depending on the volume of greenhouse gases emitted.

In targeted projects reported by Cannon et al.,[14] Gaur et al.,[15] the Pacific Climate Impacts Consortium,[16] and RWDI,[17][18] global climate models augmented with nested regional models provided projected future values of the climatic data in Table C-2 for average global warming levels of 0.5°C to 3.5°C, in increments of 0.5°C, relative to a 1986–2016 baseline. The projected future changes to the climatic data were incorporated in a calibration to derive climate change factors reflecting regional averages.[19] The climatic values listed in Table C-2 were obtained by applying the "Minimax" method and a target-reliability-based approach,[19][20] as described in the following.

For structural design parameters, such as wind and snow loads, the projected future values were determined for an average global warming of 2.5°C over a 50-year time horizon, corresponding to emissions scenario RCP8.5. For locations where an increase is projected, the future value has been applied. For locations where a decrease is projected, the current value has been retained. This approach is deemed appropriate to protect life safety by ensuring that structures are designed to withstand the highest loads for the climatic conditions expected in the 50-year time horizon.

Similarly, for heating- and cooling-related parameters, such as design temperatures and degree-days below 18°C and 15°C, the projected future values were determined for an average global warming of 2.5°C over the same 50-year time horizon, corresponding to emissions scenario RCP8.5. For locations where the heating or cooling load is projected to increase, the future value has been applied. For locations where the load is projected to decrease, the current value has been retained. According to this approach, since warming is projected for all locations in Canada, the current values have been retained for degree-days below 18°C and 15°C and for January design temperatures, whereas projected future changes have been applied to July dry-bulb and wet-bulb design temperatures.

It is expected that, in future editions of the Code, the current values will be updated based on recent observations, reflecting changes that are occurring, and will correspond to the baseline observational period on which the future climate projections will be based. The future climate projections will be updated based on improved climate models developed by the international scientific community, whose results are released periodically by the IPCC, and on improved targeted research on future projections of the climatic design data in the NBC.

January Design Temperatures

A building and its heating system should be designed to maintain the inside temperature at some pre-determined level. To achieve this, it is necessary to know the most severe weather conditions under which the system will be expected to function satisfactorily. ~~Failure to maintain the inside temperature at the pre-determined level will not usually be serious if the temperature drop is not great and if the duration is not long.~~ The outside conditions used for design should, therefore, not be the most severe in many years, but should be the somewhat less severe conditions that are occasionally but not greatly exceeded.

The January design temperatures are based on an analysis of January air temperatures only. Wind and solar radiation also affect the inside temperature of most buildings and may need to be considered for energy-efficient design.

The January design temperature is defined as the lowest temperature at or below which only a certain small percentage of the hourly outside air temperatures in January occur. In the past, a total of 158 stations with records from all or part of the period 1951-66 formed the basis for calculation of the 2.5 and 1% January temperatures. Where necessary, the data were adjusted for consistency. Since most of the temperatures were observed at airports, design values for the core areas of large cities could be 1 or 2°C milder, although the values for the outlying areas are probably about the same as for the airports. No adjustments were made for this urban island heat effect. The design values for the next 20 to 30 years will probably differ from these tabulated values due to year-to-year climate variability and global climate change resulting from the impact of human activities on atmospheric chemistry.

The design temperatures were reviewed and updated using hourly temperature observations from 480 stations for a 25-year period up to 2006 with at least 8 years of complete data. These data are consistent with data shown for Canadian locations in the 2009 Handbook of Fundamentals(3) published by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). The most recent 25 years of record were used to provide a balance between accounting for trends in the climate and the sampling variation owing to year-to-year variation. The 1% and 2.5% values used for the design conditions represent percentiles of the cumulative frequency distribution of hourly temperatures and correspond to January temperatures that are colder for 8 and 19 hours, respectively, on average over the long term.

The 2.5% January design temperature is the value ordinarily used in the design of heating systems. In special cases, when the control of inside temperature is more critical, the 1% value may be used. Other temperature-dependent climatic design parameters may be considered for future ~~issues~~editions of the Code~~this document~~.

Projected future changes to the January design temperatures, corresponding to an average global warming of 2.5°C, are available. For the locations in Table C-2, the average projected increase in the January design temperatures is about 5°C, with warming projected at all locations. Accordingly, projected future changes have not been applied.

July Design Temperatures

A building and its cooling and dehumidifying system should be designed to maintain the inside temperature and humidity at certain pre-determined levels. To achieve this, it is necessary to know the most severe weather conditions under which the system is expected to function satisfactorily. Failure to maintain the inside temperature and humidity at the pre-determined levels will usually not be serious if the increases in temperature and humidity are not great and the duration is not long. The outside conditions used for design should, therefore, not be the most severe in many years, but should be the somewhat less severe conditions that are occasionally but not greatly exceeded.

The summer design temperatures in this Appendix are based on an analysis of July air temperatures and humidity valueshumidities. Wind and solar radiation also affect the inside temperature of most buildings and may, in some cases, be more important than the outside air temperature. More complete summer and winter design information can be obtained from Environment and Climate Change Canada.

The July design dry-bulb and wet-bulb design temperatures were reviewed and updated using hourly temperature observations from 480 stations for a 25-year period up to 2006. These data are consistent with data shown for Canadian locations in the 2009 Handbook of Fundamentals[3] published by ASHRAE. As with January design temperatures, data from the most recent 25-year period were analyzed to reflect any recent climatic changes or variations. The 2.5% values used for the dry- and wet-bulb design conditions represent percentiles of the cumulative frequency distribution of hourly dry- and wet-bulb temperatures and correspond to July temperatures that are higher for 19 hours on average over the long term.

Projected future changes to the July design temperatures, corresponding to an average global warming of 2.5°C, are available. For the locations in Table C-2, the average projected increase in the July dry-bulb design temperatures is about 4.1°C, with warming projected at all locations. The average projected increase in the July wet-bulb design temperatures is about 3.4°C, with warming projected at all locations. These projected future increases are applied to the “historical” July design temperatures, which were updated based on historical observations, to provide the “future” July design temperatures.

Analysis of the energy performance of buildings does not indicate an increased risk of overheating in buildings when mechanical cooling systems are provided and sized using historical July temperatures in the context of a future climate scenario. However, sizing mechanical cooling systems based on future 50-year July temperature projections could result in oversized cooling equipment, which could increase construction costs. Also, the equipment may never experience the elevated temperature condition during its expected service life, which is considerably less than 50 years.

Oversized cooling equipment could decrease the building's energy efficiency and increase energy costs. The oversizing could also lead to increased short-cycling of equipment and to inability of the equipment to meet latent loads, resulting in potentially excessive indoor humidity levels. In addition, increased short-cycling could decrease the service life of the equipment. Therefore, for the purpose of the design of mechanical cooling system equipment, Table C-2 provides July temperatures based on historical observations.

Heating Degree-Days

The rate of consumption of fuel or energy required to keep the interior of a small building at 21°C when the outside air temperature is below 18°C is roughly proportional to the difference between 18°C and the outside temperature. Wind speed, solar radiation, the extent to which the building is exposed to these elements and the internal heat sources also affect the heat required and may have to be considered for energy-efficient design. For average conditions of wind, radiation, exposure, and internal sources, however, the proportionality with the temperature difference generally still holds.

Since the fuel required is also proportional to the duration of the cold weather, a convenient method of combining these elements of temperature and time is to add the differences between 18°C and the mean temperature for every day in the year when the mean temperature is below 18°C. It is assumed that no heat is required when the mean outside air temperature for the day is 18°C or higher.

Although more sophisticated computer simulations using other forms of weather data have now almost completely replaced degree-day-based calculation methods for estimating annual heating energy consumption, degree-days remain a useful indicator of relative severity of climate and can form the basis for certain climate-related Code requirements.

The degree-days below 18°C were compiled for 1300 stations for the 25-year period ending in 2006. This analysis period is consistent with the one used to derive the design temperatures described above and with the approach used by ASHRAE.[3]

A difference of only one Celsius degree in the mean annual temperature will cause a difference of 250 to 350 in the Celsius degree-days. Since differences of 0.5 of a Celsius degree in the mean annual temperature are quite likely to occur between two stations in the same town, heating degree-days cannot be relied on to an accuracy of less than about 100 degree-days.

Heating degree-day values for the core areas of larger cities can be 200 to 400 degree-days less (warmer) than for the surrounding fringe areas. The observed degree-days, which are based on daily temperature observations, are often most representative of rural settings or the fringe areas of cities.

Projected future changes to the heating degree-day values, corresponding to an average global warming of 2.5°C, are available. For the locations in Table C-2, with warming projected at all locations, the average projected decrease in the degree-days below 18°C values is about 1 100 degree-days. Accordingly, projected future changes have not been applied.

Degree-days below 15°C values, which are useful for building heating calculations, are provided in the 2025 edition of the NBC. These values are based on an ECCC analysis of observations from 1407 stations for the period from 1991 to 2020.

Snow Loads

The roof of a building should be designed~~able~~ to safely support the snow loads expected during the building's service life~~the greatest weight of snow that is likely to accumulate on it in many years~~. Some observations of snow on roofs have been made in Canada, but not enough to form the basis for estimating roof snow loads throughout the country. Similarly, observations of the weight, or water equivalent, of the snow on the ground have not been available in digital form in the past. The observations of roof loads and water equivalents are very useful, as noted below, but the measured depth of snow on the ground is used to provide the basic information for a consistent set of snow loads.

As reported by Newark et al.,[5] in the 1990 to 2020 editions of the NBC, ~~Theestimation of~~ the design snow load on a roof was estimated from snow depth observations using a procedure that involves the following steps:

1. The depth of snow on the ground~~, which has~~ having an annual probability of exceedance of 1-in-50~~,~~ is computed.
2. The appropriate specific weight is selected and used to convert snow depth to

loads, S_s.
3. The load, S_r, which is due to rain falling on the snow, is computed.
4. Because the accumulation of snow on roofs is often different from that on the ground, adjustments are applied to the ground snow load to provide a design snow load on a roof.

~~The annual maximum depth of snow on the ground has been assembled for 1618 stations for which data has been recorded by the Meteorological Service of Canada (MSC). The period of record used varied from station to station, ranging from 7 to 38 years. These data were analyzed using a Gumbel extreme value distribution fitted using the method of moments[4] as reported by Newark et al.[5] The resulting values are the snow depths, which have a probability of 1-in-50 of being exceeded in any one year.~~

The specific weight of old snow generally ranges from 2 to 5 kN/m^3, and it is usually assumed in Canada that 1 kN/m^3 is the average for new snow. Average specific weights of the seasonal snow pack have been derived for different regions across the country[6] and an appropriate value has been assigned to each weather station. Typically, the values average 2.01 kN/m^3 east of the continental divide (except for 2.94 kN/m^3 north of the treeline), and range from 2.55 to 4.21 kN/m^3 west of the divide. The product of the 1-in-50 snow depth and the average specific weight of the seasonal snow pack at a station is converted to the snow load (SL) in units of kilopascals (kPa).

~~Except for the mountainous areas of western Canada, the values of the ground snow load at MSC stations were normalized assuming a linear variation of the load above sea level in order to account for the effects of topography. They were then smoothed using an uncertainty-weighted moving-area average in order to minimize the uncertainty due to snow depth sampling errors and site-specific variations. Interpolation from analyzed maps of the smooth normalized values yielded a value for each location in Table C-2, which could then be converted to the listed code values (S_s) by means of an equation in the form:~~

$$S_s = \text{smooth normalized SL} + bZ$$

~~where b is the assumed rate of change of SL with elevation at the location and Z is the location's elevation above mean sea level (MSL). Although they are listed in Table C-2 to the nearest tenth of a kilopascal, values of S_s typically have an uncertainty of about 20%. Areas of sparse data in northern Canada were an exception to this procedure. In these regions, an analysis was made of the basic SL values. The effects of topography, variations due to local climates, and smoothing were all subjectively assessed. The values derived in this fashion were used to modify those derived objectively.~~

~~For the mountainous areas of British Columbia, Yukon, and the foothills area of Alberta, a more complex procedure was required to account for the variation of loads with terrain and elevation. Since the MSC observational network often does not have sufficient coverage to detail this variability in mountainous areas, additional snow course observations were obtained from the provincial and territorial governments of British Columbia, Yukon, and Alberta. The additional data allowed detailed local analysis of ground snow loads on a valley-by-valley basis. Similar to other studies, the data indicated that snow loads above a critical or reference level increased according to either a linear or quadratic relation with elevation. The determination of whether the increase with elevation was linear or quadratic, the rate of the increase and the critical~~

or reference elevation were found to be specific to the valley and mountain ranges considered. At valley levels below the critical elevation, the loads generally varied less significantly with elevation. Calculated valley- and range-specific regression relations were then used to describe the increase of load with elevation and to normalize the MSC snow observations to a critical or reference level. These normalized values were smoothed using a weighted moving-average.

Tabulated values cannot be expected to indicate all the local differences in S_s. For this reason, especially in complex terrain areas, values should not be interpolated from Table C-2 for unlisted locations. The values of S_s in the Table apply for the elevation and the latitude and longitude of the location, as defined by the Gazetteer of Canada. Values at other locations can be obtained from Environment and Climate Change Canada.

The heaviest loads frequently occur when the snow is wetted by rain, thus the rain load, S_r, was estimated to the nearest 0.1 kPa and is provided in Table C-2. When values of S_r are added to S_s, this provides a 1/50 annual probability 1-in-50-year estimate of the combined ground snow and rain load. The values of S_r are based on an analysis of about 2100 weather station values of the 1/50 annual probability 1-in-50-year one-day maximum rain amount. This return period annual probability value is appropriate because the rain amounts correspond approximately to the joint frequency of occurrence of the one-day rain on maximum snow packs. For the purpose of estimating rain on snow, the individual observed one-day rain amounts were constrained to be less than or equal to the snow pack water equivalent, which was estimated by a snow pack accumulation model reported by Bruce and Clark.(7)

The results from surveys of snow loads on roofs indicate that average roof loads are generally less than loads on the ground. The conditions under which the design snow load on the roof may be taken as a percentage of the ground snow load are given in Subsection 4.1.6. The Code also permits further decreases in design snow loads for steeply sloping roofs, but requires substantial increases for roofs where snow accumulation may be more rapid due to such factors as drifting. Recommended adjustments are given in the "Structural Commentaries (User's Guide – NBC 2020: Part 4 of Division B)".

The ground snow load values, S_s, were updated for the 2015 edition of the Code using a similar approach to the one used for the ground snow load update in the 1990 edition. The Gumbel extreme value distribution was fitted to the annual maxima of daily snow depth observations made at over 1400 weather stations, which were compiled from 1990 onward—to as recently as 2012 for some stations—to calculate the 50-year return period1/50 annual probability snow depth. The 50-year1/50 annual probability ground snow load was then calculated for each weather station by combining the 50-year 1/50 annual probability snow pack depth with the assigned snow pack density, as described above. The S_s values for each location in Table C-2 were compared with the updated weather station values and revised accordingly. As a result, S_s values remain unchanged for about 84% of the locations, have increased for 11% of the locations, and have decreased for 4% of the locations. The greatest proportion of increases was for locations in the Yukon, Northwest Territories, and Nunavut.

In the 2025 edition of the NBC, the 1/50 annual probability S_s and S_r values are unchanged from the previous edition, except that projected future changes, corresponding to an average global warming of 2.5°C, have been applied using the Minimax approach (i.e., increases have been applied where the projected future values are higher, and the current values have been retained where the projected future values are lower). According to RWDI,[18] the projected future values are lower for locations in southern Canada (the 10 provinces) and higher for locations in northern Canada (Yukon, Northwest Territories and Nunavut) where a future change factor of 1.05 has been applied.

> Footnote: Annual probability is now used to describe low-probability events instead of return period, which was frequently used previously. In an unchanging climate, the return period is defined as the average interval, in years, within which a given value occurs or is exceeded. It is the reciprocal of the annual exceedance probability. For instance, a 50-year return period value has a probability of 1/50, or 0.02, of being exceeded in any year. In a changing climate, the interpretation of return period as an average interval is not strictly accurate; rather, the return period is defined only as the reciprocal of the annual exceedance probability, which can change over time. The term “return period” is no longer used to refer to the frequency of certain climate events. The term “annual probability” is now used for this purpose (e.g., “1/50 annual probability” or sometimes “1/50 event” or “1-in-50 event”).

Significantly, in the 2025 edition of the NBC, the 1/1000 annual probability S_s and S_r values are provided to facilitate the change to the “uniform risk” approach, in which the climatic design loads are specified directly at the ultimate load levels. Further details regarding the uniform risk approach can be found in the Commentary entitled Limit States Design in the “Structural Commentaries (User's Guide – NBC 2025: Part 4 of Division B).”

In previous editions of the Code in which the “uniform hazard” approach was used, the calculation of roof snow loads for ultimate limit state design for strength involved applying a load factor of 1.5 to the 1/50 S_s and S_r values for all locations. The application of the 1.5 load factor to the 1/50 annual probability S_s and S_r values results in equivalent 1/1000 annual probability S_s and S_r values. However, the actual 1/1000 values depend on the distribution of the annual maximum values used in the extreme value analysis and vary regionally across Canada, resulting in varying degrees of risk and hence structural reliability.

The uniform risk approach adopted in the 2025 edition uses the actual 1/1000 S_s values calculated using regional data and a load factor reduced to 1.0. As reported by RWDI,[18] the 1/1000 S_s values were calculated using statistical properties of the annual maximum snow depth series used for the most recent snow load update in the 2015 edition. These actual 1/1000 S_s values reflect regional extreme snow characteristics. The 1.5 load factor applied to the 1/50 snow loads is equivalent to a 1.0 factor applied to the actual 1/1000 snow loads, averaged across Canada.

As for the 1/50 annual probability S_s and S_r values, projected future changes, corresponding to an average global warming of of 2.5°C, have been applied to the 1/1000 annual probability S_s and S_r values using the same Minimax approach and future change factors (i.e., 1.05 for Yukon, Northwest Territories and Nunavut).

In the 2025 edition of the NBC, values of the winter average temperature, T_{ws}, and winter average wind speed, V_{ws}, are provided in Table C-2 for use in roof snow drift calculations. The T_{ws} and V_{ws} values are the average dry-bulb temperature and average wind speed (at a height of 10 m in open terrain) when the hourly dry-bulb temperature is lower than 0°C, respectively. These values are based on an ECCC analysis of hourly observations from 592 stations for the period 2014 to 2022. No projected future climate change factors have been applied.

Annual Total Precipitation

Total precipitation is the sum in millimetres of the measured depth of rainwater and the estimated or measured water equivalent of the snow (typically estimated as 0.1 of the measured depth of snow, since the average density of fresh snow is about 0.1 that of water).

The average annual total precipitation amounts in Table C-2 have been interpolated from an analysis of precipitation observations from 1379 stations for the 30-year period from 1961 to 1990.

Projected future changes to the annual average total precipitation values, corresponding to an average global warming of 2.5°C, have been applied. The values for all locations have increased, with an average increase of 12%.

Annual Rainfall

The total amount of rain that normally falls in one year is frequently used as a general indication of the wetness of a climate, and is therefore included in this Appendix. See also Moisture Index below.

Projected future changes to the annual average rainfall values, corresponding to an average global warming of 2.5°C, have been applied. The values for all locations have increased, with an average increase of 22%.

Rainfall Intensity

Roof drainage systems are designed to carry off rainwater from the most intense rainfall that is likely to occur. A certain amount of time is required for the rainwater to flow across and down the roof before it enters the gutter or drainage system. This results in the smoothing out of the most rapid changes in rainfall intensity. The drainage system, therefore, need only cope with the flow of rainwater produced by the average rainfall intensity over a period of a few minutes, which can be called the concentration time.

In Canada, it has been customary to use the 15-minute rainfall that will probably be exceeded on an average of once in 10 years. The concentration time for small roofs is much less than 15 minutes and hence the design intensity will be exceeded more frequently than with a 1/10 annual probability. ~~once in 10 years.~~ The safety factors in the NPC will probably reduce the frequency to a reasonable value and, in addition, the occasional failure of a roof drainage system will not be particularly serious in most cases.

The rainfall intensity values were updated for the 2010 edition of the Code using observations of annual maximum 15-minute rainfall amounts from 485 stations with 10 or more years of record, including data up to 2007 for some stations. ~~Ten-year return period~~ ~~v~~Values with a 1/10 annual probability—the 15-minute rainfall having a probability of 1-in-10 of being exceeded in any year—were calculated by fitting the annual maximum values to the Gumbel extreme value distribution(4) using the method of moments. The updated values are compiled from the most recent short-duration rainfall intensity-duration-frequency (IDF) graphs and tables available from Environment and Climate Change Canada.

It is very difficult to estimate the pattern of rainfall intensity in mountainous areas, where precipitation is extremely variable and rainfall intensity can be much greater than in other types of areas. Many of the observations for these areas were taken at locations in valley bottoms or in extensive, fairly level areas.

Projected future changes to the rainfall intensity values, corresponding to an average global warming of 2.5°C, have been applied. The values for all locations have increased, with an average increase of about 29%.

One-Day Rainfall

If for any reason a roof drainage system becomes ineffective, the accumulation of rainwater may be great enough in some cases to cause a significant increase in the load on the roof. In previous editions of this information, it had been common practice to use the maximum one-day rainfall ever observed for estimating the additional load. Since the length of record for weather stations in Canada is quite variable, the maximum one-day rainfall amounts in previous editions often reflected the variable length of record at nearby stations as much as the climatology. As a result, the maximum values often differed greatly within relatively small areas where little difference should be expected. The current values have been standardized to represent the one-day rainfall amounts that have 1 chance in 50 of being exceeded in any one year ~~or the 1-in-50-year return value one-day rainfalls~~.

The one-day rainfall values were updated using daily rainfall observations from more than 3500 stations with 10 years or more of record, including data up to 2008 for some stations. The 50-year return period values were calculated by fitting the annual maximum one-day rainfall observations to the Gumbel extreme value distribution using the method of moments.(4)

Rainfall frequency observations can vary considerably over time and space. This is especially true for mountainous areas, where elevation effects can be significant. In other areas, small-scale intense storms or local influences can produce significant spatial variability in the data. As a result, the analysis incorporates some spatial smoothing.

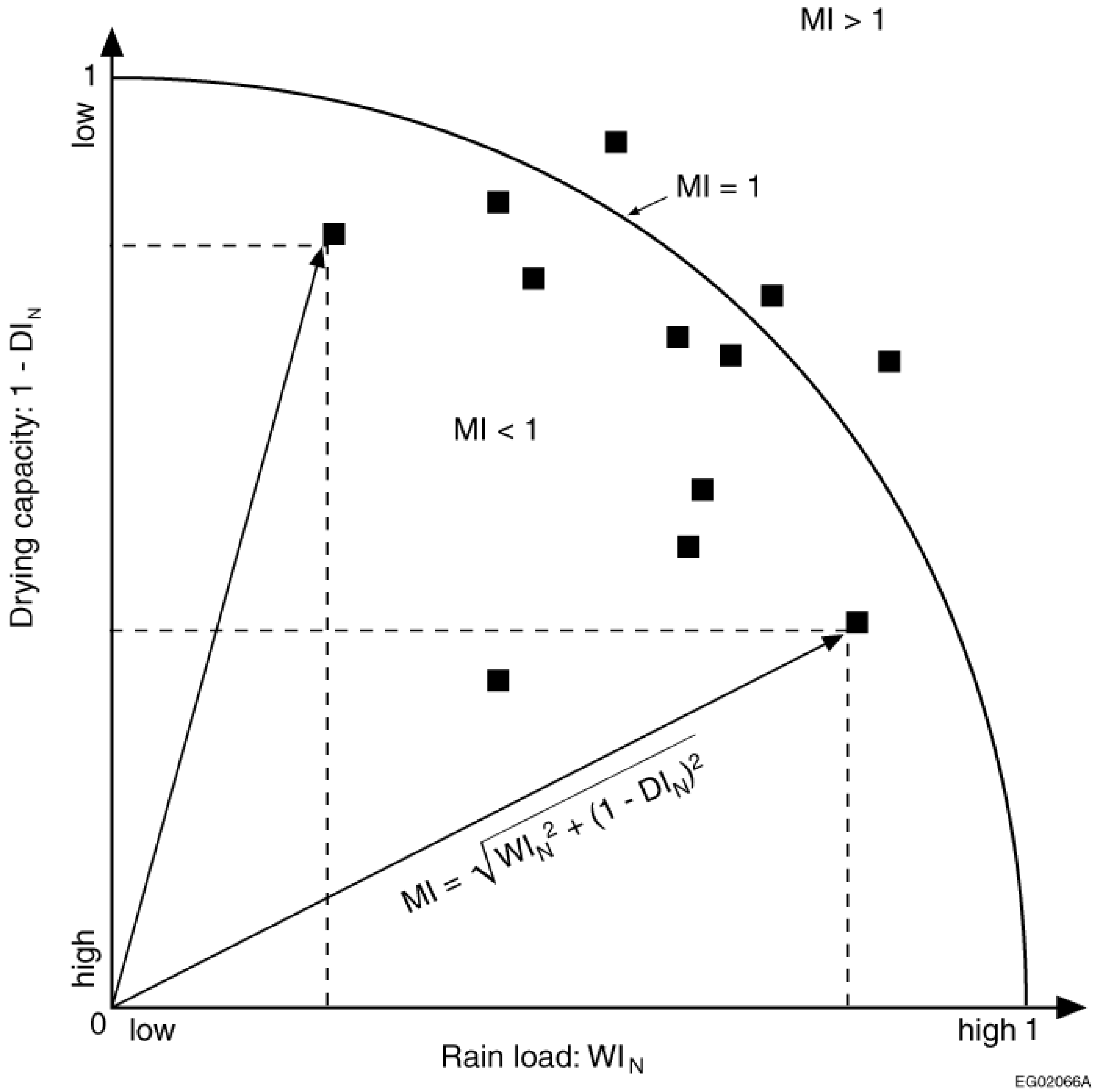
Projected future changes to the one-day rainfall values, corresponding to an average global warming of 2.5°C, have been applied. The values for all locations have increased, with an average increase of about 29%.

Determination of Moisture Index (MI)

The relationship between WI and DI to correctly define moisture loading on a wall is not known. The MI values provided in the Table are based on the root mean square values of WI and 1~~-~~–DI, with those values equally weighted. This is illustrated in Figure C-1. The resultant MI values are sufficiently consistent with industry's understanding of climate severity with respect to moisture loading as to allow limits to be identified for the purpose of specifying where additional protection from precipitation is required.

Projected future values (based on fractional changes) of moisture index, corresponding to an average global warming of 2.5°C, are available from Gaur et al.(15) For locations where the moisture index is projected to increase (two thirds of the locations), the future value has been applied. For locations where the moisture index is projected to decrease, the current value has been retained.

Figure [C-1] C-1
Derivation of moisture index (MI) based on normalized values for wetting index (WI) and drying index (DI)



Note to Figure C-1:

(1) MI equals the hypotenuse of the triangle defined by WI_N and $1 - DI_N$

Driving Rain Wind Pressure (DRWP)

The presence of rainwater on the face of a building, with or without wind, must be addressed in the design and construction of the building envelope so as to minimize the entry of water into the assembly. Wind pressure on the windward faces of a building will promote the flow of water through any open joints or cracks in the facade.

Driving rain wind pressure (DRWP) is the wind load that is coincident with rain, measured or calculated at a height of 10 m. The values provided in the Table represent the loads for which there is 1 chance in 5 of being reached or exceeded in any one year, or a probability of 20% within any one year. Approximate adjustments for height can be made using the values for C_e given in Sentence 4.1.7.3.(5) as a multiplier.

Because of inaccuracies in developing the DRWP values related to the averaging of extreme wind pressures, the actual heights of recording anemometers, and the use of estimated rather than measured rainfall values, the values are considered to be higher than actual loads.(8)(9) Thus the actual probability of reaching or exceeding the DRWP in a particular location is less than 20% per year and these values can be considered to be conservative.

DRWP can be used to determine the height to which wind will drive rainwater up enclosed vertical conduits. This provides a conservative estimate of the height needed for fins in window extrusions and end dams on flashings to control water ingress. This height can be calculated as:

$$\text{height of water, mm} = \text{DRWP}/10\text{, Pa}$$

Note that the pressure difference across the building envelope may be augmented by internal pressures induced in the building interior by the wind. These additional pressures can be estimated using the information provided in the Commentary entitled Wind Load and Effects of the "Structural Commentaries (User's Guide – NBC 2020: Part 4 of Division B)".

Projected future changes to the DRWP values, corresponding to an average global warming of 2.5°C, have been applied. The values for all locations have increased, with an average increase of 9%.

Wind Effects

All structures need to be designed to ensure that the main structural system and all secondary components, such as cladding and appurtenances, will withstand the pressures and suctions caused by the strongest wind likely to blow at that location in many years. Some flexible structures, such as tall buildings, slender towers and bridges, also need to be designed to minimize excessive wind-induced oscillations or vibrations.

At any time, the wind acting upon a structure can be treated as a mean or time-averaged component and as a gust or unsteady component. For a small structure, which is completely enveloped by wind gusts, it is only the peak gust velocity that needs to be considered. For a large structure, the wind gusts are not well correlated over its different parts and the effects of individual gusts become less significant. The "Structural Commentaries (User's Guide – NBC 2020: Part 4 of Division B)" evaluates the mean pressure acting on a structure, provides appropriate adjustments for building height and exposure and for the influence of the surrounding terrain and topography (including wind speed-up for hills), and then incorporates the effects of wind gusts by means of the gust factor, which varies according to the type of structure and the size of the area over which the pressure acts.

The wind speeds and corresponding velocity pressures used in the Code are regionally representative or reference values. The reference wind speeds are nominal one-hour averages of wind speeds representative of the 10 m height in flat open terrain corresponding to Exposure A or open terrain in the terminology of the "Structural Commentaries (User's Guide – NBC 2020: Part 4 of Division B)". The reference wind speeds and wind velocity pressures are based on long-term wind records observed at a large number of weather stations across Canada.

Reference wind velocity pressures in the 1961 to 2005 editions of the Code since 1961 were based mostly on records of hourly averaged wind speeds (i.e. the number of miles of wind passing an anemometer in an hour) from over 100 stations with 10 to 22 years of observations ending in the 1950s. The wind pressure values derived from these measurements represented true hourly wind pressures.

The reference wind velocity pressures were reviewed and updated for the 2010 edition of the Code. The primary data set used for the analysis comprised wind records compiled from about 135 stations with hourly averaged wind speeds and from 465 stations with aviation (one- or two-minute average) speeds or surface weather (ten-minute average) speeds observed once per hour at the top of the hour; the periods of record used ranged from 10 to 54 years. In addition, peak wind gust records from 400 stations with periods of record ranging from 10 to 43 years were used. Peak wind gusts (gust durations of approximately 3 to 7 seconds) were used to supplement the primary once-per-hour observations in the analysis.

Several steps were involved in updating the reference wind values. Where needed, speeds were adjusted to represent the standard anemometer height above ground of 10 m. The data from years when the anemometer at a station was installed on the top of a lighthouse or building were eliminated from the analysis since it is impractical to adjust for the effects of wind flow over the structure. (Most anemometers were moved to 10 m towers by the 1960s.) Wind speeds of the various observation types—hourly averaged, aviation, surface weather and peak wind gust—were adjusted to account for different measure durations to represent a one-hour averaging period and to account for differences in the surface roughness of flat open terrain at observing stations.

The annual maximum wind speed data was fitted to the Gumbel distribution using the method of moments[(4)] to calculate hourly wind speeds having the annual probability of occurrence of 1-in-10 and 1-in-50 ~~(10-year and 50-year return periods)~~. The values were plotted on maps, then analyzed and abstracted for the locations in Table C-2.

The wind velocity pressures, q, were calculated in Pascals using the following equation:

$$q = \frac{1}{2} \rho V^2$$

where ρ is an average air density for the windy months of the year and V is wind speed in metres per second. While air density depends on both air temperature and atmospheric pressure, the density of dry air at 0°C and standard atmospheric pressure of 1.2929 kg/m^3 was used as an average value for the wind pressure calculations. As explained by Boyd[(10)], this value is within 10% of the monthly average air densities for most of Canada in the windy part of the year.

As a result of the updating procedure for the 2010 edition of the Code, the 1-in-50 reference wind velocity pressures remained unchanged for most of the locations listed in Table C-2; both increases and decreases were noted for the remaining locations. Many of the decreases resulted from the fact that anemometers at most of the stations used in the previous analysis were installed on lighthouses, airport hangers and other structures. Wind speeds on the tops of buildings are often much higher compared to those registered by a standard 10 m tower. Eliminating anemometer data recorded on the tops of buildings from the analysis resulted in lower values at several locations.

For the 2020 edition of the Code, the reference wind velocity pressures were updated to reflect the new data collected in the approximately 10 years since the previous update for the 2010 edition. Only data collected at stations with a period of record of at least 20 years were used in the analysis. As a result, the data set comprised wind records from 368 hourly and 222 daily peak wind gust stations with periods of record ranging from 20 to 65 years. The annual maximum wind speed data were fitted to the Gumbel distribution.

The 1-in-50 hourly wind speeds, after adjusting for roughness to represent open exposure, were mapped and compared to the NBC 2015 values for the locations in Table C-2. This updating procedure resulted in small changes to the 1-in-50 reference wind velocity pressures for 60 locations.

The 1-in-10 reference wind velocity pressures were updated using the same procedure, except that regional values of the coefficient of variation were used in the calculations instead of the national value used previously. This procedure resulted in small changes to the 1-in-10 reference wind velocity pressures for 322 locations, including many for which there was no change to the 1-in-50 reference wind velocity pressure.

Wind speeds that have a 1-in-"n" chance of being exceeded in any year, where n < 50, can be calculated from the wind speeds corresponding to the 1-in-10 and 1-in-50 ~~return period~~ values in Table C-2 using the following equation:

$$V_{1/n} = \frac{1}{1.4565}\left\{V_{1/50} + 0.4565V_{1/10} + \frac{V_{1/50} - V_{1/10}}{1.1339} \times 1n\frac{-0.0339}{1n\left(1 - 1/n\right)}\right\}$$

Table C-1 has been arranged to give pressures to the nearest one-hundredth of a kPa and their corresponding wind speeds. The value of "q" in kPa is assumed to be equal to 0.00064645 V^2, where V is given in m/s.

Significant changes to wind loads are introduced in the 2025 edition of the NBC based on recent work reported by RWDI.(17)(18) As described above for snow loads, a "uniform risk" approach has been developed for wind loads. Since the 1.4 load factor applied to the 1/50 wind pressures is equivalent to a 1.0 factor applied to 1/500 wind pressures, averaged across Canada, the 1/500 wind pressures are now provided in Table C-2. These values were calculated from the NBC 2020 1/10 and 1/50 wind pressure values for each location using the equations above for q (as a function of wind speed and air density) and $V_{1/n}$, the 1/n annual probability wind speed. The 1/500 wind pressures calculated in this way account for the regional statistical properties of the extreme wind events, a necessary characteristic for the uniform risk approach.

Explicitly expressing extreme wind events at the low annual exceedance probability of 1/500 (i.e., 0.002 or 0.2%) requires accounting for a physical characteristic of extreme winds, as explained below.

In the 2020 and previous editions of the Code, the extreme wind return levels were calculated using the annual maximum observed wind speeds from all wind events, regardless of their cause. There are two common causes of extreme winds in Canada. The most common cause is synoptic wind events corresponding to large mid-latitude low-pressure systems, generally with embedded weather fronts, that result in moderate to high wind speeds, often over extensive areas. Much of Canada is also prone to convective wind events, most commonly associated with thunderstorm and related events, the extremes of which have different statistical characteristics compared to synoptic wind events.

The RWDI project[17] involved separating the annual extremes of wind events by virtue of long-term daily observations of "day with thunderstorm" and of peak gust speed. The annual extremes of the convective and synoptic wind events were analyzed separately, and their respective extreme value frequency distributions were combined using the following equation:

$$\frac{1}{R_T} = 1 - \left(1 - \frac{1}{R_S}\right)\left(1 - \frac{1}{R_C}\right)$$

where R_S is the annual exceedance probability of synoptic wind events, R_C is annual exceedance probability of convective wind events, and R_T is the annual exceedance probability of the combined convective and synoptic probability distributions. For thunderstorm-prone regions, the 1/500 wind speed calculated for the combined statistical results is generally higher than the 1/500 event calculated using the single annual maximum series of the commingled synoptic and convective wind events. Note that this effect is not significant for 1/50 events but needs to be accounted for with lower-probability events.

Based on a recent ECCC project using daily thunderstorm and peak gust speed observations, as described above, from 190 stations with at least 10 years of observations for the period from 1955 to 2022, a thunderstorm surcharge factor, T_S, was developed to account for this characteristic of extreme wind events. From the correlation between the annual average number of thunderstorm days and the ratio of the 1/500 gust speed for combined data sets compared to commingled data sets, the following T_S values (applied to wind pressure) were obtained: 1.1 for locations with more than 20 thunderstorm days per year, 1.05 for locations with 8 to 20 thunderstorm days per year, and 1.0 (i.e., no change) for locations with fewer than 8 thunderstorm days per year. The T_S = 1.1 factor applies from southeastern British Columbia, across the southern Prairies, to southern Ontario and Quebec. The T_S = 1.05 factor applies from the western British Columbia interior, across the northern portions of the Prairies, Ontario and Quebec, to Atlantic Canada, except Newfoundland and Labrador. The T_S = 1.0 factor applies to the outer coasts of Canada and the North. These T_S values have only been applied to the 1/500 wind pressure values.

Projected future changes, corresponding to an average global warming of 2.5°C, as recommended by RWDI,[18] have been applied to the 1/10, 1/50, and 1/500 wind pressure values in Table C-2. The projected future changes are all increases, by a factor of either 1.05 or 1.1.

Table [C-2] C-2
Climatic Design Data for Selected Locations in Canada

Province and Location	Elev., m	Design Temperature: January 2.5% °C	January 1% °C	July 2.5% Historical (1) Dry °C	July 2.5% Historical (1) Wet °C	July 2.5% Future Dry °C	July 2.5% Future Wet °C	Degree-Days Below 18°C	Degree-Days Below 15°C	15 Min. Rain, mm	One Day Rain, 1/50, mm	Ann. Rain, mm	Moist. Index	Ann. Tot. Ppn., mm	Driving Rain Wind Pressures, Pa, 1/5	Snow Load, kPa, 1/50 S_s	Snow Load, kPa, 1/50 S_r	Snow Load, kPa, 1/1000 S_s	Snow Load, kPa, 1/1000 S_r	Hourly Wind Pressures, kPa 1/10	Hourly Wind Pressures, kPa 1/50	Hourly Wind Pressures, kPa 1/500	Winter Average Temperature, °C	Winter Average Wind Speed, m/s
British Columbia																								
100 Mile House	1040	-30	-32	29	17	34	21	5030	4040	~~10~~ 13	~~48~~ 61	~~300~~ 450	0.4	~~425~~ 530	~~60~~ 80	2.6	0.3	3.7	0.4	~~0.27~~ 0.30	~~0.35~~ 0.39	0.55	-7	2.8
Abbotsford	70	-8	-10	29	20	35	25	2860	2000	~~12~~ 15	~~112~~ 140	~~1525~~ 1690	1.6	~~1600~~ 1630	~~160~~ 170	2	0.3	3.2	0.5	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	3.7
Agassiz	15	-9	-11	31	21	37	26	2750	1900	~~8~~ 10	~~128~~ 162	~~1650~~ 2100	~~1.7~~ 1.8	~~1700~~ 1750	~~160~~ 180	2.4	0.7	3.8	1.1	~~0.35~~ 0.39	~~0.47~~ 0.52	0.77	-4	5.1
Alberni	12	-5	-8	31	19	37	24	3100	2220	~~10~~ 12	~~144~~ 178	~~1900~~ 2130	~~2.0~~ 2.2	~~2000~~ 2140	~~220~~ 240	2.6	0.4	4.2	0.6	~~0.24~~ 0.26	~~0.32~~ 0.35	0.5	-2	1
Ashcroft	305	-24	-27	34	20	39	24	3700	2790	~~10~~ 13	~~37~~ 47	~~250~~ 380	0.3	~~300~~ 370	~~80~~ 110	1.7	0.1	2.5	0.2	~~0.29~~ 0.32	~~0.38~~ 0.42	0.61	-5	1.1
Bamfield	20	-2	-4	23	17	28	21	3080	2060	~~13~~ 16	~~170~~ 208	~~2870~~ 3060	~~3.0~~ 3.2	~~2890~~ 3010	~~280~~ 300	1	0.4	1.6	0.7	~~0.38~~ 0.42	~~0.50~~ 0.55	0.77	-2	2
Beatton River	840	-37	-39	26	18	31	22	6300	5230	~~15~~ 19	~~64~~ 81	~~330~~ 430	0.5	~~450~~ 540	~~80~~ 90	3.3	0.1	4.6	0.1	~~0.23~~ 0.25	~~0.30~~ 0.33	0.47	-12	2.5
Bella Bella	25	-5	-7	23	18	28	22	3180	2150	~~13~~ 16	~~145~~ 180	~~2715~~ 2990	~~2.8~~ 3.4	~~2800~~ 2910	~~350~~ 380	2.6	0.8	4.2	1.3	~~0.40~~ 0.44	~~0.50~~ 0.55	0.73	-2	2.5
Bella Coola	40	-14	-18	27	19	33	24	3560	2660	~~10~~ 13	~~140~~ 183	~~1500~~ 2240	~~1.9~~ 2.3	~~1700~~ 1810	~~350~~ 420	4.5	0.8	7	1.2	~~0.29~~ 0.32	~~0.39~~ 0.43	0.61	-3	2.1
Burns Lake	755	-31	-34	26	17	32	22	5450	4430	~~12~~ 15	~~54~~ 69	~~300~~ 460	0.6	~~450~~ 550	~~100~~ 120	3.4	0.2	4.8	0.3	~~0.29~~ 0.32	~~0.39~~ 0.43	0.64	-8	1
Cache Creek	455	-24	-27	34	20	39	24	3700	2790	~~10~~ 13	~~37~~ 47	~~250~~ 370	0.3	~~300~~ 380	~~80~~ 110	1.7	0.2	2.5	0.3	~~0.29~~ 0.32	~~0.39~~ 0.43	0.64	-5	1.1
Campbell River	20	-5	-7	26	18	32	23	3000	2130	~~10~~ 13	~~116~~ 145	~~1500~~ 1800	~~1.6~~ 1.7	~~1600~~ 1740	~~260~~ 280	2.8	0.4	4.5	0.7	~~0.41~~ 0.45	~~0.48~~ 0.53	0.65	-3	2
Carmi	845	-24	-26	31	19	36	23	4750	3770	~~10~~ 13	~~64~~ 81	~~325~~ 490	~~0.4~~ 0.5	~~550~~ 660	~~60~~ 80	3.6	0.2	5.2	0.3	~~0.29~~ 0.30	~~0.38~~ 0.40	0.58	-4	2.5

Castlegar	430	-18	-20	32	20	37	24	3580	2680	~~10~~ 13	~~54~~ 69	~~560~~ 820	~~0.6~~ 0.8	~~700~~ 780	~~60~~ 70	4.2	0.1	6	0.1	~~0.26~~ 0.27	~~0.34~~ 0.36	0.52	-4	2
Chetwynd	605	-35	-38	27	18	33	22	5500	4480	~~15~~ 19	~~70~~ 88	~~400~~ 520	0.6	~~625~~ 740	~~60~~ 70	2.4	0.2	3.5	0.3	~~0.30~~ 0.33	~~0.40~~ 0.44	0.65	-9	2.2
Chilliwack	10	-9	-11	30	20	36	25	2780	1920	~~8~~ 10	~~139~~ 175	~~1625~~ 1970	~~1.7~~ 1.8	~~1700~~ 1750	~~160~~ 180	2.2	0.3	3.5	0.5	~~0.35~~ 0.39	~~0.47~~ 0.52	0.74	-4	4.5
Comox	15	-7	-9	27	18	33	23	2930	2220	~~10~~ 13	~~106~~ 133	~~1175~~ 1360	~~1.3~~ 1.4	~~1200~~ 1290	~~260~~ 290	2.4	0.4	3.8	0.6	~~0.41~~ 0.45	~~0.48~~ 0.53	0.65	-2	2.1
Courtenay	10	-7	-9	28	18	34	23	2930	2220	~~10~~ 13	~~106~~ 133	~~1400~~ 1630	~~1.5~~ 1.6	~~1450~~ 1560	~~260~~ 290	2.4	0.4	3.8	0.6	~~0.41~~ 0.45	~~0.48~~ 0.53	0.65	-2	2.1
Cranbrook	910	-26	-28	32	18	37	22	4400	3450	~~12~~ 15	~~59~~ 75	~~275~~ 380	0.3	~~400~~ 440	~~100~~ 120	3	0.2	4.4	0.3	~~0.25~~ 0.26	~~0.33~~ 0.35	0.53	-7	1.6
Crescent Valley	585	-18	-20	31	20	36	24	3650	2740	~~10~~ 13	~~54~~ 69	~~675~~ 990	~~0.8~~ 1.0	~~850~~ 940	~~80~~ 100	4.2	0.1	6	0.1	~~0.25~~ 0.26	~~0.33~~ 0.35	0.51	-4	2.2
Crofton	5	-4	-6	28	19	34	24	2880	2020	~~8~~ 10	~~86~~ 106	~~925~~ 1000	~~1.1~~ 1.2	~~950~~ 990	~~160~~ 180	1.8	0.2	2.9	0.3	~~0.32~~ 0.35	~~0.40~~ 0.44	0.58	-2	1
Dawson Creek	665	-38	-40	27	18	32	22	5900	4860	~~18~~ 23	~~75~~ 95	~~325~~ 420	0.5	~~475~~ 570	~~100~~ 110	2.5	0.2	3.6	0.3	~~0.30~~ 0.33	~~0.40~~ 0.44	0.65	-11	2.2
Dease Lake	800	-37	-40	24	15	29	19	6730	5630	~~10~~ 13	~~45~~ 58	~~265~~ 390	0.6	~~425~~ 490	~~50~~ 60	2.8	0.1	3.9	0.1	~~0.23~~ 0.25	~~0.30~~ 0.33	0.45	-11	1.9
Dog Creek	450	-28	-30	29	17	34	21	4800	3820	~~10~~ 12	~~48~~ 60	~~275~~ 400	0.4	~~375~~ 480	~~100~~ 140	1.8	0.2	2.7	0.3	~~0.27~~ 0.30	~~0.35~~ 0.39	0.55	-7	2.9
Duncan	10	-6	-8	28	19	33	24	2980	2110	~~8~~ 10	~~103~~ 126	~~1000~~ 1100	~~1.1~~ 1.2	~~1050~~ 1120	~~180~~ 200	1.8	0.4	2.9	0.6	~~0.31~~ 0.34	~~0.39~~ 0.43	0.57	-2	1
Elko	1065	-28	-31	30	19	35	23	4600	3630	~~13~~ 17	~~64~~ 81	~~440~~ 590	0.5	~~650~~ 710	~~100~~ 120	3.6	0.2	5.3	0.3	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-8	2
Fernie	1010	-27	-30	30	19	35	23	4750	3770	~~13~~ 16	~~118~~ 150	~~860~~ 1140	0.9	~~1175~~ 1290	~~100~~ 120	4.5	0.2	6.5	0.3	~~0.30~~ 0.32	~~0.40~~ 0.42	0.65	-8	2.2
Fort Nelson	465	-39	-42	28	18	32	22	6710	5740	~~15~~ 19	~~70~~ 90	~~325~~ 430	0.6	~~450~~ 550	~~80~~ 90	2.4	0.1	3.3	0.1	~~0.23~~ 0.25	~~0.30~~ 0.33	0.47	-13	1.8
Fort St. John	685	-35	-37	26	18	31	22	5750	4710	~~15~~ 19	~~72~~ 91	~~320~~ 420	0.5	~~475~~ 580	~~100~~ 110	2.8	0.1	4.1	0.1	~~0.29~~ 0.32	~~0.39~~ 0.43	0.64	-11	3.9
Glacier	1145	-27	-30	27	17	33	22	5800	4760	~~10~~ 13	~~70~~ 91	~~625~~ 900	~~0.8~~ 0.9	~~1500~~ 1620	~~80~~ 100	9.4	0.2	12.3	0.3	~~0.24~~ 0.25	~~0.32~~ 0.34	0.52	-7	1.7
Golden	790	-27	-30	30	17	36	22	4750	3770	~~10~~ 13	~~55~~ 71	~~325~~ 450	0.6	~~500~~ 540	~~100~~ 130	3.7	0.2	5	0.3	~~0.26~~ 0.27	~~0.35~~ 0.37	0.58	-7	1.4
Gold River	120	-8	-11	31	18	37	23	3230	2350	~~13~~ 16	~~200~~ 248	~~2730~~ 3100	~~2.8~~ 3.1	~~2850~~ 3030	~~250~~ 270	2.8	0.6	4.7	1	~~0.24~~ 0.26	~~0.32~~ 0.35	0.5	-2	1.8
Grand Forks	565	-19	-22	34	20	39	24	3820	2900	~~10~~ 13	~~48~~ 61	~~390~~ 570	~~0.5~~ 0.6	~~475~~ 560	~~80~~ 90	2.8	0.1	4	0.1	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-4	2

Greenwood	745	-20	-23	34	20	39	24	4100	3160	~~10~~ 13	~~64~~ 81	~~430~~ 640	~~0.5~~ 0.6	~~550~~ 650	~~80~~ 100	3.6	0.1	5.2	0.1	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-4	2
Hope	40	-13	-15	31	20	37	25	2820	2130	~~8~~ 10	~~139~~ 177	~~1825~~ 2510	~~1.9~~ 2.0	~~1900~~ 1980	~~140~~ 160	2.8	0.7	4.4	1.1	~~0.47~~ 0.52	~~0.63~~ 0.69	1.03	-4	6
Jordan River	20	-1	-3	22	17	27	22	2900	1900	~~12~~ 15	~~170~~ 208	~~2300~~ 2520	~~2.4~~ 2.6	~~2370~~ 2510	~~250~~ 270	1.2	0.4	2	0.7	~~0.44~~ 0.48	~~0.55~~ 0.61	0.79	-2	2
Kamloops	355	-23	-25	34	20	38	24	3450	2670	~~13~~ 17	~~42~~ 53	~~225~~ 340	0.2	~~275~~ 340	~~80~~ 100	1.8	0.2	2.6	0.3	~~0.30~~ 0.33	~~0.40~~ 0.44	0.65	-6	2.9
Kaslo	545	-17	-20	30	19	35	23	3830	2910	~~10~~ 13	~~55~~ 70	~~660~~ 950	~~0.8~~ 0.9	~~850~~ 930	~~80~~ 100	2.8	0.1	4	0.1	~~0.23~~ 0.24	~~0.31~~ 0.33	0.51	-5	1.8
Kelowna	350	-17	-20	33	20	38	24	3400	2510	~~12~~ 15	~~43~~ 54	~~260~~ 390	0.3	~~325~~ 390	~~80~~ 120	1.7	0.1	2.5	0.2	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-5	1.6
Kimberley	1090	-25	-27	31	18	36	22	4650	3680	~~12~~ 15	~~59~~ 75	~~350~~ 480	0.4	~~500~~ 550	~~100~~ 130	3	0.2	4.3	0.3	~~0.25~~ 0.26	~~0.33~~ 0.35	0.53	-7	1.6
Kitimat Plant	15	-16	-18	25	16	31	21	3750	2830	~~13~~ 17	~~193~~ 250	~~2100~~ 2900	~~2.2~~ 2.7	~~2500~~ 2680	~~220~~ 260	5.5	0.8	8.4	1.2	~~0.36~~ 0.40	~~0.48~~ 0.53	0.75	-5	5
Kitimat Townsite	130	-16	-18	24	16	30	21	3900	2980	~~13~~ 17	~~171~~ 221	~~1900~~ 2620	~~2.0~~ 2.4	~~2300~~ 2460	~~220~~ 260	6.5	0.8	9.8	1.2	~~0.36~~ 0.40	~~0.48~~ 0.53	0.75	-5	5
Ladysmith	80	-7	-9	27	19	32	24	2920	2130	~~8~~ 10	~~97~~ 119	~~1075~~ 1180	~~1.2~~ 1.3	~~1160~~ 1220	~~180~~ 200	2.4	0.4	3.9	0.7	~~0.32~~ 0.35	~~0.40~~ 0.44	0.58	-2	1.5
Langford	80	-4	-6	27	19	33	23	2750	1770	~~9~~ 11	~~135~~ 166	~~1095~~ 1250	~~1.2~~ 1.3	~~1125~~ 1240	~~220~~ 250	1.8	0.3	3	0.5	~~0.32~~ 0.35	~~0.40~~ 0.44	0.58	-2	3.3
Lillooet	245	-21	-23	34	20	39	24	3400	2610	~~10~~ 13	~~70~~ 89	~~300~~ 470	0.3	~~350~~ 420	~~100~~ 150	2.1	0.1	3.2	0.2	~~0.33~~ 0.36	~~0.44~~ 0.48	0.72	-5	2
Lytton	325	-17	-20	35	20	40	24	3300	2410	~~10~~ 13	~~70~~ 89	~~330~~ 510	0.3	~~425~~ 490	~~80~~ 110	2.8	0.3	4.3	0.5	~~0.32~~ 0.35	~~0.43~~ 0.47	0.7	-5	1.7
Mackenzie	765	-34	-38	27	17	33	21	5550	4530	~~10~~ 13	~~50~~ 64	~~350~~ 490	0.5	~~650~~ 720	~~60~~ 70	5.1	0.2	7.1	0.3	~~0.25~~ 0.28	~~0.32~~ 0.35	0.5	-8	1.6
Masset	10	-5	-7	17	15	21	18	3700	2600	~~13~~ 16	~~80~~ 98	~~1350~~ 1510	~~1.5~~ 1.6	~~1400~~ 1530	~~400~~ 430	1.8	0.4	2.9	0.6	~~0.50~~ 0.55	~~0.61~~ 0.67	0.86	-2	1.7
McBride	730	-29	-32	29	18	36	23	4980	3990	~~13~~ 17	~~54~~ 69	~~475~~ 670	0.6	~~650~~ 700	~~60~~ 70	4.3	0.2	6.2	0.3	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2
McLeod Lake	695	-35	-37	27	17	33	21	5450	4430	~~10~~ 13	~~50~~ 64	~~350~~ 490	0.5	~~650~~ 720	~~60~~ 70	4.1	0.2	5.7	0.3	~~0.25~~ 0.28	~~0.32~~ 0.35	0.5	-8	2
Merritt	570	-24	-27	34	20	39	24	3900	2980	~~8~~ 10	~~54~~ 68	~~240~~ 370	0.2	~~310~~ 370	~~80~~ 110	1.8	0.3	2.7	0.4	~~0.33~~ 0.36	~~0.44~~ 0.48	0.72	-6	1.1
Mission City	45	-9	-11	30	20	36	25	2850	1990	~~13~~ 16	~~123~~ 154	~~1650~~ 1850	1.7	~~1700~~ 1730	~~160~~ 180	2.4	0.3	3.8	0.5	~~0.32~~ 0.35	~~0.43~~ 0.47	0.67	-3	4
Montrose	615	-16	-18	32	20	37	24	3600	2690	~~10~~ 13	~~54~~ 69	~~480~~ 690	~~0.6~~ 0.8	~~700~~ 780	~~60~~ 70	4.1	0.1	5.8	0.1	~~0.26~~ 0.27	~~0.35~~ 0.37	0.55	-4	1.5

Nakusp	445	-20	-22	31	20	36	24	3560	2660	~~10~~ 13	~~60~~ 77	~~650~~ 940	~~0.8~~ 1.0	~~850~~ 940	~~60~~ 80	4.4	0.1	6.2	0.1	~~0.25~~ 0.26	~~0.33~~ 0.35	0.51	-4	1.2
Nanaimo	15	-6	-8	27	19	33	24	2920	2130	~~10~~ 12	~~91~~ 113	~~1000~~ 1110	~~1.1~~ 1.2	~~1050~~ 1120	~~200~~ 220	2.1	0.4	3.5	0.7	~~0.38~~ 0.42	~~0.48~~ 0.53	0.7	-2	3
Nelson	600	-18	-20	31	20	36	24	3500	2600	~~10~~ 13	~~59~~ 75	~~460~~ 670	~~0.6~~ 0.8	~~700~~ 770	~~60~~ 70	4.2	0.1	5.9	0.1	~~0.25~~ 0.26	~~0.33~~ 0.35	0.51	-4	2.3
Ocean Falls	10	-10	-12	23	17	28	22	3400	2510	~~13~~ 16	~~260~~ 327	~~4150~~ 4830	~~4.2~~ 5.4	~~4300~~ 4460	~~350~~ 380	3.9	0.8	6.2	1.3	~~0.44~~ 0.48	~~0.59~~ 0.65	0.92	-3	2.1
Osoyoos	285	-14	-17	35	21	40	25	3100	2220	~~10~~ 13	~~48~~ 61	~~275~~ 420	0.3	~~310~~ 380	~~60~~ 80	1.1	0.1	1.6	0.2	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-4	1.8
Parksville	40	-6	-8	26	19	32	24	2990	2320	~~10~~ 12	~~91~~ 113	~~1200~~ 1350	~~1.3~~ 1.4	~~1250~~ 1340	~~200~~ 220	2	0.4	3.2	0.7	~~0.40~~ 0.44	~~0.48~~ 0.53	0.66	-2	2
Penticton	350	-15	-17	33	20	38	24	3350	2460	~~10~~ 13	~~48~~ 61	~~275~~ 420	0.3	~~300~~ 370	~~60~~ 90	1.3	0.1	1.9	0.2	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-4	3.4
Port Alberni	15	-5	-8	31	19	37	24	3100	2220	~~10~~ 12	~~161~~ 199	~~1900~~ 2120	~~2.0~~ 2.1	~~2000~~ 2140	~~240~~ 260	2.6	0.4	4.2	0.6	~~0.24~~ 0.26	~~0.32~~ 0.35	0.5	-2	1
Port Alice	25	-3	-6	26	17	31	21	3010	2000	~~13~~ 16	~~200~~ 244	~~3300~~ 3540	~~3.4~~ 3.6	~~3340~~ 3500	~~220~~ 230	1.1	0.4	1.8	0.7	~~0.24~~ 0.26	~~0.32~~ 0.35	0.5	-2	1.5
Port Hardy	5	-5	-7	20	16	25	20	3440	2370	~~13~~ 16	~~150~~ 184	~~1775~~ 1950	~~1.9~~ 2.0	~~1850~~ 1930	~~220~~ 240	0.9	0.4	1.5	0.7	~~0.36~~ 0.40	~~0.48~~ 0.53	0.75	-2	2.8
Port McNeill	5	-5	-7	22	17	27	21	3410	2350	~~13~~ 16	~~128~~ 157	~~1750~~ 1930	~~1.9~~ 2.0	~~1850~~ 1950	~~260~~ 280	1.1	0.4	1.8	0.7	~~0.36~~ 0.40	~~0.48~~ 0.53	0.75	-2	2.8
Port Renfrew	20	-3	-5	24	17	29	21	2900	1900	~~13~~ 16	~~200~~ 244	~~3600~~ 3860	~~3.6~~ 3.9	~~3675~~ 3860	~~270~~ 290	1.1	0.4	1.8	0.7	~~0.42~~ 0.46	~~0.52~~ 0.57	0.75	-2	2.5
Powell River	10	-7	-9	26	18	32	23	3100	2220	~~10~~ 13	~~80~~ 101	~~1150~~ 1360	~~1.3~~ 1.5	~~1200~~ 1270	~~220~~ 250	1.7	0.4	2.7	0.6	~~0.39~~ 0.43	~~0.48~~ 0.53	0.68	-2	1.2
Prince George	580	-32	-36	28	18	34	22	4720	3750	~~15~~ 19	~~54~~ 68	~~425~~ 600	~~0.6~~ 0.7	~~600~~ 710	~~80~~ 100	3.4	0.2	4.8	0.3	~~0.28~~ 0.31	~~0.37~~ 0.41	0.63	-8	3
Prince Rupert	20	-13	-15	19	15	24	19	3900	2770	~~13~~ 16	~~160~~ 201	~~2750~~ 3160	~~2.8~~ 3.1	~~2900~~ 3070	~~240~~ 260	1.9	0.4	2.9	0.6	~~0.43~~ 0.47	~~0.54~~ 0.59	0.78	-3	2.5
Princeton	655	-24	-29	33	19	39	24	4250	3300	~~10~~ 13	~~43~~ 54	~~235~~ 370	0.4	~~350~~ 400	~~80~~ 110	2.9	0.6	4.3	0.9	~~0.27~~ 0.30	~~0.36~~ 0.40	0.59	-6	1
Qualicum Beach	10	-7	-9	27	19	33	24	2990	2320	~~10~~ 12	~~96~~ 119	~~1200~~ 1350	~~1.3~~ 1.4	~~1250~~ 1340	~~200~~ 220	2	0.4	3.3	0.7	~~0.41~~ 0.45	~~0.48~~ 0.53	0.65	-2	2
Queen Charlotte City	35	-6	-8	21	16	25	20	3520	2440	~~13~~ 16	~~110~~ 135	~~1300~~ 1430	~~1.5~~ 1.6	~~1350~~ 1460	~~360~~ 390	1.8	0.4	2.9	0.6	~~0.50~~ 0.55	~~0.61~~ 0.67	0.86	-2	2
Quesnel	475	-31	-33	30	17	36	21	4650	3680	~~10~~ 13	~~50~~ 63	~~380~~ 550	~~0.5~~ 0.6	~~525~~ 630	~~80~~ 100	3	0.1	4.4	0.2	~~0.24~~ 0.26	~~0.31~~ 0.34	0.51	-7	1.8
Revelstoke	440	-20	-23	31	19	36	23	4000	3070	~~13~~ 17	~~55~~ 71	~~625~~ 910	~~0.8~~ 0.9	~~950~~ 1030	~~80~~ 100	7.2	0.1	9.9	0.1	~~0.24~~ 0.25	~~0.32~~ 0.34	0.52	-5	1.7

Salmon Arm	425	-19	-24	33	21	38	25	3650	2740	~~13~~ 17	~~48~~ 61	~~400~~ 580	~~0.5~~ 0.6	~~525~~ 610	~~80~~ 100	3.5	0.1	4.9	0.1	~~0.29~~ 0.30	~~0.39~~ 0.41	0.61	-5	1.1
Sandspit	5	-4	-6	18	15	22	19	3450	2380	~~13~~ 16	~~86~~ 105	~~1300~~ 1430	~~1.5~~ 1.6	~~1350~~ 1460	~~500~~ 540	1.8	0.4	2.9	0.7	~~0.59~~ 0.65	~~0.72~~ 0.79	1.01	-2	6.3
Sechelt	25	-6	-8	27	20	33	25	2680	1830	~~10~~ 13	~~75~~ 94	~~1140~~ 1310	~~1.3~~ 1.5	~~1200~~ 1250	~~160~~ 180	1.8	0.4	3	0.7	~~0.38~~ 0.42	~~0.48~~ 0.53	0.7	-2	1.4
Sidney	10	-4	-6	26	18	32	22	2850	1860	~~8~~ 10	~~96~~ 118	~~825~~ 900	~~1.0~~ 1.1	~~850~~ 900	~~160~~ 180	1.1	0.2	1.8	0.3	~~0.34~~ 0.37	~~0.42~~ 0.46	0.61	-2	3.3
Smithers	500	-29	-31	26	17	32	22	5040	4050	~~13~~ 17	~~60~~ 77	~~325~~ 510	0.6	~~500~~ 580	~~120~~ 150	3.5	0.2	4.9	0.3	~~0.30~~ 0.33	~~0.40~~ 0.44	0.62	-7	1.7
Smith River	660	-45	-47	26	17	30	21	7100	5980	~~10~~ 13	~~64~~ 82	~~300~~ 400	0.6	~~500~~ 590	40	2.8	0.1	3.9	0.1	~~0.24~~ 0.26	~~0.30~~ 0.33	0.46	-14	1.9
Sooke	20	-1	-3	21	16	27	20	2900	1900	~~9~~ 11	~~130~~ 159	~~1250~~ 1410	~~1.4~~ 1.5	~~1280~~ 1390	~~220~~ 250	1.3	0.3	2.2	0.5	~~0.38~~ 0.42	~~0.48~~ 0.53	0.7	-2	2
Squamish	5	-9	-11	29	20	35	25	2950	2080	~~10~~ 13	~~140~~ 182	~~2050~~ 2610	~~2.1~~ 2.6	~~2200~~ 2290	~~160~~ 190	2.8	0.7	4.3	1.1	~~0.38~~ 0.42	~~0.50~~ 0.55	0.77	-3	3
Stewart	10	-17	-20	25	16	31	21	4350	3400	~~13~~ 17	~~135~~ 181	~~1300~~ 2010	~~1.5~~ 1.7	~~1900~~ 2090	~~180~~ 210	7.9	0.8	11.4	1.2	~~0.27~~ 0.30	~~0.36~~ 0.40	0.56	-7	2
Tahsis	25	-4	-6	26	18	32	23	3150	2120	~~13~~ 16	~~200~~ 246	~~3845~~ 4250	~~3.9~~ 4.3	~~3900~~ 4110	~~300~~ 330	1.1	0.4	1.8	0.7	~~0.26~~ 0.29	~~0.34~~ 0.37	0.52	-2	1
Taylor	515	-35	-37	26	18	31	22	5720	4690	~~15~~ 19	~~72~~ 91	~~320~~ 420	0.5	~~450~~ 540	~~100~~ 110	2.3	0.1	3.3	0.2	~~0.30~~ 0.33	~~0.40~~ 0.44	0.65	-11	3.9
Terrace	60	-19	-21	27	17	33	22	4150	3210	~~13~~ 17	~~120~~ 156	~~950~~ 1420	~~1.1~~ 1.2	~~1150~~ 1250	~~200~~ 240	5.4	0.6	8	0.9	~~0.27~~ 0.30	~~0.36~~ 0.40	0.56	-5	5.2
Tofino	10	-2	-4	20	16	25	20	3150	2120	~~13~~ 16	~~193~~ 237	~~3275~~ 3490	~~3.4~~ 3.7	~~3300~~ 3450	~~300~~ 320	1.1	0.4	1.8	0.7	~~0.51~~ 0.56	~~0.68~~ 0.75	1.06	-2	1.5
Trail	440	-14	-17	33	20	38	24	3600	2690	~~10~~ 13	~~54~~ 69	~~580~~ 830	~~0.7~~ 0.9	~~700~~ 790	~~60~~ 70	4.1	0.1	5.7	0.1	~~0.26~~ 0.27	~~0.35~~ 0.37	0.55	-4	1.5
Ucluelet	5	-2	-4	18	16	23	20	3120	2100	~~13~~ 16	~~180~~ 221	~~3175~~ 3370	~~3.3~~ 3.6	~~3200~~ 3330	~~280~~ 300	1	0.4	1.7	0.7	~~0.51~~ 0.56	~~0.68~~ 0.75	1.06	-2	1.5
Vancouver Region																								
Burnaby (Simon Fraser Univ.)	330	-7	-9	25	17	31	22	3100	2220	~~10~~ 13	~~150~~ 189	~~1850~~ 2120	~~1.9~~ 2.4	~~1950~~ 2020	~~160~~ 180	2.9	0.7	4.7	1.1	~~0.35~~ 0.39	~~0.47~~ 0.52	0.74	-3	2.9
Cloverdale	10	-8	-10	29	20	35	25	2700	1850	~~10~~ 12	~~112~~ 139	~~1350~~ 1470	1.4	~~1400~~ 1440	~~160~~ 170	2.5	0.2	4	0.3	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	1.7
Haney	10	-9	-11	30	20	36	25	2840	1980	~~10~~ 13	~~134~~ 168	~~1800~~ 2030	~~1.9~~ 2.0	~~1950~~ 2000	~~160~~ 180	2.4	0.2	3.9	0.3	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	1.7
Ladner	3	-6	-8	27	19	33	24	2600	1750	~~10~~ 12	~~80~~ 99	~~1000~~ 1080	~~1.1~~ 1.4	~~1050~~ 1090	~~160~~ 170	1.3	0.2	2.1	0.3	~~0.37~~ 0.41	~~0.46~~ 0.51	0.66	-3	1.7

Langley	15	-8	-10	29	20	35	25	2700	1850	~~10~~ 12	~~112~~ 139	~~1450~~ 1590	1.5	~~1500~~ 1540	~~160~~ 170	2.4	0.2	3.9	0.3	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	1.7
New Westminster	10	-8	-10	29	19	35	24	2800	1940	~~10~~ 12	~~134~~ 167	~~1500~~ 1680	~~1.6~~ 2.0	~~1575~~ 1630	~~160~~ 180	2.3	0.2	3.7	0.3	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	1.7
North Vancouver	135	-7	-9	26	19	32	24	2910	2050	~~12~~ 15	~~150~~ 188	~~2000~~ 2250	~~2.1~~ 2.6	~~2100~~ 2170	~~160~~ 180	3	0.3	4.7	0.5	~~0.34~~ 0.37	~~0.45~~ 0.50	0.69	-3	1
Richmond	5	-7	-9	27	19	33	24	2800	1940	~~10~~ 12	~~86~~ 107	~~1070~~ 1170	~~1.2~~ 1.5	~~1100~~ 1140	~~160~~ 180	1.5	0.2	2.4	0.3	~~0.36~~ 0.40	~~0.45~~ 0.50	0.65	-3	2.5
Surrey (88 Ave & 156 St.)	90	-8	-10	29	20	35	25	2750	1900	~~10~~ 12	~~128~~ 159	~~1500~~ 1640	1.6	~~1575~~ 1620	~~160~~ 170	2.4	0.3	3.8	0.5	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	1.7
Vancouver (City Hall)	40	-7	-9	28	20	34	25	2825	1970	~~10~~ 12	~~112~~ 140	~~1325~~ 1470	~~1.4~~ 1.7	~~1400~~ 1450	~~160~~ 180	1.8	0.2	2.9	0.3	~~0.34~~ 0.37	~~0.45~~ 0.50	0.69	-3	2.5
Vancouver (Granville St. & 41st Ave)	120	-6	-8	28	20	34	25	2925	2060	~~10~~ 12	~~107~~ 133	~~1325~~ 1460	~~1.4~~ 1.7	~~1400~~ 1450	~~160~~ 180	1.9	0.3	3	0.5	~~0.36~~ 0.40	~~0.45~~ 0.50	0.65	-3	2.5
West Vancouver	45	-7	-9	28	19	34	24	2950	2080	~~12~~ 15	~~150~~ 188	~~1600~~ 1800	~~1.7~~ 2.1	~~1700~~ 1760	~~160~~ 180	2.4	0.2	3.8	0.3	~~0.36~~ 0.40	~~0.48~~ 0.53	0.75	-3	2
Vernon	405	-20	-23	33	20	38	24	3600	2690	~~13~~ 17	~~43~~ 55	~~350~~ 510	~~0.4~~ 0.5	~~400~~ 480	~~80~~ 110	2.2	0.1	3.2	0.1	~~0.30~~ 0.32	~~0.40~~ 0.42	0.62	-5	1.5
Victoria Region																								
Victoria	10	-4	-6	24	17	30	21	2650	1730	~~8~~ 10	~~91~~ 112	~~800~~ 910	~~1.0~~ 1.1	~~825~~ 910	~~220~~ 250	1.1	0.2	1.8	0.3	~~0.46~~ 0.51	~~0.57~~ 0.63	0.81	-2	4.7
Victoria (Gonzales Hts)	65	-4	-6	24	17	30	21	2700	1690	~~9~~ 11	~~91~~ 112	~~600~~ 680	~~0.8~~ 0.9	~~625~~ 690	~~220~~ 250	1.5	0.3	2.5	0.5	~~0.46~~ 0.51	~~0.57~~ 0.63	0.81	-2	4.7
Victoria (Mt Tolmie)	125	-6	-8	24	16	30	20	2700	1730	~~9~~ 11	~~91~~ 112	~~775~~ 860	~~1.0~~ 1.1	~~800~~ 860	~~220~~ 250	2.1	0.3	3.5	0.5	~~0.46~~ 0.48	~~0.57~~ 0.60	0.78	-2	4
Whistler	665	-17	-20	30	20	36	25	4180	3240	~~10~~ 13	~~85~~ 112	~~845~~ 1330	~~1.0~~ 1.2	~~1215~~ 1300	~~160~~ 200	9.5	0.9	13.9	1.3	~~0.24~~ 0.26	~~0.32~~ 0.35	0.5	-4	1
White Rock	30	-5	-7	25	20	31	25	2620	1770	~~10~~ 12	~~80~~ 99	~~1065~~ 1160	1.2	~~1100~~ 1140	~~160~~ 170	2	0.2	3.3	0.3	~~0.33~~ 0.36	~~0.44~~ 0.48	0.68	-3	1.7
Williams Lake	615	-30	-33	29	17	34	21	4400	3450	~~10~~ 13	~~48~~ 61	~~350~~ 520	~~0.5~~ 0.6	~~425~~ 540	~~80~~ 100	2.4	0.2	3.6	0.3	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-7	2.9
Youbou	200	-5	-8	31	19	36	24	3050	2180	~~10~~ 12	~~161~~ 198	~~2000~~ 2190	~~2.1~~ 2.2	~~2100~~ 2220	~~200~~ 220	3.5	0.7	5.6	1.1	~~0.26~~ 0.29	~~0.32~~ 0.35	0.45	-2	1
Alberta																								
Athabasca	515	-35	-38	27	19	32	23	6000	5000	~~18~~ 23	~~86~~ 109	~~370~~ 440	0.6	~~480~~ 550	80	1.5	0.1	2.1	0.1	~~0.27~~ 0.28	~~0.36~~ 0.38	0.59	-10	2.4
Banff	1400	-31	-33	27	16	33	20	5500	4520	~~18~~ 23	~~65~~ 82	~~300~~ 370	0.6	~~500~~ 550	~~120~~ 140	3.3	0.1	4.8	0.1	~~0.26~~ 0.27	~~0.32~~ 0.34	0.47	-8	2.3

Barrhead	645	-33	-36	27	19	32	23	5740	4750	~~20~~ 25	~~86~~ 109	~~375~~ 450	0.6	~~475~~ 550	100	1.7	0.1	2.5	0.2	~~0.35~~ 0.37	~~0.44~~ 0.46	0.67	-11	2
Beaverlodge	730	-36	-39	28	18	33	22	5700	4710	~~20~~ 25	~~86~~ 109	~~315~~ 410	0.5	~~470~~ 560	~~100~~ 110	2.4	0.1	3.5	0.2	~~0.27~~ 0.28	~~0.36~~ 0.38	0.56	-10	2.1
Brooks	760	-32	-34	32	20	37	24	4880	3940	~~18~~ 23	~~86~~ 108	~~260~~ 320	0.3	~~340~~ 400	~~220~~ 230	1.2	0.1	1.8	0.2	~~0.35~~ 0.37	~~0.44~~ 0.46	0.67	-10	3.8
Calgary	1045	-30	-32	28	17	34	21	5000	4050	~~23~~ 29	~~103~~ 129	~~325~~ 390	0.4	~~425~~ 480	~~220~~ 240	1.1	0.1	1.6	0.2	~~0.38~~ 0.40	~~0.48~~ 0.50	0.74	-9	3.4
Campsie	660	-33	-36	27	19	32	23	5750	4760	~~20~~ 25	~~86~~ 109	~~375~~ 450	0.6	~~475~~ 550	100	1.7	0.1	2.5	0.2	~~0.33~~ 0.35	~~0.44~~ 0.46	0.72	-11	1.8
Camrose	740	-33	-35	29	19	34	23	5500	4520	~~20~~ 25	~~86~~ 109	~~355~~ 420	0.5	~~470~~ 540	160	2	0.1	2.9	0.1	~~0.31~~ 0.33	~~0.39~~ 0.41	0.6	-10	2.9
Canmore	1320	-31	-33	28	17	34	21	5400	4430	~~18~~ 23	~~86~~ 108	~~325~~ 390	0.6	~~500~~ 560	~~120~~ 140	3.2	0.1	4.6	0.1	~~0.30~~ 0.32	~~0.37~~ 0.39	0.55	-8	2.3
Cardston	1130	-29	-32	30	19	35	23	4700	3770	~~20~~ 25	~~108~~ 136	~~340~~ 410	0.4	~~550~~ 630	~~140~~ 150	1.5	0.1	2.2	0.2	~~0.58~~ 0.61	~~0.72~~ 0.76	1.04	-9	4.7
Claresholm	1030	-30	-32	30	18	35	22	4680	3750	~~15~~ 19	~~97~~ 122	~~310~~ 370	0.4	~~440~~ 510	~~200~~ 210	1.3	0.1	1.9	0.2	~~0.46~~ 0.48	~~0.58~~ 0.61	0.89	-9	3.8
Cold Lake	540	-35	-38	28	19	33	23	5860	4860	~~18~~ 23	~~81~~ 104	~~320~~ 380	0.5	~~430~~ 480	140	1.7	0.1	2.5	0.1	~~0.29~~ 0.30	~~0.38~~ 0.40	0.61	-11	2.8
Coleman	1320	-31	-34	29	18	34	22	5210	4250	~~15~~ 19	~~86~~ 108	~~400~~ 500	0.5	~~550~~ 610	~~120~~ 140	2.7	0.3	4	0.4	~~0.50~~ 0.53	~~0.63~~ 0.66	0.97	-8	2.7
Coronation	790	-32	-34	30	19	36	23	5640	4660	~~20~~ 25	~~92~~ 117	~~300~~ 360	0.5	~~400~~ 460	~~200~~ 220	1.9	0.1	2.8	0.2	~~0.30~~ 0.32	~~0.37~~ 0.39	0.55	-10	4.3
Cowley	1175	-29	-32	29	18	34	22	4810	3870	~~15~~ 19	~~92~~ 116	~~310~~ 380	0.4	~~525~~ 600	~~140~~ 150	1.6	0.1	2.3	0.2	~~0.81~~ 0.85	~~1.01~~ 1.06	1.47	-9	4
Drumheller	685	-32	-34	30	18	36	22	5050	4100	~~20~~ 25	~~86~~ 109	~~300~~ 360	0.4	~~375~~ 430	~~220~~ 230	1.2	0.1	1.7	0.1	~~0.35~~ 0.37	~~0.44~~ 0.46	0.67	-10	2
Edmonton	645	-30	-33	28	19	34	23	5120	4160	~~23~~ 29	~~97~~ 123	~~360~~ 430	0.5	~~460~~ 520	~~160~~ 170	1.7	0.1	2.5	0.2	~~0.36~~ 0.38	~~0.45~~ 0.47	0.68	-10	3
Edson	920	-34	-37	27	18	32	22	5750	4760	~~18~~ 22	~~81~~ 101	~~450~~ 550	0.6	~~570~~ 660	100	2.1	0.1	3	0.1	~~0.37~~ 0.39	~~0.46~~ 0.48	0.69	-9	2.2
Embarras Portage	220	-41	-43	28	19	32	23	7100	6040	~~12~~ 16	~~81~~ 105	~~250~~ 310	0.6	~~390~~ 450	80	2.2	0.1	3	0.1	~~0.28~~ 0.29	~~0.37~~ 0.39	0.57	-14	2.9
Fairview	670	-37	-40	27	18	32	22	5840	4850	~~15~~ 19	~~86~~ 109	~~330~~ 420	0.5	~~450~~ 530	~~100~~ 110	2.4	0.1	3.5	0.2	~~0.26~~ 0.27	~~0.35~~ 0.37	0.55	-11	2.8
Fort MacLeod	945	-30	-32	31	19	36	23	4600	3670	~~16~~ 20	~~97~~ 122	~~300~~ 360	0.4	~~425~~ 490	~~180~~ 190	1.2	0.1	1.8	0.2	~~0.54~~ 0.57	~~0.68~~ 0.71	0.99	-9	3.8
Fort McMurray	255	-38	-40	28	19	33	23	6250	5230	~~13~~ 17	~~86~~ 111	~~340~~ 410	0.5	~~460~~ 520	60	1.5	0.1	2.1	0.1	~~0.28~~ 0.29	~~0.35~~ 0.37	0.53	-12	3.2

Fort Saskatchewan	610	-32	-35	28	19	34	23	5420	4450	~~20~~ 25	~~86~~ 109	~~350~~ 410	0.5	~~425~~ 480	~~140~~ 150	1.6	0.1	2.3	0.1	~~0.34~~ 0.36	~~0.43~~ 0.45	0.66	-10	2
Fort Vermilion	270	-41	-43	28	18	32	22	6700	5660	~~13~~ 17	~~70~~ 90	~~250~~ 310	0.5	~~380~~ 440	~~60~~ 70	2.1	0.1	3	0.1	~~0.23~~ 0.24	~~0.30~~ 0.32	0.45	-14	3.1
Grande Prairie	650	-36	-39	27	18	32	22	5790	4800	~~20~~ 25	~~86~~ 109	~~315~~ 400	0.5	~~450~~ 540	120	2.2	0.1	3.2	0.2	~~0.32~~ 0.34	~~0.43~~ 0.45	0.7	-11	2.9
Habay	335	-41	-43	28	18	32	22	6750	5710	~~13~~ 17	~~70~~ 90	~~275~~ 350	0.5	~~425~~ 500	~~60~~ 70	2.4	0.1	3.4	0.1	~~0.23~~ 0.24	~~0.30~~ 0.32	0.45	-14	2
Hardisty	615	-33	-36	30	19	36	23	5640	4660	~~20~~ 26	~~81~~ 104	~~325~~ 390	0.5	~~425~~ 480	~~140~~ 150	1.7	0.1	2.5	0.2	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-10	4
High River	1040	-31	-32	28	17	33	21	4900	3960	~~18~~ 23	~~97~~ 122	~~300~~ 360	0.4	~~425~~ 480	~~200~~ 210	1.3	0.1	1.9	0.1	~~0.52~~ 0.55	~~0.65~~ 0.68	0.99	-9	2.8
Hinton	990	-34	-38	27	17	33	21	5500	4520	~~13~~ 16	~~81~~ 101	~~375~~ 460	0.6	~~500~~ 580	~~100~~ 110	2.6	0.1	3.7	0.1	~~0.37~~ 0.39	~~0.46~~ 0.48	0.69	-9	2
Jasper	1060	-31	-34	28	17	34	22	5300	4330	~~12~~ 15	~~76~~ 96	~~300~~ 390	0.5	~~400~~ 450	~~80~~ 100	3	0.1	4.3	0.1	~~0.26~~ 0.27	~~0.32~~ 0.34	0.47	-9	1.7
Keg River	420	-40	-42	28	18	32	22	6520	5490	~~13~~ 17	~~70~~ 89	~~310~~ 390	0.5	~~450~~ 530	~~80~~ 90	2.4	0.1	3.5	0.1	~~0.23~~ 0.24	~~0.30~~ 0.32	0.45	-13	3
Lac La Biche	560	-35	-38	28	19	33	23	6100	5090	~~15~~ 19	~~86~~ 109	~~375~~ 440	0.6	~~475~~ 540	80	1.6	0.1	2.3	0.1	~~0.27~~ 0.28	~~0.36~~ 0.38	0.59	-11	2.4
Lacombe	855	-33	-36	28	19	34	23	5500	4520	~~23~~ 29	~~92~~ 116	~~350~~ 420	0.5	~~450~~ 520	~~180~~ 190	1.9	0.1	2.8	0.1	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-10	2.3
Lethbridge	910	-30	-32	31	19	36	23	4500	3580	~~20~~ 25	~~97~~ 122	~~250~~ 310	0.3	~~390~~ 450	~~200~~ 210	1.2	0.1	1.8	0.2	~~0.53~~ 0.56	~~0.66~~ 0.69	0.96	-9	4
Manning	465	-39	-41	27	18	32	22	6300	5280	~~13~~ 16	~~76~~ 96	~~280~~ 350	0.5	~~390~~ 460	~~80~~ 90	2.3	0.1	3.3	0.2	~~0.23~~ 0.24	~~0.30~~ 0.32	0.45	-13	2.8
Medicine Hat	705	-31	-34	32	19	37	23	4540	3610	~~23~~ 29	~~92~~ 116	~~250~~ 300	0.3	~~325~~ 370	~~220~~ 230	1.1	0.1	1.6	0.2	~~0.38~~ 0.40	~~0.48~~ 0.50	0.71	-9	3.6
Peace River	330	-37	-40	27	18	32	22	6050	5040	~~15~~ 19	~~81~~ 103	~~300~~ 380	0.5	~~390~~ 460	~~100~~ 110	2.2	0.1	3.2	0.2	~~0.24~~ 0.25	~~0.32~~ 0.34	0.5	-11	3.5
Pincher Creek	1130	-29	-32	29	18	34	22	4740	3800	~~16~~ 20	~~103~~ 130	~~325~~ 400	0.4	~~575~~ 650	~~140~~ 150	1.5	0.1	2.2	0.2	~~0.77~~ 0.81	~~0.96~~ 1.01	1.39	-9	4.6
Ranfurly	670	-34	-37	29	19	34	23	5700	4710	~~18~~ 23	~~92~~ 118	~~325~~ 380	0.5	~~420~~ 480	100	1.9	0.1	2.7	0.1	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-10	3.6
Red Deer	855	-32	-35	28	19	34	23	5550	4570	~~20~~ 25	~~97~~ 122	~~375~~ 450	0.5	~~475~~ 550	~~200~~ 210	1.8	0.1	2.6	0.1	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-10	2.8
Rocky Mountain House	985	-32	-34	27	18	33	22	5640	4660	~~20~~ 25	~~92~~ 115	~~425~~ 510	0.6	~~550~~ 630	~~120~~ 130	1.9	0.1	2.7	0.1	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-10	1.9
Slave Lake	590	-35	-38	26	19	31	23	5850	4850	~~15~~ 19	~~81~~ 102	~~380~~ 450	0.6	~~500~~ 570	80	1.9	0.1	2.8	0.2	~~0.28~~ 0.29	~~0.37~~ 0.39	0.6	-11	3.5

Stettler	820	-32	-34	30	19	36	23	5300	4330	~~20~~ 25	~~97~~ 123	~~370~~ 440	0.5	~~450~~ 520	~~200~~ 210	1.9	0.1	2.7	0.1	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-10	4.2
Stony Plain	710	-32	-35	28	19	33	23	5300	4330	~~23~~ 29	~~97~~ 122	~~410~~ 490	0.5	~~540~~ 620	~~120~~ 130	1.7	0.1	2.5	0.2	~~0.36~~ 0.38	~~0.45~~ 0.47	0.68	-10	2.9
Suffield	755	-31	-34	32	20	37	24	4770	3830	~~20~~ 25	~~86~~ 108	~~230~~ 280	0.2	~~325~~ 380	~~220~~ 230	1.3	0.1	1.9	0.2	~~0.39~~ 0.41	~~0.49~~ 0.51	0.75	-10	4.5
Taber	815	-31	-33	31	19	36	23	4580	3650	~~20~~ 25	~~92~~ 115	~~260~~ 320	0.3	~~370~~ 430	~~200~~ 210	1.2	0.1	1.8	0.2	~~0.50~~ 0.53	~~0.63~~ 0.66	0.93	-9	3.8
Turner Valley	1215	-31	-32	28	17	33	21	5220	4260	~~20~~ 25	~~97~~ 122	~~350~~ 420	0.5	~~600~~ 670	~~180~~ 190	1.4	0.1	2	0.2	~~0.52~~ 0.55	~~0.65~~ 0.68	0.99	-9	3.2
Valleyview	700	-37	-40	27	18	32	22	5600	4620	~~18~~ 23	~~86~~ 108	~~360~~ 450	0.5	~~490~~ 570	80	2.3	0.1	3.4	0.2	~~0.34~~ 0.36	~~0.42~~ 0.44	0.64	-10	3.7
Vegreville	635	-34	-37	29	19	34	23	5780	4790	~~18~~ 23	~~86~~ 110	~~325~~ 380	0.5	~~410~~ 460	100	1.9	0.1	2.8	0.1	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-11	3.8
Vermilion	580	-35	-38	29	19	35	23	5740	4750	~~18~~ 23	~~86~~ 111	~~310~~ 370	0.5	~~410~~ 460	100	1.7	0.1	2.5	0.2	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-11	3.2
Wagner	585	-35	-38	26	19	31	23	5850	4850	~~15~~ 19	~~81~~ 102	~~380~~ 450	0.6	~~500~~ 570	80	1.9	0.1	2.8	0.2	~~0.28~~ 0.29	~~0.37~~ 0.39	0.6	-11	3.5
Wainwright	675	-33	-36	29	19	35	23	5700	4710	~~20~~ 26	~~81~~ 104	~~310~~ 370	0.5	~~425~~ 480	~~120~~ 130	2	0.1	2.9	0.2	~~0.29~~ 0.30	~~0.36~~ 0.38	0.54	-11	3.7
Wetaskiwin	760	-33	-35	29	19	34	23	5500	4520	~~23~~ 29	~~86~~ 109	~~400~~ 480	0.6	~~500~~ 570	~~160~~ 170	2	0.1	2.9	0.1	~~0.31~~ 0.33	~~0.39~~ 0.41	0.6	-10	3.4
Whitecourt	690	-33	-36	27	19	32	23	5650	4670	~~20~~ 25	~~97~~ 122	~~440~~ 530	0.6	~~550~~ 640	80	1.9	0.1	2.8	0.1	~~0.28~~ 0.29	~~0.37~~ 0.39	0.6	-9	3.1
Wimborne	975	-31	-34	29	18	35	22	5310	4340	~~23~~ 29	~~92~~ 116	~~325~~ 390	0.5	~~450~~ 520	~~200~~ 210	1.6	0.1	2.3	0.1	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-9	3.7
Saskatchewan																								
Assiniboia	740	-32	-34	31	21	36	25	5180	4300	~~25~~ 32	~~81~~ 103	~~290~~ 340	0.3	~~375~~ 420	~~240~~ 260	1.6	0.1	2.4	0.2	~~0.39~~ 0.41	~~0.49~~ 0.51	0.75	-10	4.7
Battrum	700	-32	-34	32	20	37	24	5080	4210	~~23~~ 29	~~81~~ 103	~~270~~ 320	0.4	~~350~~ 390	~~260~~ 280	1.2	0.1	1.8	0.2	~~0.43~~ 0.45	~~0.54~~ 0.57	0.82	-10	4.5
Biggar	645	-34	-36	30	20	35	24	5720	4820	~~23~~ 30	~~81~~ 105	~~270~~ 320	0.4	~~350~~ 390	~~180~~ 200	2.1	0.1	3.1	0.2	~~0.36~~ 0.38	~~0.45~~ 0.47	0.68	-11	4
Broadview	600	-34	-35	30	21	35	25	5760	4850	~~25~~ 32	~~103~~ 134	~~320~~ 380	0.5	~~420~~ 470	~~160~~ 170	1.7	0.1	2.5	0.1	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	3.7
Dafoe	530	-35	-37	29	21	34	25	5860	4950	~~20~~ 26	~~92~~ 121	~~300~~ 350	0.5	~~380~~ 430	~~140~~ 150	1.7	0.1	2.5	0.1	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-11	4
Dundurn	525	-35	-37	30	21	35	25	5600	4700	~~23~~ 30	~~86~~ 112	~~275~~ 330	0.4	~~380~~ 430	~~180~~ 190	1.5	0.1	2.2	0.2	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	4.2

Estevan	565	-32	-34	32	22	37	25	5340	4450	~~28~~ 36	~~92~~ 120	~~330~~ 390	0.4	~~420~~ 480	~~200~~ 220	1.6	0.1	2.4	0.2	~~0.41~~ 0.43	~~0.52~~ 0.55	0.81	-11	4.7
Hudson Bay	370	-36	-38	29	21	34	25	6280	5350	~~20~~ 26	~~81~~ 105	~~340~~ 400	0.6	~~450~~ 500	80	2	0.1	2.8	0.1	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-12	2.9
Humboldt	565	-36	-38	28	21	33	25	6000	5080	~~20~~ 26	~~86~~ 113	~~320~~ 380	0.5	~~375~~ 420	140	2.1	0.1	3	0.1	~~0.31~~ 0.33	~~0.39~~ 0.41	0.6	-12	4
Island Falls	305	-39	-41	27	20	32	24	7100	6130	~~18~~ 24	~~76~~ 99	~~370~~ 440	0.6	~~510~~ 570	80	2.1	0.1	2.9	0.1	~~0.26~~ 0.27	~~0.35~~ 0.37	0.58	-14	1.8
Kamsack	455	-34	-37	29	22	34	26	6040	5120	~~20~~ 26	~~97~~ 126	~~360~~ 420	0.6	~~450~~ 500	120	2.1	0.2	3	0.3	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4
Kindersley	685	-33	-35	31	20	36	24	5550	4650	~~23~~ 29	~~81~~ 103	~~260~~ 310	0.4	~~325~~ 370	~~200~~ 220	1.4	0.1	2.1	0.2	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	4.8
Lloydminster	645	-34	-37	28	20	34	24	5880	4970	~~18~~ 23	~~81~~ 105	~~310~~ 370	0.5	~~430~~ 490	120	2	0.1	2.9	0.2	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4.6
Maple Creek	765	-31	-34	31	20	36	24	4780	3920	~~25~~ 32	~~81~~ 102	~~275~~ 330	0.3	~~380~~ 430	~~220~~ 240	1.2	0.1	1.8	0.2	~~0.36~~ 0.38	~~0.45~~ 0.47	0.68	-10	3.3
Meadow Lake	480	-38	-40	28	20	33	24	6280	5350	~~18~~ 23	~~81~~ 104	~~320~~ 380	0.5	~~450~~ 510	120	1.7	0.1	2.4	0.1	~~0.30~~ 0.32	~~0.40~~ 0.42	0.65	-12	3.6
Melfort	455	-36	-38	28	21	33	25	6050	5130	~~20~~ 26	~~81~~ 106	~~310~~ 370	0.5	~~410~~ 460	120	2.1	0.1	3	0.1	~~0.28~~ 0.29	~~0.36~~ 0.38	0.57	-12	3.9
Melville	550	-34	-36	29	21	34	25	5880	4970	~~23~~ 30	~~97~~ 127	~~340~~ 400	0.5	~~410~~ 460	160	1.7	0.1	2.4	0.1	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4.5
Moose Jaw	545	-32	-34	31	21	36	25	5270	4390	~~25~~ 32	~~86~~ 111	~~270~~ 320	0.3	~~360~~ 400	~~200~~ 210	1.4	0.1	2.1	0.2	~~0.41~~ 0.43	~~0.52~~ 0.55	0.81	-10	4.7
Nipawin	365	-37	-39	28	21	33	25	6300	5370	~~20~~ 26	~~76~~ 99	~~340~~ 400	0.6	~~450~~ 510	100	2	0.1	2.9	0.1	~~0.30~~ 0.32	~~0.38~~ 0.40	0.59	-12	4
North Battleford	545	-34	-36	29	20	34	24	5900	4990	~~20~~ 26	~~81~~ 105	~~280~~ 330	0.5	~~370~~ 420	~~120~~ 130	1.7	0.1	2.5	0.2	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	4.1
Prince Albert	435	-37	-40	28	21	33	25	6100	5180	~~20~~ 26	~~81~~ 105	~~320~~ 380	0.5	~~410~~ 460	140	1.9	0.1	2.7	0.1	~~0.30~~ 0.32	~~0.38~~ 0.40	0.59	-12	3.3
Qu'Appelle	645	-34	-36	30	22	35	26	5620	4720	~~25~~ 33	~~97~~ 127	~~340~~ 400	0.5	~~430~~ 480	~~160~~ 170	1.7	0.1	2.5	0.2	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-11	4.8
Regina	575	-34	-36	31	21	36	25	5600	4700	~~28~~ 37	~~103~~ 134	~~300~~ 350	0.4	~~365~~ 410	~~200~~ 210	1.4	0.1	2.1	0.2	~~0.39~~ 0.41	~~0.49~~ 0.51	0.75	-11	5.2
Rosetown	595	-34	-36	31	20	36	24	5620	4720	~~23~~ 30	~~81~~ 104	~~260~~ 310	0.4	~~330~~ 370	~~200~~ 220	1.7	0.1	2.5	0.2	~~0.39~~ 0.41	~~0.49~~ 0.51	0.75	-11	3.9
Saskatoon	500	-35	-37	30	21	35	25	5700	4800	~~23~~ 30	~~86~~ 112	~~265~~ 310	0.4	~~350~~ 390	~~160~~ 170	1.7	0.1	2.5	0.2	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	4.4
Scott	645	-34	-36	30	20	35	24	5960	5040	~~20~~ 26	~~81~~ 105	~~270~~ 320	0.4	~~360~~ 410	~~140~~ 150	1.9	0.1	2.8	0.2	~~0.36~~ 0.38	~~0.45~~ 0.47	0.68	-11	3.5

Strasbourg	545	-34	-36	30	22	35	26	5600	4700	~~25~~ 33	~~92~~ 120	~~300~~ 360	0.4	~~390~~ 440	~~180~~ 190	1.5	0.1	2.2	0.2	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-11	4.5
Swift Current	750	-31	-34	31	20	36	24	5150	4270	~~25~~ 32	~~81~~ 103	~~260~~ 310	0.3	~~350~~ 400	~~240~~ 260	1.4	0.1	2	0.2	~~0.43~~ 0.45	~~0.54~~ 0.57	0.82	-10	6
Uranium City	265	-42	-44	26	19	30	22	7500	6510	~~12~~ 16	~~54~~ 72	~~300~~ 370	0.6	~~360~~ 410	100	2	0.1	2.7	0.1	~~0.27~~ 0.28	~~0.36~~ 0.38	0.56	-16	2.8
Weyburn	575	-33	-35	31	23	36	27	5400	4510	~~28~~ 36	~~97~~ 126	~~320~~ 380	0.4	~~400~~ 450	~~200~~ 210	1.8	0.1	2.7	0.2	~~0.38~~ 0.40	~~0.48~~ 0.50	0.74	-11	4.7
Yorkton	510	-34	-37	29	21	34	25	6000	5080	~~23~~ 30	~~97~~ 127	~~350~~ 410	0.5	~~440~~ 490	140	1.9	0.1	2.7	0.1	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4.6
Manitoba																								
Beausejour	245	-33	-35	29	23	33	26	5680	4780	~~28~~ 37	~~103~~ 135	~~430~~ 510	0.6	~~530~~ 590	~~180~~ 200	2	0.2	2.9	0.3	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-12	3.3
Boissevain	510	-32	-34	30	23	34	26	5500	4610	~~28~~ 37	~~119~~ 155	~~390~~ 460	0.5	~~510~~ 570	~~180~~ 190	2.2	0.2	3.2	0.3	~~0.41~~ 0.43	~~0.52~~ 0.55	0.81	-11	4.5
Brandon	395	-33	-35	30	22	35	25	5760	4850	~~28~~ 37	~~108~~ 141	~~375~~ 440	0.6	~~460~~ 520	~~180~~ 200	2.1	0.2	3	0.3	~~0.39~~ 0.41	~~0.49~~ 0.51	0.75	-11	4.7
Churchill	10	-38	-40	25	18	29	22	8950	7890	~~12~~ 17	~~76~~ 106	~~265~~ 330	0.8	~~410~~ 470	~~260~~ 280	3	0.2	4.3	0.3	~~0.43~~ 0.45	~~0.55~~ 0.58	0.82	-16	5.9
Dauphin	295	-33	-35	30	22	35	26	5900	4990	~~28~~ 36	~~103~~ 133	~~400~~ 480	0.6	~~490~~ 550	~~160~~ 170	1.9	0.2	2.8	0.3	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4
Flin Flon	300	-38	-40	27	20	32	24	6440	5500	~~18~~ 23	~~81~~ 106	~~340~~ 400	0.6	~~475~~ 530	80	2.2	0.2	3	0.3	~~0.28~~ 0.29	~~0.35~~ 0.37	0.53	-14	3
Gimli	220	-34	-36	29	23	33	26	5800	4890	~~28~~ 37	~~108~~ 141	~~410~~ 490	0.7	~~530~~ 600	~~180~~ 190	1.9	0.2	2.7	0.3	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-12	4.1
Island Lake	240	-36	-38	27	20	31	23	6900	5940	~~18~~ 24	~~86~~ 114	~~380~~ 460	0.7	~~550~~ 620	80	2.6	0.2	3.6	0.3	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-14	3.3
Lac du Bonnet	260	-34	-36	29	23	33	26	5730	4830	~~28~~ 37	~~103~~ 134	~~445~~ 530	0.7	~~560~~ 630	~~180~~ 190	1.9	0.2	2.7	0.3	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-12	2.8
Lynn Lake	350	-40	-42	27	19	31	23	7770	6770	~~18~~ 24	~~86~~ 113	~~310~~ 370	0.6	~~490~~ 550	100	2.4	0.2	3.4	0.3	~~0.29~~ 0.30	~~0.37~~ 0.39	0.55	-15	2
Morden	300	-31	-33	30	24	34	27	5400	4510	~~28~~ 37	~~119~~ 156	~~420~~ 500	0.6	~~520~~ 580	~~180~~ 200	2.2	0.2	3.3	0.3	~~0.41~~ 0.43	~~0.52~~ 0.55	0.81	-10	3.7
Neepawa	365	-32	-34	29	23	34	26	5760	4850	~~28~~ 36	~~108~~ 141	~~410~~ 490	0.6	~~470~~ 530	~~180~~ 200	2.2	0.2	3.3	0.3	~~0.35~~ 0.37	~~0.44~~ 0.46	0.67	-11	4
Pine Falls	220	-34	-36	28	23	32	26	5900	4990	~~25~~ 33	~~97~~ 126	~~440~~ 520	0.7	~~420~~ 470	~~180~~ 190	1.9	0.2	2.7	0.3	~~0.31~~ 0.33	~~0.39~~ 0.41	0.6	-12	4
Portage la Prairie	260	-31	-33	30	23	34	26	5600	4700	~~28~~ 37	~~108~~ 142	~~390~~ 460	0.5	~~525~~ 590	~~180~~ 200	2.1	0.2	3.1	0.3	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	4

Rivers	465	-34	-36	29	23	33	26	5840	4930	~~28~~ 37	~~108~~ 141	~~370~~ 440	0.6	~~460~~ 520	~~180~~ 200	2.1	0.2	3	0.3	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-12	4.4
Sandilands	365	-32	-34	29	23	33	26	5650	4750	~~28~~ 36	~~113~~ 147	~~460~~ 540	0.6	~~550~~ 610	~~180~~ 190	2.2	0.2	3.2	0.3	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4
Selkirk	225	-33	-35	29	23	33	26	5700	4800	~~28~~ 37	~~108~~ 142	~~420~~ 500	0.6	~~500~~ 560	~~180~~ 200	1.9	0.2	2.8	0.3	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-11	4.5
Split Lake	175	-38	-40	27	19	31	23	7900	6890	~~18~~ 24	~~76~~ 102	~~325~~ 400	0.7	~~500~~ 570	120	2.5	0.2	3.5	0.3	~~0.31~~ 0.33	~~0.39~~ 0.41	0.57	-15	3.4
Steinbach	270	-33	-35	29	23	33	26	5700	4800	~~28~~ 37	~~108~~ 141	~~440~~ 520	0.6	~~500~~ 560	~~180~~ 200	2	0.2	3	0.3	~~0.32~~ 0.34	~~0.40~~ 0.42	0.61	-11	4.1
Swan River	335	-34	-37	29	22	34	26	6100	5180	~~20~~ 26	~~92~~ 119	~~370~~ 440	0.6	~~500~~ 560	120	2	0.2	2.8	0.3	~~0.28~~ 0.29	~~0.35~~ 0.37	0.53	-12	3.5
The Pas	270	-36	-38	28	21	33	25	6480	5540	~~18~~ 23	~~81~~ 105	~~330~~ 390	0.6	~~450~~ 500	160	2.2	0.2	3.1	0.3	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-13	3.4
Thompson	205	-40	-43	27	19	31	23	7600	6600	~~18~~ 24	~~86~~ 114	~~350~~ 420	0.6	~~540~~ 610	100	2.4	0.2	3.3	0.3	~~0.28~~ 0.29	~~0.36~~ 0.38	0.54	-15	2.9
Virden	435	-33	-35	30	23	34	26	5620	4720	~~28~~ 37	~~108~~ 141	~~350~~ 410	0.5	~~460~~ 520	~~180~~ 200	2	0.2	2.8	0.3	~~0.36~~ 0.38	~~0.46~~ 0.48	0.72	-11	4
Winnipeg	235	-33	-35	30	23	34	26	5670	4770	~~28~~ 37	~~108~~ 142	~~415~~ 490	0.6	~~500~~ 560	~~180~~ 200	1.9	0.2	2.8	0.3	~~0.36~~ 0.38	~~0.45~~ 0.47	0.68	-11	5.2
Ontario																								
Ailsa Craig	230	-17	-19	30	23	34	26	3840	3050	~~25~~ 32	~~103~~ 131	~~800~~ 920	0.9	~~950~~ 1030	~~180~~ 200	2.2	0.4	3.2	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.5
Ajax	95	-20	-22	30	23	34	26	3820	3030	~~23~~ 30	~~92~~ 118	~~760~~ 880	0.9	~~825~~ 900	~~160~~ 170	1	0.4	1.5	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4
Alexandria	80	-24	-26	30	23	34	26	4600	3740	~~25~~ 32	~~103~~ 133	~~800~~ 950	~~0.9~~ 1.0	~~975~~ 1090	160	2.4	0.4	3.4	0.6	~~0.31~~ 0.34	~~0.40~~ 0.44	0.67	-8	3.8
Alliston	220	-23	-25	29	23	33	26	4200	3380	~~28~~ 36	~~113~~ 145	~~690~~ 800	0.8	~~875~~ 960	~~120~~ 130	2	0.4	2.9	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	3.5
Almonte	120	-26	-28	30	23	34	26	4620	3760	~~25~~ 32	~~97~~ 125	~~730~~ 870	~~0.8~~ 0.9	~~800~~ 890	140	2.5	0.4	3.6	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	3.8
Armstrong	340	-37	-40	28	21	32	24	6500	5530	~~23~~ 30	~~97~~ 126	~~525~~ 640	0.8	~~725~~ 820	~~100~~ 110	2.7	0.4	3.8	0.6	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-12	2.3
Arnprior	85	-27	-29	30	23	34	26	4680	3820	~~23~~ 30	~~86~~ 111	~~630~~ 750	~~0.8~~ 0.9	~~775~~ 870	140	2.5	0.4	3.6	0.6	~~0.29~~ 0.32	~~0.37~~ 0.41	0.61	-8	3.5
Atikokan	400	-33	-35	29	22	33	25	5750	4810	~~25~~ 32	~~103~~ 133	~~570~~ 680	0.8	~~760~~ 850	~~100~~ 110	2.4	0.3	3.4	0.4	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	1.7
Attawapiskat	10	-37	-39	28	21	32	24	7100	6120	~~18~~ 25	~~81~~ 112	~~450~~ 580	0.8	~~650~~ 750	~~160~~ 170	2.8	0.3	3.9	0.4	~~0.30~~ 0.33	~~0.41~~ 0.45	0.68	-13	4

Aurora	270	-21	-23	30	23	34	26	4210	3390	~~28~~ 36	~~108~~ 139	~~700~~ 810	0.8	~~800~~ 880	~~140~~ 150	2	0.4	2.9	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-7	3.5
Bancroft	365	-28	-31	29	23	33	26	4740	3870	~~25~~ 32	~~92~~ 118	~~720~~ 840	0.9	~~900~~ 980	~~100~~ 110	3.1	0.4	4.3	0.6	~~0.25~~ 0.28	~~0.32~~ 0.35	0.52	-8	1.6
Barrie	245	-24	-26	29	23	33	26	4380	3540	~~28~~ 36	~~97~~ 125	~~700~~ 820	0.8	~~900~~ 990	~~120~~ 130	2.5	0.4	3.6	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	3.6
Barriefield	100	-22	-24	28	23	32	26	3990	3190	~~23~~ 29	~~108~~ 138	~~780~~ 890	1	~~950~~ 1020	~~160~~ 170	2.1	0.4	3	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-7	4.3
Beaverton	240	-24	-26	30	23	34	26	4300	3470	~~25~~ 32	~~108~~ 139	~~720~~ 830	0.9	~~950~~ 1030	~~120~~ 130	2.2	0.4	3.2	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	4.8
Belleville	90	-22	-24	29	23	33	26	3910	3110	~~23~~ 29	~~97~~ 124	~~760~~ 870	0.9	~~850~~ 920	~~180~~ 190	1.7	0.4	2.4	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-7	4
Belmont	260	-17	-19	30	24	34	27	3840	3050	~~25~~ 32	~~97~~ 123	~~850~~ 970	1	~~950~~ 1030	~~180~~ 200	1.7	0.4	2.5	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	3.5
Borden (CFB)	225	-23	-25	29	23	33	26	4300	3470	~~28~~ 36	~~103~~ 133	~~690~~ 800	~~0.8~~ 0.9	~~875~~ 960	~~120~~ 130	2.2	0.4	3.2	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-6	3.6
Bracebridge	310	-26	-28	29	23	33	26	4800	3920	~~25~~ 32	~~103~~ 132	~~830~~ 960	1	~~1050~~ 1120	~~120~~ 130	3.1	0.4	4.3	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-8	2
Bradford	240	-23	-25	30	23	34	26	4280	3450	~~28~~ 36	~~108~~ 139	~~680~~ 790	0.8	~~800~~ 880	~~120~~ 130	2.1	0.4	3	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	3.5
Brampton	215	-19	-21	30	23	34	26	4100	3290	~~28~~ 36	~~119~~ 152	~~720~~ 840	0.8	~~820~~ 900	~~140~~ 150	1.3	0.4	1.9	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	5
Brantford	205	-18	-20	30	23	34	26	3900	3110	~~23~~ 29	~~103~~ 131	~~780~~ 900	0.9	~~850~~ 930	~~160~~ 170	1.3	0.4	1.9	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-6	4.4
Brighton	95	-21	-23	29	23	33	26	4000	3200	~~23~~ 29	~~94~~ 121	~~760~~ 870	0.9	~~850~~ 920	~~160~~ 170	1.6	0.4	2.3	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	3.8
Brockville	85	-23	-25	29	23	33	26	4060	3250	~~25~~ 32	~~103~~ 132	~~770~~ 900	0.9	~~975~~ 1070	180	2.2	0.4	3.1	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-8	3.2
Burk's Falls	305	-26	-28	29	22	33	25	5020	4120	~~25~~ 32	~~97~~ 125	~~810~~ 950	0.9	~~1010~~ 1090	120	2.7	0.4	3.7	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2.5
Burlington	80	-17	-19	31	23	35	26	3740	2960	~~23~~ 29	~~103~~ 131	~~770~~ 890	0.9	~~850~~ 930	~~160~~ 170	1.1	0.4	1.6	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	4
Cambridge	295	-18	-20	29	23	33	26	4100	3290	~~25~~ 32	~~113~~ 144	~~800~~ 920	0.9	~~890~~ 970	~~160~~ 170	1.6	0.4	2.3	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-6	4.4
Campbellford	150	-23	-26	30	23	34	26	4280	3450	~~25~~ 32	~~97~~ 125	~~730~~ 840	0.9	~~850~~ 930	~~160~~ 170	1.7	0.4	2.4	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-7	2.2
Cannington	255	-24	-26	30	23	34	26	4310	3480	~~25~~ 32	~~108~~ 139	~~740~~ 860	0.9	~~950~~ 1030	~~120~~ 130	2.2	0.4	3.2	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	3.5
Carleton Place	135	-25	-27	30	23	34	26	4600	3740	~~25~~ 32	~~97~~ 124	~~730~~ 870	~~0.8~~ 0.9	~~850~~ 950	160	2.5	0.4	3.6	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	2.8

Cavan	200	-23	-25	30	23	34	26	4400	3560	~~25~~ 32	~~97~~ 125	~~740~~ 850	0.9	~~850~~ 920	~~140~~ 150	2	0.4	2.9	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-7	3.3
Centralia	260	-17	-19	30	23	34	26	3800	3010	~~25~~ 32	~~103~~ 131	~~820~~ 940	1	~~1000~~ 1080	~~180~~ 200	2.3	0.4	3.3	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.5
Chapleau	425	-35	-38	27	21	31	24	5900	4950	~~20~~ 26	~~97~~ 126	~~530~~ 640	0.7	~~850~~ 950	80	3.6	0.4	5.1	0.6	~~0.23~~ 0.25	~~0.30~~ 0.33	0.5	-10	3.5
Chatham	180	-16	-18	31	24	34	27	3470	2710	~~28~~ 35	~~103~~ 130	~~800~~ 910	0.9	~~850~~ 930	~~180~~ 190	1	0.4	1.5	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-5	5
Chesley	275	-19	-21	29	22	33	25	4320	3490	~~28~~ 36	~~103~~ 132	~~810~~ 940	0.9	~~1125~~ 1210	~~140~~ 150	2.8	0.4	4	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	4
Clinton	280	-17	-19	29	23	33	26	4150	3330	~~25~~ 32	~~103~~ 132	~~810~~ 930	0.9	~~1000~~ 1080	~~160~~ 170	2.6	0.4	3.8	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-6	5
Coboconk	270	-25	-27	30	23	34	26	4500	3650	~~25~~ 32	~~108~~ 139	~~740~~ 850	0.9	~~950~~ 1030	~~120~~ 130	2.5	0.4	3.5	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-7	2
Cobourg	90	-21	-23	29	23	33	26	3980	3180	~~23~~ 30	~~94~~ 121	~~760~~ 870	0.9	~~825~~ 900	~~160~~ 170	1.2	0.4	1.7	0.6	~~0.38~~ 0.42	~~0.49~~ 0.54	0.81	-6	3.6
Cochrane	245	-34	-36	29	21	33	24	6200	5240	~~20~~ 26	~~92~~ 121	~~575~~ 700	0.8	~~875~~ 980	80	2.8	0.3	3.9	0.4	~~0.27~~ 0.30	~~0.35~~ 0.39	0.55	-12	3.8
Colborne	105	-21	-23	29	23	33	26	3980	3180	~~23~~ 30	~~94~~ 121	~~760~~ 870	0.9	~~850~~ 930	~~160~~ 170	1.6	0.4	2.3	0.6	~~0.38~~ 0.42	~~0.49~~ 0.54	0.81	-6	3.6
Collingwood	190	-21	-23	29	23	33	26	4180	3360	~~28~~ 36	~~97~~ 124	~~720~~ 840	0.9	~~950~~ 1030	~~160~~ 170	2.7	0.4	3.9	0.6	~~0.30~~ 0.33	~~0.39~~ 0.43	0.65	-6	3.7
Cornwall	35	-23	-25	30	23	34	26	4250	3420	~~25~~ 32	~~103~~ 132	~~780~~ 930	~~0.9~~ 1.0	~~960~~ 1080	180	2.2	0.4	3	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	3.1
Corunna	185	-16	-18	31	24	34	27	3600	2830	~~25~~ 32	~~100~~ 126	~~760~~ 870	0.9	~~800~~ 880	~~180~~ 190	1	0.4	1.5	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-5	4.7
Deep River	145	-29	-32	30	22	34	25	4900	3980	~~23~~ 30	~~92~~ 118	~~650~~ 780	0.8	~~850~~ 950	~~100~~ 110	2.5	0.4	3.5	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	3.2
Deseronto	85	-22	-24	29	23	33	26	4070	3260	~~23~~ 29	~~92~~ 118	~~760~~ 870	0.9	~~900~~ 980	~~160~~ 170	1.9	0.4	2.8	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-7	4
Dorchester	260	-18	-20	30	24	34	27	3900	3110	~~28~~ 36	~~103~~ 131	~~850~~ 970	1	~~950~~ 1030	~~180~~ 200	1.9	0.4	2.7	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.4
Dorion	200	-33	-35	28	21	32	24	5950	5000	~~20~~ 26	~~103~~ 133	~~550~~ 670	0.8	~~725~~ 810	~~160~~ 170	2.8	0.4	4	0.6	~~0.29~~ 0.32	~~0.39~~ 0.43	0.67	-10	3.3
Dresden	185	-16	-18	31	24	34	27	3750	2970	~~28~~ 35	~~97~~ 122	~~760~~ 870	0.8	~~820~~ 900	~~180~~ 190	1	0.4	1.5	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-6	4.2
Dryden	370	-34	-36	28	22	32	25	5850	4940	~~25~~ 32	~~97~~ 126	~~550~~ 660	0.7	~~700~~ 780	~~120~~ 130	2.4	0.3	3.4	0.4	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	3.9
Dundalk	525	-22	-24	29	22	33	25	4700	3830	~~28~~ 36	~~108~~ 139	~~750~~ 870	0.9	~~1080~~ 1170	~~150~~ 160	3.2	0.4	4.6	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-7	3.8

Dunnville	175	-15	-17	30	24	34	27	3660	2890	~~23~~ 29	~~108~~ 137	~~830~~ 960	1	~~950~~ 1040	~~160~~ 170	2	0.4	3	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	3.8
Durham	340	-20	-22	29	22	33	25	4340	3510	~~28~~ 36	~~103~~ 132	~~815~~ 950	0.9	~~1025~~ 1110	~~140~~ 150	2.8	0.4	4	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-7	3.8
Dutton	225	-16	-18	31	24	35	27	3700	2920	~~28~~ 35	~~92~~ 116	~~850~~ 970	1	~~925~~ 1010	~~180~~ 190	1.3	0.4	1.9	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4
Earlton	245	-33	-36	29	22	33	25	5730	4790	~~23~~ 30	~~92~~ 120	~~560~~ 670	0.8	~~820~~ 910	~~120~~ 130	3.1	0.4	4.3	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-11	4.2
Edison	365	-34	-36	28	22	32	25	5740	4840	~~25~~ 32	~~108~~ 140	~~510~~ 610	0.7	~~680~~ 760	~~120~~ 130	2.4	0.3	3.4	0.4	~~0.23~~ 0.25	~~0.31~~ 0.34	0.53	-11	3.9
Elliot Lake	380	-26	-28	29	21	33	24	4950	4030	~~23~~ 30	~~108~~ 139	~~630~~ 740	0.8	~~950~~ 1030	~~160~~ 170	2.9	0.4	4.1	0.6	~~0.30~~ 0.33	~~0.38~~ 0.42	0.62	-8	4
Elmvale	220	-24	-26	29	23	33	26	4200	3380	~~28~~ 36	~~97~~ 125	~~720~~ 840	0.9	~~950~~ 1030	~~140~~ 150	2.6	0.4	3.7	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-6	3.7
Embro	310	-19	-21	30	23	34	26	3950	3150	~~28~~ 36	~~113~~ 144	~~830~~ 950	0.9	~~950~~ 1030	~~160~~ 180	2	0.4	2.9	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.4
Englehart	205	-33	-36	29	22	33	25	5800	4860	~~23~~ 30	~~92~~ 120	~~600~~ 720	0.8	~~880~~ 980	~~100~~ 110	2.8	0.4	3.9	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-11	4.2
Espanola	220	-25	-27	29	21	33	24	4920	4000	~~23~~ 30	~~108~~ 139	~~650~~ 760	0.8	~~840~~ 910	~~160~~ 170	2.3	0.4	3.3	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-8	4
Exeter	265	-17	-19	30	23	34	26	3900	3110	~~25~~ 32	~~113~~ 144	~~810~~ 930	0.9	~~975~~ 1050	~~180~~ 200	2.4	0.4	3.4	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5
Fenelon Falls	260	-25	-27	30	23	34	26	4440	3600	~~25~~ 32	~~108~~ 139	~~730~~ 840	0.9	~~950~~ 1030	~~120~~ 130	2.3	0.4	3.3	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	2
Fergus	400	-20	-22	29	23	33	26	4300	3470	~~28~~ 36	~~108~~ 138	~~760~~ 880	0.9	~~925~~ 1010	~~160~~ 170	2.2	0.4	3.2	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-6	4.3
Forest	215	-16	-18	31	23	35	26	3740	2960	~~25~~ 32	~~103~~ 131	~~810~~ 930	~~1.0~~ 1.1	~~875~~ 960	~~160~~ 170	2	0.4	2.9	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.7
Fort Erie	180	-15	-17	30	24	34	27	3650	2880	~~23~~ 29	~~108~~ 137	~~860~~ 1000	1	~~1020~~ 1120	~~160~~ 170	2.3	0.4	3.4	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	5
Fort Erie (Ridgeway)	190	-15	-17	30	24	34	27	3600	2830	~~25~~ 32	~~108~~ 137	~~860~~ 1000	1	~~1000~~ 1100	~~160~~ 170	2.3	0.4	3.4	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	5
Fort Frances	340	-33	-35	29	22	33	25	5440	4550	~~25~~ 32	~~108~~ 139	~~570~~ 680	0.7	~~725~~ 810	~~120~~ 130	2.3	0.3	3.3	0.4	~~0.23~~ 0.25	~~0.31~~ 0.34	0.53	-11	3.2
Gananoque	80	-22	-24	28	23	32	26	4010	3210	~~23~~ 29	~~103~~ 132	~~760~~ 870	0.9	~~900~~ 980	180	2.1	0.4	3	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-7	3.8
Geraldton	345	-36	-39	28	21	32	24	6450	5490	~~20~~ 26	~~86~~ 112	~~550~~ 670	0.8	~~725~~ 810	~~100~~ 110	2.9	0.4	4	0.6	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	2.5
Glencoe	215	-16	-18	31	24	35	27	3680	2900	~~28~~ 35	~~103~~ 130	~~800~~ 910	0.9	~~925~~ 1010	~~180~~ 190	1.5	0.4	2.2	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-6	4.2

Goderich	185	-16	-18	29	23	33	26	4000	3200	~~25~~ 32	~~92~~ 117	~~810~~ 930	1	~~950~~ 1030	~~180~~ 200	2.4	0.4	3.5	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5.3
Gore Bay	205	-24	-26	28	22	32	25	4700	3830	~~23~~ 30	~~92~~ 118	~~640~~ 750	0.8	~~860~~ 930	~~160~~ 170	2.6	0.4	3.7	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-8	4.3
Graham	495	-35	-37	29	22	33	25	5940	4990	~~23~~ 30	~~97~~ 126	~~570~~ 680	0.8	~~750~~ 830	~~140~~ 150	2.6	0.3	3.7	0.4	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	2.5
Gravenhurst (Muskoka Airport)	255	-26	-28	29	23	33	26	4760	3890	~~25~~ 32	~~103~~ 132	~~790~~ 910	0.9	~~1050~~ 1120	~~120~~ 130	2.7	0.4	3.8	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-8	2
Grimsby	85	-16	-18	30	23	34	26	3520	2760	~~23~~ 29	~~108~~ 138	~~760~~ 880	0.9	~~875~~ 960	~~160~~ 170	0.9	0.4	1.3	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	4.5
Guelph	340	-19	-21	29	23	33	26	4270	3440	~~28~~ 36	~~103~~ 132	~~770~~ 890	0.9	~~875~~ 950	~~140~~ 150	1.9	0.4	2.7	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-6	4.5
Guthrie	280	-24	-26	29	23	33	26	4300	3470	~~28~~ 36	~~103~~ 133	~~700~~ 810	0.8	~~950~~ 1030	~~120~~ 130	2.5	0.4	3.6	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	3.5
Haileybury	210	-32	-35	30	22	34	25	5600	4660	~~23~~ 30	~~92~~ 120	~~590~~ 710	0.8	~~820~~ 910	~~120~~ 130	2.4	0.4	3.3	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-11	3.9
Haldimand (Caledonia)	190	-18	-20	30	23	34	26	3750	2970	~~23~~ 29	~~108~~ 138	~~810~~ 930	0.9	~~875~~ 960	~~160~~ 170	1.2	0.4	1.8	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4.5
Haldimand (Hagersville)	215	-17	-19	30	23	34	26	3760	2980	~~25~~ 32	~~97~~ 123	~~840~~ 970	1	~~875~~ 950	~~160~~ 170	1.3	0.4	1.9	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-6	4.5
Haliburton	335	-27	-29	29	23	33	26	4840	3960	~~25~~ 32	~~92~~ 118	~~780~~ 910	0.9	~~980~~ 1060	~~100~~ 110	2.9	0.4	4	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-8	2
Halton Hills (Georgetown)	255	-19	-21	30	23	34	26	4200	3380	~~28~~ 36	~~119~~ 152	~~750~~ 870	0.8	~~850~~ 930	~~140~~ 150	1.4	0.4	2	0.6	~~0.29~~ 0.32	~~0.37~~ 0.41	0.61	-6	4.8
Hamilton	90	-17	-19	31	23	35	26	3460	2700	~~23~~ 29	~~108~~ 138	~~810~~ 930	0.9	~~875~~ 960	~~160~~ 170	1.1	0.4	1.6	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-6	3.5
Hanover	270	-19	-21	29	22	33	25	4300	3470	~~28~~ 36	~~103~~ 132	~~790~~ 920	0.9	~~1050~~ 1130	~~140~~ 150	2.6	0.4	3.8	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-7	3.8
Hastings	200	-24	-26	30	23	34	26	4280	3450	~~25~~ 32	~~92~~ 118	~~730~~ 840	0.9	~~840~~ 910	~~140~~ 150	2	0.4	2.8	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-7	3
Hawkesbury	50	-25	-27	30	23	34	26	4610	3750	~~23~~ 30	~~103~~ 133	~~800~~ 950	~~0.9~~ 1.0	~~925~~ 1030	160	2.3	0.4	3.2	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	3.8
Hearst	245	-35	-37	29	21	33	24	6450	5490	~~20~~ 26	~~86~~ 113	~~520~~ 640	0.7	~~825~~ 930	80	2.8	0.3	3.9	0.4	~~0.23~~ 0.25	~~0.30~~ 0.33	0.47	-12	3.5
Honey Harbour	180	-24	-26	29	23	33	26	4300	3470	~~25~~ 32	~~97~~ 124	~~710~~ 820	0.9	~~1050~~ 1120	~~160~~ 170	2.7	0.4	3.8	0.6	~~0.30~~ 0.33	~~0.39~~ 0.43	0.65	-7	4
Hornepayne	360	-37	-40	28	21	32	24	6340	5380	~~20~~ 26	~~93~~ 121	~~420~~ 510	0.7	~~750~~ 840	80	3.3	0.4	4.5	0.6	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	3
Huntsville	335	-26	-29	29	22	33	25	4850	3970	~~25~~ 32	~~103~~ 132	~~800~~ 930	0.9	~~1000~~ 1080	120	2.9	0.4	4	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-8	2

Ingersoll	280	-18	-20	30	23	34	26	3920	3120	~~28~~ 36	~~108~~ 138	~~840~~ 960	1	~~950~~ 1030	~~180~~ 200	1.7	0.4	2.4	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.4
Iroquois Falls	275	-33	-36	29	21	33	24	6100	5150	~~20~~ 26	~~86~~ 113	~~575~~ 700	0.8	~~825~~ 920	100	2.9	0.3	4	0.4	~~0.29~~ 0.32	~~0.37~~ 0.41	0.58	-11	3.5
Jellicoe	330	-36	-39	28	21	32	24	6400	5440	~~20~~ 26	~~86~~ 112	~~550~~ 670	0.8	~~750~~ 840	~~100~~ 110	2.7	0.4	3.8	0.6	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	2.3
Kapuskasing	245	-34	-36	29	21	33	24	6250	5290	~~20~~ 26	~~86~~ 113	~~550~~ 670	0.8	~~825~~ 930	100	3	0.3	4.2	0.4	~~0.24~~ 0.26	~~0.31~~ 0.34	0.49	-12	3.9
Kemptville	90	-25	-27	30	23	34	26	4540	3690	~~25~~ 32	~~92~~ 118	~~750~~ 880	~~0.9~~ 1.0	~~925~~ 1030	160	2.3	0.4	3.3	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	2.3
Kenora	370	-33	-35	28	22	32	25	5630	4730	~~25~~ 32	~~113~~ 146	~~515~~ 610	0.6	~~630~~ 700	120	2.5	0.3	3.6	0.4	~~0.23~~ 0.25	~~0.31~~ 0.34	0.53	-11	2.9
Killaloe	185	-28	-31	30	22	34	25	4960	4070	~~23~~ 30	~~86~~ 110	~~680~~ 820	0.8	~~825~~ 920	120	2.7	0.4	3.9	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2
Kincardine	190	-17	-19	28	22	32	25	3890	3100	~~25~~ 32	~~92~~ 118	~~800~~ 930	1	~~950~~ 1030	~~180~~ 190	2.6	0.4	3.8	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5.3
Kingston	80	-22	-24	28	23	32	26	4000	3200	~~23~~ 29	~~108~~ 138	~~780~~ 890	1	~~950~~ 1020	~~180~~ 190	2.1	0.4	3	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-7	4.3
Kinmount	295	-26	-28	29	23	33	26	4600	3740	~~25~~ 32	~~108~~ 139	~~750~~ 870	0.9	~~950~~ 1030	~~120~~ 130	2.7	0.4	3.8	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-7	2
Kirkland Lake	325	-33	-36	29	22	33	25	6000	5050	~~23~~ 30	~~92~~ 120	~~600~~ 720	0.8	~~875~~ 970	100	2.9	0.3	4	0.4	~~0.30~~ 0.33	~~0.39~~ 0.43	0.62	-11	3.8
Kitchener	335	-19	-21	29	23	33	26	4200	3380	~~28~~ 36	~~119~~ 152	~~780~~ 900	0.9	~~925~~ 1010	~~140~~ 150	2	0.4	2.9	0.6	~~0.29~~ 0.32	~~0.37~~ 0.41	0.61	-6	4.5
Kitchenuhmaykoosib / Big Trout Lake	215	-38	-40	26	20	30	23	7450	–	~~18~~ 24	~~92~~ 123	~~400~~ 490	0.8	~~600~~ 680	150	3.2	0.2	4.6	0.3	~~0.31~~ 0.34	~~0.42~~ 0.46	0.69	-14	3.7
Lakefield	240	-24	-26	30	23	34	26	4330	3500	~~25~~ 32	~~92~~ 118	~~720~~ 830	0.9	~~850~~ 920	~~140~~ 150	2.2	0.4	3.1	0.6	~~0.30~~ 0.33	~~0.38~~ 0.42	0.62	-7	2
Lansdowne House	240	-38	-40	28	21	32	24	7150	6160	~~23~~ 30	~~92~~ 122	~~500~~ 610	0.8	~~680~~ 770	~~140~~ 150	3	0.2	4.2	0.3	~~0.24~~ 0.26	~~0.32~~ 0.35	0.52	-13	3.5
Leamington	190	-15	-17	31	24	34	27	3400	2650	~~28~~ 35	~~113~~ 142	~~800~~ 910	0.9	~~875~~ 960	~~180~~ 190	0.8	0.4	1.2	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-5	5
Lindsay	265	-24	-26	30	23	34	26	4320	3490	~~25~~ 32	~~103~~ 133	~~720~~ 830	0.8	~~850~~ 930	~~140~~ 150	2.3	0.4	3.3	0.6	~~0.30~~ 0.33	~~0.38~~ 0.42	0.62	-7	2.5
Lion's Head	185	-19	-21	27	22	31	25	4300	3470	~~25~~ 32	~~103~~ 132	~~700~~ 820	0.9	~~950~~ 1020	~~180~~ 190	2.7	0.4	3.9	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.1
Listowel	380	-19	-21	29	23	33	26	4300	3470	~~28~~ 36	~~119~~ 152	~~800~~ 920	0.9	~~1000~~ 1080	~~160~~ 170	2.6	0.4	3.8	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-6	4.5
London	245	-18	-20	30	24	34	27	3900	3110	~~28~~ 36	~~103~~ 131	~~825~~ 940	0.9	~~975~~ 1060	~~180~~ 200	1.9	0.4	2.8	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.4

Lucan	300	-17	-19	30	23	34	26	3900	3110	~~25~~ 32	~~113~~ 144	~~810~~ 930	0.9	~~1000~~ 1090	~~180~~ 200	2.3	0.4	3.3	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.6
Maitland	85	-23	-25	29	23	33	26	4080	3270	~~25~~ 32	~~103~~ 132	~~770~~ 900	~~0.9~~ 1.0	~~975~~ 1070	180	2.2	0.4	3.1	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-8	3.2
Markdale	425	-20	-22	29	22	33	25	4500	3650	~~28~~ 36	~~103~~ 132	~~820~~ 960	0.9	~~1050~~ 1130	~~160~~ 170	3.2	0.4	4.6	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-6	3.6
Markham	175	-21	-23	31	24	35	27	4000	3200	~~25~~ 32	~~86~~ 110	~~720~~ 830	0.8	~~825~~ 900	~~140~~ 150	1.3	0.4	1.9	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4.2
Martin	485	-35	-37	29	22	33	25	5900	4950	~~25~~ 32	~~103~~ 133	~~560~~ 670	0.8	~~750~~ 830	~~120~~ 130	2.6	0.3	3.7	0.4	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	2.8
Matheson	265	-33	-36	29	21	33	24	6080	5130	~~20~~ 26	~~86~~ 113	~~580~~ 700	0.8	~~825~~ 920	100	2.8	0.3	3.9	0.4	~~0.30~~ 0.33	~~0.39~~ 0.43	0.62	-11	3.5
Mattawa	165	-29	-31	30	22	34	25	5050	4130	~~23~~ 30	~~86~~ 111	~~700~~ 830	0.9	~~875~~ 960	~~100~~ 110	2.1	0.4	2.9	0.6	~~0.25~~ 0.28	~~0.32~~ 0.35	0.52	-9	3.2
Midland	190	-24	-26	29	23	33	26	4200	3380	~~25~~ 32	~~97~~ 124	~~740~~ 860	0.9	~~1060~~ 1140	~~160~~ 170	2.7	0.4	3.9	0.6	~~0.30~~ 0.33	~~0.39~~ 0.43	0.65	-6	3.7
Milton	200	-18	-20	30	23	34	26	3920	3120	~~25~~ 32	~~125~~ 160	~~750~~ 870	0.9	~~850~~ 930	~~160~~ 170	1.3	0.4	1.9	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-6	4.5
Milverton	370	-19	-21	29	23	33	26	4200	3380	~~28~~ 36	~~108~~ 138	~~800~~ 920	0.9	~~1050~~ 1140	~~160~~ 170	2.4	0.4	3.5	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-6	4.6
Minden	270	-27	-29	29	23	33	26	4640	3780	~~25~~ 32	~~97~~ 124	~~780~~ 900	0.9	~~1010~~ 1090	~~100~~ 110	2.7	0.4	3.7	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-8	2
Mississauga	160	-18	-20	30	23	34	26	3880	3090	~~25~~ 32	~~113~~ 145	~~720~~ 830	0.9	~~800~~ 880	~~160~~ 170	1.1	0.4	1.6	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-5	5.2
Mississauga (Lester B. Pearson Int'l Airport)	170	-20	-22	31	24	35	27	3890	–	~~26~~ 33	~~108~~ 138	~~685~~ 790	0.8	~~790~~ 870	~~160~~ 170	1.1	0.4	1.6	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	5.2
Mississauga (Port Credit)	75	-18	-20	29	23	33	26	3780	3000	~~25~~ 32	~~108~~ 138	~~720~~ 830	0.9	~~800~~ 880	~~160~~ 170	0.9	0.4	1.3	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5.2
Mitchell	335	-18	-20	29	23	33	26	4100	3290	~~28~~ 36	~~113~~ 144	~~810~~ 930	0.9	~~1050~~ 1140	~~160~~ 170	2.4	0.4	3.5	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	4.5
Moosonee	10	-36	-38	28	22	32	25	6800	5820	~~18~~ 25	~~81~~ 111	~~500~~ 630	0.8	~~700~~ 790	~~160~~ 170	2.7	0.3	3.8	0.4	~~0.26~~ 0.29	~~0.35~~ 0.39	0.58	-12	4
Morrisburg	75	-23	-25	30	23	34	26	4370	3530	~~25~~ 32	~~103~~ 132	~~800~~ 940	~~0.9~~ 1.0	~~950~~ 1050	180	2.3	0.4	3.2	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	3.5
Mount Forest	420	-21	-24	28	22	32	25	4700	3830	~~28~~ 36	~~103~~ 132	~~740~~ 860	0.9	~~940~~ 1020	~~140~~ 150	2.7	0.4	3.9	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-7	3.3
Nakina	325	-36	-38	28	21	32	24	6500	5530	~~20~~ 26	~~86~~ 113	~~540~~ 660	0.8	~~750~~ 850	~~100~~ 110	2.8	0.4	3.8	0.5	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-12	2.7

Nanticoke (Jarvis)	205	-17	-18	30	23	34	26	3700	2920	~~28~~ 36	~~108~~ 137	~~840~~ 970	1	~~900~~ 980	~~160~~ 170	1.4	0.4	2.1	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.5
Nanticoke (Port Dover)	180	-15	-17	30	24	34	27	3600	2830	~~25~~ 32	~~108~~ 137	~~860~~ 990	1	~~950~~ 1030	~~140~~ 150	1.2	0.4	1.8	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-5	5
Napanee	90	-22	-24	29	23	33	26	4140	3320	~~23~~ 29	~~92~~ 118	~~770~~ 880	0.9	~~900~~ 970	~~160~~ 170	1.9	0.4	2.8	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-7	4
Newcastle	115	-20	-22	30	23	34	26	3990	3190	~~23~~ 30	~~86~~ 111	~~760~~ 880	0.9	~~830~~ 900	~~160~~ 170	1.5	0.4	2.2	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4
Newcastle (Bowmanville)	95	-20	-22	30	23	34	26	4000	–	~~23~~ 30	~~86~~ 110	~~760~~ 880	0.9	~~830~~ 910	~~160~~ 170	1.4	0.4	2	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4
New Liskeard	180	-32	-35	30	22	34	25	5570	4630	~~23~~ 30	~~92~~ 120	~~570~~ 680	0.8	~~810~~ 900	~~100~~ 110	2.6	0.4	3.6	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-11	4.2
Newmarket	185	-22	-24	30	23	34	26	4260	3430	~~28~~ 36	~~108~~ 139	~~700~~ 810	0.8	~~800~~ 880	~~140~~ 150	2	0.4	2.9	0.6	~~0.30~~ 0.33	~~0.38~~ 0.42	0.62	-7	3.5
Niagara Falls	210	-16	-18	30	23	34	26	3600	2830	~~23~~ 29	~~96~~ 122	~~810~~ 940	0.9	~~950~~ 1040	~~160~~ 170	1.8	0.4	2.7	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-5	4
North Bay	210	-28	-30	28	22	32	25	5150	4230	~~25~~ 32	~~95~~ 123	~~775~~ 920	0.9	~~975~~ 1060	120	2.2	0.4	3	0.6	~~0.27~~ 0.30	~~0.34~~ 0.37	0.54	-9	4.4
Norwood	225	-24	-26	30	23	34	26	4320	3490	~~25~~ 32	~~92~~ 118	~~720~~ 830	0.8	~~850~~ 930	~~120~~ 130	2.1	0.4	3	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-7	2
Oakville	90	-18	-20	30	23	34	26	3760	2980	~~23~~ 29	~~97~~ 124	~~750~~ 870	0.9	~~850~~ 930	~~160~~ 170	1.1	0.4	1.6	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-5	5.2
Orangeville	430	-21	-23	29	23	33	26	4450	3610	~~28~~ 36	~~108~~ 139	~~730~~ 850	0.8	~~875~~ 960	~~140~~ 150	2.3	0.4	3.3	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	4
Orillia	230	-25	-27	29	23	33	26	4260	3430	~~25~~ 32	~~103~~ 132	~~740~~ 860	0.9	~~1000~~ 1080	~~120~~ 130	2.4	0.4	3.4	0.6	~~0.28~~ 0.31	~~0.36~~ 0.40	0.59	-7	3.5
Oshawa	110	-19	-21	30	23	34	26	3860	3070	~~23~~ 30	~~86~~ 110	~~760~~ 880	0.9	~~875~~ 950	~~160~~ 170	1.4	0.4	2	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4
Ottawa (Metropolitan)																								
Ottawa (Barrhaven)	98	-25	-27	30	23	34	26	4500	3600	~~25~~ 32	~~92~~ 119	~~750~~ 890	~~0.8~~ 0.9	~~900~~ 1000	160	2.4	0.4	3.5	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	4.4
Ottawa (City Hall)	70	-25	-27	30	23	34	26	4440	3650	~~23~~ 30	~~86~~ 111	~~750~~ 890	~~0.8~~ 0.9	~~900~~ 1000	160	2.4	0.4	3.4	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	3.5
Ottawa (Kanata)	98	-25	-27	30	23	34	26	4520	3670	~~25~~ 32	~~92~~ 118	~~730~~ 870	~~0.8~~ 0.9	~~900~~ 1000	160	2.5	0.4	3.6	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	4.4
Ottawa (M-C Int'l Airport)	125	-25	-27	30	23	34	26	4500	3650	~~24~~ 31	~~89~~ 115	~~750~~ 890	~~0.8~~ 0.9	~~900~~ 1000	160	2.4	0.4	3.5	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	4.4
Ottawa (Orléans)	70	-26	-28	30	23	33	26	4500	3650	~~23~~ 30	~~91~~ 118	~~750~~ 890	~~0.8~~ 0.9	~~900~~ 1000	160	2.4	0.4	3.4	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	3.5

Owen Sound	215	-19	-21	29	22	33	25	4030	3220	~~28~~ 36	~~113~~ 145	~~760~~ 890	0.9	~~1075~~ 1150	~~160~~ 170	2.8	0.4	4	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4
Pagwa River	185	-35	-37	28	21	32	24	6500	5530	~~20~~ 26	~~86~~ 113	~~540~~ 660	0.8	~~825~~ 930	80	2.7	0.4	3.6	0.5	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-12	2.7
Paris	245	-18	-20	30	23	34	26	4000	3200	~~23~~ 29	~~96~~ 122	~~790~~ 910	0.9	~~925~~ 1010	~~160~~ 170	1.4	0.4	2	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-6	4.2
Parkhill	205	-16	-18	31	23	35	26	3800	3010	~~25~~ 32	~~103~~ 131	~~800~~ 920	0.9	~~925~~ 1010	~~180~~ 200	2.1	0.4	3.1	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5
Parry Sound	215	-24	-26	28	22	32	25	4640	3780	~~23~~ 30	~~97~~ 124	~~820~~ 950	1	~~1050~~ 1110	~~160~~ 170	2.8	0.4	4	0.6	~~0.30~~ 0.33	~~0.39~~ 0.43	0.65	-8	3.7
Pelham (Fonthill)	230	-15	-17	30	23	34	26	3690	2910	~~23~~ 29	~~96~~ 122	~~820~~ 950	0.9	~~950~~ 1040	~~160~~ 170	2.1	0.4	3.1	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-6	4
Pembroke	125	-28	-31	30	23	34	26	4980	4090	~~23~~ 30	~~105~~ 135	~~640~~ 770	0.8	~~825~~ 930	100	2.5	0.4	3.5	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2.7
Penetanguishene	220	-24	-26	29	23	33	26	4200	3380	~~25~~ 32	~~97~~ 124	~~720~~ 830	0.9	~~1050~~ 1120	~~160~~ 170	2.8	0.4	4	0.6	~~0.30~~ 0.33	~~0.39~~ 0.43	0.65	-7	3.7
Perth	130	-25	-27	30	23	34	26	4540	3690	~~25~~ 32	~~92~~ 118	~~730~~ 860	0.8	~~900~~ 1000	140	2.3	0.4	3.3	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	2.3
Petawawa	135	-29	-31	30	23	34	26	4980	4090	~~23~~ 30	~~92~~ 118	~~640~~ 770	0.8	~~825~~ 920	100	2.6	0.4	3.6	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2.7
Peterborough	200	-23	-25	30	23	34	26	4400	3560	~~25~~ 32	~~92~~ 118	~~710~~ 820	0.8	~~840~~ 910	~~140~~ 150	2	0.4	2.9	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-7	2.8
Petrolia	195	-16	-18	31	24	34	27	3640	2870	~~25~~ 32	~~108~~ 137	~~810~~ 930	0.9	~~920~~ 1010	~~180~~ 200	1.3	0.4	1.9	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.2
Pickering (Dunbarton)	85	-19	-21	30	23	34	26	3800	3010	~~23~~ 29	~~92~~ 118	~~730~~ 840	0.9	~~825~~ 900	~~140~~ 150	1	0.4	1.5	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4
Picton	95	-21	-23	29	23	33	26	3980	3180	~~23~~ 29	~~92~~ 117	~~770~~ 890	0.9	~~940~~ 1020	~~160~~ 170	2	0.4	2.9	0.6	~~0.38~~ 0.42	~~0.49~~ 0.54	0.81	-6	4.5
Plattsville	300	-19	-21	29	23	33	26	4150	3330	~~28~~ 36	~~103~~ 132	~~820~~ 940	0.9	~~950~~ 1030	~~140~~ 150	1.9	0.4	2.8	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-6	4.2
Point Alexander	150	-29	-32	30	22	34	25	4960	4040	~~23~~ 30	~~92~~ 118	~~650~~ 780	0.8	~~850~~ 950	~~100~~ 110	2.5	0.4	3.5	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	3.2
Port Burwell	195	-15	-17	30	24	34	27	3800	3010	~~25~~ 32	~~92~~ 117	~~930~~ 1060	1.1	~~1000~~ 1090	~~180~~ 190	1.2	0.4	1.7	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-5	5
Port Colborne	180	-15	-17	30	24	34	27	3600	2830	~~23~~ 29	~~108~~ 137	~~850~~ 990	1	~~1000~~ 1100	~~160~~ 170	2.1	0.4	3.1	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	5
Port Elgin	205	-17	-19	28	22	32	25	4100	3290	~~25~~ 32	~~92~~ 118	~~790~~ 920	0.9	~~850~~ 920	~~180~~ 190	2.8	0.4	4	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5.3
Port Hope	100	-21	-23	29	23	33	26	3970	3170	~~23~~ 30	~~94~~ 121	~~760~~ 880	0.9	~~825~~ 900	~~180~~ 190	1.2	0.4	1.7	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4

Port Perry	270	-22	-24	30	23	34	26	4260	3430	~~25~~ 32	~~97~~ 125	~~720~~ 830	0.8	~~850~~ 930	~~140~~ 150	2.4	0.4	3.5	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-7	3.4
Port Stanley	180	-15	-17	31	24	35	27	3850	3060	~~25~~ 32	~~92~~ 117	~~940~~ 1070	1.1	~~975~~ 1060	~~180~~ 190	1.2	0.4	1.7	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-5	5
Prescott	90	-23	-25	29	23	33	26	4120	3310	~~25~~ 32	~~103~~ 132	~~770~~ 900	~~0.9~~ 1.0	~~975~~ 1080	180	2.2	0.4	3.1	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-8	3.2
Princeton	280	-18	-20	30	23	34	26	4000	3200	~~25~~ 32	~~97~~ 124	~~810~~ 930	0.9	~~925~~ 1010	~~160~~ 170	1.5	0.4	2.2	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-6	4.2
Raith	475	-34	-37	28	22	32	25	5900	4950	~~23~~ 30	~~97~~ 125	~~570~~ 690	0.8	~~750~~ 840	~~120~~ 130	2.7	0.4	3.8	0.6	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	2.3
Rayside-Balfour (Chelmsford)	270	-28	-30	29	21	33	24	5200	4280	~~25~~ 32	~~92~~ 119	~~650~~ 770	0.8	~~850~~ 930	~~180~~ 190	2.5	0.4	3.5	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-9	3.8
Red Lake	360	-35	-37	28	21	32	26	6220	5290	~~20~~ 26	~~92~~ 120	~~470~~ 560	0.7	~~630~~ 700	~~120~~ 130	2.6	0.3	3.7	0.4	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	3.5
Renfrew	115	-27	-30	30	23	34	26	4900	4020	~~23~~ 30	~~97~~ 125	~~620~~ 740	~~0.8~~ 0.9	~~810~~ 910	140	2.5	0.4	3.5	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	3.5
Richmond Hill	230	-21	-23	31	24	35	27	4000	3200	~~25~~ 32	~~97~~ 125	~~740~~ 860	0.8	~~850~~ 930	~~140~~ 150	1.5	0.4	2.2	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	3.5
Rockland	50	-26	-28	30	23	34	26	4600	3740	~~23~~ 30	~~92~~ 119	~~780~~ 920	~~0.9~~ 1.0	~~950~~ 1050	160	2.4	0.4	3.3	0.6	~~0.31~~ 0.34	~~0.40~~ 0.44	0.67	-8	3.5
Sarnia	190	-16	-18	31	24	34	27	3750	2970	~~25~~ 32	~~100~~ 126	~~750~~ 860	0.9	~~825~~ 910	~~180~~ 190	1.1	0.4	1.6	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.7
Sault Ste. Marie	190	-25	-28	29	22	33	25	4960	4040	~~23~~ 30	~~97~~ 125	~~660~~ 780	~~0.9~~ 1.0	~~950~~ 1030	~~200~~ 210	3.1	0.4	4.5	0.6	~~0.33~~ 0.36	~~0.44~~ 0.48	0.75	-8	4.1
Schreiber	310	-34	-36	27	21	31	24	5960	5010	~~20~~ 26	~~103~~ 134	~~600~~ 730	0.8	~~850~~ 940	~~160~~ 170	3.3	0.4	4.7	0.6	~~0.29~~ 0.32	~~0.39~~ 0.43	0.67	-10	3
Seaforth	310	-17	-19	30	23	34	26	4100	3290	~~25~~ 32	~~108~~ 138	~~810~~ 930	0.9	~~1025~~ 1110	~~160~~ 170	2.5	0.4	3.6	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	5
Shelburne	495	-22	-24	29	23	33	26	4700	3830	~~28~~ 36	~~108~~ 139	~~740~~ 860	0.9	~~900~~ 980	~~150~~ 160	3.1	0.4	4.4	0.6	~~0.31~~ 0.34	~~0.40~~ 0.44	0.67	-7	3.5
Simcoe	210	-17	-19	30	24	34	27	3700	2920	~~28~~ 36	~~113~~ 144	~~860~~ 990	1	~~950~~ 1030	~~160~~ 170	1.3	0.4	1.9	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	4
Sioux Lookout	375	-34	-36	28	22	32	25	5950	5030	~~25~~ 32	~~97~~ 126	~~520~~ 620	0.7	~~710~~ 790	~~100~~ 110	2.6	0.3	3.7	0.4	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-12	3
Smiths Falls	130	-25	-27	30	23	34	26	4540	3690	~~25~~ 32	~~92~~ 118	~~730~~ 860	~~0.8~~ 0.9	~~850~~ 940	140	2.3	0.4	3.3	0.6	~~0.32~~ 0.35	~~0.41~~ 0.45	0.67	-8	2.5
Smithville	185	-16	-18	30	23	34	26	3650	2880	~~23~~ 29	~~108~~ 137	~~800~~ 920	0.9	~~900~~ 980	~~160~~ 170	1.5	0.4	2.2	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-6	4.2
Smooth Rock Falls	235	-34	-36	29	21	33	24	6250	5290	~~20~~ 26	~~92~~ 121	~~560~~ 680	0.8	~~850~~ 950	80	2.7	0.3	3.8	0.4	~~0.25~~ 0.28	~~0.32~~ 0.35	0.5	-11	3.9

Southampton	180	-17	-19	28	22	32	25	4100	3290	~~25~~ 32	~~92~~ 118	~~800~~ 930	1	~~830~~ 900	~~180~~ 190	2.7	0.4	3.9	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5.3
South River	355	-27	-29	29	22	33	25	5090	4190	~~25~~ 32	~~103~~ 132	~~830~~ 980	1	~~975~~ 1060	120	2.8	0.4	3.9	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2.5
St. Catharines	105	-16	-18	30	23	34	26	3540	2780	~~23~~ 29	~~92~~ 117	~~770~~ 890	0.9	~~850~~ 930	~~160~~ 170	1	0.4	1.5	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-5	4.5
St. Marys	310	-18	-20	30	23	34	26	4000	3200	~~28~~ 36	~~108~~ 138	~~820~~ 940	1	~~1025~~ 1110	~~160~~ 180	2.2	0.4	3.2	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.5
St. Thomas	225	-16	-18	31	24	35	27	3780	3000	~~25~~ 32	~~103~~ 131	~~900~~ 1030	1	~~975~~ 1060	~~180~~ 190	1.4	0.4	2	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.7
Stirling	120	-23	-25	30	23	34	26	4220	3400	~~25~~ 32	~~97~~ 124	~~740~~ 850	0.9	~~850~~ 930	~~120~~ 130	1.7	0.4	2.4	0.6	~~0.31~~ 0.34	~~0.40~~ 0.44	0.67	-7	2.2
Stratford	360	-18	-20	29	23	33	26	4050	3240	~~28~~ 36	~~113~~ 144	~~820~~ 940	1	~~1050~~ 1140	~~160~~ 170	2.3	0.4	3.4	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	4.5
Strathroy	225	-17	-19	31	24	35	27	3780	3000	~~25~~ 32	~~103~~ 131	~~770~~ 880	0.9	~~950~~ 1040	~~180~~ 200	1.9	0.4	2.8	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.7
Sturgeon Falls	205	-28	-30	29	21	33	24	5200	4280	~~25~~ 32	~~95~~ 123	~~700~~ 830	0.9	~~910~~ 990	140	2.4	0.4	3.3	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	4.4
Sudbury	275	-28	-30	29	21	33	24	5180	4260	~~25~~ 32	~~97~~ 125	~~650~~ 770	0.8	~~875~~ 950	~~200~~ 210	2.5	0.4	3.6	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-9	4.5
Sundridge	340	-27	-29	29	22	33	25	5080	4180	~~25~~ 32	~~97~~ 125	~~840~~ 990	1	~~975~~ 1060	120	2.8	0.4	3.9	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2.5
Tavistock	340	-19	-21	29	23	33	26	4100	3290	~~28~~ 36	~~113~~ 144	~~820~~ 940	1	~~1010~~ 1100	~~160~~ 170	2.1	0.4	3	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	4.5
Temagami	300	-30	-33	30	22	34	25	5420	4490	~~23~~ 30	~~92~~ 119	~~650~~ 780	0.8	~~875~~ 970	~~120~~ 130	2.6	0.4	3.6	0.6	~~0.29~~ 0.32	~~0.37~~ 0.41	0.61	-10	3.9
Thamesford	280	-19	-21	30	23	34	26	3950	3150	~~28~~ 36	~~108~~ 138	~~820~~ 940	0.9	~~975~~ 1050	~~160~~ 180	1.9	0.4	2.7	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4.4
Thedford	205	-16	-18	31	23	35	26	3710	2930	~~25~~ 32	~~103~~ 131	~~810~~ 930	~~1.0~~ 1.1	~~900~~ 980	~~180~~ 200	2.1	0.4	3.1	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	5
Thunder Bay	210	-31	-33	29	21	33	24	5650	4710	~~23~~ 30	~~108~~ 139	~~560~~ 690	0.8	~~710~~ 790	~~160~~ 180	2.9	0.4	4.2	0.6	~~0.29~~ 0.32	~~0.39~~ 0.43	0.67	-10	3.3
Tillsonburg	215	-17	-19	30	24	34	27	3840	3050	~~25~~ 32	~~103~~ 131	~~880~~ 1000	1	~~980~~ 1060	~~160~~ 170	1.3	0.4	1.9	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	3.5
Timmins	300	-34	-36	29	21	33	24	5940	4990	~~20~~ 26	~~108~~ 141	~~560~~ 680	0.8	~~875~~ 980	100	3.1	0.3	4.3	0.4	~~0.27~~ 0.30	~~0.35~~ 0.39	0.55	-11	3.5
Timmins (Porcupine)	295	-34	-36	29	21	33	24	6000	5050	~~20~~ 26	~~103~~ 135	~~560~~ 680	0.8	~~875~~ 980	100	2.9	0.3	4	0.4	~~0.29~~ 0.32	~~0.37~~ 0.41	0.58	-11	3.5
Toronto Metropolitan Region																								

Etobicoke	160	-20	-22	31	24	35	27	3800	3010	~~26~~ 33	~~108~~ 138	~~720~~ 830	0.8	~~800~~ 880	~~160~~ 170	1.1	0.4	1.6	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4
North York	175	-20	-22	31	24	35	27	3760	2980	~~25~~ 32	~~108~~ 138	~~730~~ 840	0.8	~~850~~ 930	~~150~~ 160	1.2	0.4	1.7	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4
Scarborough	180	-20	-22	31	24	35	27	3800	3010	~~25~~ 32	~~92~~ 118	~~730~~ 840	0.9	~~825~~ 900	~~160~~ 170	1.2	0.4	1.8	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4
Toronto (City Hall)	90	-18	-20	31	23	35	26	3520	2760	~~25~~ 32	~~97~~ 124	~~720~~ 830	0.9	~~820~~ 900	~~160~~ 170	0.9	0.4	1.3	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-5	4
Trenton	80	-22	-24	29	23	33	26	4110	3300	~~23~~ 29	~~97~~ 124	~~760~~ 870	0.9	~~850~~ 920	~~160~~ 170	1.6	0.4	2.3	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4
Trout Creek	330	-27	-29	29	22	33	25	5100	4200	~~25~~ 32	~~103~~ 133	~~780~~ 920	0.9	~~975~~ 1060	120	2.7	0.4	3.7	0.6	~~0.27~~ 0.30	~~0.35~~ 0.39	0.58	-9	2.5
Uxbridge	275	-22	-24	30	23	34	26	4240	3410	~~25~~ 32	~~103~~ 133	~~700~~ 810	0.8	~~850~~ 930	~~140~~ 150	2.4	0.4	3.5	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.68	-7	3.4
Vaughan (Woodbridge)	165	-20	-22	31	24	35	27	4100	3290	~~26~~ 33	~~113~~ 145	~~700~~ 810	0.8	~~800~~ 880	~~140~~ 150	1.1	0.4	1.6	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4
Vittoria	215	-15	-17	30	24	34	27	3680	2900	~~25~~ 32	~~113~~ 143	~~880~~ 1010	1	~~950~~ 1030	~~160~~ 170	1.3	0.4	1.9	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.8
Walkerton	275	-18	-20	30	22	34	25	4300	3470	~~28~~ 36	~~103~~ 132	~~790~~ 920	0.9	~~1025~~ 1110	~~160~~ 170	2.7	0.4	3.9	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-7	3.8
Wallaceburg	180	-16	-18	31	24	34	27	3600	2830	~~28~~ 35	~~97~~ 122	~~760~~ 870	0.9	~~825~~ 910	~~180~~ 190	0.9	0.4	1.3	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	4.5
Waterloo	330	-19	-21	29	23	33	26	4200	3380	~~28~~ 36	~~119~~ 152	~~780~~ 900	0.9	~~925~~ 1010	~~160~~ 170	2	0.4	2.9	0.6	~~0.29~~ 0.32	~~0.37~~ 0.41	0.61	-6	4.5
Watford	240	-17	-19	31	24	35	27	3740	2960	~~25~~ 32	~~108~~ 137	~~790~~ 900	0.9	~~950~~ 1040	~~160~~ 180	1.9	0.4	2.8	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.5
Wawa	290	-34	-36	26	21	30	24	5840	4900	~~20~~ 26	~~93~~ 120	~~725~~ 880	0.9	~~950~~ 1040	~~160~~ 170	3.4	0.4	4.8	0.6	~~0.30~~ 0.33	~~0.39~~ 0.43	0.65	-10	3.5
Welland	180	-15	-17	30	23	34	26	3670	2900	~~23~~ 29	~~103~~ 131	~~840~~ 970	1	~~975~~ 1070	~~160~~ 170	2	0.4	3	0.6	~~0.34~~ 0.37	~~0.43~~ 0.47	0.69	-6	4
West Lorne	215	-16	-18	31	24	35	27	3700	2920	~~28~~ 35	~~103~~ 130	~~840~~ 960	1	~~900~~ 980	~~180~~ 190	1.3	0.4	1.9	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	5
Whitby	85	-20	-22	30	23	34	26	3820	3030	~~23~~ 30	~~86~~ 110	~~760~~ 880	0.9	~~850~~ 930	~~160~~ 170	1.2	0.4	1.8	0.6	~~0.37~~ 0.41	~~0.48~~ 0.53	0.8	-6	4
Whitby (Brooklin)	160	-20	-22	30	23	34	26	4010	3210	~~23~~ 30	~~86~~ 110	~~770~~ 890	0.9	~~850~~ 930	~~140~~ 150	1.9	0.4	2.8	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.74	-6	3.8
White River	375	-39	-42	28	21	32	24	6150	5200	~~20~~ 26	~~92~~ 120	~~575~~ 700	0.8	~~825~~ 910	~~100~~ 110	3.6	0.4	5	0.6	~~0.22~~ 0.24	~~0.30~~ 0.33	0.52	-11	3
Wiarton	185	-19	-21	29	22	33	25	4300	3470	~~25~~ 32	~~103~~ 132	~~740~~ 870	0.9	~~1000~~ 1070	~~180~~ 190	2.7	0.4	3.9	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4.1

Windsor	185	-16	-18	32	24	35	27	3400	2650	~~28~~ 35	~~103~~ 130	~~800~~ 910	0.9	~~900~~ 990	~~180~~ 190	0.8	0.4	1.2	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-5	5
Wingham	310	-18	-20	30	23	34	26	4220	3400	~~28~~ 36	~~108~~ 138	~~780~~ 900	0.9	~~1050~~ 1140	~~160~~ 170	2.6	0.4	3.8	0.6	~~0.36~~ 0.40	~~0.46~~ 0.51	0.75	-6	4
Woodstock	300	-19	-21	30	23	34	26	3910	3110	~~28~~ 36	~~113~~ 144	~~830~~ 950	0.9	~~930~~ 1010	~~160~~ 180	1.9	0.4	2.7	0.6	~~0.34~~ 0.37	~~0.44~~ 0.48	0.73	-6	4.2
Wyoming	215	-16	-18	31	24	34	27	3700	2920	~~25~~ 32	~~103~~ 130	~~815~~ 930	0.9	~~900~~ 990	~~180~~ 200	1.6	0.4	2.4	0.6	~~0.37~~ 0.41	~~0.47~~ 0.52	0.76	-6	4.2
Québec																								
Acton Vale	95	-24	-27	30	23	34	26	4620	3790	~~21~~ 27	~~107~~ 138	~~860~~ 1010	~~1.0~~ 1.1	~~1050~~ 1170	180	2.3	0.4	3.4	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3.5
Alma	110	-31	-33	28	22	32	25	5800	4860	~~20~~ 26	~~91~~ 119	~~700~~ 850	~~0.9~~ 1.0	~~950~~ 1070	~~160~~ 170	3.3	0.4	4.6	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-11	3.8
Amos	295	-34	-36	28	21	32	24	6160	5210	~~20~~ 26	~~91~~ 119	~~670~~ 810	0.9	~~920~~ 1030	100	3.2	0.3	4.3	0.4	~~0.25~~ 0.26	~~0.32~~ 0.34	0.47	-11	3.8
Aylmer	90	-25	-28	30	23	34	26	4520	3620	~~23~~ 30	~~91~~ 117	~~730~~ 870	~~0.8~~ 0.9	~~900~~ 1000	160	2.5	0.4	3.6	0.6	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3.5
Baie-Comeau	60	-27	-29	25	19	29	22	6020	5070	~~16~~ 21	~~91~~ 119	~~680~~ 850	~~1.0~~ 1.1	~~1000~~ 1140	~~220~~ 240	4.3	0.4	6.2	0.6	~~0.39~~ 0.41	~~0.50~~ 0.53	0.75	-9	4.8
Baie-Saint-Paul	20	-27	-29	28	21	32	24	5280	4350	~~18~~ 23	~~102~~ 133	~~730~~ 900	~~0.9~~ 1.0	~~1000~~ 1150	~~180~~ 200	3.4	0.6	4.8	0.8	~~0.37~~ 0.39	~~0.48~~ 0.50	0.73	-10	3.5
Beauport	45	-26	-29	28	22	32	25	5100	4180	~~20~~ 26	~~107~~ 140	~~980~~ 1180	~~1.1~~ 1.2	~~1200~~ 1340	~~200~~ 210	3.4	0.6	4.8	0.8	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-9	4
Bedford	55	-24	-26	29	23	33	26	4420	3610	~~23~~ 29	~~91~~ 117	~~880~~ 1040	~~1.0~~ 1.1	~~1260~~ 1410	160	2.1	0.4	3.1	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	2.8
Beloeil	25	-24	-26	30	23	34	26	4500	3680	~~23~~ 30	~~91~~ 118	~~840~~ 1000	~~1.0~~ 1.1	~~1025~~ 1150	~~180~~ 190	2.4	0.4	3.6	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	3.5
Brome	210	-25	-27	29	23	33	26	4730	3880	~~23~~ 29	~~96~~ 123	~~990~~ 1170	~~1.1~~ 1.2	~~1240~~ 1380	160	2.5	0.4	3.6	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	3
Brossard	15	-24	-26	30	23	34	26	4420	3610	~~23~~ 30	~~91~~ 118	~~800~~ 960	~~0.9~~ 1.0	~~1025~~ 1160	~~180~~ 190	2.4	0.4	3.6	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	4.3
Buckingham	130	-26	-28	30	23	33	26	4880	3970	~~23~~ 30	~~91~~ 118	~~810~~ 960	~~0.9~~ 1.0	~~990~~ 1100	160	2.6	0.4	3.6	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	2.2
Campbell's Bay	115	-28	-30	30	23	34	26	4900	3980	~~23~~ 30	~~96~~ 124	~~700~~ 840	~~0.8~~ 0.9	~~850~~ 950	140	2.6	0.4	3.6	0.6	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-9	2.8
Chambly	20	-24	-26	30	23	34	26	4450	3630	~~23~~ 30	~~91~~ 118	~~850~~ 1010	~~1.0~~ 1.1	~~1000~~ 1130	~~160~~ 170	2.3	0.4	3.4	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	3.5
Coaticook	295	-25	-27	28	22	32	25	4750	3840	~~23~~ 29	~~96~~ 123	~~860~~ 1020	~~1.0~~ 1.1	~~1060~~ 1170	~~160~~ 170	2.3	0.6	3.3	0.9	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3

Contrecoeur	10	-25	-27	30	23	34	26	4500	3680	~~20~~ 26	~~102~~ 133	~~810~~ 970	~~0.9~~ 1.0	~~1000~~ 1120	~~180~~ 190	2.8	0.4	4.1	0.6	~~0.34~~ 0.36	~~0.43~~ 0.45	0.66	-8	3.5
Cowansville	120	-25	-27	29	23	33	26	4540	3710	~~23~~ 30	~~91~~ 117	~~940~~ 1110	~~1.0~~ 1.1	~~1150~~ 1280	160	2.3	0.4	3.4	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	2.8
Deux-Montagnes	25	-25	-27	29	23	33	26	4440	3630	~~23~~ 30	~~96~~ 125	~~820~~ 980	~~0.9~~ 1.0	~~1025~~ 1160	~~160~~ 170	2.4	0.4	3.5	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	3.5
Dolbeau	120	-32	-34	28	22	32	25	6250	5290	~~22~~ 29	~~91~~ 120	~~670~~ 820	~~0.9~~ 1.0	~~900~~ 1020	~~140~~ 150	3.5	0.3	4.8	0.4	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-12	3.8
Drummondville	85	-26	-28	30	23	34	26	4700	3860	~~22~~ 29	~~107~~ 139	~~870~~ 1030	~~1.0~~ 1.1	~~1075~~ 1200	180	2.5	0.4	3.6	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	3.8
Farnham	60	-24	-26	29	23	33	26	4500	3680	~~23~~ 30	~~96~~ 123	~~910~~ 1080	~~1.0~~ 1.1	~~1050~~ 1180	180	2.5	0.4	3.7	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	2.8
Fort-Coulonge	110	-28	-30	30	23	34	26	4950	4030	~~23~~ 30	~~96~~ 124	~~720~~ 860	0.9	~~900~~ 1010	100	2.5	0.4	3.5	0.6	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-9	3
Gagnon	545	-34	-36	24	19	28	22	7600	6600	~~17~~ 22	~~80~~ 105	~~580~~ 730	~~0.9~~ 1.0	~~925~~ 1060	~~140~~ 160	4.6	0.4	6.4	0.6	~~0.30~~ 0.32	~~0.39~~ 0.41	0.6	-14	3.7
Gaspé	55	-25	-26	26	20	30	23	5500	4570	~~19~~ 25	~~118~~ 153	~~760~~ 970	~~1.0~~ 1.1	~~1100~~ 1260	~~300~~ 330	4.3	0.6	6.2	0.9	~~0.37~~ 0.39	~~0.48~~ 0.50	0.73	-8	3.5
Gatineau	95	-25	-28	30	23	34	26	4600	3690	~~23~~ 30	~~91~~ 118	~~790~~ 940	~~0.9~~ 1.0	~~950~~ 1060	160	2.5	0.4	3.6	0.6	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3.2
Gracefield	175	-28	-31	30	23	34	26	5080	4160	~~23~~ 30	~~96~~ 124	~~700~~ 830	0.9	~~950~~ 1050	140	2.6	0.4	3.7	0.6	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-9	2.2
Granby	120	-25	-27	29	23	33	26	4500	3680	~~23~~ 30	~~102~~ 131	~~940~~ 1110	~~1.0~~ 1.1	~~1175~~ 1310	160	2.3	0.4	3.4	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	2.5
Harrington Harbour	30	-27	-29	19	16	23	20	6150	5200	~~15~~ 20	~~96~~ 127	~~900~~ 1120	~~1.2~~ 1.4	~~1150~~ 1280	~~300~~ 330	4.9	0.6	7	0.9	~~0.56~~ 0.59	~~0.72~~ 0.76	1.03	-9	5
Havre-Saint-Pierre	5	-27	-29	22	18	26	22	6100	5150	~~15~~ 20	~~96~~ 126	~~780~~ 960	~~1.1~~ 1.2	~~1125~~ 1250	~~300~~ 340	4.1	0.6	5.9	0.9	~~0.49~~ 0.51	~~0.63~~ 0.66	0.95	-9	5
Hemmingford	75	-24	-26	30	23	34	26	4380	3570	~~23~~ 29	~~91~~ 116	~~770~~ 920	~~0.9~~ 1.0	~~1025~~ 1160	160	2.4	0.4	3.6	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	3
Hull	65	-25	-28	30	23	34	26	4550	3650	~~23~~ 30	~~91~~ 117	~~730~~ 870	~~0.8~~ 0.9	~~900~~ 1000	160	2.4	0.4	3.5	0.6	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3.2
Iberville	35	-24	-26	29	23	33	26	4450	3630	~~23~~ 30	~~91~~ 118	~~880~~ 1050	~~1.0~~ 1.1	~~1010~~ 1140	160	2.2	0.4	3.3	0.6	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3
Inukjuak	5	-36	-38	21	15	26	19	9150	8100	~~9~~ 13	~~54~~ 79	~~270~~ 370	0.9	~~420~~ 510	~~240~~ 270	4.1	0.2	5.9	0.3	~~0.37~~ 0.39	~~0.48~~ 0.50	0.69	-15	5.4
Joliette	45	-26	-28	29	23	33	26	4720	3870	~~21~~ 27	~~102~~ 133	~~790~~ 940	~~0.9~~ 1.0	~~1000~~ 1120	~~160~~ 170	3.1	0.4	4.4	0.6	~~0.28~~ 0.29	~~0.36~~ 0.38	0.57	-8	2.5
Kuujjuaq	25	-37	-39	24	17	29	21	8550	7520	~~9~~ 13	~~54~~ 75	~~280~~ 380	0.8	~~525~~ 640	~~260~~ 290	4.8	0.2	7.1	0.3	~~0.47~~ 0.49	~~0.60~~ 0.63	0.85	-14	4

Kuujjuarapik	20	-36	-38	25	17	29	20	7990	6980	~~12~~ 17	~~80~~ 113	~~410~~ 540	0.9	~~610~~ 720	~~180~~ 200	4.2	0.3	6	0.4	~~0.37~~ 0.39	~~0.48~~ 0.50	0.69	-13	4.6
Lachute	65	-26	-28	29	23	33	26	4640	4570	~~23~~ 30	~~96~~ 125	~~910~~ 1080	~~1.0~~ 1.1	~~1075~~ 1200	~~160~~ 170	2.4	0.4	3.4	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	2.8
Lac-Mégantic	420	-27	-29	27	22	31	25	5180	4470	~~23~~ 29	~~91~~ 117	~~790~~ 950	~~0.9~~ 1.0	~~1025~~ 1150	160	3.2	0.6	4.6	0.9	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3.5
La Malbaie	25	-26	-28	28	21	32	24	5400	3800	~~18~~ 23	~~102~~ 133	~~640~~ 790	~~0.8~~ 0.9	~~900~~ 1040	~~180~~ 200	3.1	0.6	4.3	0.8	~~0.37~~ 0.39	~~0.48~~ 0.50	0.73	-9	3.5
La Pocatière	55	-24	-26	28	22	32	25	5160	4240	~~18~~ 23	~~102~~ 133	~~675~~ 830	~~0.9~~ 1.0	~~965~~ 1110	~~180~~ 190	3.2	0.6	4.5	0.9	~~0.39~~ 0.41	~~0.50~~ 0.53	0.75	-8	4.3
La Tuque	165	-30	-32	29	22	33	25	5500	4260	~~23~~ 30	~~96~~ 125	~~720~~ 870	~~0.9~~ 1.0	~~930~~ 1040	~~160~~ 170	3.4	0.4	4.7	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-10	2.1
Lennoxville	155	-28	-30	29	22	33	25	4700	3790	~~23~~ 29	~~96~~ 123	~~850~~ 1000	~~1.0~~ 1.1	~~1100~~ 1220	160	2.1	0.6	3.1	0.9	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-8	2.9
Léry	30	-24	-26	29	23	33	26	4420	3610	~~23~~ 30	~~91~~ 118	~~800~~ 960	~~0.9~~ 1.0	~~950~~ 1070	~~180~~ 190	2.3	0.4	3.4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.5
Loretteville	100	-26	-29	28	22	32	25	5200	4280	~~20~~ 26	~~102~~ 133	~~980~~ 1180	~~1.1~~ 1.2	~~1225~~ 1370	~~200~~ 210	3.7	0.6	5.1	0.8	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-9	3
Louiseville	15	-25	-28	29	23	33	26	4900	4030	~~20~~ 26	~~102~~ 134	~~800~~ 960	~~0.9~~ 1.0	~~1025~~ 1150	160	2.9	0.4	4.1	0.6	~~0.34~~ 0.36	~~0.43~~ 0.45	0.66	-9	3
Magog	215	-26	-28	29	23	33	26	4730	3880	~~23~~ 29	~~96~~ 123	~~860~~ 1010	~~1.0~~ 1.1	~~1125~~ 1250	160	2.3	0.4	3.4	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3.5
Malartic	325	-33	-36	29	21	33	24	6200	5240	~~20~~ 26	~~86~~ 112	~~640~~ 770	0.8	~~900~~ 1000	~~100~~ 110	3.3	0.3	4.4	0.4	~~0.25~~ 0.26	~~0.32~~ 0.34	0.47	-11	3.6
Maniwaki	180	-30	-32	29	22	33	25	5280	4350	~~23~~ 30	~~96~~ 124	~~700~~ 830	0.9	~~900~~ 990	~~100~~ 110	2.4	0.4	3.4	0.6	~~0.24~~ 0.25	~~0.31~~ 0.33	0.49	-9	2.2
Masson	50	-26	-28	30	23	33	26	4610	3700	~~23~~ 30	~~91~~ 118	~~790~~ 930	~~0.9~~ 1.0	~~975~~ 1080	160	2.4	0.4	3.3	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	3.2
Matane	5	-24	-26	24	20	28	23	5510	4580	~~18~~ 23	~~91~~ 119	~~640~~ 800	~~0.9~~ 1.0	~~1050~~ 1200	~~220~~ 250	3.7	0.4	5.3	0.6	~~0.43~~ 0.45	~~0.55~~ 0.58	0.82	-8	6
Mont-Joli	90	-24	-26	26	21	30	24	5370	4440	~~18~~ 23	~~91~~ 119	~~610~~ 760	~~0.8~~ 0.9	~~920~~ 1050	~~220~~ 240	4.1	0.4	6	0.6	~~0.41~~ 0.43	~~0.52~~ 0.55	0.77	-8	5.9
Mont-Laurier	225	-29	-32	29	22	33	25	5320	4390	~~24~~ 31	~~102~~ 132	~~790~~ 940	0.9	~~1000~~ 1110	~~160~~ 170	2.6	0.4	3.6	0.6	~~0.23~~ 0.24	~~0.30~~ 0.32	0.47	-10	2.2
Montmagny	10	-25	-28	28	22	32	25	5090	4170	~~20~~ 26	~~102~~ 133	~~880~~ 1070	~~1.0~~ 1.1	~~1090~~ 1230	~~180~~ 190	2.9	0.6	4	0.8	~~0.37~~ 0.39	~~0.47~~ 0.49	0.73	-9	4
Montréal Region																								
Beaconsfield	25	-24	-26	30	23	34	26	4440	3630	~~23~~ 30	~~91~~ 118	~~780~~ 930	~~0.9~~ 1.0	~~950~~ 1070	~~180~~ 190	2.3	0.4	3.4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.5

Dorval	25	-24	-26	30	23	34	26	4400	3590	~~23~~ 30	~~91~~ 118	~~760~~ 910	~~0.9~~ 1.0	~~940~~ 1060	~~180~~ 190	2.4	0.4	3.3	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	4
Laval	35	-24	-26	29	23	33	26	4500	3680	~~23~~ 30	~~96~~ 125	~~830~~ 990	~~0.9~~ 1.0	~~1025~~ 1160	~~160~~ 170	2.6	0.4	3.9	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.5
Montréal (City Hall)	20	-23	-26	30	23	34	26	4200	3410	~~23~~ 30	~~96~~ 125	~~830~~ 990	~~0.9~~ 1.0	~~1025~~ 1160	~~180~~ 190	2.6	0.4	4	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	3.5
Montréal-Est	25	-23	-26	30	23	34	26	4470	3650	~~23~~ 30	~~96~~ 125	~~830~~ 990	~~0.9~~ 1.0	~~1025~~ 1150	~~180~~ 190	2.7	0.4	4	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	3.5
Montréal-Nord	20	-24	-26	30	23	34	26	4470	3650	~~23~~ 30	~~96~~ 125	~~830~~ 990	~~0.9~~ 1.0	~~1025~~ 1150	~~160~~ 170	2.6	0.4	3.9	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.5
Outremont	105	-23	-26	30	23	34	26	4300	3500	~~23~~ 30	~~96~~ 125	~~820~~ 980	~~0.9~~ 1.0	~~1025~~ 1160	~~180~~ 190	2.8	0.4	4.2	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	3.5
Pierrefonds	25	-24	-26	30	23	34	26	4430	3620	~~23~~ 30	~~96~~ 125	~~800~~ 960	~~0.9~~ 1.0	~~960~~ 1080	~~180~~ 190	2.4	0.4	3.5	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.5
Sainte-Anne-de-Bellevue	35	-24	-26	29	23	33	26	4460	3640	~~23~~ 30	~~96~~ 125	~~780~~ 940	~~0.9~~ 1.0	~~960~~ 1080	~~180~~ 190	2.3	0.4	3.4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.3
Saint-Lambert	15	-23	-26	30	23	34	26	4400	3590	~~23~~ 30	~~96~~ 125	~~810~~ 970	~~0.9~~ 1.0	~~1050~~ 1180	~~160~~ 170	2.5	0.4	3.8	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	4
Saint-Laurent	45	-23	-26	30	23	34	26	4270	3470	~~23~~ 30	~~96~~ 125	~~790~~ 940	~~0.9~~ 1.0	~~950~~ 1070	~~160~~ 170	2.5	0.4	3.7	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	3.5
Verdun	20	-23	-26	30	23	34	26	4200	3410	~~23~~ 30	~~91~~ 118	~~780~~ 930	~~0.9~~ 1.0	~~1025~~ 1160	~~180~~ 190	2.5	0.4	3.8	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	3.5
Nicolet (Gentilly)	15	-25	-28	29	23	33	26	4900	3980	~~20~~ 26	~~107~~ 140	~~860~~ 1030	~~1.0~~ 1.1	~~1025~~ 1150	~~160~~ 170	2.8	0.4	4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-9	3.5
Nitchequon	545	-39	-41	23	19	27	22	8100	7080	~~15~~ 20	~~70~~ 93	~~500~~ 640	~~0.9~~ 1.0	~~825~~ 960	~~140~~ 160	3.5	0.3	4.6	0.4	~~0.29~~ 0.30	~~0.37~~ 0.39	0.55	-14	3.7
Noranda	305	-33	-36	29	21	33	24	6050	5100	~~20~~ 26	~~91~~ 119	~~650~~ 780	0.8	~~875~~ 970	~~100~~ 110	3.2	0.3	4.3	0.4	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-11	3.5
Percé	5	-21	-24	25	19	29	23	5400	4470	~~16~~ 21	~~107~~ 139	~~1000~~ 1260	~~1.2~~ 1.3	~~1300~~ 1480	~~300~~ 330	3.8	0.6	5.5	0.9	~~0.49~~ 0.51	~~0.63~~ 0.66	0.95	-7	5.1
Pincourt	25	-24	-26	29	23	33	26	4480	3660	~~23~~ 30	~~96~~ 124	~~780~~ 940	~~0.9~~ 1.0	~~950~~ 1070	~~180~~ 190	2.3	0.4	3.4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.3
Plessisville	145	-26	-28	29	23	33	26	5100	4180	~~21~~ 27	~~107~~ 139	~~890~~ 1060	~~1.0~~ 1.1	~~1150~~ 1280	180	2.8	0.6	4.1	0.9	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	3.2
Port-Cartier	20	-28	-30	25	19	29	22	6060	5110	~~15~~ 20	~~106~~ 139	~~730~~ 940	~~1.0~~ 1.1	~~1125~~ 1280	~~300~~ 330	4.1	0.4	5.8	0.6	~~0.42~~ 0.44	~~0.54~~ 0.57	0.8	-9	4
Puvirnituq	5	-36	-38	23	16	29	21	9200	8150	~~7~~ 10	~~54~~ 79	~~210~~ 300	0.9	~~375~~ 460	~~240~~ 280	4.5	0.2	6.5	0.3	~~0.47~~ 0.49	~~0.60~~ 0.63	0.85	-16	5.4
Québec City Region																								

Ancienne-Lorette	35	-25	-28	28	23	32	26	5130	4210	~~20~~ 26	~~102~~ 133	~~940~~ 1130	~~1.1~~ 1.2	~~1200~~ 1340	~~200~~ 210	3.4	0.6	4.7	0.8	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	4
Lévis	50	-25	-28	28	22	32	25	5050	4130	~~20~~ 26	~~107~~ 140	~~920~~ 1110	~~1.0~~ 1.1	~~1200~~ 1340	~~160~~ 170	3.3	0.6	4.6	0.8	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	4
Québec	120	-25	-28	28	22	32	25	5080	4160	~~20~~ 26	~~107~~ 140	~~925~~ 1110	~~1.0~~ 1.1	~~1210~~ 1350	~~200~~ 210	3.6	0.6	5	0.8	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3.5
Sainte-Foy	115	-25	-28	28	23	32	26	5100	4180	~~20~~ 26	~~107~~ 140	~~940~~ 1130	~~1.1~~ 1.2	~~1200~~ 1340	~~180~~ 190	3.7	0.6	5.1	0.8	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3.5
Sillery	10	-25	-28	28	23	32	26	5070	4150	~~20~~ 26	~~107~~ 140	~~930~~ 1120	~~1.1~~ 1.2	~~1200~~ 1340	~~200~~ 210	3.1	0.6	4.2	0.8	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3.5
Richmond	150	-25	-27	29	22	33	25	4700	3860	~~23~~ 30	~~96~~ 124	~~870~~ 1030	~~1.0~~ 1.1	~~1060~~ 1170	160	2.4	0.6	3.5	0.9	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-9	3.5
Rimouski	30	-25	-27	26	20	30	23	5300	4370	~~18~~ 23	~~91~~ 119	~~640~~ 800	~~0.8~~ 0.9	~~890~~ 1020	~~200~~ 220	3.8	0.4	5.5	0.6	~~0.41~~ 0.43	~~0.52~~ 0.55	0.77	-8	5
Rivière-du-Loup	55	-25	-27	26	21	30	24	5380	4450	~~18~~ 23	~~91~~ 119	~~660~~ 820	~~0.8~~ 0.9	~~900~~ 1040	~~180~~ 190	3.5	0.6	5	0.9	~~0.39~~ 0.41	~~0.50~~ 0.53	0.75	-8	4
Roberval	100	-31	-33	28	21	32	24	5750	4810	~~22~~ 29	~~91~~ 119	~~590~~ 720	0.8	~~910~~ 1030	~~140~~ 150	3.5	0.3	5	0.4	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-11	3.8
Rock Island	160	-25	-27	29	23	33	26	4850	3990	~~23~~ 29	~~91~~ 116	~~900~~ 1060	~~1.0~~ 1.1	~~1125~~ 1250	160	2	0.4	2.9	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3
Rosemère	25	-24	-26	29	23	33	26	4550	3720	~~23~~ 30	~~96~~ 125	~~840~~ 1000	~~1.0~~ 1.1	~~1050~~ 1180	~~160~~ 170	2.6	0.4	3.8	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	3.3
Rouyn	300	-33	-36	29	21	33	24	6050	5100	~~20~~ 26	~~91~~ 119	~~650~~ 780	0.8	~~900~~ 1000	~~100~~ 110	3.1	0.3	4.2	0.4	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-11	3.5
Saguenay	10	-30	-32	28	22	32	25	5700	4760	~~18~~ 23	~~86~~ 112	~~710~~ 860	~~0.9~~ 1.0	~~975~~ 1090	~~140~~ 150	2.7	0.4	3.7	0.6	~~0.28~~ 0.29	~~0.36~~ 0.38	0.54	-10	4.2
Saguenay (Bagotville)	5	-31	-33	28	21	32	24	5700	4760	~~18~~ 23	~~86~~ 112	~~690~~ 840	~~0.9~~ 1.0	~~925~~ 1040	~~160~~ 180	2.7	0.4	3.7	0.6	~~0.30~~ 0.32	~~0.38~~ 0.40	0.56	-10	4.2
Saguenay (Jonquière)	135	-30	-32	28	22	32	25	5650	4710	~~18~~ 23	~~86~~ 112	~~710~~ 860	~~0.9~~ 1.0	~~925~~ 1040	~~160~~ 170	3.1	0.4	4.2	0.5	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-10	4.2
Saguenay (Kénogami)	140	-30	-32	28	22	32	25	5650	4710	~~18~~ 23	~~86~~ 112	~~690~~ 840	~~0.9~~ 1.0	~~925~~ 1040	~~160~~ 170	3.1	0.4	4.2	0.5	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-10	4.2
Sainte-Agathe-des-Monts	360	-28	-30	28	22	32	25	5390	4470	~~23~~ 30	~~96~~ 124	~~820~~ 970	~~1.0~~ 1.1	~~1170~~ 1290	140	3.4	0.4	4.6	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	2.2
Saint-Eustache	35	-25	-27	29	23	33	26	4500	3680	~~23~~ 30	~~96~~ 125	~~820~~ 980	~~0.9~~ 1.0	~~1025~~ 1160	~~160~~ 170	2.4	0.4	3.5	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	3.3
Saint-Félicien	105	-32	-34	28	22	32	25	5850	4900	~~22~~ 29	~~91~~ 119	~~570~~ 700	0.8	~~900~~ 1020	~~140~~ 150	3.5	0.3	4.9	0.4	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-11	3.8
Saint-Georges-de-Cacouna	35	-25	-27	26	21	30	24	5400	4470	~~18~~ 23	~~91~~ 119	~~660~~ 820	~~0.9~~ 1.0	~~925~~ 1070	~~180~~ 190	3.2	0.6	4.6	0.9	~~0.39~~ 0.41	~~0.50~~ 0.53	0.75	-8	4

Saint-Hubert	25	-24	-26	30	23	34	26	4490	3670	~~23~~ 30	~~91~~ 118	~~820~~ 980	~~0.9~~ 1.0	~~1020~~ 1150	~~180~~ 190	2.5	0.4	3.7	0.6	~~0.34~~ 0.36	~~0.44~~ 0.46	0.69	-8	4.6
Saint-Hubert-de-Rivière-du-Loup	310	-26	-28	26	21	30	24	5520	4590	~~22~~ 29	~~91~~ 118	~~740~~ 910	~~0.9~~ 1.0	~~1025~~ 1170	~~180~~ 190	4.4	0.6	6.3	0.9	~~0.31~~ 0.33	~~0.40~~ 0.42	0.61	-8	3
Saint-Hyacinthe	35	-24	-27	30	23	34	26	4500	3680	~~21~~ 27	~~91~~ 118	~~840~~ 1000	~~1.0~~ 1.1	~~1030~~ 1150	160	2.3	0.4	3.3	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3.5
Saint-Jean-sur-Richelieu	35	-24	-26	29	23	33	26	4450	3630	~~23~~ 30	~~91~~ 118	~~880~~ 1050	~~1.0~~ 1.1	~~1010~~ 1140	180	2.2	0.4	3.3	0.6	~~0.32~~ 0.34	~~0.41~~ 0.43	0.64	-8	3
Saint-Jérôme	95	-26	-28	29	23	33	26	4820	3960	~~23~~ 30	~~96~~ 125	~~830~~ 990	~~1.0~~ 1.1	~~1025~~ 1150	~~160~~ 170	2.7	0.4	3.9	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	2.5
Saint-Jovite	230	-29	-31	28	22	32	25	5250	4340	~~23~~ 30	~~96~~ 124	~~810~~ 960	~~1.0~~ 1.1	~~1025~~ 1130	160	2.8	0.4	3.8	0.5	~~0.26~~ 0.27	~~0.33~~ 0.35	0.51	-9	2.2
Saint-Lazare / Hudson	60	-24	-26	30	23	34	26	4520	3700	~~23~~ 30	~~96~~ 124	~~750~~ 900	~~0.9~~ 1.0	~~950~~ 1070	~~180~~ 190	2.3	0.4	3.4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3
Saint-Nicolas	65	-25	-28	28	22	32	25	4990	4070	~~20~~ 26	~~102~~ 133	~~890~~ 1070	~~1.0~~ 1.1	~~1200~~ 1340	~~200~~ 210	3.5	0.6	4.9	0.8	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-9	4
Salaberry-de-Valleyfield	50	-23	-25	29	23	33	26	4400	3590	~~23~~ 30	~~96~~ 124	~~760~~ 910	~~0.9~~ 1.0	~~900~~ 1020	180	2.3	0.4	3.4	0.6	~~0.33~~ 0.35	~~0.42~~ 0.44	0.65	-8	3.1
Schefferville	550	-37	-39	24	16	28	20	8550	7520	~~13~~ 17	~~64~~ 86	~~410~~ 540	0.8	~~800~~ 950	~~180~~ 200	4.5	0.3	6.4	0.4	~~0.33~~ 0.35	~~0.42~~ 0.44	0.59	-15	4.2
Senneterre	310	-34	-36	29	21	33	24	6180	5220	~~22~~ 29	~~91~~ 119	~~740~~ 890	0.9	~~925~~ 1030	~~100~~ 110	3.3	0.3	4.6	0.4	~~0.25~~ 0.26	~~0.32~~ 0.34	0.47	-11	3.8
Sept-Îles	5	-29	-31	24	18	28	22	6200	5240	~~15~~ 20	~~106~~ 139	~~760~~ 960	~~1.0~~ 1.1	~~1125~~ 1270	~~300~~ 330	4.1	0.4	6	0.6	~~0.42~~ 0.44	~~0.54~~ 0.57	0.8	-9	3.9
Shawinigan	60	-26	-29	29	23	33	26	5050	4130	~~22~~ 29	~~102~~ 133	~~820~~ 980	~~1.0~~ 1.1	~~1050~~ 1180	~~180~~ 190	3.1	0.4	4.3	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	2.2
Shawville	170	-27	-30	30	23	34	26	4880	3970	~~23~~ 30	~~96~~ 124	~~670~~ 800	~~0.8~~ 0.9	~~880~~ 990	160	2.8	0.4	4	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	2.8
Sherbrooke	185	-28	-30	29	23	33	26	4700	3790	~~23~~ 29	~~96~~ 123	~~900~~ 1060	~~1.0~~ 1.1	~~1100~~ 1220	160	2.2	0.6	3.2	0.9	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-8	3.1
Sorel	10	-25	-27	29	23	33	26	4550	3720	~~20~~ 26	~~102~~ 133	~~800~~ 960	~~0.9~~ 1.0	~~975~~ 1100	~~180~~ 190	2.8	0.4	4.1	0.6	~~0.34~~ 0.36	~~0.43~~ 0.45	0.66	-8	3.5
Sutton	185	-25	-27	29	23	33	26	4600	3770	~~23~~ 29	~~96~~ 123	~~990~~ 1170	~~1.1~~ 1.2	~~1260~~ 1400	160	2.4	0.4	3.5	0.6	~~0.29~~ 0.30	~~0.37~~ 0.39	0.58	-8	2.8
Tadoussac	65	-26	-28	27	21	31	24	5450	4520	~~18~~ 23	~~96~~ 125	~~700~~ 880	~~0.9~~ 1.0	~~1000~~ 1150	~~180~~ 190	3.7	0.4	5.3	0.6	~~0.41~~ 0.43	~~0.52~~ 0.55	0.77	-10	6.9
Témiscaming	240	-30	-32	30	22	34	25	5020	4100	~~23~~ 30	~~96~~ 124	~~730~~ 870	0.9	~~940~~ 1030	100	2.5	0.4	3.3	0.5	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-9	2.7
Terrebonne	20	-25	-27	29	23	33	26	4500	3680	~~23~~ 30	~~96~~ 124	~~830~~ 990	~~0.9~~ 1.0	~~1025~~ 1150	~~160~~ 170	2.6	0.4	3.8	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	3.5

Thetford Mines	330	-26	-28	28	22	32	25	5120	4200	~~22~~ 28	~~107~~ 138	~~950~~ 1130	~~1.1~~ 1.2	~~1230~~ 1370	160	3.5	0.6	5	0.9	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	3.2
Thurso	50	-26	-28	30	23	34	26	4820	3910	~~23~~ 30	~~91~~ 118	~~800~~ 940	~~0.9~~ 1.0	~~950~~ 1050	160	2.4	0.4	3.3	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	2.5
Trois-Rivières	25	-25	-28	29	23	33	26	4900	3980	~~20~~ 26	~~107~~ 140	~~860~~ 1030	~~1.0~~ 1.1	~~1050~~ 1180	~~180~~ 190	2.8	0.4	4	0.6	~~0.34~~ 0.36	~~0.43~~ 0.45	0.66	-9	3.1
Val-des-Sources	245	-26	-28	29	22	33	25	4800	3890	~~23~~ 30	~~96~~ 124	~~870~~ 1030	~~1.0~~ 1.1	~~1050~~ 1160	160	2.8	0.6	4.1	0.9	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	3.4
Val-d'Or	310	-33	-36	29	21	33	24	6180	5220	~~20~~ 26	~~86~~ 113	~~640~~ 770	0.8	~~925~~ 1030	~~100~~ 110	3.4	0.3	4.7	0.4	~~0.25~~ 0.26	~~0.32~~ 0.34	0.47	-11	3.8
Varennes	15	-24	-26	30	23	34	26	4500	3680	~~23~~ 30	~~96~~ 125	~~810~~ 970	~~0.9~~ 1.0	~~1000~~ 1130	~~160~~ 170	2.6	0.4	3.8	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-8	3.8
Verchères	15	-24	-26	30	23	34	26	4450	3630	~~23~~ 30	~~96~~ 125	~~810~~ 970	~~0.9~~ 1.0	~~1000~~ 1130	~~160~~ 170	2.7	0.4	3.9	0.6	~~0.34~~ 0.36	~~0.43~~ 0.45	0.66	-8	3.8
Victoriaville	125	-26	-28	29	23	33	26	4900	3980	~~21~~ 27	~~102~~ 132	~~850~~ 1010	~~1.0~~ 1.1	~~1100~~ 1220	180	2.6	0.6	3.8	0.9	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-9	3.5
Ville-Marie	200	-31	-34	30	22	34	25	5550	4610	~~23~~ 30	~~96~~ 125	~~630~~ 750	0.8	~~825~~ 910	~~120~~ 130	2.3	0.4	3.1	0.6	~~0.31~~ 0.33	~~0.40~~ 0.42	0.64	-11	4.2
Wakefield	120	-27	-30	30	23	34	26	4820	3910	~~23~~ 30	~~91~~ 117	~~780~~ 930	~~0.9~~ 1.0	~~1020~~ 1140	160	2.4	0.4	3.5	0.6	~~0.27~~ 0.28	~~0.34~~ 0.36	0.52	-8	2.2
Waterloo	205	-25	-27	29	23	33	26	4650	3810	~~23~~ 30	~~96~~ 123	~~980~~ 1160	~~1.1~~ 1.2	~~1250~~ 1390	160	2.5	0.4	3.6	0.6	~~0.27~~ 0.28	~~0.35~~ 0.37	0.55	-8	3
Windsor	150	-25	-27	29	23	33	26	4700	3860	~~23~~ 30	~~96~~ 123	~~930~~ 1100	~~1.0~~ 1.1	~~1075~~ 1190	160	2.3	0.4	3.4	0.6	~~0.25~~ 0.26	~~0.32~~ 0.34	0.5	-8	3.5
New Brunswick																								
Alma	5	-21	-23	26	20	29	23	4500	3600	~~18~~ 23	~~144~~ 183	~~1175~~ 1360	~~1.3~~ 1.5	~~1450~~ 1600	~~260~~ 270	2.6	0.6	3.9	0.9	~~0.37~~ 0.41	~~0.48~~ 0.53	0.76	-7	4.5
Bathurst	10	-23	-26	30	22	34	25	5020	4100	~~20~~ 26	~~106~~ 137	~~775~~ 970	~~0.9~~ 1.0	~~1020~~ 1180	~~180~~ 200	4.1	0.6	5.9	0.9	~~0.37~~ 0.41	~~0.48~~ 0.53	0.76	-8	4
Boiestown	65	-25	-28	29	21	33	24	4900	–	~~20~~ 26	~~96~~ 123	~~800~~ 970	~~0.9~~ 1.0	~~1075~~ 1210	~~180~~ 200	3.6	0.6	5.1	0.9	~~0.30~~ 0.33	~~0.39~~ 0.43	0.62	-8	2.8
Campbellton	30	-26	-28	29	22	33	25	5500	4570	~~20~~ 26	~~107~~ 139	~~725~~ 910	~~0.9~~ 1.0	~~1025~~ 1180	~~180~~ 200	4.3	0.4	6	0.6	~~0.35~~ 0.39	~~0.45~~ 0.50	0.7	-8	4.1
Edmundston	160	-27	-29	28	22	32	25	5320	4500	~~23~~ 30	~~91~~ 118	~~750~~ 920	~~0.9~~ 1.0	~~1000~~ 1130	~~160~~ 180	3.4	0.6	4.8	0.9	~~0.30~~ 0.33	~~0.38~~ 0.42	0.59	-9	2
Fredericton	15	-24	-27	29	22	33	25	4670	3760	~~22~~ 28	~~112~~ 143	~~900~~ 1070	~~1.0~~ 1.1	~~1100~~ 1240	~~160~~ 180	3.1	0.6	4.5	0.9	~~0.30~~ 0.33	~~0.38~~ 0.42	0.59	-7	3.5
Gagetown	20	-24	-26	29	22	32	25	4460	3560	~~20~~ 26	~~112~~ 143	~~900~~ 1060	~~1.0~~ 1.1	~~1125~~ 1260	~~180~~ 190	2.8	0.6	4.1	0.9	~~0.31~~ 0.34	~~0.40~~ 0.44	0.64	-7	3.5

Grand Falls	115	-27	-30	28	22	32	25	5300	4450	~~23~~ 30	~~107~~ 139	~~850~~ 1040	~~1.0~~ 1.1	~~1100~~ 1250	~~160~~ 180	3.6	0.6	5.1	0.8	~~0.30~~ 0.33	~~0.38~~ 0.42	0.59	-8	2.2
Miramichi	5	-24	-26	30	22	34	25	4950	4030	~~20~~ 26	~~96~~ 124	~~825~~ 1030	~~1.0~~ 1.2	~~1050~~ 1210	~~200~~ 220	3.4	0.6	4.8	0.9	~~0.32~~ 0.35	~~0.41~~ 0.45	0.64	-7	3.2
Moncton	20	-23	-25	28	21	31	24	4680	3770	~~20~~ 26	~~112~~ 143	~~850~~ 1020	~~1.0~~ 1.2	~~1175~~ 1330	~~220~~ 240	3	0.6	4.3	0.9	~~0.39~~ 0.43	~~0.50~~ 0.55	0.79	-7	5.2
Oromocto	20	-24	-26	29	22	33	25	4650	3740	~~22~~ 28	~~112~~ 143	~~900~~ 1060	~~1.0~~ 1.1	~~1110~~ 1250	~~160~~ 170	3	0.6	4.4	0.9	~~0.30~~ 0.33	~~0.39~~ 0.43	0.62	-7	3.5
Sackville	15	-22	-24	27	21	30	24	4590	3680	~~18~~ 23	~~112~~ 143	~~975~~ 1160	~~1.1~~ 1.2	~~1175~~ 1320	~~220~~ 240	2.5	0.6	3.7	0.9	~~0.38~~ 0.42	~~0.49~~ 0.54	0.77	-7	4.5
Saint Andrews	35	-22	-24	25	20	28	23	4680	3770	~~19~~ 24	~~123~~ 156	~~1000~~ 1130	~~1.2~~ 1.3	~~1200~~ 1310	~~220~~ 230	2.8	0.6	4.1	0.9	~~0.35~~ 0.39	~~0.45~~ 0.50	0.7	-7	4.5
Saint John	5	-22	-24	25	20	28	23	4570	3670	~~18~~ 23	~~139~~ 176	~~1100~~ 1250	~~1.3~~ 1.4	~~1425~~ 1560	~~260~~ 270	2.3	0.6	3.4	0.9	~~0.41~~ 0.45	~~0.53~~ 0.58	0.83	-7	4.5
Shippagan	5	-22	-24	28	21	32	24	4930	4010	~~18~~ 23	~~96~~ 124	~~800~~ 1000	~~1.0~~ 1.1	~~1050~~ 1200	~~260~~ 290	3.4	0.6	4.7	0.8	~~0.49~~ 0.54	~~0.63~~ 0.69	0.99	-7	4.8
St. George	35	-21	-23	25	20	28	23	4680	3770	~~18~~ 23	~~123~~ 156	~~1000~~ 1130	~~1.2~~ 1.3	~~1200~~ 1310	~~220~~ 230	2.8	0.6	4.2	0.9	~~0.35~~ 0.39	~~0.45~~ 0.50	0.7	-7	4.5
St. Stephen	20	-24	-26	28	22	31	25	4700	3790	~~20~~ 25	~~123~~ 156	~~1000~~ 1150	~~1.2~~ 1.3	~~1160~~ 1280	~~180~~ 190	2.9	0.6	4.2	0.9	~~0.33~~ 0.36	~~0.42~~ 0.46	0.65	-7	4
Woodstock	60	-26	-29	30	22	34	25	4910	3990	~~22~~ 28	~~107~~ 138	~~875~~ 1050	~~1.0~~ 1.1	~~1100~~ 1250	~~160~~ 180	3.1	0.6	4.4	0.9	~~0.29~~ 0.32	~~0.37~~ 0.41	0.58	-8	2.4
Nova Scotia																								
Amherst	25	-21	-24	27	21	31	24	4500	3600	~~18~~ 23	~~118~~ 150	~~950~~ 1130	~~1.1~~ 1.2	~~1150~~ 1290	~~220~~ 240	2.4	0.6	3.5	0.9	~~0.37~~ 0.41	~~0.48~~ 0.53	0.76	-6	4.3
Antigonish	10	-17	-20	27	21	31	24	4510	3610	~~15~~ 19	~~123~~ 156	~~1100~~ 1290	~~1.3~~ 1.4	~~1250~~ 1380	~~240~~ 250	2.3	0.6	3.5	0.9	~~0.42~~ 0.46	~~0.54~~ 0.59	0.84	-5	4.6
Bridgewater	10	-15	-17	27	20	30	23	4140	3250	~~16~~ 20	~~144~~ 181	~~1300~~ 1450	~~1.5~~ 1.7	~~1475~~ 1600	~~260~~ 280	1.9	0.6	2.9	0.9	~~0.43~~ 0.47	~~0.55~~ 0.61	0.85	-5	4
Canso	5	-13	-15	25	20	29	23	4400	3500	~~15~~ 19	~~123~~ 155	~~1325~~ 1470	~~1.5~~ 1.6	~~1400~~ 1510	260	1.7	0.6	2.5	0.9	~~0.48~~ 0.53	~~0.61~~ 0.67	0.95	-4	7.5
Debert	45	-21	-24	27	21	31	24	4500	3600	~~18~~ 23	~~118~~ 150	~~1000~~ 1180	~~1.2~~ 1.3	~~1200~~ 1350	~~240~~ 260	2.1	0.6	3.1	0.9	~~0.37~~ 0.41	~~0.48~~ 0.53	0.76	-6	3.8
Digby	35	-15	-17	25	20	28	23	4020	3130	~~15~~ 19	~~130~~ 163	~~1100~~ 1240	~~1.3~~ 1.4	~~1275~~ 1380	~~260~~ 270	2.2	0.6	3.2	0.9	~~0.43~~ 0.47	~~0.55~~ 0.61	0.85	-4	5
Greenwood (CFB)	28	-18	-20	29	22	32	25	4140	3250	~~16~~ 20	~~118~~ 149	~~925~~ 1060	~~1.1~~ 1.2	~~1100~~ 1210	~~280~~ 290	2.7	0.6	4	0.9	~~0.42~~ 0.46	~~0.54~~ 0.59	0.84	-5	4.2
Halifax Region																								

Dartmouth	10	-16	-18	26	20	29	23	4100	3210	~~18~~ 23	~~144~~ 181	~~1250~~ 1380	~~1.4~~ 1.6	~~1400~~ 1510	~~280~~ 290	1.6	0.6	2.4	0.9	~~0.45~~ 0.50	~~0.58~~ 0.64	0.91	-5	3.9
Halifax	55	-16	-18	26	20	29	23	4000	3110	~~17~~ 21	~~150~~ 189	~~1350~~ 1490	~~1.5~~ 1.7	~~1500~~ 1610	~~280~~ 290	1.9	0.6	2.8	0.9	~~0.45~~ 0.50	~~0.58~~ 0.64	0.91	-5	3.9
Kentville	25	-18	-20	28	21	31	24	4130	3240	~~17~~ 22	~~118~~ 149	~~950~~ 1100	~~1.1~~ 1.2	~~1200~~ 1340	~~260~~ 270	2.6	0.6	3.9	0.9	~~0.42~~ 0.46	~~0.54~~ 0.59	0.84	-5	3.2
Liverpool	20	-16	-18	27	20	30	23	3990	3100	~~16~~ 20	~~150~~ 188	~~1325~~ 1450	~~1.5~~ 1.6	~~1425~~ 1530	~~280~~ 290	1.7	0.6	2.5	0.9	~~0.48~~ 0.53	~~0.61~~ 0.67	0.95	-5	4.1
Lockeport	5	-14	-16	25	20	28	23	4000	3110	~~18~~ 22	~~139~~ 173	~~1250~~ 1360	~~1.4~~ 1.5	~~1450~~ 1550	~~280~~ 290	1.4	0.6	2.1	0.9	~~0.47~~ 0.52	~~0.60~~ 0.66	0.94	-4	5.5
Louisbourg	5	-15	-17	26	20	30	23	4530	3630	~~15~~ 19	~~118~~ 149	~~1300~~ 1460	~~1.5~~ 1.7	~~1500~~ 1620	300	2.1	0.7	3.2	1.1	~~0.51~~ 0.56	~~0.65~~ 0.72	1	-5	6
Lunenburg	25	-15	-17	26	20	29	23	4140	3250	~~16~~ 20	~~144~~ 181	~~1300~~ 1440	~~1.5~~ 1.7	~~1450~~ 1570	~~260~~ 270	1.9	0.6	2.8	0.9	~~0.48~~ 0.53	~~0.61~~ 0.67	0.95	-5	4.1
New Glasgow	30	-19	-21	27	21	31	24	4320	3420	~~15~~ 19	~~135~~ 171	~~975~~ 1150	~~1.1~~ 1.2	~~1200~~ 1340	~~260~~ 280	2.2	0.6	3.2	0.9	~~0.43~~ 0.47	~~0.55~~ 0.61	0.85	-6	4.6
North Sydney	20	-16	-19	27	21	31	24	4500	3600	~~15~~ 19	~~123~~ 156	~~1200~~ 1370	~~1.4~~ 1.6	~~1475~~ 1600	300	2.4	0.6	3.6	0.9	~~0.46~~ 0.51	~~0.59~~ 0.65	0.92	-5	5.6
Pictou	25	-19	-21	27	21	31	24	4310	3410	~~15~~ 19	~~107~~ 136	~~950~~ 1120	~~1.1~~ 1.2	~~1175~~ 1310	~~260~~ 280	2.2	0.6	3.3	0.9	~~0.43~~ 0.47	~~0.55~~ 0.61	0.85	-6	4.6
Port Hawkesbury	40	-17	-19	27	21	31	24	4500	3600	~~15~~ 19	~~128~~ 162	~~1325~~ 1500	~~1.5~~ 1.6	~~1450~~ 1580	260	2.1	0.6	3.2	0.9	~~0.48~~ 0.53	~~0.61~~ 0.67	0.95	-5	4.9
Springhill	185	-20	-23	27	21	31	24	4540	3640	~~18~~ 23	~~118~~ 150	~~1075~~ 1270	~~1.2~~ 1.3	~~1175~~ 1320	~~220~~ 240	3.1	0.6	4.6	0.9	~~0.37~~ 0.41	~~0.48~~ 0.53	0.76	-6	4
Stewiacke	25	-20	-22	27	21	30	24	4400	3500	~~18~~ 23	~~128~~ 162	~~1050~~ 1200	~~1.2~~ 1.3	~~1250~~ 1380	~~240~~ 250	1.8	0.6	2.7	0.9	~~0.39~~ 0.43	~~0.50~~ 0.55	0.79	-6	4.5
Sydney	5	-16	-19	27	21	31	24	4530	3630	~~15~~ 19	~~123~~ 156	~~1200~~ 1360	~~1.4~~ 1.6	~~1475~~ 1600	300	2.3	0.6	3.5	0.9	~~0.46~~ 0.51	~~0.59~~ 0.65	0.92	-5	5.6
Tatamagouche	25	-20	-23	27	21	31	24	4380	3480	~~18~~ 23	~~118~~ 150	~~875~~ 1040	~~1.1~~ 1.2	~~1150~~ 1290	~~260~~ 280	2.2	0.6	3.3	0.9	~~0.43~~ 0.47	~~0.55~~ 0.61	0.85	-6	4.6
Truro	25	-20	-22	27	21	30	24	4500	3600	~~18~~ 23	~~118~~ 150	~~1000~~ 1170	~~1.2~~ 1.3	~~1175~~ 1310	~~240~~ 260	2	0.6	2.9	0.9	~~0.37~~ 0.41	~~0.48~~ 0.53	0.76	-6	3.5
Wolfville	35	-19	-21	28	21	31	24	4140	3250	~~17~~ 22	~~118~~ 149	~~975~~ 1140	~~1.1~~ 1.2	~~1175~~ 1310	~~260~~ 280	2.6	0.6	3.9	0.9	~~0.42~~ 0.46	~~0.54~~ 0.59	0.84	-5	3.2
Yarmouth	10	-14	-16	22	19	25	22	3990	3100	~~19~~ 24	~~135~~ 168	~~1125~~ 1230	~~1.3~~ 1.4	~~1260~~ 1350	~~280~~ 290	1.8	0.6	2.7	0.9	~~0.44~~ 0.48	~~0.56~~ 0.62	0.87	-4	5.2
Prince Edward Island																								
Charlottetown	5	-20	-22	26	21	30	24	4460	3650	~~16~~ 20	~~107~~ 136	~~900~~ 1070	~~1.1~~ 1.2	~~1150~~ 1290	~~350~~ 380	2.7	0.6	4	0.9	~~0.44~~ 0.48	~~0.56~~ 0.62	0.87	-6	5

Souris	5	-19	-21	27	21	31	24	4550	3650	~~15~~ 19	~~112~~ 142	~~950~~ 1120	~~1.1~~ 1.2	~~1130~~ 1250	~~350~~ 370	2.7	0.6	4.1	0.9	~~0.45~~ 0.50	~~0.58~~ 0.64	0.91	-6	5
Summerside	10	-20	-22	27	21	31	24	4600	3690	~~16~~ 20	~~112~~ 143	~~825~~ 1000	~~1.0~~ 1.1	~~1060~~ 1210	~~350~~ 390	3.1	0.6	4.6	0.9	~~0.47~~ 0.52	~~0.60~~ 0.66	0.94	-6	5.5
Tignish	10	-20	-22	27	21	31	24	4770	3860	~~16~~ 20	~~96~~ 123	~~800~~ 970	~~1.0~~ 1.1	~~1100~~ 1250	~~350~~ 390	3.2	0.6	4.7	0.9	~~0.51~~ 0.56	~~0.66~~ 0.73	1.04	-5	7.5
Newfoundland and Labrador																								
Argentia	15	-12	-14	21	18	25	22	4600	3620	~~15~~ 19	~~107~~ 136	~~1250~~ 1420	~~1.5~~ 1.6	~~1400~~ 1490	~~400~~ 410	2.4	0.7	3.5	1	~~0.59~~ 0.65	~~0.75~~ 0.83	1.11	-4	6.5
Bonavista	15	-14	-16	24	19	28	22	5000	4000	~~18~~ 23	~~96~~ 122	~~825~~ 1010	~~1.1~~ 1.2	~~1010~~ 1110	~~400~~ 430	3.1	0.6	4.7	0.9	~~0.66~~ 0.73	~~0.84~~ 0.92	1.24	-4	7.5
Buchans	255	-24	-27	27	20	31	24	5250	4240	~~13~~ 17	~~107~~ 138	~~850~~ 1090	~~1.0~~ 1.1	~~1125~~ 1290	~~200~~ 210	4.7	0.6	6.8	0.9	~~0.47~~ 0.52	~~0.60~~ 0.66	0.89	-6	5
Cape Harrison	5	-29	-31	26	16	30	20	6900	5920	~~10~~ 13	~~106~~ 143	~~475~~ 660	~~0.9~~ 1.0	~~950~~ 1080	~~350~~ 400	6.3	0.4	9.3	0.6	~~0.47~~ 0.52	~~0.60~~ 0.66	0.89	-9	6
Cape Race	5	-11	-13	19	18	23	22	4900	3900	~~18~~ 23	~~130~~ 164	~~1425~~ 1570	~~1.7~~ 1.8	~~1550~~ 1620	400	2.3	0.7	3.4	1	~~0.82~~ 0.90	~~1.05~~ 1.16	1.56	-4	7.5
Channel-Port aux Basques	5	-13	-15	19	18	23	22	5000	4000	~~13~~ 17	~~123~~ 157	~~1175~~ 1340	~~1.4~~ 1.5	~~1520~~ 1630	~~450~~ 460	3.6	0.7	5.5	1.1	~~0.61~~ 0.67	~~0.78~~ 0.86	1.16	-4	8.3
Corner Brook	35	-16	-18	26	20	30	23	4760	3770	~~13~~ 17	~~91~~ 117	~~875~~ 1080	~~1.1~~ 1.3	~~1190~~ 1310	~~300~~ 320	3.7	0.6	5.3	0.9	~~0.43~~ 0.47	~~0.55~~ 0.61	0.81	-6	5
Gander	125	-18	-20	27	20	31	24	5110	4110	~~18~~ 23	~~91~~ 117	~~775~~ 1010	~~1.0~~ 1.1	~~1180~~ 1350	~~280~~ 310	3.7	0.6	5.4	0.9	~~0.47~~ 0.52	~~0.60~~ 0.66	0.89	-5	6.3
Grand Bank	5	-14	-15	20	18	24	22	4550	3570	~~15~~ 19	~~123~~ 157	~~1350~~ 1540	~~1.6~~ 1.8	~~1525~~ 1640	~~400~~ 410	2.4	0.7	3.6	1	~~0.58~~ 0.64	~~0.74~~ 0.81	1.1	-4	6.5
Grand Falls	60	-26	-29	27	20	31	24	5020	4020	~~15~~ 19	~~86~~ 111	~~775~~ 1010	~~1.0~~ 1.1	~~1030~~ 1190	~~240~~ 260	3.4	0.6	4.9	0.9	~~0.47~~ 0.52	~~0.60~~ 0.66	0.89	-6	5.5
Happy Valley-Goose Bay	15	-31	-32	27	19	31	23	6670	5700	~~18~~ 24	~~80~~ 107	~~575~~ 750	~~0.8~~ 0.9	~~960~~ 1120	~~160~~ 180	5.3	0.4	7.7	0.6	~~0.33~~ 0.36	~~0.42~~ 0.46	0.62	-11	4.7
Labrador City	550	-36	-38	24	17	28	20	7710	6710	~~15~~ 20	~~70~~ 92	~~500~~ 630	~~0.8~~ 0.9	~~880~~ 1020	~~140~~ 160	4.8	0.3	6.8	0.4	~~0.31~~ 0.34	~~0.40~~ 0.44	0.61	-14	4
St. Anthony	10	-25	-27	22	18	26	22	6440	5380	~~13~~ 17	~~86~~ 112	~~800~~ 1070	~~1.1~~ 1.3	~~1280~~ 1440	~~450~~ 500	6.1	0.6	8.9	0.9	~~0.68~~ 0.75	~~0.87~~ 0.96	1.3	-8	7.5
Stephenville	25	-16	-18	24	19	28	23	4850	3860	~~14~~ 18	~~102~~ 131	~~1000~~ 1200	~~1.2~~ 1.3	~~1275~~ 1390	~~350~~ 370	4.1	0.6	6.1	0.9	~~0.45~~ 0.50	~~0.58~~ 0.64	0.87	-5	6.1
St. John's	65	-15	-16	24	20	28	23	4800	3810	~~18~~ 23	~~118~~ 148	~~1200~~ 1330	~~1.4~~ 1.6	~~1575~~ 1650	~~400~~ 420	2.9	0.7	4.4	1.1	~~0.61~~ 0.67	~~0.78~~ 0.86	1.16	-4	7.5
Twin Falls	425	-35	-37	24	17	28	21	7790	6880	~~15~~ 20	~~70~~ 93	~~500~~ 640	~~0.9~~ 1.0	~~950~~ 1110	~~120~~ 130	4.8	0.4	6.8	0.6	~~0.31~~ 0.34	~~0.40~~ 0.44	0.61	-14	4

Wabana	75	-15	-17	24	20	27	23	4750	3760	~~18~~ 23	~~112~~ 141	~~1125~~ 1280	~~1.3~~ 1.4	~~1500~~ 1590	~~400~~ 430	3	0.7	4.6	1.1	~~0.59~~ 0.65	~~0.75~~ 0.83	1.11	-4	4.8
Wabush	550	-36	-38	24	17	28	20	7710	6710	~~15~~ 20	~~70~~ 92	~~500~~ 630	~~0.8~~ 0.9	~~880~~ 1020	~~140~~ 160	4.8	0.3	6.8	0.4	~~0.31~~ 0.34	~~0.40~~ 0.44	0.61	-14	4
Yukon																								
Aishihik	920	-44	-46	23	15	27	19	7500	6500	~~8~~ 10	~~43~~ 56	~~190~~ 270	0.6	~~275~~ 340	~~40~~ 60	~~1.9~~ 2.0	0.1	3	0.2	~~0.27~~ 0.28	~~0.38~~ 0.40	0.6	-14	2.2
Dawson	330	-50	-51	26	16	30	19	8120	7100	~~10~~ 13	~~49~~ 65	~~200~~ 270	0.6	~~350~~ 440	~~40~~ 50	~~2.9~~ 3.0	0.1	4.4	0.2	~~0.22~~ 0.23	~~0.31~~ 0.33	0.48	-17	2
Destruction Bay	815	-43	-45	23	14	27	18	7800	6790	~~8~~ 10	~~49~~ 64	~~190~~ 290	0.6	~~300~~ 380	~~80~~ 140	~~1.9~~ 2.0	0.1	3	0.2	~~0.42~~ 0.44	~~0.60~~ 0.63	0.96	-14	2.3
Faro	670	-46	-47	25	16	29	20	7300	6310	~~10~~ 13	~~33~~ 43	~~215~~ 300	0.6	~~315~~ 380	~~40~~ 50	~~2.3~~ 2.4	0.1	3.6	0.2	~~0.26~~ 0.27	~~0.35~~ 0.37	0.55	-14	2.3
Haines Junction	600	-45	-47	24	14	29	18	7100	6120	~~8~~ 10	~~51~~ 66	~~145~~ 230	0.6	~~315~~ 400	~~180~~ 310	~~2.2~~ 2.3	0.1	3.3	0.2	~~0.24~~ 0.25	~~0.34~~ 0.36	0.54	-11	2.5
Snag	595	-51	-53	23	16	27	19	8300	7280	~~8~~ 10	~~59~~ 77	~~290~~ 390	0.6	~~350~~ 440	~~40~~ 50	~~2.2~~ 2.3	0.1	3.4	0.2	~~0.22~~ 0.23	~~0.31~~ 0.33	0.48	-17	2.2
Teslin	690	-42	-44	24	15	28	19	6770	5800	~~10~~ 13	~~38~~ 49	~~200~~ 300	0.5	~~340~~ 400	~~40~~ 50	~~3.0~~ 3.2	0.1	4.6	0.2	~~0.26~~ 0.27	~~0.34~~ 0.36	0.49	-12	2.2
Watson Lake	685	-46	-48	26	16	30	20	7470	6470	~~10~~ 13	~~54~~ 69	~~250~~ 360	0.6	~~410~~ 510	~~60~~ 70	~~3.2~~ 3.4	0.1	4.9	0.2	~~0.26~~ 0.27	~~0.35~~ 0.37	0.55	-15	2
Whitehorse	655	-41	-43	25	15	30	19	6580	5610	~~8~~ 10	~~43~~ 56	~~170~~ 260	0.5	~~275~~ 340	~~40~~ 60	~~2.0~~ 2.1	0.1	3.2	0.2	~~0.29~~ 0.30	~~0.38~~ 0.40	0.56	-11	3.7
Northwest Territories																								
Aklavik	5	-42	-44	26	17	29	20	9600	8540	~~6~~ 8	~~49~~ 69	~~115~~ 170	0.7	~~250~~ 310	~~60~~ 80	~~2.8~~ 2.9	0.1	4.3	0.2	~~0.31~~ 0.33	~~0.40~~ 0.42	0.58	-17	2.9
Behchokǫ̀ / Rae-Edzo	160	-42	-44	25	17	28	20	8300	7280	~~10~~ 13	~~60~~ 81	~~175~~ 230	0.6	~~275~~ 330	~~80~~ 90	~~2.3~~ 2.4	0.1	3.5	0.2	~~0.31~~ 0.33	~~0.40~~ 0.42	0.58	-17	3.5
Echo Bay / Port Radium	195	-42	-44	22	16	25	19	9300	8250	~~8~~ 11	~~60~~ 82	~~160~~ 210	0.7	~~250~~ 310	~~80~~ 90	~~3.0~~ 3.2	0.1	4.7	0.2	~~0.41~~ 0.43	~~0.53~~ 0.56	0.79	-17	4.4
Fort Good Hope	100	-43	-45	28	18	31	21	8700	7660	~~9~~ 12	~~60~~ 82	~~140~~ 190	0.6	~~280~~ 340	~~80~~ 90	~~2.9~~ 3.0	0.1	4.6	0.2	~~0.34~~ 0.36	~~0.44~~ 0.46	0.63	-17	2.8
Fort McPherson	25	-44	-46	26	17	29	20	9150	8100	~~6~~ 8	~~50~~ 70	~~145~~ 200	0.7	~~315~~ 390	~~60~~ 80	~~3.2~~ 3.4	0.1	5	0.2	~~0.31~~ 0.33	~~0.40~~ 0.42	0.61	-17	2.3
Fort Providence	150	-40	-43	28	18	32	21	7620	6620	~~10~~ 13	~~71~~ 94	~~210~~ 270	0.6	~~350~~ 420	~~100~~ 110	~~2.4~~ 2.5	0.1	3.6	0.2	~~0.27~~ 0.28	~~0.35~~ 0.37	0.53	-16	3
Fort Resolution	160	-40	-42	26	18	30	21	7750	6740	~~10~~ 13	~~60~~ 80	~~175~~ 230	0.6	~~300~~ 360	~~140~~ 160	~~2.3~~ 2.4	0.1	3.5	0.2	~~0.30~~ 0.32	~~0.39~~ 0.41	0.6	-16	3.3

Fort Simpson	120	-42	-44	28	19	31	22	7660	6660	~~12~~ 16	~~76~~ 100	~~225~~ 290	0.6	~~360~~ 430	80	~~2.3~~ 2.4	0.1	3.3	0.1	~~0.30~~ 0.32	~~0.39~~ 0.41	0.6	-16	2.4
Fort Smith	205	-41	-43	28	19	32	22	7300	6310	~~10~~ 13	~~65~~ 86	~~250~~ 310	0.6	~~350~~ 410	~~80~~ 90	~~2.3~~ 2.4	0.2	3.5	0.3	~~0.30~~ 0.32	~~0.39~~ 0.41	0.6	-15	2.7
Hay River	45	-38	-41	27	18	31	21	7550	6550	~~10~~ 13	~~60~~ 79	~~200~~ 260	0.6	~~325~~ 390	~~140~~ 160	~~2.4~~ 2.5	0.1	3.7	0.2	~~0.27~~ 0.28	~~0.35~~ 0.37	0.5	-16	3.3
Inuvik	45	-43	-45	26	17	30	20	9600	8540	~~6~~ 9	~~49~~ 69	~~115~~ 160	0.7	~~425~~ 530	~~60~~ 80	~~3.1~~ 3.3	0.1	4.9	0.2	~~0.31~~ 0.33	~~0.40~~ 0.42	0.58	-16	2.6
Mould Bay	5	-44	-46	11	8	15	12	12900	11730	~~3~~ 5	~~33~~ 52	~~25~~ 40	0.9	~~100~~ 140	~~140~~ 210	~~1.5~~ 1.6	0.1	2.3	0.2	~~0.45~~ 0.47	~~0.58~~ 0.61	0.87	-20	4.3
Norman Wells	65	-43	-45	28	18	31	21	8510	7480	~~9~~ 12	~~60~~ 81	~~165~~ 220	0.6	~~320~~ 390	80	~~3.0~~ 3.2	0.1	4.9	0.2	~~0.34~~ 0.36	~~0.44~~ 0.46	0.63	-17	3.1
Tungsten	1340	-49	-51	26	16	30	20	7700	6700	~~10~~ 13	~~44~~ 57	~~315~~ 430	0.8	~~640~~ 750	~~40~~ 50	~~4.3~~ 4.5	0.1	6.7	0.2	~~0.34~~ 0.36	~~0.44~~ 0.46	0.66	-16	3
Ulukhaktok / Holman	10	-39	-41	18	12	23	16	10700	9600	~~3~~ 4	~~44~~ 65	~~80~~ 120	0.9	~~250~~ 310	~~120~~ 140	~~2.1~~ 2.2	0.1	3.3	0.2	~~0.67~~ 0.70	~~0.86~~ 0.90	1.23	-18	4.9
Wrigley	80	-42	-44	28	18	31	21	8050	7040	~~10~~ 13	~~54~~ 71	~~220~~ 290	0.6	~~350~~ 420	80	~~2.8~~ 2.9	0.1	4.3	0.2	~~0.30~~ 0.32	~~0.39~~ 0.41	0.6	-16	3
Yellowknife	160	-41	-44	25	17	29	20	8170	7150	~~10~~ 13	~~60~~ 81	~~175~~ 230	0.6	~~275~~ 330	~~100~~ 110	~~2.2~~ 2.3	0.1	3.4	0.2	~~0.31~~ 0.33	~~0.40~~ 0.42	0.58	-17	3.8
Nunavut																								
Alert	5	-43	-44	13	8	18	12	13030	11860	~~3~~ 4	~~22~~ 32	~~20~~ 30	1	~~150~~ 200	~~100~~ 140	~~2.6~~ 2.7	0.1	4	0.2	~~0.59~~ 0.62	~~0.75~~ 0.79	1.06	-22	4.3
Arctic Bay	15	-42	-44	14	10	19	14	11900	10760	~~3~~ 4	~~38~~ 56	~~60~~ 100	0.9	~~150~~ 200	~~160~~ 200	~~2.4~~ 2.5	0.1	3.9	0.2	~~0.43~~ 0.45	~~0.55~~ 0.58	0.78	-20	4
Arviat	5	-40	-41	22	16	27	20	9850	8780	~~8~~ 12	~~65~~ 94	~~225~~ 290	0.9	~~300~~ 350	~~240~~ 260	~~3.0~~ 3.2	0.2	4.9	0.3	~~0.45~~ 0.47	~~0.58~~ 0.61	0.83	-19	6.6
Baker Lake	5	-42	-44	23	15	28	19	10700	9600	~~5~~ 7	~~55~~ 80	~~160~~ 210	0.8	~~260~~ 310	~~180~~ 200	~~3.4~~ 3.6	0.2	5.5	0.3	~~0.42~~ 0.44	~~0.54~~ 0.57	0.77	-20	6.5
Eureka	5	-47	-48	12	8	17	12	13500	12310	~~3~~ 4	~~27~~ 39	~~25~~ 40	1	~~70~~ 90	~~100~~ 140	~~1.6~~ 1.7	0.1	2.5	0.2	~~0.43~~ 0.45	~~0.55~~ 0.58	0.78	-21	4.3
Igluligaarjuk / Chesterfield Inlet	10	-40	-41	20	14	25	18	10500	9410	~~5~~ 7	~~60~~ 88	~~175~~ 240	0.9	~~270~~ 320	~~240~~ 270	~~3.6~~ 3.8	0.2	6	0.3	~~0.44~~ 0.46	~~0.56~~ 0.59	0.79	-19	6.7
Iqaluit	45	-40	-41	17	12	21	16	9980	8900	~~5~~ 7	~~58~~ 83	~~200~~ 310	0.9	~~433~~ 550	~~200~~ 230	~~2.9~~ 3.0	0.2	4.7	0.3	~~0.51~~ 0.54	~~0.65~~ 0.68	0.91	-16	4.8
Iqaluktuuttiaq / Cambridge Bay	15	-41	-44	18	13	23	17	11670	10540	~~4~~ 6	~~38~~ 58	~~70~~ 100	0.9	~~140~~ 170	~~100~~ 120	~~1.9~~ 2.0	0.1	3	0.2	~~0.39~~ 0.41	~~0.50~~ 0.53	0.71	-21	5
Isachsen	10	-46	-48	12	9	17	13	13600	12410	~~3~~ 5	~~27~~ 42	~~25~~ 40	1	~~75~~ 100	~~140~~ 180	~~1.9~~ 2.0	0.1	3.1	0.2	~~0.47~~ 0.49	~~0.60~~ 0.63	0.85	-20	4.3

Kangiqiniq / Rankin Inlet	10	-41	-42	21	15	26	19	10500	9410	~~5~~ 7	~~65~~ 95	~~180~~ 240	0.9	~~250~~ 300	~~240~~ 270	~~3.0~~ 3.2	0.2	4.9	0.3	~~0.47~~ 0.49	~~0.60~~ 0.63	0.85	-19	6.7
Kanngiqtugaapik / Clyde River	5	-40	-42	14	10	19	14	11300	10180	~~5~~ 7	~~44~~ 61	~~55~~ 90	0.9	~~225~~ 280	~~220~~ 270	~~4.2~~ 4.4	0.2	6.8	0.3	~~0.43~~ 0.45	~~0.55~~ 0.58	0.78	-17	5
Kugluktuk / Coppermine	10	-41	-43	23	16	27	19	10300	9210	~~6~~ 9	~~65~~ 94	~~140~~ 190	0.8	~~150~~ 180	~~80~~ 90	~~3.4~~ 3.6	0.1	5.4	0.2	~~0.36~~ 0.38	~~0.46~~ 0.48	0.65	-19	5.1
Nottingham Island	30	-37	-39	16	13	21	17	10000	8920	~~5~~ 8	~~54~~ 81	~~175~~ 260	0.9	~~325~~ 410	~~200~~ 230	~~4.7~~ 4.9	0.2	7.5	0.3	~~0.61~~ 0.64	~~0.78~~ 0.82	1.1	-17	7
Resolute	25	-42	-43	11	9	16	13	12360	11210	~~3~~ 5	~~27~~ 42	~~50~~ 80	0.9	~~140~~ 180	~~180~~ 220	~~2.0~~ 2.1	0.1	3.2	0.2	~~0.46~~ 0.48	~~0.59~~ 0.62	0.84	-19	6.1
Resolution Island	5	-32	-34	12	10	16	14	9000	7960	~~5~~ 7	~~71~~ 99	~~240~~ 350	0.9	~~550~~ 650	~~200~~ 220	~~5.5~~ 5.8	0.2	9	0.3	~~0.96~~ 1.01	~~1.23~~ 1.29	1.74	-14	9.5
Salliq / Coral Harbour	15	-41	-42	20	14	25	18	10720	9620	~~5~~ 7	~~65~~ 97	~~150~~ 210	0.9	~~280~~ 350	~~200~~ 230	~~3.8~~ 4.0	0.2	6.2	0.3	~~0.45~~ 0.47	~~0.58~~ 0.61	0.83	-18	5.5

Note to Table [C-2] C-2:

(1) July design temperatures based on historical observations are provided for the design of mechanical cooling systems.

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Impact analysis

The following summarizes the updates to the climatic design parameters forming part of NBC Table C-2. The revisions are to account for potential future climate change effects expected over the 50-year design life of buildings and building components.

January 2.5% design temperatures ($T_{Jan2.5}$)

This parameter is used for the design of heating systems in buildings. The values of this parameter are projected to increase for all locations in the future as a consequence of climate warming; therefore, the current historical NBC values are deemed appropriate and are recommended to continue to be used for design. Overall, no change to the NBC 2020 design values of this parameter is proposed.

January 1% design temperatures (T_{Jan1})

This parameter is also used for the design of heating systems in buildings. The values of this parameter are projected to increase for all locations in the future as a consequence of climate warming; therefore, the current historical NBC values are considered appropriate and are recommended to continue to be used for design. Overall, no change to the NBC 2020 design values of this parameter is proposed.

July 2.5% dry temperatures ($T_{Juldry2.5}$)

This parameter is used for the design of cooling and dehumidifying systems in buildings. The projected values indicate an increase for all locations as a consequence of global warming. Therefore, the NBC 2020 values require updating for climate change effects expected over the design life of 50 years (typical). This updating procedure is expected to result in the following changes in value of this parameter:

Province or Territory	Number of Locations	2°C < $\Delta T_{Juldry2.5}$ ≤ 3°C	3°C < $\Delta T_{Juldry2.5}$ ≤ 4°C	4°C < $\Delta T_{Juldry2.5}$ ≤ 5°C	5°C < $\Delta T_{Juldry2.5}$ ≤ 6°C	6°C < $\Delta T_{Juldry2.5}$ ≤ 7°C
Alberta	55	0	0	7	47	1
British Columbia	108	0	5	21	80	2
Manitoba	24	0	2	22	0	0
New Brunswick	18	0	18	0	0	0
Newfoundland	18	0	17	1	0	0
Nova Scotia	25	0	25	0	0	0
Northwest Territories	17	1	13	3	0	0
Nunavut	16	0	0	15	1	0
Ontario	230	0	229	1	0	0
Prince Edward Island	4	0	4	0	0	0
Quebec	125	0	119	4	2	0
Saskatchewan	31	0	0	19	12	0
Yukon	9	0	5	4	0	0
Total	**680**	**1**	**437**	**97**	**142**	**3**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over the 50-year future timeframe range from 2.8°C to 6.5°C. A large fraction of the locations (438 out of 680) are projected to have future increases of less than or equal to 4°C, 97 locations are projected to have changes on the order of 4-5°C, 142 locations are projected to have changes on the order of 5-6°C, and 3 locations, in Alberta and British Columbia, are projected to have changes greater than 6°C. To minimize the risk of overheating, and depending on the building location, there will likely be a need for cost-effective solutions to implement fenestration shading systems or advanced fenestration and glazing design, enhanced building envelope design, and a review of the air-handing and cooling system design.

Using a July design temperature based on historical observations for the design of mechanical cooling equipment will

- reduce the risk of oversized cooling equipment
- maintain energy efficiency and energy costs for cooling
- minimize equipment short-cycling and maintain service life of equipment
- reduce the risk of excessive indoor humidity levels

July 2.5% wet temperatures ($T_{Julwet2.5}$)

This parameter is used for the design of cooling and dehumidifying systems in buildings. The values of this parameter are projected to increase at all locations as a consequence of global warming. Accordingly, the NBC 2020 values require updating for climate change effects expected over the design life of typical building cooling and dehumidifying systems (50 years). This updating procedure is expected to result in the following changes in the value of this parameter:

Province or Territory	Number of Locations	1°C < $\Delta T_{Julwet2.5}$ ≤ 2°C	2°C < $\Delta T_{Julwet2.5}$ ≤ 3°C	3°C < $\Delta T_{Julwet2.5}$ ≤ 4°C	4°C < $\Delta T_{Julwet2.5}$ ≤ 5°C	5°C < $\Delta T_{Julwet2.5}$ ≤ 6°C
Alberta	55	0	0	21	34	0
British Columbia	108	0	0	16	92	0
Manitoba	24	0	1	23	0	0
New Brunswick	18	0	0	18	0	0
Newfoundland	18	0	0	18	0	0
Nova Scotia	25	0	5	20	0	0
Northwest Territories	17	0	3	14	0	0
Nunavut	16	0	0	8	8	0
Ontario	230	0	218	12	0	0
Prince Edward Island	4	0	0	4	0	0
Quebec	125	0	106	17	2	0
Saskatchewan	31	0	0	27	4	0
Yukon	9	0	0	9	0	0
Total	**680**	**0**	**333**	**207**	**140**	**0**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over the 50-year future timeframe range from 2.6°C to 5°C. All locations in Manitoba, New Brunswick, Newfoundland, Nova Scotia, Northwest Territories, Ontario, Prince Edward Island and Yukon are projected to have future increases of less than or equal to 4°C, whereas some locations in Alberta, Nunavut, Quebec and Saskatchewan are projected to have future increases greater than 4°C. To minimize the risk of overheating, there will likely be a need for cost-effective solutions to implement fenestration shading systems or advanced fenestration and glazing design, enhanced building envelope design, and a review of the air-handing and cooling system design.

Using a July design temperature based on historical observations for the design of mechanical cooling equipment will

- reduce the risk of oversized cooling equipment
- maintain energy efficiency and energy costs for cooling
- minimize equipment short-cycling and maintain service life of equipment
- reduce the risk of excessive indoor humidity levels

Degree-days below 18°C (HDD18)

This parameter is used to identify the required levels of insulation in the building. The values of this parameter are projected to decrease for all locations in the future as a consequence of climate change; therefore, the current values are deemed appropriate and are recommended to continued to be used for design. Overall, no change in the NBC 2020 design values of this parameter is proposed.

15-minute rain ($Rain_{15}$)

This parameter is used for the design roof drainage systems. The values of this parameter are projected to increase at all reference locations as a consequence of climate change. Therefore, the design values require updating for climate change effects expected over the design life of buildings (50 years). This updating procedure is expected to result in the following changes in the value of this parameter:

Province or Territory	Number of Locations	$\Delta Rain_{15} \leq$ 20%	20% < $\Delta Rain_{15} \leq$ 30%	30% < $\Delta Rain_{15} \leq$ 40%	40% < $\Delta Rain_{15} \leq$ 50%	$\Delta Rain_{15}$ > 50%
Alberta	55	0	55	0	0	0
British Columbia	108	0	104	4	0	0
Manitoba	24	0	3	20	1	0
New Brunswick	18	0	18	0	0	0
Newfoundland	18	0	12	6	0	0
Nova Scotia	25	0	25	0	0	0
Northwest Territories	17	0	0	13	3	1
Nunavut	16	0	0	2	10	4
Ontario	230	0	207	23	0	0
Prince Edward Island	4	0	4	0	0	0
Quebec	125	0	73	49	3	0
Saskatchewan	31	0	18	13	0	0
Yukon	9	0	5	4	0	0
Total	**680**	**0**	**524**	**134**	**17**	**5**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over the 50-year future timeframe range from 21.8% to 56.1%. A large fraction of the locations (524 out of 680) are projected to have future increases of less than or equal to 30%, whereas, 156 locations are projected to have future increases of 30% or more.

Cost impact on roof drainage systems in the NPC

Refer to "Cost Impact on Roof Drainage Systems in NPC" in the supporting document for PCF 1979 for the full cost analysis. A summary is reproduced here.

The cost impact on roof drainage system requirements per Article 2.4.1.4. in the NPC was determined for three archetypal buildings. The cost increase for upsizing the combined primary and emergency roof drainage systems due to the updated 15-minute rainfall values was calculated. This does not account for the impact of the proposed change on alternative acceptable solutions, such as scuppers. The locations impacted and the cost increase for each archetypal building are as follows:

	2-storey				10-storey				20-storey			
	Locations impacted	Min. cost diff.	Max. cost diff.	Avg. cost diff.	Locations impacted	Min. cost diff.	Max. cost diff.	Avg. cost diff.	Locations impacted	Min. cost diff.	Max. cost diff.	Avg. cost diff.
NU (1)	9	-	-	-	13	-	-	-	16	-	-	-
NT	17	45	743	546	16	55	2094	1503	17	45	6253	3988
YT	9	41	680	325	9	673	1770	1161	9	41	5729	2569
BC	103	45	741	384	107	55	1928	986	104	45	6241	2686
AB	42	65	2000	506	44	65	4845	1308	52	65	9600	2364
SK	26	91	1846	1319	28	82	5206	2780	28	1283	8862	5575
MB	7	91	1665	478	18	82	5184	1247	9	1277	8742	2632
ON	181	100	2029	1764	229	91	5722	3968	181	1410	9741	8711
QC	109	63	1953	1581	112	87	4732	3502	122	63	10733	6744

	2-storey				10-storey				20-storey			
	Locations impacted	**Min. cost diff.**	**Max. cost diff.**	**Avg. cost diff.**	**Locations impacted**	**Min. cost diff.**	**Max. cost diff.**	**Avg. cost diff.**	**Locations impacted**	**Min. cost diff.**	**Max. cost diff.**	**Avg. cost diff.**
NB	13	90	1832	1092	12	82	4439	1897	18	1273	10070	3676
PE	1	55	55	55	4	1439	1495	1453	1	55	55	55
NS	10	62	94	65	16	1514	1670	1625	17	62	1327	657
NL	13	60	688	130	12	151	1789	1144	18	60	5790	787

Note to Table:

(1) Cost data for Nunavut not available.

One-day rain ($Rain_{1day}$)

This parameter is used for design for the accumulation of rainwater on roofs. The values of this parameter are projected to increase at all locations as a consequence of climate change. Therefore, the values require updating for climate change effects expected over the design life of buildings (50 years). This updating procedure is expected to result in following changes in the values of this parameter:

Province or Territory	Number of Locations	$\Delta Rain_{1day} \leq 20\%$	$20\% < \Delta Rain_{1day} \leq 30\%$	$30\% < \Delta Rain_{1day} \leq 40\%$	$40\% < \Delta Rain_{1day} \leq 50\%$	$\Delta Rain_{1day} > 50\%$
Alberta	55	0	55	0	0	0
British Columbia	108	0	104	4	0	0
Manitoba	24	0	3	20	1	0
New Brunswick	18	0	18	0	0	0
Newfoundland	18	0	12	6	0	0
Nova Scotia	25	0	25	0	0	0
Northwest Territories	17	0	0	13	3	1
Nunavut	16	0	0	2	10	4
Ontario	230	0	207	23	0	0
Prince Edward Island	4	0	4	0	0	0
Quebec	125	0	73	49	3	0
Saskatchewan	31	0	18	13	0	0
Yukon	9	0	5	4	0	0
Total	**680**	**0**	**524**	**134**	**17**	**5**

Across the 680 locations in NBC Table C-2, the projected changes in the value of this parameter over the 50-year future timeframe range from 21.8% to 56.1%. A large fraction of the locations (524 out of 680) are projected to have future increases of less than or equal to 30%, whereas 156 locations are projected to have future increases of 30% or more.

To account for the projected increase in the amount of rain that may fall in a day, and thus to avoid water accumulation and ponding on the roof, the design of the drainage systems would be adjusted, as the value of this parameter would affect the drainage design of flat roofs. The design of the drainage system would need to consider both the number of control flow roof drains and scuppers, and their proper sizing. In the future, there will be a need to design roof areas to drain accumulated water that may result from greater rain loads from the roof.

Moisture index (MI)

This parameter is used to define the minimum levels of protection from precipitation to be provided by cladding assemblies on exterior walls. The following is a summary of the projected changes in values of this parameter as a consequence of climate change over a 50-year horizon, which corresponds to the typical design life of buildings (50 years):

Province or Territory	Number of Locations	ΔMI ≤ -10%	-10% < ΔMI≤ 0	0 < ΔMI≤ 10%	10% < ΔMI≤ 20%	ΔMI > 20%
Alberta	55	5	46	4	0	0
British Columbia	108	0	11	52	21	24
Manitoba	24	4	20	0	0	0
New Brunswick	18	0	0	5	13	0
Newfoundland	18	0	0	5	13	0
Nova Scotia	25	0	0	12	13	0
Northwest Territories	17	0	17	0	0	0
Nunavut	16	0	13	3	0	0
Ontario	230	0	63	167	0	0
Prince Edward Island	4	0	0	2	2	0
Quebec	125	0	1	110	14	0
Saskatchewan	31	26	5	0	0	0
Yukon	9	0	7	2	0	0
Total	**680**	**35**	**183**	**362**	**76**	**24**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over a 50-year future timeframe range from -19.4% to 29.4%. A large fraction of the locations (545 out of 680) are projected to have changes of up to ±10%. A total of 35 locations, located in the prairie provinces of Alberta, Manitoba and Saskatchewan, are projected to have future decreases of greater than 10%, whereas 24 locations, all located in British Columbia, are projected to have future increases of greater than 20%.

The worst-case MI values are recommended for design. This implies that, for locations where future decreases in MI are projected, the current values of MI are recommended for the design of cladding assemblies on exterior walls, whereas for locations where future increases in MI are projected, the future projected values of MI are recommended for design. Overall, 462 locations are projected to have future increases in MI, and 218 locations are projected to have future decreases. Out of the 462 locations projected to have future increases, only 265 locations are associated with projected changes large enough to not be rounded off within one decimal point (the level of accuracy to which MI values are reported in the NBC). Accordingly, the current MI values are updated to increased future projected MI values for these 265 locations and kept unchanged for other locations.

With these changes in MI design values, a cavity between the cladding and the membrane sheathing will be required at 82 additional locations (shown in Figure 1) to minimize the probability of moisture accumulation inboard of the cladding.

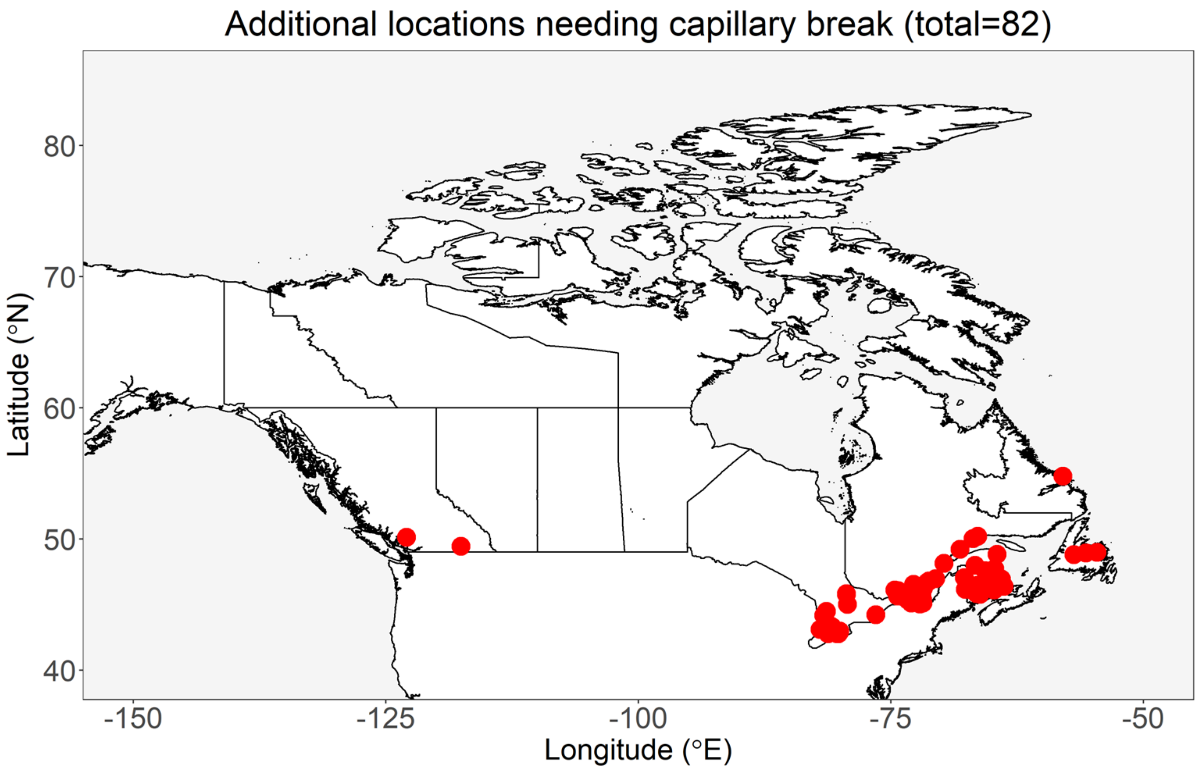

Figure 1. Additional locations in NBC Table C-2 that will require a capillary break for protection from potential moisture damage in the building envelope, taking climate change effects into consideration.

Cost impact on NBC Part 9 of updated moisture index values

Refer to "Cost Impact on Part 9 of Updated Moisture Index Values" in the supporting document for PCF 1979 for the full cost analysis. A summary is reproduced here.

The cost impact with respect to NBC Part 9 requirements for termite and decay protection per NBC 9.3.2.9.(3)(b) was determined for the 56 locations with a moisture index moving from less than or equal to 1 to greater than 1 due to the updated moisture index values. The locations impacted and the cost increases for a sample wood deck using preservative-treated instead of untreated lumber are as follows:

	Northern					Prairies				Atlantic				
	NT	NU	YT	BC	AB	SK	MB	ON	QC	NB	PE	NS	NL	National
Total locations impacted	0	0	0	4	0	0	0	2	37	8	2	0	3	56
Cost difference per deck ($)	n/a	n/a	n/a	289.20	n/a	n/a	n/a	271.91	435.24	444.62	444.62	n/a	544.17	415.89

The cost impact with respect to NBC Part 9 requirements for minimum protection from precipitation ingress per NBC Sentence 9.27.2.2.(5) was determined for the 53 new locations that will require a capillary break between the first and second planes of protection due to the updated moisture index values. The material and installation costs for vertical strapping between the cladding and sheathing to provide a capillary break were calculated for an archetypal house. The locations impacted and the cost increase per unit are as follows:

	Northern					Prairies				Atlantic				
	NT	NU	YT	BC	AB	SK	MB	ON	QC	NB	PE	NS	NL	National
Total locations impacted	0	0	0	1	0	0	0	2	37	8	2	0	3	53
Cost per unit ($)	n/a	n/a	n/a	1706	n/a	n/a	n/a	1666	1653	1226	1226	n/a	1520	1391

Driving rain wind pressure (DRWP)

This parameter is used for the design of wall assemblies to help ensure that incidental water entry into the assembly is minimized and for the selection of fenestration products. The following is a summary of the projected changes in the values of this parameter as a consequence of climate change over the typical design life of buildings (50 years):

Province or Territory	Number of Locations	ΔDRWP ≤ -5%	-5% < ΔDRWP ≤ 0	0 < ΔDRWP ≤ 5%	5% < ΔDRWP ≤ 10%	ΔDRWP > 10%
Alberta	55	0	3	23	21	8
British Columbia	108	0	0	0	42	66
Manitoba	24	0	4	3	12	5
New Brunswick	18	0	0	2	10	6
Newfoundland	18	0	0	5	7	6
Nova Scotia	25	0	1	13	10	1
Northwest Territories	17	0	0	2	6	9
Nunavut	16	0	0	0	2	14
Ontario	230	0	16	35	169	10
Prince Edward Island	4	0	0	1	1	2
Quebec	125	0	14	43	53	15
Saskatchewan	31	1	5	12	11	2
Yukon	9	0	0	0	0	9
Total	**680**	**1**	**43**	**139**	**344**	**153**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over a 50-year future timeframe range from -5.4% to 17.8%. A large fraction of the locations (636 out of 680) are projected to have future increases in DRWP, whereas 44 locations are projected to have future decreases. Out of the 636 locations projected to have future increases, 548 locations are projected to have changes large enough to not be rounded off within zero decimal places (the level of accuracy to which DRWP values are reported in the NBC). Accordingly, the current DRWP values are updated to increased future projected values for these 548 locations, for the design of wall assemblies and selection of fenestration products, and the current DRWP values are retained for the other locations. The design to ensure the watertightness of waterproofing systems around windows and doors would also need to account for the change in DRWP at locations where the increase is larger than 10% (i.e., for 153 locations).

Cost impact on NBC Part 9 of updated DRWP values

Refer to "Cost Impact on Part 9 of Updated Driving Rain Wind Pressure (DRWP) values" in the supporting document for PCF 1979 for the full cost analysis. A summary is reproduced here.

The cost impact with respect to NBC Part 9 requirements for flashing installation per NBC Clause 9.27.3.8.(4)(c) was determined for 74 locations where the required end-dam height will be increased due to the updated DRWP values. The cost increase of extending the end-dam height of window flashing was calculated for an archetypal house. The locations impacted and the cost increase per unit are as follows:

	Northern					Prairies				Atlantic				
	NT	**NU**	**YT**	**BC**	**AB**	**SK**	**MB**	**ON**	**QC**	**NB**	**PE**	**NS**	**NL**	**National**
Total locations impacted	0	4	1	21	0	3	1	0	9	3	4	16	12	74
Total cost of extra flashing per unit ($)	n/a	(1)	4.09	4.96	n/a	1.43	1.36	n/a	2.86	2.04	2.67	1.42	3.54	1.88

Note to Table:

(1) Cost data for Nunavut not available.

1/10 hourly wind pressure (Q_{10})

The following is a summary of changes projected in the values of this parameter as a consequence of climate change over the typical design life of buildings (50 years):

Province or Territory	Number of Locations	$\Delta Q_{10} \leq 0\%$	$0\% < \Delta Q_{10} \leq 5\%$	$5\% < \Delta Q_{10} \leq 10\%$	$10\% < \Delta Q_{10} \leq 15\%$	$\Delta Q_{10} > 15\%$
Alberta	55	0	26	29	0	0
British Columbia	108	0	15	48	45	0
Manitoba	24	0	10	14	0	0
New Brunswick	18	0	0	4	14	0
Newfoundland	18	0	0	8	10	0
Nova Scotia	25	0	0	11	14	0
Northwest Territories	17	0	5	12	0	0
Nunavut	16	0	11	5	0	0
Ontario	230	0	0	92	138	0
Prince Edward Island	4	0	0	2	2	0
Quebec	125	0	63	62	0	0
Saskatchewan	31	0	9	22	0	0
Yukon	9	0	9	0	0	0
Total	**680**	**0**	**148**	**309**	**223**	**0**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over a 50-year future timeframe range from 3.5% to 12%. Since all locations are projected to have future increases in Q_{10}, these increased values are applied as the future projected values. The 1-in-10 reference wind velocity pressure, Q_{10}, is used for the determination of the wind-induced accelerations of buildings for serviceability (see the Commentary entitled Wind Load and Effects in the "Structural Commentaries (User's Guide – NBC 2020: Part 4 of Division B)"). The climate change factor for Q_{10} is similar to that for Q_{500} (and Q_{50}); modest increases in building accelerations can be expected. Except for very tall buildings, acceptable accelerations will probably still be obtained without a significant change to structural design. For tall buildings that are very dynamically sensitive, the increase in Q_{10} may result in some additional structural costs to comply with serviceability criteria with respect to acceleration. Very dynamically sensitive tall buildings are required to be assessed through testing in a wind tunnel, which often allows significant optimization of the structure to be achieved.

1/50 hourly wind pressure (Q_{50})

The following is a summary of the changes projected in the values of this parameter as a consequence of climate change over the typical design life of buildings (50 years):

Province or Territory	Number of Locations	$\Delta Q_{50} \leq 0\%$	$0\% < \Delta Q_{50} \leq 5\%$	$5\% < \Delta Q_{50} \leq 10\%$	$10\% < \Delta Q_{50} \leq 15\%$	$\Delta Q_{50} > 15\%$
Alberta	55	0	55	0	0	0
British Columbia	108	0	23	85	0	0
Manitoba	24	0	24	0	0	0
New Brunswick	18	0	0	18	0	0
Newfoundland	18	0	0	18	0	0
Nova Scotia	25	0	0	25	0	0
Northwest Territories	17	0	17	0	0	0
Nunavut	16	0	16	0	0	0
Ontario	230	0	0	230	0	0
Prince Edward Island	4	0	0	4	0	0

Province or Territory	Number of Locations	$\Delta Q_{50} \leq$ 0%	0% < $\Delta Q_{50} \leq$ 5%	5% < $\Delta Q_{50} \leq$ 10%	10% < $\Delta Q_{50} \leq$ 15%	ΔQ_{50} > 15%
Quebec	125	0	125	0	0	0
Saskatchewan	31	0	31	0	0	0
Yukon	9	0	9	0	0	0
Total	**680**	**0**	**300**	**380**	**0**	**0**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over a 50-year future timeframe range from 5% to 10%. Since all locations are projected to have future increases in Q_{50}, the increased values are applied as the future projected values. Where the increases are higher than 5%, the total deflection of the building may be affected in terms of serviceability and comfort; therefore, the design of the building would need to be verified with respect to increased wind loads and, where warranted, the stiffness of building structural systems would need to be increased to ensure compliance with the serviceability requirements in the NBC 2025. As well, the design of cladding and roofing systems would need to account for increased strength of their connections. The locations where there are increases in reference wind velocity pressure would likely have increases to the cost of the building structure of less than 5%. This, in turn, would increase the total construction cost by less than 0.5%. Considering that these projected cost increases would be more than offset by improved safety and the prevention of wind-related failures, such cost increases are entirely reasonable.

Cost impact on NBC Part 9 of updated 1/50 hourly wind pressure

Refer to "Cost impact of climatic load changes on Part 9: Future projected climate data for snow and wind loads (PCF 1979)" in the supporting document for PCF 1979 for the full cost analysis. A summary is reproduced here.

For structural sufficiency of glass (NBC Sentence 9.6.1.3.(2)), a 128.5 m^2, 2-storey detached home, which contained five differently sized windows with glass areas between 0.57 m^2 and 1.43 m^2, was used as the archetype. In 649 of the 680 locations in NBC Table C-2, the 1-in-50 hourly wind pressures remained below the maximum limits provided in NBC Tables 9.6.1.3.-A, 9.6.1.3.-B and 9.6.1.3.-C before and after the change, resulting in no impact. In 3 of the 31 locations with a potential impact—Cowley, AB; Cape Race, NL; and Resolution Island, NU—the 1-in-50 hourly wind pressure before and after the proposed change exceeded the maximum value of 1.0 kPa provided in the prescriptive table in the NBC; this would require consultation with the window manufacturer for glass thickness and would likely have a cost impact. For the remaining 28 locations, there would be an increased cost for windows of $126.98 to $353.51.

For nailing of framing (nailing of roof trusses, rafters and joists to wall framing; NBC Sentence 9.23.3.4.(3)), a 120 m^2 bungalow was used as the archetype. Due to the proposed change, 6 new locations—Argentia, NL; Channel-Port aux Basques, NL; Grand Bank, NL; St. John's, NL; Wabana, NL; and Nottingham Island, NU—will have 1-in-50 hourly wind pressures that are equal to or exceed 0.8 kPa, and roof trusses, rafters or joists would be required to be tied to wall framing with connectors that can resist 3 kN of roof uplift. For 6 these locations, the number of galvanized steel connectors required was calculated to be approximately 72, resulting in a cost increase of $437.04.

For fasteners for sheathing (NBC Article 9.23.3.5.), a 128.5 m^2, 2-storey detached house was used as the archetype. In 667 of the 680 locations in NBC Table C-2, the 1-in-50 hourly wind pressures remained below 0.8 kPa, resulting in no impact. Seven of the 13 remaining locations already have a 1-in-50 hourly wind pressure greater than 0.8 kPa in the current NBC Table C-2, resulting in no impact. The same 6 locations noted above will have 1-in-50 hourly wind pressures that exceed 0.8 kPa due to the proposed change, resulting in the following impacts:

- For roof sheathing, the 6 new locations would require larger fasteners and fasteners spaced at 50 mm within 1 m of the roof edge. The cost increase using common wire nails was estimated to be $468.68 for each location.
- For wall sheathing, the 6 new locations would require braced wall panels with wood-based wall sheathing, resulting in a cost increase of $1,125.30 for each location.

For anchorage of building frames (NBC Sentence 9.23.6.1.(3)), the same 6 new locations noted above will have 1-in-50 hourly wind pressures that exceed 0.8 kPa, resulting in an increase in the number of anchor bolts by 15 for a total cost increase of $94.20.

For required roof sheathing (NBC Sentence 9.23.16.1.(1)), a 128.5 m^2 2-storey detached bungalow was used as the archetype. The same 6 locations noted above would be impacted by the proposed change and be required to meet Subsection 9.23.16. The cost increase for going from a sheathing deemed too thin for truss spacing in NBC Sentence 9.23.16.7.(2) to a compliant plywood sheathing was approximately $168.82.

For lumber roof sheathing (NBC Article 9.23.16.5.), the roof area of a 128.5 m^2 2-storey detached house was used as the archetype. The same 6 locations noted above would be impacted by the proposed change and be required to have lumber roof sheathing installed diagonally instead of horizontally, per NBC Sentence 9.23.16.5., resulting in a cost increase of approximately $311.67 for each location.

For the attachment of cladding to flat insulating concrete form (ICF) wall units (NBC Sentence 9.27.5.4.(2)), a 128.5 m^2 2-storey detached house was used as the archetype. In 612 of the 680 locations in NBC Table C-2, the 1-in-50 hourly wind pressure is equal to or less than 0.6 kPa before and after the proposed change, resulting in no impact. In 34 of the remaining 68 locations, the 1-in-50 hourly wind pressure is greater than 0.6 kPa before and after the proposed change, so the impact is assumed to be minimal and would account for additional fasteners. The greatest impact would be experienced where the 1-in-50 hourly wind pressure increases from equal to or less than 0.60 kPa to more than 0.6 kPa after the proposed change, which occurs in the remaining 34 locations. This resulted in an approximate cost increase of $2,009.15 in these locations, representing the different material costs for fasteners into concrete, the additional labour, and the reduced daily output to attach the furring through the flat ICF wall units into the solid concrete back-up wall.

1/50 snow load S_s (S_{s50})

The following is a summary of the changes projected in the values of this parameter as a consequence of climate change over the typical design life of buildings (50 years):

Province or Territory	Number of Locations	ΔS_{s50} < 0%	ΔS_{s50} = 0%	0% < ΔS_{s50} ≤ 2%	2% < ΔS_{s50} < 5%	ΔS_{s50}= 5%
Alberta	55	0	55	0	0	0
British Columbia	108	0	108	0	0	0
Manitoba	24	0	24	0	0	0
New Brunswick	18	0	18	0	0	0
Newfoundland	18	0	18	0	0	0
Nova Scotia	25	0	25	0	0	0
Northwest Territories	17	0	0	0	0	17
Nunavut	16	0	0	0	0	16
Ontario	230	0	230	0	0	0
Prince Edward Island	4	0	4	0	0	0
Quebec	125	0	125	0	0	0
Saskatchewan	31	0	31	0	0	0
Yukon	9	0	0	0	0	9
Total	**680**	**0**	**638**	**0**	**0**	**42**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over a 50-year future timeframe range from 0% to 5%. All 638 locations in the provinces of Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec and Saskatchewan are projected to have no change in S_{s50} in the future; accordingly, the design values for these locations remain the same as the current values. For the remaining 42 locations in the Northwest Territories, Nunavut and Yukon, a future increase in snow loads of 5% is projected and, as such, the future projected values are the recommended design values for those locations. Although the projected increase in snow loading in the North is greater than 4%, it is anticipated that this proposed change will have a negligible effect on total building costs in the future.

1/50 snow load S_r (S_{r50})

The following is a summary of the changes projected in the values of this parameter as a consequence of climate change over the typical design life of buildings (50 years):

Province or Territory	Number of Locations	ΔS_{r50} < 0%	ΔS_{r50} = 0%	0% < ΔS_{r50} ≤ 2%	2% < ΔS_{r50} < 5%	ΔS_{r50}= 5%
Alberta	55	0	55	0	0	0
British Columbia	108	0	108	0	0	0
Manitoba	24	0	24	0	0	0
New Brunswick	18	0	18	0	0	0
Newfoundland	18	0	18	0	0	0
Nova Scotia	25	0	25	0	0	0

Province or Territory	Number of Locations	ΔS_{r50} < 0%	ΔS_{r50} = 0%	0% < ΔS_{r50} ≤ 2%	2% < ΔS_{r50} < 5%	ΔS_{r50}= 5%
Northwest Territories	17	0	0	0	0	17
Nunavut	16	0	0	0	0	16
Ontario	230	0	230	0	0	0
Prince Edward Island	4	0	4	0	0	0
Quebec	125	0	125	0	0	0
Saskatchewan	31	0	31	0	0	0
Yukon	9	0	0	0	0	9
Total	**680**	**0**	**638**	**0**	**0**	**42**

Across the 680 locations in NBC Table C-2, the projected changes in the values of this parameter over a 50-year future timeframe range from 0% to 5%. All 638 locations in the provinces of Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec and Saskatchewan are projected to have no change in S_{r50} in the future; accordingly, the design values for these locations remain the same as the current values. For the remaining 42 locations in the Northwest Territories, Nunavut and Yukon, a future increase in snow loads of 5% is projected and, as such, the future projected values are the recommended design values for those locations. Although the projected increase in snow loading in the North is higher than 4%, it is anticipated that this proposed change will have a negligible effect on total building costs in the future.

Cost impact on NBC Part 9 of updated 1/50 snow loads

Refer to "Cost impact of climatic load changes on Part 9: Future projected climate data for snow and wind loads (PCF 1979)" in the supporting document for PCF 1979 for the full cost analysis. A summary is reproduced here.

For platforms subject to snow and occupancy loads (NBC Sentence 9.4.2.3.(1)), a 3.5 m by 4 m exterior platform was assessed as the archetype. Of the 42 locations impacted by the updated 1/50 snow loads, 29 locations had specified snow loads less than 1.9 kPa before and after the proposed change, resulting in no impact. Of the 13 remaining locations, 6 locations had specified snow loads that remained within the same range before and after the proposed change, resulting in no impact. Of the 7 remaining locations, using the archetype, span tables, and costs from RSMeans, only 2 locations had a cost increase—$47.77 in Tungsten, NT, and $126.43 in Kugluktuk/Coppermine, NU.

For performance of windows, doors and skylights (NBC Sentence 9.7.3.1.(2)), the magnitude of the cost impact could not be determined without industry knowledge of the structural design of skylights, including the capacity of the skylight frames and glazing.

For columns (NBC Sub 9.17.1.1.(1)(b)(ii)), a 2.44 m by 4 m exterior platform that is raised 3 m from the ground by 3 columns was assessed. In 41 of the 42 locations impacted by the updated 1/50 snow loads, the sum of the specified snow load and the occupancy load remained below 4.8 kPa before and after the proposed change, resulting in no impact. It was found that there was no change in cost in the last location—Resolution Island, NU—as the same column size was applicable before and after the change.

For ridge support (NBC Sentence 9.23.14.8.(5) and NBC Table 9.23.14.8.), a 120 m^2 bungalow was used as the archetype. In 32 of the 42 locations impacted by the updated 1/50 snow loads, the specified snow load remained within the same range before and after the proposed change, resulting in no impact. Of the 10 remaining locations, 3 were not impacted because the same number of nails were sufficient before and after the proposed change. In the 7 remaining locations, the maximum number of additional nails required was 3 nails, resulting in an additional material cost of $5.45 in Eureka, NU.

For ICF lintels (NBC Sentence 9.20.17.4.(3) and NBC Span Tables 9.20.17.4.-A, 9.20.17.4.-B and 9.20.17.4.-C), an approximately 120 m^2 bungalow was used as the archetype, assuming 150 mm thick ICF walls. ICF lintel sizes before and after the proposed change were analyzed where the ground snow load exceeded 3.33 kPa. In 31 of the 42 locations impacted by the updated 1/50 snow loads, the ICF lintel size was sufficient to support the snow load before and after the proposed change, resulting in no impact. In Resolution Island, NU, the ground snow load exceeded both those listed in the NBC span tables and those provided by an ICF manufacturer and will likely require a structural engineer to design using NBC Part 4 with additional material and labour costs. For the 10 remaining locations in the Yukon, Northwest Territories and Nunavut, there was an increased cost for ICF lintels of $6.71 to $32.63.

For spans for joists, rafters and beams (NBC Sentence 9.23.4.2.(1)), an approximately 120 m^2 bungalow was used as the archetype. In 38 of the 42 locations impacted by the updated 1/50 snow loads, the specified snow load before and after the proposed change remained within the same range, resulting in no impact. The impacts on the remaining 4 locations—Fort Smith, NT; Tungsten, NT; Eureka, NU; and, Kugluktuk, NU—are as follows:

- For roof joists (NBC Span Tables 9.23.4.2.-D and 9.23.4.2.-E), there was no impact in Fort Smith, NT, and Tungsten, NT, because the same roof joist size was sufficient before and after the proposed change. The cost increase in Eureka, NU, and Kugluktuk, NU, was approximately $1,850.00.
- For roof rafters (NBC Span Tables 9.23.4.2.-F and 9.23.4.2.-G), there was no impact in Kugluktuk, NU because the size of the roof rafters was sufficient before and after the proposed change. There was a cost increase of $255.30 to $1,342.89 in the 3 remaining locations.
- For built-up ridge beams and lintels supporting the roof (NBC Span Table 9.23.4.2.-L), there was no impact in Tungsten, NT, because the size of the built-up ridge beam was sufficient before and after the proposed change. There was a cost increase of $140.24 to $262.66 in the 3 remaining locations.
- For lintels of various wood species (NBC Span Tables 9.23.12.3.-A, 9.23.12.3.-B, 9.23.12.3.-C and 9.23.12.3.-D), there was a cost increase in all 4 locations of $32.13 to $84.47.

Uniform hazard vs. uniform risk
The introduction of new data for snow and wind loads reflects a change in the approach used to assess reliability in NBC Part 4 from "uniform hazard" to "uniform risk":

- New specified wind and snow load values are proposed that reflect a uniform risk by reducing the current load factors of 1.4 and 1.5, respectively, to 1.0 and by using 500-year recurrence wind loads and 1000-year recurrence snow loads.
- New parameters, winter average temperature and wind speed, are introduced (for snow drifting calculations on roofs).

The impacts of these changes are addressed in PCF 1980, which incorporates proposed climate-related changes in NBC Part 4, including the uniform risk approach.

Most importantly, this new approach will provide a more uniform level of safety across the country, depending on the site-specific climate, that accounts for climate projections over a 50-year horizon but keeps the same target level of safety (currently, a probability of failure of 0.001 during the 50-year assumed service life). In addition, this will harmonize the approach used for climatic loads with the approach used for seismic effects (2475-year recurrence of design earthquake).

Overall, the proposed changes to NBC Table C-2 will result in buildings with a lower risk of failure during their entire service compared to past practice. While the changes in some locations may seem significant, the proposed approach remains reasonably simple and is not disruptive to the current practice.

In most cases, it is expected that common construction methods, material spacings and design considerations would prove to be resilient enough that no significant additional measures or costs would be needed to satisfy the engineering design resulting from the shift to the proposed uniform risk approach and climate change factors.

Enforcement implications

There are no foreseeable enforcement implications.

Who is affected

Designers, architects, building regulators and building owners.

Supporting Document(s)

Cost Impact of PCF 1979 (cost_impact_of_pcf_1979.pdf)

OBJECTIVE-BASED ANALYSIS OF NEW OR CHANGED PROVISIONS

N/A