

DURHAM REGION'S FUTURE CLIMATE (2040-2049)

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

Prepared for:

The Regional Municipality of Durham

Prepared by:

SENES Consultants
121 Granton Drive, Unit 12
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December 2013

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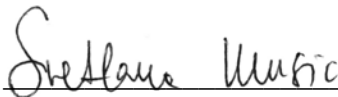


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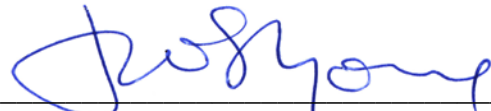
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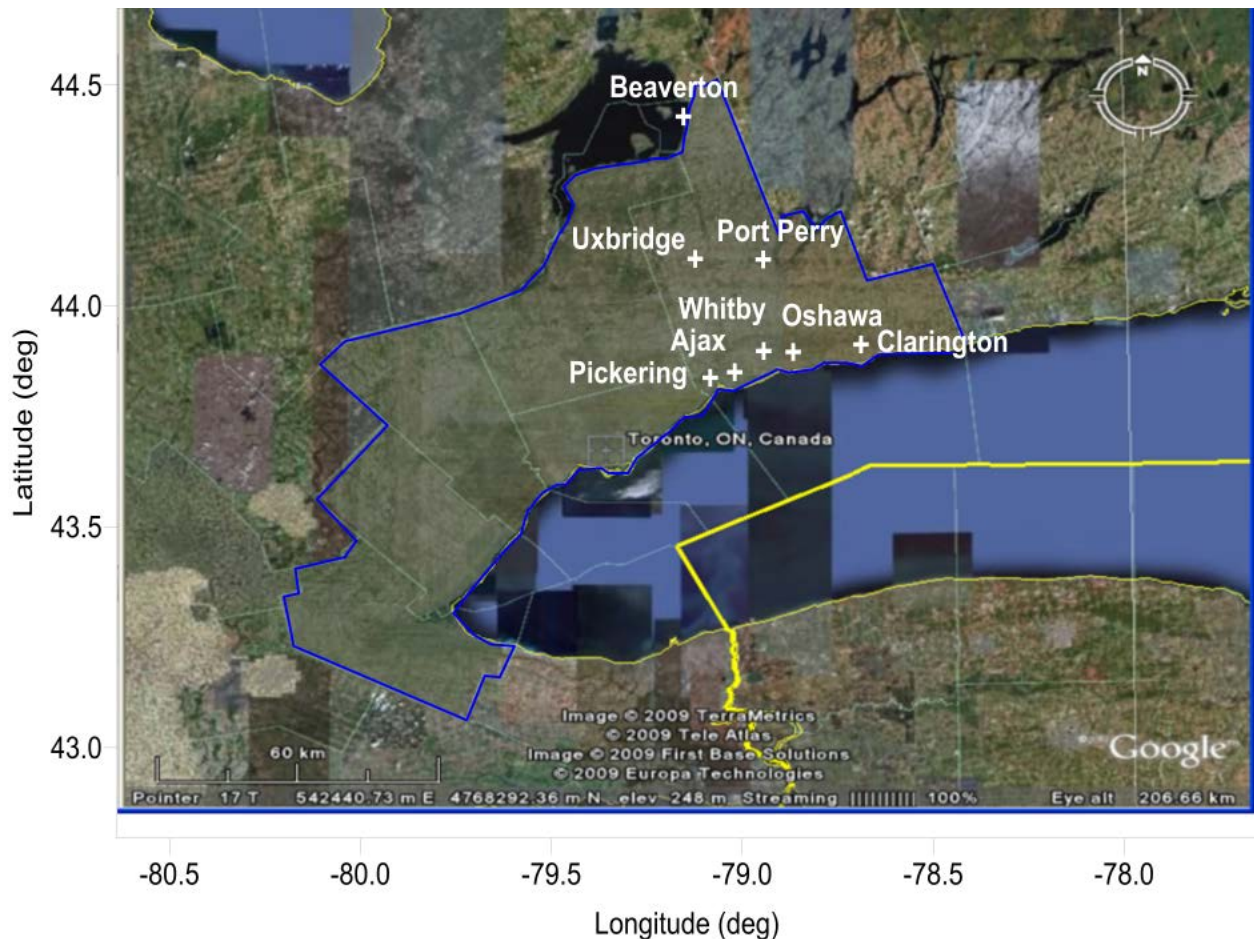
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1.0 MODEL RESULTS

1.1 INTRODUCTION

In the Volume 1 of this report only data for Whitby was used for the analysis, while all other points selected for results presentation are reported here in Volume 2 of the report. Figure 1 represents the selected locations for result presentation in the Regional Municipality of Durham.

Figure 1: Output Points Selected for the Durham Area



1.2 CLIMATOLOGICAL TABLES

This section presents tables of data for the current and future period for the 8 output locations listed in Table 1 as follows:

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

Table 1: List of Sub-Table Numbers and Actual Model Grid Points Used

Sub-Table Number	Station Name	Grid Point Used
1	Ajax	13414
2	Whitby	14165
3	Oshawa	14171
4	Clarington	14483
5	Uxbridge	17570
6	Port Perry	17584
7	Beaverton	22908
8	Pickering	13110

1.3 WHY SOME TABLES ARE LISTED AS CORRECTED

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

1.4 HUMIDEX

Typically humidex is not calculated during the winter months but since the climate is changing and the definition of when winter is actually occurring is changing with the climate. SENES, therefore, opted to report humidex for all months of the year. SENES has not screened out humidex values that are less than or equal to 25°C when the air temperature is greater than 20°C at which point humidex and air temperature are about the same. This means that for Table 12 Whitby, for example, there will be no humidex for January, February, March, November or December for the period 2000-2009. Compare this to Table 13 Whitby, which shows that November in the 2040-2049 period will have a valid humidex value in that month.

1.5 WIND CHILL

Wind chill is in some senses the opposite of humidex and is typically not calculated during the summer months. Again because we are looking at climate change, SENES opted to calculate values for wind chill for all months of the year to show how the definitions of seasons may vary into the future. For example, looking at Table 22

Whitby, we can see that the wind chill for July and August in the period 2000-2009 are listed as zero, when in reality they would just not be calculated and should show up in the table as “not available”. If we now look at Table 23 Whitby for the 2040-2049 period we see that there are zeros listed in the months May through August, clearly demonstrating the effect of climate change. Again those values would typically be listed as “not available” but have been left as zero for comparison purposes.

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Table 2: Temperature Summary for 2000-2009

Table 1. Ajax = 13414

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.5	-4.4	-0.7	5.8	11.2	17.1	20.0	20.2	16.7	10.1	4.7	-1.6	7.9
Standard Deviation of Daily Average (°C)	4.4	3.6	4.1	3.7	3.0	2.9	2.0	2.3	3.1	3.9	3.6	3.7	3.4
Daily Maximum (°C)	-1.8	-1.5	2.7	9.9	15.3	21.1	23.5	23.6	20.2	13.4	7.5	0.9	11.2
Standard Deviation of Daily Maximum (°C)	4.2	3.5	4.5	4.4	3.6	3.3	2.3	2.3	2.9	4.0	3.7	3.5	3.5
Daily Minimum (°C)	-7.0	-7.1	-3.6	2.3	7.3	13.3	16.2	16.4	13.1	6.9	2.0	-3.9	4.7
Standard Deviation of Daily Minimum (°C)	4.8	4.0	4.4	3.6	3.4	3.4	2.9	3.0	3.9	4.3	3.6	3.9	3.8
Extreme Maximum (°C)	11.8	11.5	18.5	24.1	27.3	30.3	31.3	31.2	29.4	29.6	17.0	16.3	31.3
Extreme Minimum (°C)	-20.6	-20.2	-24.3	-9.3	-1.6	1.8	5.8	8.8	-0.4	-1.6	-10.1	-20.7	-24.3

Table 2. Whitby = 14165

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.9	-4.6	-0.5	6.6	12.3	18.1	20.5	20.5	16.8	9.8	4.4	-2.1	8.1
Standard Deviation of Daily Average (°C)	4.6	3.8	4.5	4.2	3.3	3.1	2.2	2.5	3.3	4.1	3.7	3.8	3.6
Daily Maximum (°C)	-1.9	-1.2	3.5	11.4	17.2	22.8	24.9	24.8	21.1	13.9	7.7	0.7	12.1
Standard Deviation of Daily Maximum (°C)	4.4	3.9	4.9	4.9	3.9	3.4	2.4	2.7	3.3	4.4	4.0	3.6	3.8
Daily Minimum (°C)	-7.6	-7.6	-3.9	2.3	7.4	13.4	16.0	16.1	12.6	6.3	1.5	-4.5	4.3
Standard Deviation of Daily Minimum (°C)	4.9	4.1	4.6	3.9	3.6	3.6	2.9	3.0	3.9	4.4	3.7	4.0	3.9
Extreme Maximum (°C)	12.3	20.7	19.8	25.7	29.7	31.2	32.6	32.4	29.9	30.2	17.7	13.6	32.6
Extreme Minimum (°C)	-21.3	-21.2	-25.0	-9.8	-1.8	3.5	6.4	7.8	-0.8	-2.2	-12.4	-22.3	-25.0

Table 3. Oshawa = 14171

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.8	-4.6	-0.5	6.4	12.1	17.8	20.3	20.4	16.7	9.8	4.4	-2.0	8.0
Standard Deviation of Daily Average (°C)	4.6	3.8	4.4	4.1	3.2	3.1	2.1	2.5	3.2	4.1	3.7	3.8	3.5
Daily Maximum (°C)	-2.0	-1.4	3.3	11.0	16.6	22.2	24.4	24.4	20.7	13.7	7.6	0.7	11.8
Standard Deviation of Daily Maximum (°C)	4.4	3.8	4.8	4.8	3.7	3.4	2.3	2.6	3.2	4.3	3.9	3.6	3.7
Daily Minimum (°C)	-7.5	-7.5	-3.8	2.4	7.5	13.5	16.1	16.3	12.8	6.4	1.6	-4.5	4.4
Standard Deviation of Daily Minimum (°C)	4.9	4.1	4.6	3.9	3.6	3.5	2.8	3.0	3.9	4.3	3.6	4.0	3.8
Extreme Maximum (°C)	12.2	13.0	19.2	25.7	28.7	31.1	31.9	31.9	29.6	29.2	17.3	13.7	31.9
Extreme Minimum (°C)	-21.3	-21.2	-25.1	-9.6	-1.5	4.0	5.8	8.0	-0.7	-2.2	-12.2	-22.6	-25.1

Table 4. Clarington = 14483

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.7	-4.4	-0.4	6.5	12.0	17.7	20.3	20.3	16.8	9.9	4.5	-1.9	8.1
Standard Deviation of Daily Average (°C)	4.5	3.7	4.4	4.0	3.2	3.0	2.1	2.4	3.2	4.1	3.7	3.8	3.5
Daily Maximum (°C)	-1.9	-1.3	3.4	11.0	16.5	22.0	24.2	24.3	20.7	13.7	7.6	0.8	11.8
Standard Deviation of Daily Maximum (°C)	4.4	3.7	4.8	4.6	3.4	3.2	2.2	2.4	3.1	4.1	3.9	3.7	3.6
Daily Minimum (°C)	-7.3	-7.3	-3.6	2.5	7.5	13.5	16.1	16.3	12.9	6.5	1.7	-4.3	4.5
Standard Deviation of Daily Minimum (°C)	4.9	4.1	4.6	3.9	3.6	3.5	2.9	3.1	3.9	4.4	3.7	4.1	3.9
Extreme Maximum (°C)	11.8	15.0	18.3	23.3	28.1	31.0	31.8	31.8	29.0	26.7	17.0	19.3	31.8
Extreme Minimum (°C)	-21.0	-20.9	-24.6	-9.2	-1.7	4.3	6.4	7.3	-0.2	-2.2	-12.0	-22.9	-24.6

Table 5. Uxbridge = 17570

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.2	-5.8	-1.4	6.1	12.2	17.9	19.9	19.7	16.0	8.8	3.2	-3.4	7.2
Standard Deviation of Daily Average (°C)	4.8	4.2	5.1	5.1	4.1	3.8	2.6	3.0	3.6	4.5	4.0	3.9	4.1
Daily Maximum (°C)	-3.1	-2.0	2.9	11.4	17.5	22.9	24.6	24.3	20.8	13.2	6.9	-0.5	11.6
Standard Deviation of Daily Maximum (°C)	4.7	4.7	5.7	6.0	4.6	4.0	2.9	3.1	3.9	5.1	4.6	4.1	4.4
Daily Minimum (°C)	-8.9	-8.9	-5.0	1.5	7.0	13.0	15.4	15.3	11.6	5.3	0.3	-5.8	3.4
Standard Deviation of Daily Minimum (°C)	5.1	4.4	5.0	4.6	4.3	4.1	3.2	3.4	4.0	4.4	3.8	4.1	4.2
Extreme Maximum (°C)	12.5	37.1	20.0	27.5	31.1	32.2	33.7	34.7	31.0	28.2	18.1	29.2	37.1
Extreme Minimum (°C)	-24.1	-23.6	-27.5	-12.5	-2.9	2.6	4.8	5.8	-3.3	-3.8	-12.9	-23.2	-27.5

Table 6. Port Perry = 17584

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.1	-5.7	-1.3	6.2	12.2	17.8	19.9	19.7	15.9	8.8	3.2	-3.4	7.3
Standard Deviation of Daily Average (°C)	4.8	4.1	5.0	4.9	4.0	3.7	2.6	2.9	3.6	4.4	4.0	4.0	4.0
Daily Maximum (°C)	-3.0	-1.9	3.1	11.7	17.7	22.9	24.6	24.5	20.9	13.4	7.0	-0.4	11.7
Standard Deviation of Daily Maximum (°C)	4.6	4.3	5.6	5.9	4.5	3.8	2.8	3.0	3.7	5.0	4.5	4.2	4.3
Daily Minimum (°C)	-9.0	-8.8	-5.0	1.3	6.8	12.7	15.1	15.0	11.3	5.0	0.2	-5.9	3.2
Standard Deviation of Daily Minimum (°C)	5.2	4.4	5.0	4.5	4.3	4.2	3.2	3.5	4.1	4.5	3.8	4.2	4.2
Extreme Maximum (°C)	12.0	18.3	18.9	27.0	31.3	32.3	34.0	35.0	30.7	27.8	18.5	35.0	35.0
Extreme Minimum (°C)	-23.8	-23.4	-27.3	-11.6	-2.9	2.3	4.5	5.1	-4.3	-4.9	-14.2	-24.5	-27.3

Table 7. Beaverton = 22908

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-6.3	-6.1	-1.7	6.0	12.0	17.5	19.8	19.6	16.0	9.0	3.3	-3.3	7.1
Standard Deviation of Daily Average (°C)	4.9	4.3	5.0	5.0	3.8	3.5	2.4	2.7	3.5	4.3	4.0	4.0	4.0
Daily Maximum (°C)	-3.1	-2.3	2.6	11.4	17.5	22.6	24.4	24.3	20.9	13.4	7.0	-0.4	11.5
Standard Deviation of Daily Maximum (°C)	4.7	4.5	5.7	6.1	4.5	3.8	2.9	3.0	3.9	5.0	4.7	3.9	4.4
Daily Minimum (°C)	-9.2	-9.5	-5.5	1.2	6.7	12.7	15.3	15.3	11.5	5.3	0.3	-5.8	3.2
Standard Deviation of Daily Minimum (°C)	5.4	4.8	5.0	4.4	3.9	3.8	2.7	3.1	3.9	4.2	3.8	4.2	4.1
Extreme Maximum (°C)	13.2	30.5	20.4	27.5	31.0	31.6	32.1	32.7	30.3	27.8	20.5	15.0	32.7
Extreme Minimum (°C)	-27.7	-26.9	-29.0	-13.2	-3.6	1.9	6.7	7.0	-3.4	-3.9	-13.2	-24.3	-29.0

Table 8. Pickering = 13110

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-4.7	-4.6	-0.5	6.4	12.1	17.9	20.5	20.5	16.8	9.9	4.4	-2.0	8.1
Standard Deviation of Daily Average (°C)	4.5	3.7	4.4	4.1	3.4	3.2	2.3	2.6	3.3	4.1	3.7	3.8	3.6
Daily Maximum (°C)	-1.7	-1.3	3.4	11.2	16.9	22.6	24.9	24.9	21.1	14.0	7.8	0.8	12.0
Standard Deviation of Daily Maximum (°C)	4.4	3.7	4.9	5.0	4.1	3.7	2.6	2.9	3.4	4.4	4.0	3.6	3.9
Daily Minimum (°C)	-7.4	-7.5	-3.9	2.1	7.1	13.1	15.7	15.9	12.5	6.3	1.5	-4.5	4.3
Standard Deviation of Daily Minimum (°C)	4.9	4.0	4.5	3.8	3.6	3.6	3.1	3.1	3.9	4.4	3.7	4.0	3.9
Extreme Maximum (°C)	12.6	10.9	20.4	27.1	32.1	32.2	34.1	35.1	32.0	30.6	18.0	13.7	35.1
Extreme Minimum (°C)	-21.2	-21.1	-25.0	-9.8	-2.0	1.9	5.7	7.6	-0.8	-2.2	-11.8	-20.5	-25.0

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Table 3: Temperature Summary for 2040-2049

Table 1. Ajax = 13414

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.6	2.4	4.8	8.8	14.1	18.0	21.4	22.6	19.9	14.6	8.5	3.2	11.7
Standard Deviation of Daily Average (°C)	2.9	3.0	2.6	3.0	2.3	2.1	1.7	1.8	3.1	3.6	3.1	3.0	2.7
Daily Maximum (°C)	4.2	5.1	8.1	12.7	18.2	22.4	25.2	26.0	23.3	18.1	11.6	6.0	15.1
Standard Deviation of Daily Maximum (°C)	2.8	3.1	2.9	3.5	3.1	3.2	2.6	2.4	3.0	3.5	2.8	2.9	3.0
Daily Minimum (°C)	-0.4	0.2	1.8	5.3	10.2	14.3	18.2	19.7	16.5	11.1	5.8	0.9	8.6
Standard Deviation of Daily Minimum (°C)	3.2	3.3	2.8	3.3	2.5	2.1	1.8	2.2	3.8	4.2	3.7	3.3	3.0
Extreme Maximum (°C)	11.6	13.3	16.9	26.2	36.3	39.8	37.3	40.4	30.8	30.8	19.9	12.9	40.4
Extreme Minimum (°C)	-9.4	-8.8	-6.2	-3.5	3.2	4.0	11.4	11.8	3.3	1.1	-4.6	-11.5	-11.5

Table 2. Whitby = 14165

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.1	2.1	4.9	9.6	15.7	20.2	23.1	23.6	20.1	14.4	8.0	2.6	12.1
Standard Deviation of Daily Average (°C)	3.1	3.3	2.9	3.5	2.8	2.5	1.9	2.1	3.5	3.9	3.3	3.1	3.0
Daily Maximum (°C)	4.0	5.2	8.9	14.2	20.8	25.5	28.0	28.3	24.5	18.7	11.6	5.7	16.3
Standard Deviation of Daily Maximum (°C)	3.0	3.5	3.4	4.2	3.5	3.3	2.3	2.5	3.6	4.0	3.1	3.0	3.3
Daily Minimum (°C)	-1.2	-0.4	1.5	5.3	10.8	15.2	18.7	19.6	16.1	10.6	5.0	0.1	8.4
Standard Deviation of Daily Minimum (°C)	3.4	3.5	3.0	3.7	3.0	2.5	2.1	2.3	3.9	4.4	3.8	3.3	3.2
Extreme Maximum (°C)	13.3	15.2	18.0	28.3	38.0	39.7	39.3	38.6	33.3	31.5	20.6	13.7	39.7
Extreme Minimum (°C)	-11.8	-9.6	-7.3	-4.8	3.2	4.4	12.1	11.1	3.5	-0.6	-5.5	-13.1	-13.1

Table 3. Oshawa = 14171

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.1	2.1	4.8	9.4	15.4	19.7	22.7	23.3	20.0	14.4	8.1	2.7	12.0
Standard Deviation of Daily Average (°C)	3.1	3.3	2.9	3.4	2.7	2.4	1.8	2.0	3.4	3.8	3.2	3.1	2.9
Daily Maximum (°C)	3.9	5.1	8.6	13.8	20.0	24.5	27.1	27.5	24.1	18.5	11.5	5.7	15.9
Standard Deviation of Daily Maximum (°C)	3.0	3.4	3.3	4.0	3.3	3.1	2.2	2.4	3.5	4.0	3.0	3.0	3.2
Daily Minimum (°C)	-1.0	-0.4	1.5	5.3	10.9	15.1	18.7	19.6	16.2	10.7	5.2	0.2	8.5
Standard Deviation of Daily Minimum (°C)	3.3	3.5	3.0	3.7	3.0	2.5	2.0	2.2	3.8	4.3	3.7	3.3	3.2
Extreme Maximum (°C)	13.3	14.5	17.7	26.7	38.0	39.7	34.3	39.3	32.2	31.3	19.5	13.9	39.7
Extreme Minimum (°C)	-10.8	-9.6	-7.5	-5.0	3.3	4.0	12.6	11.4	2.9	-0.1	-5.2	-11.3	-11.3

Table 4. Clarington = 14483

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.3	2.2	4.8	9.4	15.2	19.4	22.5	23.1	19.9	14.4	8.2	2.8	11.9
Standard Deviation of Daily Average (°C)	3.0	3.3	2.9	3.3	2.6	2.3	1.8	1.9	3.3	3.8	3.2	3.1	2.9
Daily Maximum (°C)	4.0	5.2	8.7	13.7	19.7	24.1	26.8	27.2	24.0	18.4	11.5	5.8	15.8
Standard Deviation of Daily Maximum (°C)	2.9	3.3	3.2	3.8	3.0	2.8	2.1	2.1	3.3	3.8	2.9	3.0	3.0
Daily Minimum (°C)	-0.9	-0.3	1.6	5.3	10.7	14.9	18.5	19.6	16.2	10.8	5.3	0.4	8.5
Standard Deviation of Daily Minimum (°C)	3.3	3.6	3.0	3.6	3.0	2.5	2.1	2.3	3.9	4.4	3.8	3.4	3.2
Extreme Maximum (°C)	12.8	14.6	17.4	25.8	38.4	39.5	33.8	36.5	31.5	28.5	19.4	13.9	39.5
Extreme Minimum (°C)	-9.7	-9.6	-7.6	-3.6	3.1	4.3	11.7	11.7	4.5	-0.6	-5.2	-10.9	-10.9

Table 5. Uxbridge = 17570

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-0.3	0.8	3.8	9.1	16.0	21.1	23.6	23.7	19.3	13.5	6.8	1.3	11.6
Standard Deviation of Daily Average (°C)	3.2	3.7	3.5	4.5	4.1	3.8	2.7	2.9	3.9	4.3	3.4	3.2	3.6
Daily Maximum (°C)	2.4	4.0	7.9	13.7	21.0	26.1	28.7	28.7	23.9	17.9	10.4	4.2	15.7
Standard Deviation of Daily Maximum (°C)	3.3	3.9	4.2	5.2	4.5	4.1	3.1	3.3	4.3	4.8	3.5	3.3	4.0
Daily Minimum (°C)	-2.4	-1.7	0.5	4.9	11.0	16.3	19.0	19.4	15.4	9.8	4.0	-1.0	7.9
Standard Deviation of Daily Minimum (°C)	3.4	3.8	3.2	4.5	4.4	4.1	3.0	3.0	4.2	4.5	3.7	3.3	3.7
Extreme Maximum (°C)	14.3	18.9	20.5	28.6	35.1	39.5	40.8	42.9	32.9	29.5	19.7	14.3	42.9
Extreme Minimum (°C)	-13.5	-12.9	-9.0	-6.5	1.8	3.4	10.9	11.5	0.4	-0.8	-7.0	-14.2	-14.2

Table 6. Port Perry = 17584

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-0.2	1.0	4.0	9.2	16.0	21.0	23.6	23.6	19.3	13.5	6.9	1.4	11.6
Standard Deviation of Daily Average (°C)	3.2	3.7	3.4	4.4	3.9	3.6	2.6	2.7	3.9	4.2	3.4	3.3	3.5
Daily Maximum (°C)	2.7	4.3	8.3	14.0	21.2	26.1	28.6	28.6	24.0	18.0	10.6	4.4	15.9
Standard Deviation of Daily Maximum (°C)	3.2	3.9	4.1	5.0	4.3	4.0	2.9	3.2	4.2	4.6	3.5	3.3	3.9
Daily Minimum (°C)	-2.4	-1.6	0.5	4.8	10.7	15.9	18.8	19.2	15.1	9.6	4.0	-1.0	7.8
Standard Deviation of Daily Minimum (°C)	3.5	3.8	3.2	4.4	4.4	3.9	2.9	2.9	4.3	4.5	3.8	3.4	3.8
Extreme Maximum (°C)	14.3	18.8	19.5	28.3	35.6	39.5	40.8	44.1	32.6	28.9	19.9	14.6	44.1
Extreme Minimum (°C)	-14.3	-12.6	-9.2	-5.9	1.6	2.8	10.7	11.1	-0.3	-1.7	-7.9	-12.8	-14.3

Table 7. Beaverton = 22908

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	0.0	0.9	4.0	9.2	15.7	20.4	23.2	23.5	19.4	13.6	7.2	1.7	11.6
Standard Deviation of Daily Average (°C)	3.1	3.7	3.4	4.3	3.8	3.4	2.6	2.6	3.7	4.0	3.4	3.2	3.4
Daily Maximum (°C)	2.5	4.1	8.0	13.8	20.8	25.6	28.4	28.5	23.9	17.8	10.7	4.6	15.7
Standard Deviation of Daily Maximum (°C)	3.2	4.0	4.1	5.2	4.4	3.9	3.1	3.2	4.2	4.6	3.5	3.4	3.9
Daily Minimum (°C)	-2.1	-1.6	0.7	5.0	10.8	15.6	18.6	19.4	15.5	10.0	4.4	-0.5	8.0
Standard Deviation of Daily Minimum (°C)	3.4	3.9	3.1	4.2	4.0	3.6	2.7	2.5	4.0	4.3	3.7	3.3	3.6
Extreme Maximum (°C)	13.3	18.4	20.9	30.3	33.7	36.6	38.2	39.6	34.1	27.9	19.6	15.4	39.6
Extreme Minimum (°C)	-14.8	-13.2	-9.1	-5.5	2.5	4.5	11.1	12.1	0.9	-0.1	-7.2	-12.7	-14.8

Table 8. Pickering = 13110

Temperature:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	1.3	2.4	5.0	9.5	15.3	19.5	22.6	23.4	20.2	14.6	8.3	2.8	12.1
Standard Deviation of Daily Average (°C)	3.1	3.2	2.9	3.4	2.7	2.5	1.9	2.2	3.4	3.9	3.2	3.2	3.0
Daily Maximum (°C)	4.3	5.4	8.9	14.1	20.1	24.5	27.1	27.8	24.5	19.0	11.9	6.1	16.1
Standard Deviation of Daily Maximum (°C)	3.0	3.4	3.4	4.1	3.5	3.4	2.6	2.7	3.6	4.1	3.1	3.0	3.3
Daily Minimum (°C)	-1.0	-0.2	1.6	5.2	10.4	14.8	18.4	19.6	16.1	10.6	5.2	0.2	8.4
Standard Deviation of Daily Minimum (°C)	3.4	3.4	2.9	3.6	2.9	2.5	2.1	2.4	4.0	4.4	3.8	3.4	3.2
Extreme Maximum (°C)	14.0	14.6	19.0	28.8	38.4	41.2	40.2	42.6	34.0	31.9	21.8	14.4	42.6
Extreme Minimum (°C)	-11.7	-9.5	-6.7	-4.0	3.0	3.6	11.2	11.4	2.7	0.1	-5.1	-13.0	-13.0

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Table 4: Degree Days Summary for 2000-2009

Table 1. Ajax = 13414

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	0	2	1	0	0	0	0	4
Above 22 C	0	0	0	0	0	2	9	9	1	0	0	0	22
Above 18 C	0	0	0	0	1	26	70	76	22	2	0	0	197
Above 15 C	0	0	0	0	7	79	154	160	73	10	0	0	482
Above 10 C	0	0	0	9	62	213	309	315	203	55	4	0	1169
Above 5 C	1	0	5	60	194	363	464	470	352	162	41	3	2115
Above 0C	15	8	45	179	348	513	619	625	502	312	147	30	3342
Below 0 C	154	133	66	4	0	0	0	0	0	0	7	80	444
Below 5 C	294	268	181	35	1	0	0	0	0	5	51	208	1043
Below 10 C	448	409	331	134	23	0	0	0	1	52	164	360	1923
Below 15 C	602	550	486	275	124	16	0	0	20	162	310	515	3062
Below 18 C	695	635	579	365	211	53	9	9	60	247	400	608	3872

Table 2. Whitby = 14165

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	1	3	3	1	0	0	0	8
Above 22 C	0	0	0	0	1	5	14	15	3	0	0	0	37
Above 18 C	0	0	0	0	4	42	84	86	25	2	0	0	242
Above 15 C	0	0	0	1	15	103	170	170	75	10	0	0	543
Above 10 C	0	0	0	17	88	242	325	324	204	53	4	0	1258
Above 5 C	2	0	9	79	226	392	480	479	353	157	39	3	2219
Above 0C	15	8	53	202	381	542	635	634	503	305	140	26	3444
Below 0 C	165	139	67	4	0	0	0	0	0	0	9	91	475
Below 5 C	306	273	179	31	0	0	0	0	0	7	58	222	1076
Below 10 C	459	414	325	119	17	0	0	0	2	58	173	375	1941
Below 15 C	614	555	479	253	99	11	0	0	22	170	319	530	3052
Below 18 C	706	640	572	342	181	40	7	10	62	255	409	623	3847

Table 3. Oshawa = 14171

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	0	3	3	0	0	0	0	6
Above 22 C	0	0	0	0	1	4	13	13	2	0	0	0	33
Above 18 C	0	0	0	0	3	38	80	83	23	2	0	0	230
Above 15 C	0	0	0	1	13	98	166	167	73	10	0	0	527
Above 10 C	0	0	0	16	82	236	320	322	202	53	4	0	1235
Above 5 C	2	0	8	75	219	385	475	477	351	156	39	3	2191
Above 0C	15	8	51	197	374	535	630	632	501	305	140	27	3415
Below 0 C	164	139	68	4	0	0	0	0	0	0	9	90	474
Below 5 C	306	273	180	32	0	0	0	0	0	6	58	221	1076
Below 10 C	458	414	327	122	18	0	0	0	2	58	172	374	1945
Below 15 C	613	555	482	258	104	12	0	0	22	170	319	528	3063
Below 18 C	706	640	575	347	187	43	8	10	63	255	409	621	3862

Table 4. Clarington = 14483

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	0	2	2	0	0	0	0	5
Above 22 C	0	0	0	0	0	3	11	12	2	0	0	0	29
Above 18 C	0	0	0	0	2	35	79	82	24	2	0	0	224
Above 15 C	0	0	0	1	11	94	164	166	74	10	0	0	520
Above 10 C	0	0	0	15	81	232	318	321	204	54	4	0	1229
Above 5 C	2	0	9	75	218	382	473	476	353	159	40	3	2189
Above 0C	15	8	53	198	373	532	628	631	503	307	143	28	3420
Below 0 C	160	134	65	4	0	0	0	0	0	0	8	87	457
Below 5 C	301	268	176	31	0	0	0	0	0	6	55	216	1053
Below 10 C	454	409	322	120	18	0	0	0	1	57	169	369	1919
Below 15 C	608	550	477	256	103	12	0	0	22	167	315	524	3036
Below 18 C	701	635	570	346	187	43	8	10	61	252	405	617	3835

Table 5. Uxbridge = 17570

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	3	3	4	1	0	0	0	12
Above 22 C	0	0	0	0	2	10	14	13	3	0	0	0	42
Above 18 C	0	0	0	1	9	47	75	71	22	2	0	0	227
Above 15 C	0	0	0	4	22	103	154	147	62	9	0	0	502
Above 10 C	0	0	1	24	94	236	307	300	182	45	3	0	1192
Above 5 C	2	1	11	80	224	386	462	455	329	133	30	2	2115
Above 0C	10	7	49	193	378	536	617	610	479	274	113	17	3283
Below 0 C	202	172	93	9	0	0	0	0	0	0	17	123	614
Below 5 C	347	307	209	46	1	0	0	0	0	14	84	263	1271
Below 10 C	500	448	355	140	26	0	0	0	4	81	206	416	2175
Below 15 C	655	589	508	270	109	17	2	2	34	201	353	571	3311
Below 18 C	747	674	601	357	189	52	15	19	83	287	443	664	4131

DURHAM REGION'S FUTURE CLIMATE – VOLUME 2

Table 5: Degree Days Summary for 2000-2009 (Continued)

<i>Table 6. Port Perry = 17584</i>													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	2	3	4	1	0	0	0	10
Above 22 C	0	0	0	0	1	9	13	13	2	0	0	0	38
Above 18 C	0	0	0	1	8	46	72	70	20	2	0	0	220
Above 15 C	0	0	0	4	21	101	152	147	61	9	0	0	494
Above 10 C	0	0	1	22	93	236	305	300	181	44	3	0	1185
Above 5 C	1	1	10	80	225	385	460	455	327	132	30	2	2109
Above 0C	10	7	49	194	379	535	615	610	477	273	114	18	3280
Below 0 C	199	167	90	8	0	0	0	0	0	0	16	122	602
Below 5 C	345	302	206	44	1	0	0	0	0	14	83	261	1257
Below 10 C	498	443	351	137	25	0	0	0	4	81	205	414	2159
Below 15 C	653	584	506	268	107	16	2	2	34	201	353	569	3294
Below 18 C	745	669	599	355	188	51	15	19	84	287	443	662	4115
<i>Table 7. Beaverton = 22908</i>													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	1	2	2	1	0	0	0	6
Above 22 C	0	0	0	0	1	7	10	10	2	0	0	0	30
Above 18 C	0	0	0	0	6	41	69	68	20	2	0	0	207
Above 15 C	0	0	0	3	18	94	149	146	62	9	0	0	481
Above 10 C	0	0	1	21	88	227	303	299	183	45	3	0	1169
Above 5 C	1	0	9	77	218	376	458	454	330	136	30	2	2092
Above 0C	10	6	44	188	372	526	613	609	479	278	116	18	3260
Below 0 C	205	180	98	9	0	0	0	0	0	0	16	120	627
Below 5 C	351	316	218	48	1	0	0	0	0	12	81	259	1286
Below 10 C	504	457	365	142	26	1	0	0	3	77	203	412	2189
Below 15 C	658	598	519	274	111	18	1	1	32	196	350	567	3327
Below 18 C	751	683	612	362	192	55	14	16	81	281	440	660	4148
<i>Table 8. Pickering = 13110</i>													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	0	1	4	4	0	0	0	0	9
Above 22 C	0	0	0	0	1	5	15	16	3	0	0	0	39
Above 18 C	0	0	0	0	4	40	83	86	25	2	0	0	241
Above 15 C	0	0	0	1	14	100	169	170	76	10	0	0	539
Above 10 C	0	0	0	15	80	238	324	325	206	55	4	0	1247
Above 5 C	2	0	8	73	217	387	479	480	354	160	40	3	2204
Above 0C	15	8	50	196	372	537	634	635	504	310	142	28	3431
Below 0 C	160	137	67	4	0	0	0	0	0	0	8	87	463
Below 5 C	301	270	179	32	0	0	0	0	0	6	56	217	1062
Below 10 C	454	412	327	123	18	0	0	0	2	56	170	370	1931
Below 15 C	608	553	482	259	107	12	0	0	21	166	316	525	3050
Below 18 C	701	638	575	348	190	43	8	9	61	250	406	618	3847

DURHAM REGION'S FUTURE CLIMATE – VOLUME 2

Table 6: Corrected Degree days Summary for 2040-2049

Table 1. Ajax = 13414													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	1	1	4	10	1	0	0	0	17
Above 22 C	0	0	0	0	1	3	17	37	12	0	0	0	70
Above 18 C	0	0	0	0	3	27	106	144	79	10	0	0	369
Above 15 C	0	0	0	1	19	94	197	237	152	43	0	0	742
Above 10 C	0	0	1	24	127	241	352	392	297	148	24	1	1608
Above 5 C	9	15	37	123	281	391	507	547	447	297	115	22	2793
Above 0C	71	85	151	265	436	541	662	702	597	452	256	110	4329
Below 0 C	20	17	3	0	0	0	0	0	0	0	0	10	50
Below 5 C	114	89	44	8	0	0	0	0	0	0	9	77	341
Below 10 C	259	215	163	59	1	0	0	0	0	6	68	211	982
Below 15 C	414	356	317	186	48	3	0	0	5	55	194	365	1944
Below 18 C	507	441	410	275	125	26	1	0	22	115	284	458	2666
Table 2. Whitby = 14165													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	1	4	17	23	4	0	0	0	49
Above 22 C	0	0	0	0	2	12	49	61	19	0	0	0	143
Above 18 C	0	0	0	0	13	75	159	173	87	12	0	0	520
Above 15 C	0	0	0	3	48	157	252	266	159	44	0	0	929
Above 10 C	0	1	2	42	178	305	407	421	302	145	21	1	1825
Above 5 C	8	16	44	146	332	455	562	576	452	291	104	18	3004
Above 0C	61	81	155	287	487	605	717	731	602	446	241	95	4508
Below 0 C	28	22	4	0	0	0	0	0	0	0	1	15	70
Below 5 C	130	99	48	9	0	0	0	0	0	0	14	93	393
Below 10 C	277	225	161	55	1	0	0	0	0	9	81	231	1040
Below 15 C	432	366	314	166	27	2	0	0	7	63	210	385	1971
Below 18 C	525	450	407	253	84	10	0	0	25	124	300	478	2657
Table 3. Oshawa = 14171													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	1	3	13	19	3	0	0	0	38
Above 22 C	0	0	0	0	1	9	40	53	16	0	0	0	120
Above 18 C	0	0	0	0	10	64	147	164	83	11	0	0	479
Above 15 C	0	0	0	2	42	144	239	257	156	43	0	0	884
Above 10 C	0	1	2	38	169	292	394	412	299	145	21	1	1774
Above 5 C	8	16	42	140	323	442	549	567	449	291	105	19	2953
Above 0C	62	81	153	282	478	592	704	722	599	446	242	97	4459
Below 0 C	27	22	4	0	0	0	0	0	0	0	1	14	69
Below 5 C	128	99	49	9	0	0	0	0	0	0	13	91	389
Below 10 C	275	225	163	56	1	0	0	0	0	9	79	229	1037
Below 15 C	430	366	317	171	29	2	0	0	7	62	208	383	1974
Below 18 C	523	451	410	259	90	11	0	0	24	123	298	476	2665
Table 4. Clarington = 14483													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	1	2	11	16	2	0	0	0	32
Above 22 C	0	0	0	0	1	6	36	49	15	0	0	0	107
Above 18 C	0	0	0	0	9	55	140	160	83	10	0	0	456
Above 15 C	0	0	0	2	38	134	232	253	155	42	0	0	855
Above 10 C	0	1	2	36	162	282	387	408	298	145	22	1	1744
Above 5 C	9	17	42	139	316	432	542	563	448	291	108	20	2928
Above 0C	65	83	154	281	471	582	697	718	598	446	246	101	4443
Below 0 C	24	22	4	0	0	0	0	0	0	0	1	13	64
Below 5 C	123	97	47	8	0	0	0	0	0	0	13	88	375
Below 10 C	269	222	162	55	1	0	0	0	0	9	77	224	1018
Below 15 C	424	363	315	171	31	2	0	0	6	61	205	378	1956
Below 18 C	517	448	408	259	95	13	0	0	24	122	295	471	2652
Table 5. Uxbridge = 17570													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	2	19	31	33	5	0	0	0	90
Above 22 C	0	0	0	0	6	40	67	69	17	0	0	0	200
Above 18 C	0	0	0	2	30	111	175	176	76	13	0	0	584
Above 15 C	0	0	0	8	71	187	268	268	142	40	0	0	984
Above 10 C	0	2	4	48	188	334	423	423	280	126	15	0	1843
Above 5 C	6	14	37	139	340	484	578	578	429	264	80	11	2961
Above 0C	41	63	131	274	495	634	733	733	579	419	207	69	4378
Below 0 C	49	40	12	1	0	0	0	0	0	0	2	28	132
Below 5 C	169	133	73	17	0	0	0	0	0	1	25	125	542
Below 10 C	318	262	195	76	3	0	0	0	1	18	110	269	1250
Below 15 C	473	402	346	186	40	3	0	0	13	86	245	424	2218
Below 18 C	566	486	439	270	93	17	1	1	37	152	335	517	2914

DURHAM REGION'S FUTURE CLIMATE – VOLUME 2

Table 7: Corrected Degree days Summary for 2040-2049 (Continued)

<i>Table 6. Port Perry = 17584</i>													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	2	15	28	30	4	0	0	0	80
Above 22 C	0	0	0	0	5	35	64	66	16	0	0	0	187
Above 18 C	0	0	0	2	29	106	173	174	75	11	0	0	570
Above 15 C	0	0	0	8	69	182	265	266	142	38	0	0	971
Above 10 C	0	1	4	48	189	330	420	421	279	126	15	0	1834
Above 5 C	6	15	38	142	341	480	575	576	428	263	81	12	2958
Above 0C	42	66	135	278	496	630	730	731	578	418	209	71	4384
Below0 C	47	38	10	1	0	0	0	0	0	0	2	28	127
Below5 C	166	129	69	15	0	0	0	0	0	1	25	123	527
Below10 C	315	257	190	72	3	0	0	0	1	18	108	267	1229
Below15 C	470	397	341	181	38	3	0	0	14	86	243	422	2193
Below18 C	563	482	434	265	91	16	0	1	37	151	333	515	2888
<i>Table 7. Beaverton = 22908</i>													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	1	10	25	28	4	0	0	0	68
Above 22 C	0	0	0	0	4	26	57	64	16	0	0	0	167
Above 18 C	0	0	0	2	24	92	162	172	76	10	0	0	539
Above 15 C	0	0	0	7	63	165	255	264	144	38	0	0	937
Above 10 C	0	2	4	47	179	312	410	419	284	128	16	1	1802
Above 5 C	5	15	36	140	331	462	565	574	433	269	89	12	2930
Above 0C	43	65	133	276	486	612	720	729	583	423	218	78	4365
Below0 C	44	39	10	1	0	0	0	0	0	0	2	25	121
Below5 C	161	131	69	15	0	0	0	0	0	0	22	114	512
Below10 C	311	260	191	73	3	0	0	0	0	15	99	258	1210
Below15 C	466	399	342	183	42	3	0	0	11	80	233	412	2172
Below18 C	559	484	435	267	97	20	0	1	33	145	323	505	2870
<i>Table 8. Pickering = 13110</i>													
Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Above 24 C	0	0	0	0	1	3	12	23	4	0	0	0	43
Above 22 C	0	0	0	0	1	9	37	57	20	0	0	0	126
Above 18 C	0	0	0	0	10	57	143	169	88	14	0	0	481
Above 15 C	0	0	0	2	40	136	236	262	161	47	0	0	885
Above 10 C	0	0	2	38	165	284	391	417	305	150	23	1	1778
Above 5 C	10	17	44	143	320	434	546	572	455	298	110	21	2969
Above 0C	67	85	158	285	475	584	701	727	605	453	249	101	4490
Below0 C	26	19	3	0	0	0	0	0	0	0	1	13	62
Below5 C	123	92	45	8	0	0	0	0	0	0	12	87	367
Below10 C	269	217	158	53	1	0	0	0	0	8	75	223	1002
Below15 C	423	358	310	167	31	2	0	0	6	60	202	377	1936
Below18 C	516	443	403	255	93	13	0	0	23	120	292	470	2628

Table 8: Number of Temperature Days Summary for 2000-2009

Table 1. Ajax = 13414

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	19	18	9	0	0	0	0	0	0	0	1	12	60
> 0 C	12	10	22	30	31	30	31	31	30	31	29	19	305
> 10 C	0	0	2	14	29	30	31	31	30	23	8	1	199
> 20 C	0	0	0	1	3	19	29	28	16	3	0	0	98
> 30 C	0	0	0	0	0	0	1	0	0	0	0	0	1
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	4	2	7	22	31	30	31	31	30	29	21	6	243
<= 2 C	30	28	28	15	3	0	0	0	0	5	16	29	153
<= 0 C	27	27	24	8	1	0	0	0	0	2	9	25	122
< -2 C	24	25	18	4	0	0	0	0	0	0	4	19	93
< -10 C	10	8	3	0	0	0	0	0	0	0	0	3	24
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	1
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Whitby = 14165

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	19	17	8	0	0	0	0	0	0	0	1	13	59
> 0 C	12	11	23	30	31	30	31	31	30	31	29	18	306
> 10 C	1	0	4	18	30	30	31	31	30	24	9	1	209
> 20 C	0	0	0	1	6	23	30	29	19	4	0	0	114
> 30 C	0	0	0	0	0	0	1	1	0	0	0	0	2
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	3	1	7	21	30	30	31	31	30	28	19	5	236
<= 2 C	30	28	27	15	3	0	0	0	0	7	17	30	156
<= 0 C	28	27	25	9	1	0	0	0	0	3	11	26	129
< -2 C	25	25	19	4	0	0	0	0	0	0	5	21	99
< -10 C	11	10	3	0	0	0	0	0	0	0	0	4	27
< -20 C	1	0	0	0	0	0	0	0	0	0	0	0	1
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3. Oshawa = 14171

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	19	18	9	0	0	0	0	0	0	0	1	13	61
> 0 C	12	11	23	30	31	30	31	31	30	31	29	18	305
> 10 C	1	0	4	17	30	30	31	31	30	23	9	1	206
> 20 C	0	0	0	1	6	22	30	29	18	3	0	0	108
> 30 C	0	0	0	0	0	0	1	1	0	0	0	0	1
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	4	1	7	21	30	30	31	31	30	29	19	5	238
<= 2 C	30	28	27	14	3	0	0	0	0	6	17	30	154
<= 0 C	28	27	25	9	1	0	0	0	0	2	11	26	128
< -2 C	25	25	19	4	0	0	0	0	0	0	5	20	98
< -10 C	11	9	3	0	0	0	0	0	0	0	0	4	27
< -20 C	1	0	0	0	0	0	0	0	0	0	0	0	1
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4. Clarington = 14483

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	19	18	8	0	0	0	0	0	0	0	1	13	60
> 0 C	12	11	23	30	31	30	31	31	30	31	29	18	306
> 10 C	1	0	3	17	30	30	31	31	30	23	9	1	206
> 20 C	0	0	0	1	5	22	29	29	18	3	0	0	107
> 30 C	0	0	0	0	0	0	1	0	0	0	0	0	1
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	4	2	7	21	30	30	31	31	30	29	20	6	239
<= 2 C	30	28	27	14	3	0	0	0	0	6	16	29	153
<= 0 C	28	27	24	9	1	0	0	0	0	2	10	25	126
< -2 C	25	25	18	4	0	0	0	0	0	0	4	20	96
< -10 C	10	9	3	0	0	0	0	0	0	0	0	4	25
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	1
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 9: Number of Temperature Days for 2000-2009 (Continued)

Table 5. Uxbridge = 17570

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	22	20	11	1	0	0	0	0	0	0	3	17	73
> 0 C	9	9	20	29	31	30	31	31	30	31	27	14	292
> 10 C	1	1	4	17	29	30	31	31	30	22	8	1	203
> 20 C	0	0	0	3	9	23	29	28	18	4	0	0	113
> 30 C	0	0	0	0	0	1	2	2	0	0	0	0	5
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	2	1	6	19	29	30	31	31	30	27	16	2	224
<= 2 C	30	28	28	18	5	0	0	0	0	9	20	30	168
<= 0 C	29	27	25	11	2	0	0	0	0	4	14	29	141
< -2 C	27	26	22	7	0	0	0	0	0	1	8	24	115
< -10 C	13	11	5	0	0	0	0	0	0	0	0	6	36
< -20 C	1	0	0	0	0	0	0	0	0	0	0	0	2
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 6. Port Perry = 17584

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	22	19	11	1	0	0	0	0	0	0	2	16	71
> 0 C	9	9	21	29	31	30	31	31	30	31	28	15	294
> 10 C	1	1	4	18	29	30	31	31	30	22	8	1	206
> 20 C	0	0	0	3	9	23	29	28	18	4	0	0	114
> 30 C	0	0	0	0	0	1	2	2	0	0	0	0	5
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	2	1	5	18	29	30	31	31	30	27	15	3	221
<= 2 C	30	28	28	18	5	0	0	0	1	10	20	30	170
<= 0 C	29	27	26	12	3	0	0	0	0	4	15	28	144
< -2 C	27	26	21	7	0	0	0	0	0	2	8	24	116
< -10 C	13	11	5	0	0	0	0	0	0	0	0	6	36
< -20 C	1	0	0	0	0	0	0	0	0	0	0	0	2
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 7. Beaverton = 22908

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	22	20	12	1	0	0	0	0	0	0	2	17	74
> 0 C	9	8	19	29	31	30	31	31	30	31	28	14	292
> 10 C	0	0	4	17	29	30	31	31	30	22	9	1	204
> 20 C	0	0	0	3	9	22	29	28	18	4	0	0	113
> 30 C	0	0	0	0	0	1	2	2	0	0	0	0	4
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	2	1	5	18	30	30	31	31	30	27	16	3	224
<= 2 C	30	28	29	18	5	0	0	0	0	8	20	30	169
<= 0 C	29	27	26	12	1	0	0	0	0	4	14	28	141
< -2 C	27	26	22	7	0	0	0	0	0	1	7	23	114
< -10 C	13	13	6	0	0	0	0	0	0	0	0	7	39
< -20 C	2	1	0	0	0	0	0	0	0	0	0	0	3
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 8. Pickering = 13110

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	19	17	8	0	0	0	0	0	0	0	1	13	58
> 0 C	12	12	23	30	31	30	31	31	30	31	29	18	307
> 10 C	1	0	4	17	30	30	31	31	30	24	9	1	207
> 20 C	0	0	0	2	6	22	30	29	19	5	0	0	114
> 30 C	0	0	0	0	0	1	2	1	0	0	0	0	4
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	3	1	6	21	30	30	31	31	30	28	19	5	236
<= 2 C	30	28	28	15	4	0	0	0	0	7	17	29	157
<= 0 C	28	27	25	9	1	0	0	0	0	3	11	26	129
< -2 C	25	25	19	4	0	0	0	0	0	0	5	20	99
< -10 C	11	9	3	0	0	0	0	0	0	0	0	4	27
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	1
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 10: Corrected Number of Temperature Days for 2040-2049

Table 1. Ajax = 13414

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	3	3	0	0	0	0	0	0	0	0	0	1	7
> 0 C	28	26	31	30	31	30	31	31	30	31	30	30	339
> 10 C	1	3	9	23	31	30	31	31	30	31	20	4	232
> 20 C	0	0	0	1	8	24	30	31	25	11	0	0	123
> 30 C	0	0	0	0	0	1	2	2	0	0	0	0	6
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	1
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	13	15	21	27	31	30	31	31	30	31	28	18	306
<= 2 C	24	21	19	7	0	0	0	0	0	0	6	21	98
<= 0 C	18	14	10	3	0	0	0	0	0	0	2	13	60
< -2 C	9	8	3	1	0	0	0	0	0	0	0	6	28
< -10 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2. Whitby = 14165

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	4	3	0	0	0	0	0	0	0	0	0	2	9
> 0 C	27	26	31	30	31	30	31	31	30	31	30	29	337
> 10 C	1	4	13	25	31	30	31	31	30	31	20	4	238
> 20 C	0	0	0	3	18	28	31	31	25	12	0	0	141
> 30 C	0	0	0	0	0	3	6	7	2	0	0	0	17
> 35 C	0	0	0	0	0	0	1	1	0	0	0	0	2
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	10	12	18	26	31	30	31	31	30	31	26	14	291
<= 2 C	25	22	19	8	0	0	0	0	0	1	8	22	104
<= 0 C	21	17	13	4	0	0	0	0	0	0	4	17	75
< -2 C	14	10	4	1	0	0	0	0	0	0	1	8	38
< -10 C	0	0	0	0	0	0	0	0	0	0	0	0	1
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3. Oshawa = 14171

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	4	4	0	0	0	0	0	0	0	0	0	2	9
> 0 C	27	25	31	30	31	30	31	31	30	31	30	29	337
> 10 C	1	4	11	25	31	30	31	31	30	31	20	4	236
> 20 C	0	0	0	2	15	28	31	31	25	11	0	0	136
> 30 C	0	0	0	0	0	2	4	5	1	0	0	0	11
> 35 C	0	0	0	0	0	0	0	1	0	0	0	0	1
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	10	12	19	26	31	30	31	31	30	31	27	15	293
<= 2 C	25	22	19	8	0	0	0	0	0	0	8	22	103
<= 0 C	21	17	12	4	0	0	0	0	0	0	3	16	73
< -2 C	13	10	4	1	0	0	0	0	0	0	1	8	37
< -10 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 4. Clarington = 14483

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	4	3	0	0	0	0	0	0	0	0	0	2	9
> 0 C	27	26	31	30	31	30	31	31	30	31	30	29	357
> 10 C	1	4	11	25	31	30	31	31	30	31	20	4	249
> 20 C	0	0	0	1	14	28	31	31	25	11	0	0	142
> 30 C	0	0	0	0	0	1	3	4	1	0	0	0	9
> 35 C	0	0	0	0	0	0	0	0	0	0	0	0	1
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	11	12	19	27	31	30	31	31	30	31	26	16	295
<= 2 C	24	21	19	7	0	0	0	0	0	1	7	21	101
<= 0 C	20	17	12	3	0	0	0	0	0	0	4	15	71
< -2 C	12	9	4	1	0	0	0	0	0	0	1	8	36
< -10 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 11: Corrected Number of Temperature Days for 2040-2049 (Continued)

Table 5. Uxbridge = 17570

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	9	6	1	0	0	0	0	0	0	0	0	5	21
> 0 C	22	23	30	30	31	30	31	31	30	31	30	26	345
> 10 C	1	4	11	22	31	30	31	31	30	30	15	2	237
> 20 C	0	0	0	4	17	27	31	31	23	11	0	0	144
> 30 C	0	0	0	0	1	6	9	9	2	0	0	0	28
> 35 C	0	0	0	0	0	1	2	2	0	0	0	0	4
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	8	9	14	24	31	30	31	31	30	31	25	11	275
<= 2 C	27	24	21	10	0	0	0	0	0	2	10	25	118
<= 0 C	23	20	17	6	0	0	0	0	0	0	5	20	91
< -2 C	16	14	7	2	0	0	0	0	0	0	2	12	52
< -10 C	1	1	0	0	0	0	0	0	0	0	0	0	2
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 6. Port Perry = 17584

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	8	6	1	0	0	0	0	0	0	0	0	4	19
> 0 C	23	23	30	30	31	30	31	31	30	31	30	27	347
> 10 C	1	4	12	22	31	30	31	31	30	30	16	3	242
> 20 C	0	0	0	4	18	27	31	31	23	11	0	0	145
> 30 C	0	0	0	0	1	6	9	9	2	0	0	0	27
> 35 C	0	0	0	0	0	1	1	2	0	0	0	0	4
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	8	9	14	24	31	30	31	31	30	31	24	11	274
<= 2 C	27	23	21	10	0	0	0	0	0	2	10	25	120
<= 0 C	23	20	17	6	0	0	0	0	0	0	6	20	92
< -2 C	17	13	7	2	0	0	0	0	0	0	2	12	52
< -10 C	1	1	0	0	0	0	0	0	0	0	0	0	2
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 7. Beaverton = 22908

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	8	6	1	0	0	0	0	0	0	0	0	4	20
> 0 C	23	23	30	30	31	30	31	31	30	31	30	27	346
> 10 C	1	4	11	22	31	30	31	31	30	30	16	3	239
> 20 C	0	0	0	4	18	27	31	31	23	10	0	0	144
> 30 C	0	0	0	0	1	5	9	9	2	0	0	0	26
> 35 C	0	0	0	0	0	0	1	1	0	0	0	0	3
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	9	10	17	26	31	30	31	31	30	31	25	14	284
<= 2 C	28	24	21	9	0	0	0	0	0	1	8	23	115
<= 0 C	22	19	14	4	0	0	0	0	0	0	5	17	82
< -2 C	16	13	6	2	0	0	0	0	0	0	2	11	49
< -10 C	1	1	0	0	0	0	0	0	0	0	0	0	2
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 8. Pickering = 13110

Max Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<= 0 C	4	3	0	0	0	0	0	0	0	0	0	1	8
> 0 C	27	26	31	30	31	30	31	31	30	31	30	30	358
> 10 C	2	5	12	25	31	30	31	31	30	31	21	5	253
> 20 C	0	0	0	3	16	28	31	31	26	12	0	0	146
> 30 C	0	0	0	0	0	2	4	6	2	0	0	0	15
> 35 C	0	0	0	0	0	0	1	1	0	0	0	0	2
Min Temp (deg C)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
> 0 C	11	13	19	26	31	30	31	31	30	31	27	14	294
<= 2 C	24	22	19	8	0	0	0	0	0	1	7	22	103
<= 0 C	20	16	12	4	0	0	0	0	0	0	3	17	72
< -2 C	12	9	4	1	0	0	0	0	0	0	1	8	34
< -10 C	1	0	0	0	0	0	0	0	0	0	0	0	1
< -20 C	0	0	0	0	0	0	0	0	0	0	0	0	0
< -30 C	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 12: Humidex Summary for 2000-2009

Table 1. Ajax = 13414													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	13	11	19	30	37	39	42	43	36	38	20	16	43
Days with Humidex > =30	0	0	0	0	1	7	14	17	4	0	0	0	42
Days with Humidex > =35	0	0	0	0	0	2	4	4	1	0	0	0	11
Days with Humidex >= 40	0	0	0	0	0	0	1	0	0	0	0	0	1
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 2. Whitby = 14165													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	14	20	21	32	40	42	45	47	39	39	20	15	47
Days with Humidex > =30	0	0	0	0	2	12	19	20	5	1	0	0	59
Days with Humidex > =35	0	0	0	0	0	4	8	8	1	0	0	0	21
Days with Humidex >= 40	0	0	0	0	0	0	2	1	0	0	0	0	3
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 3. Oshawa = 14171													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	14	13	20	33	39	41	43	46	39	38	20	16	46
Days with Humidex > =30	0	0	0	0	1	11	18	19	5	1	0	0	54
Days with Humidex > =35	0	0	0	0	0	4	7	7	1	0	0	0	19
Days with Humidex >= 40	0	0	0	0	0	0	2	1	0	0	0	0	3
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 4. Clarington = 14483													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	14	14	18	27	38	40	43	45	38	35	20	19	45
Days with Humidex > =30	0	0	0	0	1	11	18	19	5	1	0	0	54
Days with Humidex > =35	0	0	0	0	0	3	6	6	1	0	0	0	17
Days with Humidex >= 40	0	0	0	0	0	0	1	1	0	0	0	0	2
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 5. Uxbridge = 17570													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	15	40	24	35	41	43	44	45	39	36	21	32	45
Days with Humidex > =30	0	0	0	0	2	10	15	15	5	1	0	0	49
Days with Humidex > =35	0	0	0	0	0	5	6	6	1	0	0	0	19
Days with Humidex >= 40	0	0	0	0	0	1	2	1	0	0	0	0	3
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 6. Port Perry = 17584													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	14	20	22	35	41	44	45	46	39	35	20	41	46
Days with Humidex > =30	0	0	0	0	2	10	16	16	5	1	0	0	51
Days with Humidex > =35	0	0	0	0	1	6	6	6	1	0	0	0	20
Days with Humidex >= 40	0	0	0	0	0	1	2	1	0	0	0	0	4
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 7. Beaverton = 22908													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	16	32	26	35	42	43	44	45	39	35	22	18	45
Days with Humidex > =30	0	0	0	0	2	11	16	16	5	1	0	0	51
Days with Humidex > =35	0	0	0	0	0	5	6	6	2	0	0	0	19
Days with Humidex >= 40	0	0	0	0	0	1	2	1	0	0	0	0	4
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 8. Pickering = 13110													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	14	12	21	34	38	42	45	48	40	39	20	15	48
Days with Humidex > =30	0	0	0	0	2	11	19	19	5	1	0	0	56
Days with Humidex > =35	0	0	0	0	0	4	8	7	2	0	0	0	21
Days with Humidex >= 40	0	0	0	0	0	0	2	2	0	0	0	0	4
Days with Humidex >= 45	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 13: Corrected Humidex Summary for 2040-2049

Table 1. Ajax = 13414													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	13	15	18	31	42	48	47	48	40	37	25	15	48
Days with Humidex > =30	0	0	0	0	1	8	23	26	15	1	0	0	74
Days with Humidex > =35	0	0	0	0	0	3	9	13	4	0	0	0	29
Days with Humidex >= 40	0	0	0	0	0	1	3	3	0	0	0	0	6
Days with Humidex >= 45	0	0	0	0	0	0	0	1	0	0	0	0	1
Table 2. Whitby = 14165													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	15	17	21	34	45	49	50	51	44	37	26	16	51
Days with Humidex > =30	0	0	0	0	4	17	29	28	17	3	0	0	98
Days with Humidex > =35	0	0	0	0	0	9	21	21	9	0	0	0	60
Days with Humidex >= 40	0	0	0	0	0	3	7	9	1	0	0	0	19
Days with Humidex >= 45	0	0	0	0	0	1	1	2	0	0	0	0	5
Table 3. Oshawa = 14171													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	15	16	20	33	44	48	49	50	44	37	25	16	50
Days with Humidex > =30	0	0	0	0	3	16	29	28	17	2	0	0	94
Days with Humidex > =35	0	0	0	0	0	7	17	19	8	0	0	0	52
Days with Humidex >= 40	0	0	0	0	0	2	6	7	1	0	0	0	16
Days with Humidex >= 45	0	0	0	0	0	0	1	2	0	0	0	0	3
Table 4. Clarington = 14483													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	14	17	19	28	44	48	48	48	44	35	23	16	48
Days with Humidex > =30	0	0	0	0	2	15	28	28	17	2	0	0	92
Days with Humidex > =35	0	0	0	0	0	5	17	19	8	0	0	0	50
Days with Humidex >= 40	0	0	0	0	0	1	5	6	1	0	0	0	13
Days with Humidex >= 45	0	0	0	0	0	0	1	1	0	0	0	0	2
Table 5. Uxbridge = 17570													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	17	22	25	35	42	51	54	53	45	36	26	18	54
Days with Humidex > =30	0	0	0	1	6	17	27	27	15	3	0	0	95
Days with Humidex > =35	0	0	0	0	2	12	19	19	6	0	0	0	59
Days with Humidex >= 40	0	0	0	0	1	6	8	9	1	0	0	0	24
Days with Humidex >= 45	0	0	0	0	0	1	2	2	0	0	0	0	6
Table 6. Port Perry = 17584													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	15	22	23	34	42	51	54	54	45	37	26	17	54
Days with Humidex > =30	0	0	0	0	6	18	27	27	16	3	0	0	97
Days with Humidex > =35	0	0	0	0	2	12	20	20	7	0	0	0	62
Days with Humidex >= 40	0	0	0	0	0	6	9	8	1	0	0	0	25
Days with Humidex >= 45	0	0	0	0	0	2	3	3	0	0	0	0	7
Table 7. Beaverton = 22908													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	15	22	25	36	44	52	54	53	47	37	25	19	54
Days with Humidex > =30	0	0	0	0	6	18	27	27	15	3	0	0	96
Days with Humidex > =35	0	0	0	0	2	12	19	19	7	0	0	0	60
Days with Humidex >= 40	0	0	0	0	0	6	8	9	2	0	0	0	25
Days with Humidex >= 45	0	0	0	0	0	1	3	2	0	0	0	0	6
Table 8. Pickering = 13110													
Humidex	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Humidex	17	18	21	35	44	51	53	51	44	38	28	17	53
Days with Humidex > =30	0	0	0	0	3	15	28	28	17	3	0	0	95
Days with Humidex > =35	0	0	0	0	1	6	16	19	8	0	0	0	50
Days with Humidex >= 40	0	0	0	0	0	2	5	8	1	0	0	0	17
Days with Humidex >= 45	0	0	0	0	0	0	1	2	0	0	0	0	3

Table 14: Precipitation Summary for 2000-2009

Table 1. Ajax = 13414													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	18	15	31	68	79	93	87	54	63	60	68	42	678
Snowfall (cm)	33	39	25	6	0	0	0	0	0	0	7	31	142
Precipitation (mm)	51	55	56	74	79	93	87	54	63	60	75	73	820
Std of Precipitation	3	4	4	5	5	8	7	5	6	4	6	5	5
Extreme Daily Rainfall (mm)	22	24	34	34	35	68	62	58	70	30	79	27	79
Extreme Daily Snowfall (cm)	17	26	19	14	0	0	0	0	0	0	13	29	29
Extreme Daily Precipitation (mm)	22	26	34	34	35	68	62	58	70	30	79	33	79
Table 2. Whitby = 14165													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	19	17	32	69	81	90	98	63	68	66	71	43	717
Snowfall (cm)	37	41	25	6	0	0	0	0	0	0	7	35	152
Precipitation (mm)	55	58	57	75	81	90	98	63	68	66	79	78	869
Std of Precipitation	3	4	4	5	5	7	7	6	6	4	6	5	5
Extreme Daily Rainfall (mm)	24	26	35	35	35	73	65	60	75	33	79	31	79
Extreme Daily Snowfall (cm)	17	25	18	14	0	0	0	0	0	0	14	28	28
Extreme Daily Precipitation (mm)	24	26	35	35	35	73	65	60	75	33	79	32	79
Table 3. Oshawa = 14171													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	19	16	34	72	81	85	104	67	64	67	71	43	722
Snowfall (cm)	37	44	26	7	0	0	0	0	0	0	8	36	158
Precipitation (mm)	56	60	60	78	81	85	104	67	64	67	78	79	880
Std of Precipitation	3	4	4	5	5	7	8	6	6	4	6	5	5
Extreme Daily Rainfall (mm)	22	26	37	35	32	59	66	71	84	31	69	31	84
Extreme Daily Snowfall (cm)	17	25	20	15	0	0	0	0	0	0	15	29	29
Extreme Daily Precipitation (mm)	22	26	37	35	32	59	66	71	84	31	69	32	84
Table 4. Clarington = 14483													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	21	18	33	73	82	90	106	61	67	67	66	46	730
Snowfall (cm)	36	43	26	7	0	0	0	0	0	0	7	35	153
Precipitation (mm)	56	61	59	80	82	90	106	61	67	67	73	81	883
Std of Precipitation	3	4	4	5	6	7	9	6	6	5	5	5	6
Extreme Daily Rainfall (mm)	19	26	42	39	48	66	80	88	99	31	45	37	99
Extreme Daily Snowfall (cm)	17	24	20	16	0	0	0	0	0	0	15	27	27
Extreme Daily Precipitation (mm)	19	26	42	39	48	66	80	88	99	31	45	39	99
Table 5. Uxbridge = 17570													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	16	20	37	61	101	98	118	71	74	83	81	33	793
Snowfall (cm)	50	51	32	18	0	0	0	0	0	1	21	61	232
Precipitation (mm)	66	71	68	79	101	98	118	71	74	83	102	93	1025
Std of Precipitation	4	5	4	5	7	8	10	6	6	5	7	5	6
Extreme Daily Rainfall (mm)	29	23	34	35	56	82	80	52	51	41	62	27	82
Extreme Daily Snowfall (cm)	19	24	21	19	0	0	0	0	0	4	19	40	40
Extreme Daily Precipitation (mm)	29	32	34	35	56	82	80	52	51	41	62	40	82
Table 6. Port Perry = 17584													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	17	20	35	66	98	92	126	62	73	82	79	37	788
Snowfall (cm)	43	45	29	13	0	0	0	0	0	0	16	54	200
Precipitation (mm)	60	65	64	79	98	92	126	62	73	83	95	91	988
Std of Precipitation	4	4	4	5	6	7	11	5	6	5	7	6	6
Extreme Daily Rainfall (mm)	32	27	39	41	40	50	76	45	64	40	87	34	87
Extreme Daily Snowfall (cm)	17	24	21	18	0	0	0	0	0	3	19	39	39
Extreme Daily Precipitation (mm)	32	30	39	41	40	50	76	45	64	40	87	43	87
Table 7. Beaverton = 22908													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	12	15	30	47	84	81	98	64	62	63	61	19	637
Snowfall (cm)	42	43	26	12	0	0	0	0	0	0	19	50	191
Precipitation (mm)	54	58	56	59	84	81	98	64	62	63	80	69	828
Std of Precipitation	3	4	4	4	6	7	8	6	5	4	5	4	5
Extreme Daily Rainfall (mm)	27	26	37	19	52	58	85	55	46	25	39	16	85
Extreme Daily Snowfall (cm)	20	22	18	16	0	0	0	0	0	0	14	27	27
Extreme Daily Precipitation (mm)	27	35	37	22	52	58	85	55	46	25	39	27	85
Table 8. Pickering = 13110													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	18	16	31	66	81	92	90	56	61	60	68	39	677
Snowfall (cm)	33	40	25	6	0	0	0	0	0	0	7	34	144
Precipitation (mm)	51	56	56	71	81	92	90	56	61	60	76	72	822
Std of Precipitation	3	4	4	5	5	8	7	5	5	4	6	5	5
Extreme Daily Rainfall (mm)	21	24	33	33	36	77	58	60	65	29	81	25	81
Extreme Daily Snowfall (cm)	18	26	19	16	0	0	0	0	0	0	14	33	33
Extreme Daily Precipitation (mm)	21	26	33	33	36	77	58	60	65	29	81	33	81

Table 15: Precipitation Summary for 2040-2049

Table 1. Ajax = 13414													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	43	50	52	62	76	119	167	105	94	37	76	44	924
Snowfall (cm)	11	9	3	0	0	0	0	0	0	0	0	7	30
Precipitation (mm)	54	58	55	62	76	119	167	105	94	37	77	51	954
Std of Precipitation	3	4	4	4	6	9	11	9	8	3	7	4	6
Extreme Daily Rainfall (mm)	32	33	49	39	77	75	84	67	83	27	53	38	84
Extreme Daily Snowfall (cm)	12	14	6	2	0	0	0	0	0	0	0	6	14
Extreme Daily Precipitation (mm)	32	33	49	39	77	75	84	67	83	27	53	38	84
Table 2. Whitby = 14165													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	46	53	53	63	76	119	170	113	99	42	82	49	965
Snowfall (cm)	14	10	4	1	0	0	0	0	0	0	0	9	39
Precipitation (mm)	61	63	57	64	76	119	170	113	99	42	82	58	1004
Std of Precipitation	4	4	4	5	6	9	12	10	9	4	7	4	7
Extreme Daily Rainfall (mm)	32	34	49	42	64	76	76	117	82	29	58	46	117
Extreme Daily Snowfall (cm)	11	17	6	4	0	0	0	0	0	0	0	8	17
Extreme Daily Precipitation (mm)	32	34	49	42	64	76	76	117	82	29	58	46	117
Table 3. Oshawa = 14171													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	49	54	54	68	77	121	172	109	100	43	86	52	983
Snowfall (cm)	15	10	4	1	0	0	0	0	0	0	0	9	40
Precipitation (mm)	64	65	59	69	77	121	172	109	100	43	86	61	1023
Std of Precipitation	4	5	4	5	6	9	12	9	9	4	7	5	7
Extreme Daily Rainfall (mm)	35	36	50	44	60	81	74	88	85	32	64	48	88
Extreme Daily Snowfall (cm)	10	18	8	5	0	0	0	0	0	0	0	7	18
Extreme Daily Precipitation (mm)	35	36	50	44	60	81	74	88	85	32	64	48	88
Table 4. Calrington = 14483													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	47	55	52	66	68	139	150	103	91	39	80	52	943
Snowfall (cm)	11	10	5	0	0	0	0	0	0	0	0	7	34
Precipitation (mm)	58	65	57	66	68	139	150	103	91	39	81	59	977
Std of Precipitation	4	5	4	5	5	11	12	8	8	3	8	4	6
Extreme Daily Rainfall (mm)	34	42	50	44	47	89	96	51	76	33	69	50	96
Extreme Daily Snowfall (cm)	11	21	10	3	0	0	0	0	0	0	1	7	21
Extreme Daily Precipitation (mm)	34	42	50	44	47	89	96	51	76	33	69	50	96
Table 5. Uxbridge = 17570													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	40	45	61	72	74	117	154	150	88	56	104	51	1012
Snowfall (cm)	33	28	11	4	0	0	0	0	0	0	2	26	103
Precipitation (mm)	72	73	73	76	74	117	154	150	88	56	106	76	1115
Std of Precipitation	4	5	5	5	6	9	11	11	8	5	10	5	7
Extreme Daily Rainfall (mm)	23	27	59	52	71	93	77	100	62	36	86	46	100
Extreme Daily Snowfall (cm)	23	26	15	9	0	0	0	0	0	1	3	19	26
Extreme Daily Precipitation (mm)	23	27	59	52	71	93	77	100	62	36	86	46	100
Table 6. Port Perry = 17584													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	39	46	60	71	78	125	160	150	98	49	101	55	1032
Snowfall (cm)	23	22	8	2	0	0	0	0	0	0	1	16	72
Precipitation (mm)	62	68	68	73	78	125	160	150	98	49	102	71	1104
Std of Precipitation	4	5	5	6	7	10	12	12	9	4	10	5	7
Extreme Daily Rainfall (mm)	27	31	55	75	56	87	98	122	68	33	97	66	122
Extreme Daily Snowfall (cm)	12	25	12	8	0	0	0	0	0	0	4	10	25
Extreme Daily Precipitation (mm)	27	31	55	75	56	87	98	122	68	33	97	66	122
Table 7. Beaverton = 22908													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	31	33	48	64	84	109	108	117	84	61	78	51	867
Snowfall (cm)	32	30	9	2	0	0	0	0	0	0	2	14	88
Precipitation (mm)	62	63	56	66	84	109	108	117	84	61	80	65	955
Std of Precipitation	3	4	4	5	7	9	9	9	7	6	6	4	6
Extreme Daily Rainfall (mm)	23	25	41	33	75	88	85	78	56	53	68	51	88
Extreme Daily Snowfall (cm)	31	28	7	8	0	0	0	0	0	0	8	25	31
Extreme Daily Precipitation (mm)	31	28	41	33	75	88	85	78	56	53	68	51	88
Table 8. Pickering = 13110													
Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (mm)	41	49	53	60	73	113	168	118	90	36	79	43	923
Snowfall (cm)	15	9	4	1	0	0	0	0	0	0	0	9	37
Precipitation (mm)	56	58	56	61	73	113	168	118	90	36	79	51	960
Std of Precipitation	4	4	4	4	6	9	11	10	8	3	7	4	6
Extreme Daily Rainfall (mm)	30	32	50	38	81	77	76	76	97	27	55	37	97
Extreme Daily Snowfall (cm)	29	13	7	3	0	0	0	0	0	0	1	9	29
Extreme Daily Precipitation (mm)	30	32	50	38	81	77	76	76	97	27	55	37	97

Table 16: Number of Precipitation Days for 2000-2009

Table 1. Ajax = 13414													
Total Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	15	14	13	12	12	11	10	9	8	11	13	16	144
>= 5 mm	3	4	4	5	5	5	4	3	4	4	4	4	47
>= 10 mm	2	1	2	3	3	3	3	2	2	2	2	3	27
>= 25 mm	0	0	0	0	1	1	1	0	0	0	0	0	5
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	12	12	8	2	0	0	0	0	0	0	2	10	45
>= 5 cm	2	3	1	0	0	0	0	0	0	0	0	2	8
>= 10 cm	1	1	1	0	0	0	0	0	0	0	0	1	4
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	5	3	7	11	12	11	10	9	8	11	12	8	106
>= 5 mm	1	1	2	5	5	5	4	3	4	4	4	3	39
>= 10 mm	1	0	1	3	3	3	3	2	2	2	2	1	22
>= 25 mm	0	0	0	0	1	1	1	0	0	0	0	0	4
Table 2. Whitby = 14165													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	15	13	12	11	11	11	9	9	12	13	16	147
>= 5 mm	3	4	4	5	5	4	4	3	4	4	4	5	49
>= 10 mm	2	1	2	3	3	3	3	2	2	2	2	3	27
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	1	6
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	13	13	8	2	0	0	0	0	0	0	2	11	49
>= 5 cm	2	3	1	0	0	0	0	0	0	0	0	2	9
>= 10 cm	1	1	1	0	0	0	0	0	0	0	0	1	4
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	4	3	7	11	11	11	11	9	9	12	11	7	106
>= 5 mm	1	1	2	4	5	4	4	3	4	4	4	3	41
>= 10 mm	1	0	1	3	3	3	3	2	2	2	2	1	23
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	0	5
Table 3. Oshawa = 14171													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	15	13	12	12	12	11	9	9	12	14	17	150
>= 5 mm	4	4	3	5	6	4	4	3	4	4	4	5	48
>= 10 mm	2	2	2	3	3	3	3	2	2	2	2	3	29
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	1	6
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	13	13	8	2	0	0	0	0	0	0	3	13	52
>= 5 cm	2	3	1	0	0	0	0	0	0	0	0	2	9
>= 10 cm	1	1	1	0	0	0	0	0	0	0	0	1	4
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	4	3	7	11	12	12	11	9	9	12	12	7	108
>= 5 mm	1	1	2	5	6	4	4	3	4	4	4	3	39
>= 10 mm	1	1	1	3	3	3	3	2	2	2	2	1	24
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	0	5
Table 4. Clarington = 14483													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	15	14	13	12	12	12	11	8	8	13	13	16	148
>= 5 mm	4	4	4	5	6	5	5	2	4	4	4	5	50
>= 10 mm	2	2	2	3	3	3	3	2	2	2	2	3	28
>= 25 mm	0	0	0	1	1	1	1	1	0	0	1	1	6
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	13	12	8	2	0	0	0	0	0	0	3	11	49
>= 5 cm	2	3	1	0	0	0	0	0	0	0	0	2	9
>= 10 cm	1	1	1	0	0	0	0	0	0	0	0	1	4
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	5	4	7	11	12	12	11	8	8	13	12	7	109
>= 5 mm	1	2	2	4	6	5	5	2	4	4	4	3	41
>= 10 mm	1	1	1	3	3	3	3	2	2	2	2	2	23
>= 25 mm	0	0	0	1	1	1	1	1	0	0	1	0	6

Table 17: Number of Precipitation Days for 2000-2009 (Continued)

<i>Table 5. Uxbridge = 17570</i>													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	18	17	14	12	12	11	12	9	11	14	15	18	162
>= 5 mm	4	4	4	5	6	5	5	4	4	5	6	5	57
>= 10 mm	2	2	2	3	4	3	4	2	3	3	3	3	33
>= 25 mm	0	0	0	0	1	1	2	1	1	1	1	1	7
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	17	16	10	4	0	0	0	0	0	0	6	16	69
>= 5 cm	2	3	2	1	0	0	0	0	0	0	2	3	13
>= 10 cm	1	1	1	1	0	0	0	0	0	0	1	1	5
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	3	3	7	10	12	11	12	9	11	14	11	5	107
>= 5 mm	1	1	2	4	6	5	5	4	4	5	4	2	43
>= 10 mm	0	1	1	2	4	3	4	2	3	3	3	1	26
>= 25 mm	0	0	0	0	1	1	2	1	1	1	1	0	6
<i>Table 6. Port Perry = 17584</i>													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	16	14	12	12	11	11	9	9	13	14	18	154
>= 5 mm	4	4	4	5	6	5	5	4	4	5	5	5	55
>= 10 mm	2	2	2	3	4	3	4	2	3	3	3	3	32
>= 25 mm	0	0	0	0	1	1	2	0	1	1	1	1	7
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	15	14	9	4	0	0	0	0	0	1	5	16	63
>= 5 cm	2	3	2	1	0	0	0	0	0	0	1	3	11
>= 10 cm	1	1	1	0	0	0	0	0	0	0	0	1	4
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	3	3	7	10	12	11	11	9	9	13	12	5	104
>= 5 mm	1	1	3	4	6	5	5	4	4	5	4	2	44
>= 10 mm	1	1	1	3	4	3	4	2	3	3	3	1	27
>= 25 mm	0	0	0	0	1	1	2	0	1	1	1	0	6
<i>Table 7. Beaverton = 22908</i>													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	17	16	14	13	11	10	11	8	9	13	16	20	157
>= 5 mm	3	4	4	4	5	5	5	4	4	5	6	4	51
>= 10 mm	1	2	1	2	3	3	3	2	2	2	3	1	25
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	0	4
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	16	15	10	4	0	0	0	0	0	0	6	17	67
>= 5 cm	2	3	2	1	0	0	0	0	0	0	2	3	12
>= 10 cm	1	1	0	0	0	0	0	0	0	0	1	1	3
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	3	3	6	11	11	10	11	8	9	13	13	5	103
>= 5 mm	1	1	2	4	5	5	5	4	4	5	4	1	39
>= 10 mm	0	0	1	2	3	3	3	2	2	2	2	0	20
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	0	4
<i>Table 8. Pickering = 13110</i>													
Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	15	14	13	12	12	11	10	8	8	12	13	15	142
>= 5 mm	3	4	3	5	5	5	4	3	4	4	4	4	47
>= 10 mm	2	2	2	3	3	3	3	2	2	2	2	3	27
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	0	5
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	12	12	8	2	0	0	0	0	0	0	2	10	46
>= 5 cm	2	3	1	0	0	0	0	0	0	0	0	2	8
>= 10 cm	1	1	1	0	0	0	0	0	0	0	0	1	4
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	4	3	7	11	12	11	10	8	8	12	12	8	106
>= 5 mm	1	1	2	4	5	5	4	3	4	4	4	3	38
>= 10 mm	1	1	1	3	3	3	3	2	2	2	2	1	23
>= 25 mm	0	0	0	0	1	1	1	1	0	0	0	0	4

Table 18: Corrected Number of Precipitation Days for 2040-2049

Table 1. Ajax = 13414

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	13	12	13	12	14	16	12	11	9	14	14	152
>= 5 mm	4	4	4	4	4	5	8	5	4	2	4	4	52
>= 10 mm	1	2	1	2	2	4	6	4	3	1	2	1	29
>= 25 mm	0	0	0	0	1	1	2	1	1	0	1	0	9
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	2
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	6	3	2	0	0	0	0	0	0	0	0	2	13
>= 5 cm	1	1	0	0	0	0	0	0	0	0	0	1	2
>= 10 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	11	11	11	12	12	14	16	12	11	9	14	13	143
>= 5 mm	3	3	4	4	4	5	8	5	4	2	4	3	50
>= 10 mm	1	1	1	2	2	4	6	4	3	1	2	1	29
>= 25 mm	0	0	0	0	1	1	2	1	1	0	1	0	9

Table 2. Whitby = 14165

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	13	11	12	10	12	14	12	11	10	13	15	147
>= 5 mm	5	4	4	4	4	5	7	6	5	3	5	4	55
>= 10 mm	1	2	1	2	2	4	6	4	3	1	2	1	31
>= 25 mm	0	0	0	0	1	2	3	1	1	0	1	0	10
>= 50 mm	0	0	0	0	0	1	1	0	0	0	0	0	2
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	7	5	2	0	0	0	0	0	0	0	0	5	19
>= 5 cm	1	0	0	0	0	0	0	0	0	0	0	1	2
>= 10 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	11	10	10	12	10	12	14	12	11	10	13	13	136
>= 5 mm	3	4	4	4	4	5	7	6	5	3	5	3	52
>= 10 mm	1	2	1	2	2	4	6	4	3	1	2	1	30
>= 25 mm	0	0	0	0	1	2	3	1	1	0	1	0	10

Table 3. Oshawa = 14171

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	13	12	12	11	12	15	12	10	9	14	16	151
>= 5 mm	5	5	4	5	5	5	7	5	5	3	5	4	56
>= 10 mm	2	2	2	2	3	4	5	4	3	1	2	2	31
>= 25 mm	0	0	0	0	1	2	3	1	1	0	1	0	10
>= 50 mm	0	0	0	0	0	0	1	0	0	0	0	0	2
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	6	4	2	1	0	0	0	0	0	0	0	5	18
>= 5 cm	1	1	0	0	0	0	0	0	0	0	0	1	3
>= 10 cm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	11	10	11	12	11	12	15	12	10	9	14	13	139
>= 5 mm	4	4	4	5	5	5	7	5	5	3	5	4	53
>= 10 mm	1	1	1	2	3	4	5	4	3	1	2	2	31
>= 25 mm	0	0	0	0	1	2	3	1	1	0	1	0	10

Table 4. Clarington = 14483

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	13	12	11	10	13	14	12	10	9	13	16	148
>= 5 mm	4	5	4	5	5	5	6	5	4	3	4	3	52
>= 10 mm	1	2	2	2	2	4	5	4	3	1	2	1	29
>= 25 mm	0	0	0	0	1	1	2	1	1	0	1	0	9
>= 50 mm	0	0	0	0	0	1	1	0	0	0	0	0	3
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	6	4	3	0	0	0	0	0	0	0	0	4	16
>= 5 cm	1	0	0	0	0	0	0	0	0	0	0	0	1
>= 10 cm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	12	11	11	11	10	13	14	12	10	9	13	14	138
>= 5 mm	4	4	3	5	5	5	6	5	4	3	4	3	50
>= 10 mm	1	2	2	2	2	4	5	4	3	1	2	1	28
>= 25 mm	0	0	0	0	1	1	2	1	1	0	1	0	9

Table 19: Corrected Number of Precipitation Days for 2040-2049 (Continued)

Table 5. Uxbridge = 17570

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	19	16	14	14	9	11	14	13	10	11	14	17	160
>= 5 mm	6	5	5	5	4	5	7	7	4	4	5	5	60
>= 10 mm	2	2	2	2	2	4	5	5	3	2	2	2	32
>= 25 mm	0	0	1	0	1	2	2	2	1	1	1	0	11
>= 50 mm	0	0	0	0	0	0	1	1	0	0	0	0	3
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	11	9	5	1	0	0	0	0	0	0	1	10	36
>= 5 cm	2	1	1	0	0	0	0	0	0	0	0	1	6
>= 10 cm	0	1	0	0	0	0	0	0	0	0	0	1	2
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	10	10	11	13	9	11	14	13	10	11	14	12	137
>= 5 mm	3	3	4	4	4	5	7	7	4	4	5	3	53
>= 10 mm	1	1	2	2	2	4	5	5	3	2	2	1	30
>= 25 mm	0	0	1	0	1	2	2	2	1	1	1	0	11

Table 6. Port Perry = 17584

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	17	14	12	12	9	11	14	12	10	10	14	16	150
>= 5 mm	5	4	4	5	4	5	7	6	5	3	4	4	56
>= 10 mm	2	2	2	2	3	4	5	4	3	1	2	1	30
>= 25 mm	0	0	1	0	1	2	2	2	1	0	1	1	11
>= 50 mm	0	0	0	0	0	1	1	1	1	0	1	0	4
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	10	7	4	1	0	0	0	0	0	0	1	7	29
>= 5 cm	1	1	0	0	0	0	0	0	0	0	0	1	4
>= 10 cm	0	1	0	0	0	0	0	0	0	0	0	0	1
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	9	10	10	11	9	11	14	12	10	10	14	12	131
>= 5 mm	3	3	4	4	4	5	7	6	5	3	4	3	51
>= 10 mm	1	1	2	2	3	4	5	4	3	1	2	1	29
>= 25 mm	0	0	1	0	1	2	2	2	1	0	1	1	11

Table 7. Beaverton = 22908

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	19	14	12	12	9	10	10	11	9	11	14	17	148
>= 5 mm	5	4	4	5	4	5	5	6	4	3	4	4	54
>= 10 mm	1	2	1	2	2	3	4	4	3	2	2	1	28
>= 25 mm	0	0	0	0	1	2	1	1	1	1	0	0	9
>= 50 mm	0	0	0	0	0	0	0	0	0	0	0	0	2
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	11	8	4	1	0	0	0	0	0	0	1	7	31
>= 5 cm	2	2	1	0	0	0	0	0	0	0	0	1	5
>= 10 cm	0	1	0	0	0	0	0	0	0	0	0	0	1
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	11	10	10	11	9	10	10	11	9	11	14	14	131
>= 5 mm	2	2	4	5	4	5	5	6	4	3	4	3	47
>= 10 mm	1	1	1	2	2	3	4	4	3	2	2	1	26
>= 25 mm	0	0	0	0	1	2	1	1	1	1	0	0	8

Table 8. Pickering = 13110

Total Precipitation (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	16	14	11	12	10	12	15	12	10	9	14	14	148
>= 5 mm	4	4	4	4	4	5	8	6	4	2	4	4	52
>= 10 mm	1	2	1	2	2	3	5	4	2	1	2	1	28
>= 25 mm	0	0	0	0	1	2	3	1	1	0	1	0	9
>= 50 mm	0	0	0	0	0	0	0	1	0	0	0	0	2
>= 100 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 150 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 200 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
>= 250 mm	0	0	0	0	0	0	0	0	0	0	0	0	0
Snowfall (cm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 cm	6	4	2	0	0	0	0	0	0	0	0	3	16
>= 5 cm	1	0	0	0	0	0	0	0	0	0	0	0	2
>= 10 cm	0	0	0	0	0	0	0	0	0	0	0	0	1
>= 25 cm	0	0	0	0	0	0	0	0	0	0	0	0	0
Rainfall (mm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
>= 0.2 mm	11	11	11	12	10	12	15	12	10	9	14	12	138
>= 5 mm	3	3	4	4	4	5	8	6	4	2	4	3	49
>= 10 mm	1	1	1	2	2	3	5	4	2	1	2	1	27
>= 25 mm	0	0	0	0	1	2	3	1	1	0	1	0	9

Table 20: Wind Summary for 2000-2009

Table 1. Ajax = 13414													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	18	18	17	17	15	14	13	13	14	17	17	19	16
Maximum Hourly Speed	57	55	58	53	47	40	50	47	55	58	63	65	65
Maximum Gust Speed	82	94	92	88	86	71	69	63	81	88	100	120	120
Days with Winds >= 52 km/h	0	0	0	0	0	0	0	0	0	0	0	1	3
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 2. Whitby = 14165													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	17	17	17	17	15	13	13	13	14	16	16	18	16
Maximum Hourly Speed	54	54	56	53	47	41	46	46	50	56	60	62	62
Maximum Gust Speed	79	98	94	85	81	66	69	65	85	89	87	119	119
Days with Winds >= 52 km/h	0	0	0	0	0	0	0	0	0	0	0	1	2
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 3. Oshawa = 14171													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	18	18	17	17	15	14	14	14	14	17	17	19	16
Maximum Hourly Speed	57	57	59	54	48	43	47	45	52	57	63	65	65
Maximum Gust Speed	83	104	97	85	85	73	70	69	86	91	91	120	120
Days with Winds >= 52 km/h	0	0	0	0	0	0	0	0	0	0	0	1	2
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	0
Table 4. Clarington = 14483													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	18	18	17	17	15	13	13	13	14	16	17	19	16
Maximum Hourly Speed	58	60	59	52	46	44	46	46	52	57	63	70	70
Maximum Gust Speed	84	113	94	86	81	76	68	72	94	88	92	102	113
Days with Winds >= 52 km/h	0	0	1	0	0	0	0	0	0	0	1	1	3
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	1
Table 5. Uxbridge = 17570													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	19	19	19	19	17	15	15	14	15	17	18	20	17
Maximum Hourly Speed	59	60	61	58	47	40	48	45	47	63	66	69	69
Maximum Gust Speed	86	108	91	88	80	73	67	70	82	90	95	100	108
Days with Winds >= 52 km/h	0	0	0	0	0	0	0	0	0	0	0	1	2
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	1
Table 6. Port Perry = 17584													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	19	19	19	19	17	15	15	14	15	17	18	19	17
Maximum Hourly Speed	58	60	62	55	50	41	47	45	47	61	66	69	69
Maximum Gust Speed	85	115	91	82	84	73	68	68	84	107	106	116	116
Days with Winds >= 52 km/h	0	0	0	0	0	0	0	0	0	0	0	1	2
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	1
Table 7. Beaverton = 22908													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	19	19	18	18	16	14	14	14	15	18	19	21	17
Maximum Hourly Speed	59	65	66	57	48	43	49	58	58	63	73	75	75
Maximum Gust Speed	86	99	95	85	81	74	71	79	85	89	106	105	106
Days with Winds >= 52 km/h	1	0	1	0	0	0	0	0	0	0	1	1	4
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	1	1
Table 8. Pickering = 13110													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	17	17	16	17	15	13	13	13	14	16	16	18	16
Maximum Hourly Speed	54	56	56	54	47	43	48	50	54	58	60	62	62
Maximum Gust Speed	82	92	92	87	85	65	72	62	80	86	96	108	108
Days with Winds >= 52 km/h	0	0	0	0	0	0	0	0	0	0	0	1	2
Days with Winds >= 63 km/h	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 21: Corrected Wind Summary for 2040-2049

Table 1. Ajax = 13414													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	16	17	16	16	14	12	11	11	13	15	16	15	14
Maximum Hourly Speed	46	57	45	41	40	46	37	47	37	42	48	44	57
Maximum Gust Speed	67	74	69	64	70	74	60	67	57	70	74	71	74
Days with Winds >= 52 km/h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2. Whitby = 14165													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	15	16	16	16	14	12	11	11	13	14	16	14	14
Maximum Hourly Speed	43	54	44	40	41	50	38	45	37	42	45	42	54
Maximum Gust Speed	66	74	74	63	66	74	58	66	58	70	74	72	74
Days with Winds >= 52 km/h	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 3. Oshawa = 14171													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	16	17	16	16	14	12	11	11	13	15	16	15	14
Maximum Hourly Speed	45	56	45	42	42	50	39	40	40	45	47	43	56
Maximum Gust Speed	68	77	73	65	71	76	61	58	58	71	76	72	77
Days with Winds >= 52 km/h	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 4. Clarington = 14483													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	16	16	15	16	13	11	10	11	13	14	16	15	14
Maximum Hourly Speed	43	51	44	40	41	47	36	51	40	45	56	44	56
Maximum Gust Speed	69	77	70	66	69	74	60	63	67	71	77	72	77
Days with Winds >= 52 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 5. Uxbridge = 17570													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	16	17	17	18	17	15	13	13	13	15	16	16	15
Maximum Hourly Speed	44	48	49	44	46	50	41	37	41	47	44	43	50
Maximum Gust Speed	73	78	72	64	70	77	56	58	62	71	71	65	78
Days with Winds >= 52 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 6. Port Perry = 17584													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	16	17	17	18	16	15	13	13	13	15	16	15	15
Maximum Hourly Speed	43	48	48	42	45	49	40	41	38	45	45	41	49
Maximum Gust Speed	72	77	72	65	71	76	58	57	61	70	80	66	80
Days with Winds >= 52 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7. Beaverton = 22908													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	17	18	17	17	15	13	12	12	13	16	17	17	15
Maximum Hourly Speed	57	51	47	43	42	42	36	40	43	51	56	59	59
Maximum Gust Speed	73	81	74	64	60	73	57	63	59	71	72	84	84
Days with Winds >= 52 km/h	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8. Pickering = 13110													
Wind	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Speed (km/h)	16	17	16	16	14	12	11	11	13	14	16	15	14
Maximum Hourly Speed	46	57	46	42	43	48	38	49	37	42	48	44	57
Maximum Gust Speed	64	74	70	66	65	72	58	64	58	70	74	71	74
Days with Winds >= 52 km/h	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Days with Winds >= 63 km/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Table 22: Wind Chill Summary for 2000-2009

Table 1. Ajax = 13414													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-30	-30	-36	-17	-5	-2	0	0	-5	-6	-17	-23	-36
Days with Windchill < -20	5.0	4.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	12.9
Days with Windchill < -30	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 2. Whitby = 14165													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-32	-31	-37	-18	-6	-1	0	0	-6	-8	-18	-25	-37
Days with Windchill < -20	6.1	5.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	15.1
Days with Windchill < -30	0.5	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 3. Oshawa = 14171													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-32	-31	-37	-18	-6	0	0	0	-6	-8	-18	-26	-37
Days with Windchill < -20	6.1	5.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	15.6
Days with Windchill < -30	0.5	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 4. Clarington = 14483													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-32	-31	-36	-17	-6	0	0	0	-5	-8	-18	-25	-36
Days with Windchill < -20	5.6	5.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	14.3
Days with Windchill < -30	0.4	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 5. Uxbridge = 17570													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-34	-34	-41	-22	-9	-3	0	0	-8	-10	-20	-28	-41
Days with Windchill < -20	9.2	8.2	3.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	23.7
Days with Windchill < -30	0.9	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Days with Windchill <= -40	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 6. Port Perry = 17584													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-35	-34	-40	-21	-9	-2	0	0	-9	-11	-20	-29	-40
Days with Windchill < -20	8.8	7.9	3.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.6	23.1
Days with Windchill < -30	0.9	0.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 7. Beaverton = 22908													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-34	-34	-39	-21	-9	-3	0	0	-8	-10	-20	-28	-39
Days with Windchill < -20	8.7	8.9	4.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	24.5
Days with Windchill < -30	1.3	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 8. Pickering = 13110													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-30	-31	-37	-17	-5	-1	0	0	-6	-7	-17	-24	-37
Days with Windchill < -20	5.8	4.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	14.0
Days with Windchill < -30	0.2	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 23: Corrected Wind Chill Summary for 2040-2049

Table 1. Ajax = 13414													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-15	-16	-13	-10	0	0	0	0	-1	-2	-10	-17	-17
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 2. Whitby = 14165													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-18	-17	-15	-10	0	0	0	0	-1	-5	-11	-19	-19
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 3. Oshawa = 14171													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-16	-17	-15	-10	-1	0	0	0	-2	-4	-11	-17	-17
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 4. Clarington = 14483													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-16	-17	-15	-10	0	0	0	0	0	-4	-11	-15	-17
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 5. Uxbridge = 17570													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-19	-20	-18	-13	-2	-2	0	0	-3	-5	-12	-19	-20
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 6. Port Perry = 17584													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-20	-20	-18	-12	-2	-1	0	0	-4	-5	-13	-18	-20
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 7. Beaverton = 22908													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-21	-21	-18	-13	-2	-1	0	0	-3	-5	-12	-19	-21
Days with Windchill < -20	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Table 8. Pickering = 13110													
Windchill	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Extreme Windchill	-17	-17	-14	-10	-1	0	0	0	-2	-3	-11	-20	-20
Days with Windchill < -20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill < -30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days with Windchill <= -45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

APPENDIX A

ASSESSMENT OF THE SEVERE WEATHER ENVIRONMENT
IN NORTH AMERICA SIMULATED BY A GLOBAL CLIMATE MODEL

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1. INTRODUCTION

The accuracy of climate change predictions hinges on the understanding of current climatologies and the correct simulation of current climatologies by climate models. Severe convective weather events (thunderstorms, hail, tornadoes, etc.) are relatively rare atmospheric phenomena due to their very small temporal and spatial scales. Consequently, assessing climatologies of actual severe convective weather events is difficult. Inconsistencies in reporting criteria and improvements in the technology used to observe severe weather make the problem of developing reliable long-term climatologies of severe weather events nearly impossible. Brown and Murphy (1996) and Brooks et al. (2003) proposed the use of covariates that represent the severe weather environment as proxies for the occurrence of weather events that could not be accurately quantified. Environmental conditions conducive to the occurrence of severe weather can be quantified from meteorological soundings in terms of the convective available potential energy (CAPE) and vertical shear of the horizontal wind. In each of the studies, extreme values of the covariates were closely related to the average occurrence of severe weather. In the context of establishing climatologies of severe convective weather events, the problem is transformed from trying to assess an inherently inadequate database of observed severe convective weather events to trying to establish a relationship between better observed environmental conditions and the original events in question. Previously, it has been shown that most convective parameters derived from reanalysis data are qualitatively similar to convective parameters derived from observed soundings (Lee 2002). Brooks et al. (2003) calculated CAPE values using the mixed layer within the lowest 100 hPa of the atmosphere and shear values over the 0-6 km range. They concluded that the higher the CAPE and shear, the greater the probability became that the environmental conditions would be associated with severe convective weather. This is consistent with the results of Rasmussen and Blanchard (1998) using observed environmental parameters from neighboring meteorological soundings. Currently, global climate models are incapable of resolving actual severe weather events as these events occur at scales are well below the horizontal resolution within the models. As a result, assessing the distribution of severe weather within a global climate model is limited to assessing environments associated with severe convective weather. This project evaluates how well a modern global climate model represents the severe weather environment and, in turn, if the severe weather environments of modern global climate models can be used as a covariate for estimating future distributions of observed severe weather events. Preliminary results are presented from an investigation of the ability of the NCAR Community Climate System Model 3 (CCSM3) to simulate severe convective weather environments. The model severe weather environments are compared with the severe weather environments from global reanalysis data discussed in Brooks et al. (2003). This will serve as the basis for future analysis aimed at describing changes in the severe weather environment under different future climate change scenarios. The following sections include a brief description of the CCSM3 model as well as a concise discussion of the severe weather environment from the global reanalysis data. Then attention turns to presenting early results from analyzing one year of CCSM3 output followed by preliminary conclusions.

2. DESCRIPTION OF THE CLIMATE MODEL

The CCSM3 is a coupled global climate model consisting of atmosphere, land surface, sea-ice, and ocean component (Collins et al., 2006). Each component is a model in itself joined together through a flux coupler. For this particular study a control run (b30.030e) with greenhouse gases held constant was chosen in an effort to assess how well climate models can simulate current severe weather environments. The atmospheric portion of the CCSM3, the Community Atmospheric Model (CAM3), is a spectral model with 85-wavenumber triangular truncation (approximately 1.4 degree) in the horizontal with 26 terrain following hybrid levels in the vertical (Collins et al., 2006). Specifically, CAM3 vertical resolution contains 4 levels below 850 hPa and 13 levels below 200 hPa. CAM3 output fields are archived every 6 hours. Fields used in calculating CAPE are the 3-dimensional fields of temperature (T), mixing ratio (Q), geopotential height (Z3) and pressure (P). Additionally, surface geopotential and surface pressure are necessary but can be taken from the lowest level of the corresponding vertical fields. It should be noted that in calculating the CAPE fields the model data was used on its own vertical grid and not interpolated.

3. REANALYSIS OBSERVATIONS

The premise behind the reanalysis dataset is to create a best representation of the atmosphere for every 6 hours by:

1. Recover all available observations from each time and synthesize them with a static data assimilation system.
2. Use observational fields to initialize a model for a 6 hour forecast. This global reanalysis model used was identical to the NCEP global operational model except that the horizontal resolution was half that of the operational model.
3. Use the forecast as a first-guess in conjunction with concurrent observational fields. This constituted the reanalysis output data. An optimal interpolation technique was used to generate the reanalysis fields.
4. Repeat process every 6 hours.

The resolution of the global reanalysis dataset is 1.875° in the longitude, 1.915° in the latitude, and 28 σ levels (σ is defined as pressure divided by surface pressure) in the vertical of which 10 σ levels are located between the surface and 700 hPa (Brooks et al., 2003). The resolution of the reanalysis data is roughly that of the CCSM3 model output. The atmospheric parameters necessary for construction of a sounding were derived from the six available global reanalysis fields: surface geopotential, virtual temperature, specific humidity, divergence, and vorticity. The mixed layer CAPE taken from the reanalysis data was averaged over all times for each season: Winter (December, January, February), Spring (March, April, May), Summer (June, July, August), and Autumn (September, October, November) for the region 25°N to 50°N and 135°W to 65°W. The overall distribution of CAPE for all times (1958-1999) is bimodal with a subtle peak between 25 and 50 J/kg and a more substantial peak between 400 and 650

J/kg. The distribution is characterized by a rapid increase in occurrence of a given CAPE value up to the first peak with a slight drop off before continuing with an even steeper climb to the overall peak. Frequency of CAPE values above the peak drops off extremely quickly.

4. GLOBAL CLIMATE MODEL ANALYSIS

The CAM3 archived output does not include the CAPE field. To produce the CAM3 CAPE field, the NCAR Command Language (NCL) `rip_cape_3d` routine was used. This routine takes arrays ordered top to bottom of pressure, temperature, geopotential height and mixing ratio as well as arrays of surface pressure and surface geopotential. Since the CAM3 uses hybrid levels in the vertical a separate NCL routine was used to convert the hybrid pressure levels to true pressure levels needed for the pressure level array in the `rip_cape_3d` routine. For this paper a single year was chosen and CAPE values are once again averaged for all times over each season in the region extending from 25°N to 50°N and 135°W to 65°W. It is very important to point out that while the reanalysis CAPE observations were computed using a mixed layer of the lowest 100 hPa that the global climate model's CAPE field is calculated using the maximum CAPE value.

The overall distribution of CAPE for one year at all times is also bimodal with a subtle peak between 40 and 65 J/kg and a more substantial peak between 650 and 1000 J/kg. The distribution is characterized by a gradual increase in occurrence of a given CAPE value up to the first peak with a slight drop off before continuing with a steep climb to the overall peak. Frequency of CAPE values above the peak also drops off extremely quickly.

5. PRELIMINARY RESULTS

The average CAPE field derived from the CAM3 model output qualitatively agrees with the CAPE field derived from the reanalysis data. In winter and spring the CAM3 CAPE field is roughly collocated with the reanalysis data albeit with values a little higher. In summer and autumn the CAM3 and the global reanalysis produce highest values of CAPE in the southeastern United States along with lesser values in the southwest United States. Of substantial interest is the lack of CAPE values in the CAM3 output over the central plains of the United States during the summer. When looking at time series of CAPE values for the summer it becomes apparent that the model does not produce CAPE on a day to day basis in the central plains; however, the CAM3 does produce CAPE when synoptic scale disturbances move across the plains. It is too early to speculate as to the reason for the lack of CAPE, but of primary interest is the lack of moisture in the central portion of the United States.

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and help in debugging the rip_cape_3d routine while still in beta. This research was supported by NSF SGER grant ATM-0550178.

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FIGURE 1. CAPE values averaged over all times for December through February using global reanalysis data (top) and CAM3 global climate model output (bottom).

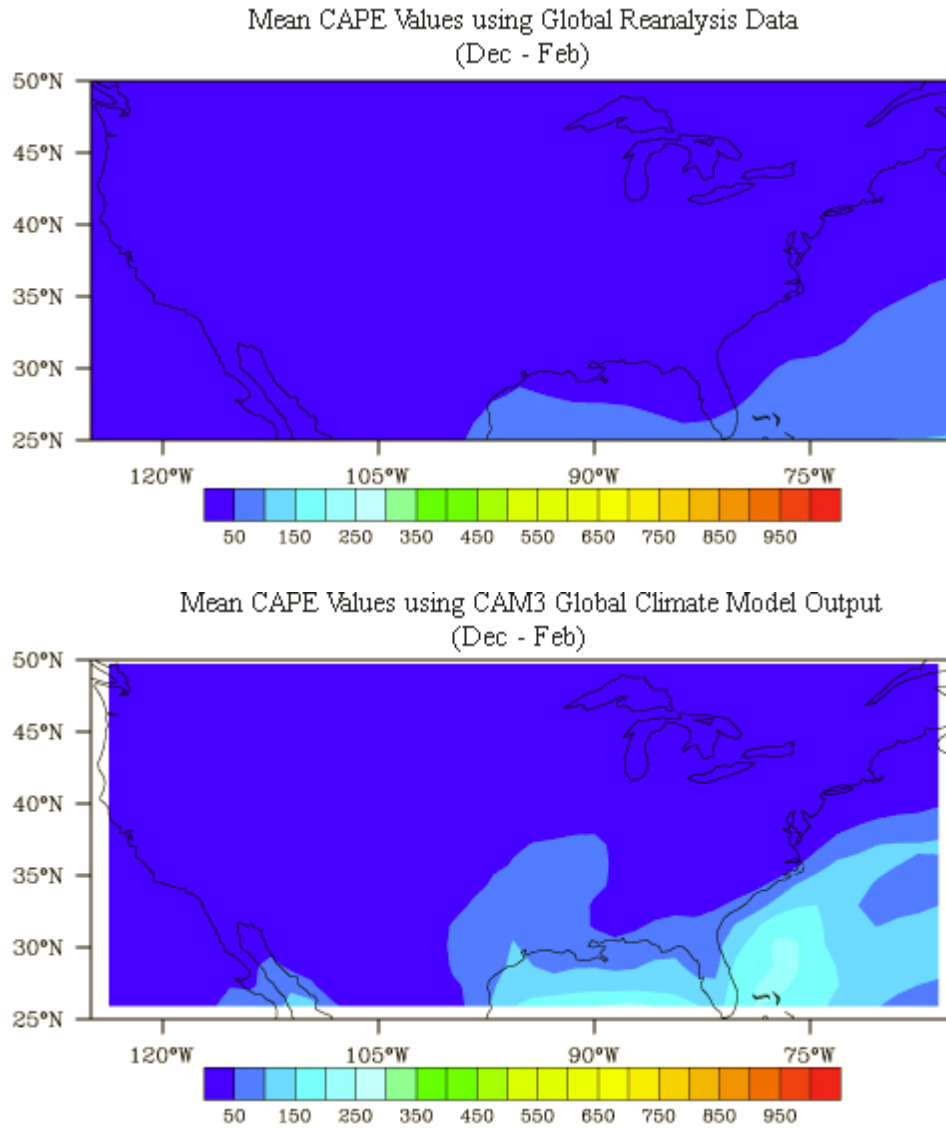


FIGURE 2. CAPE values averaged over all times for March through May using global reanalysis data (top) and CAM3 global climate model output (bottom).

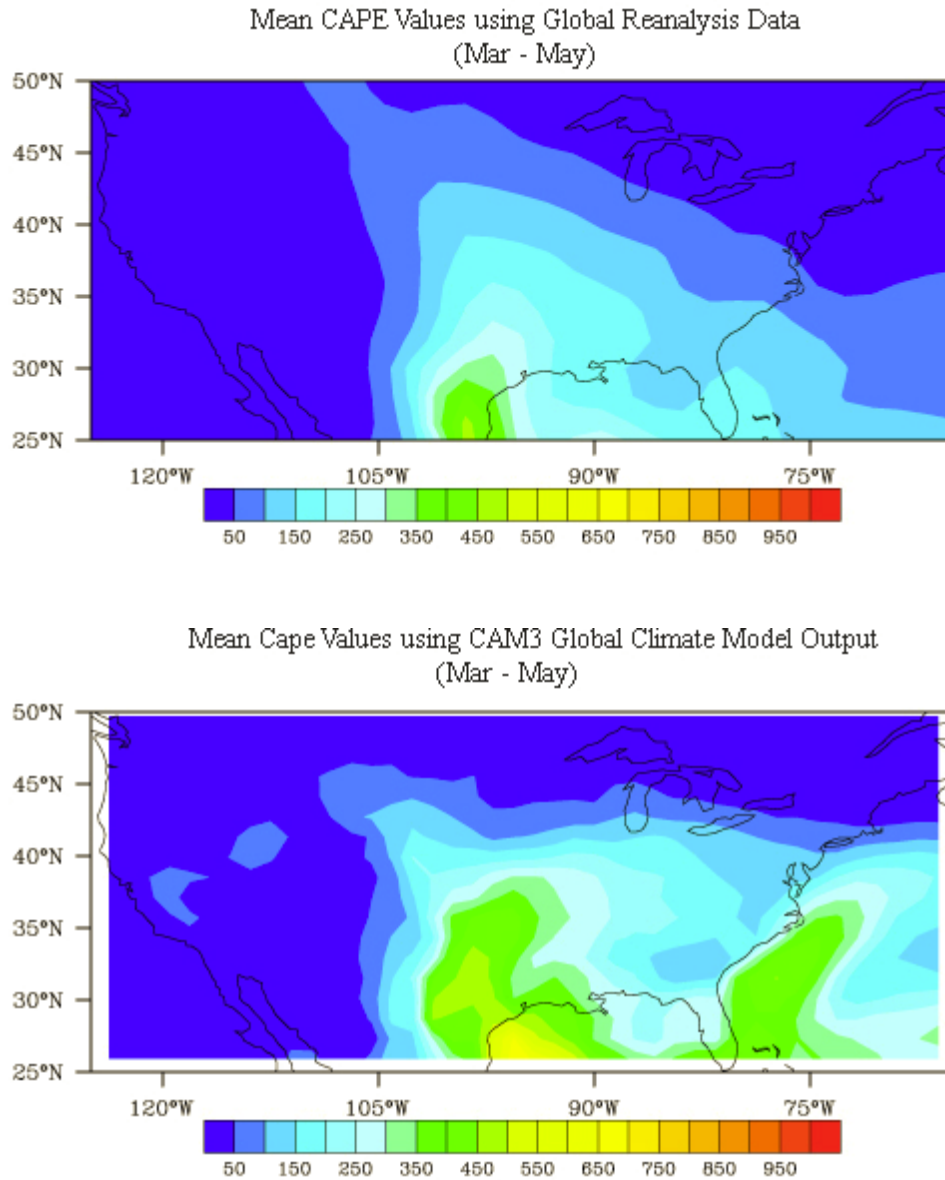


FIGURE 3. CAPE values averaged over all times for June through August using the global reanalysis data (top) and the CAM3 global climate model output (bottom).

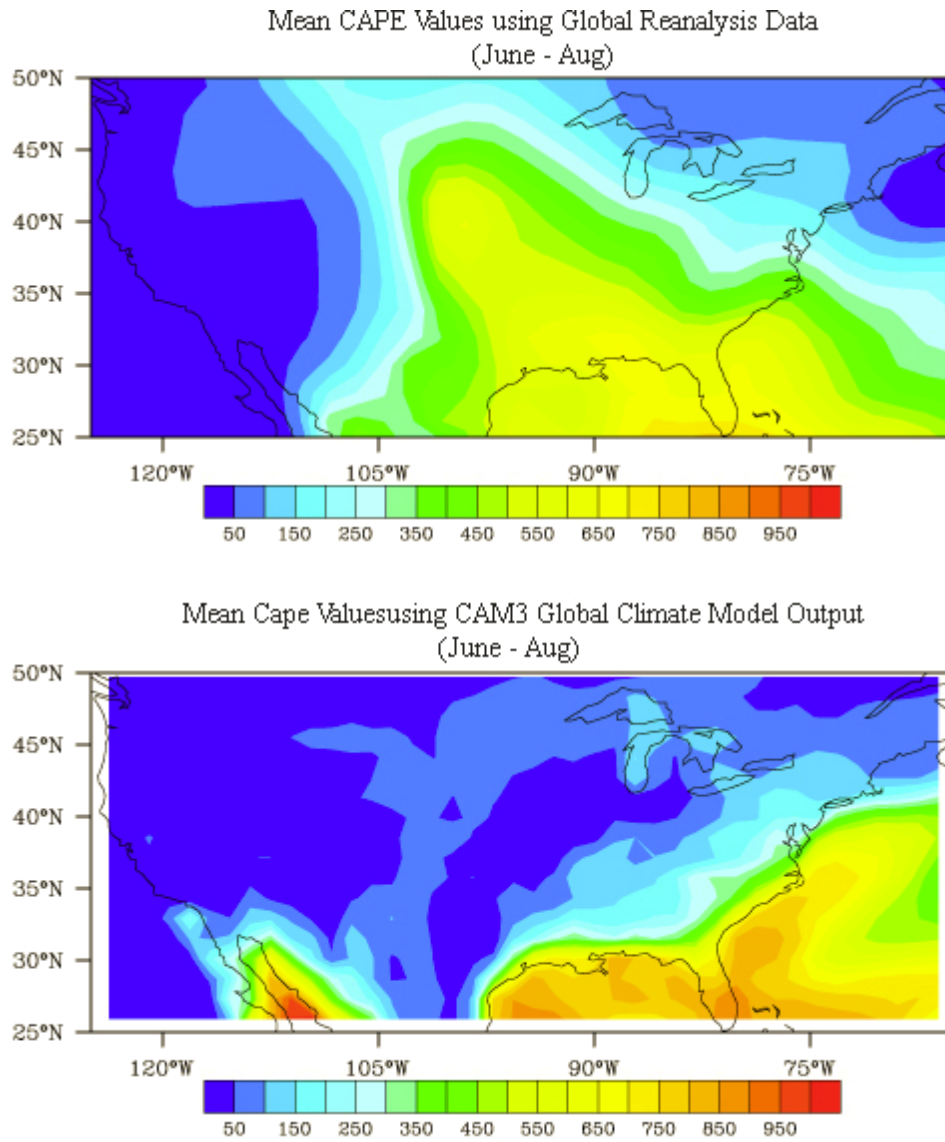


FIGURE 4. CAPE values averaged over all times for September through October using the global reanalysis data (top) and the CAM3 global climate model output (bottom).

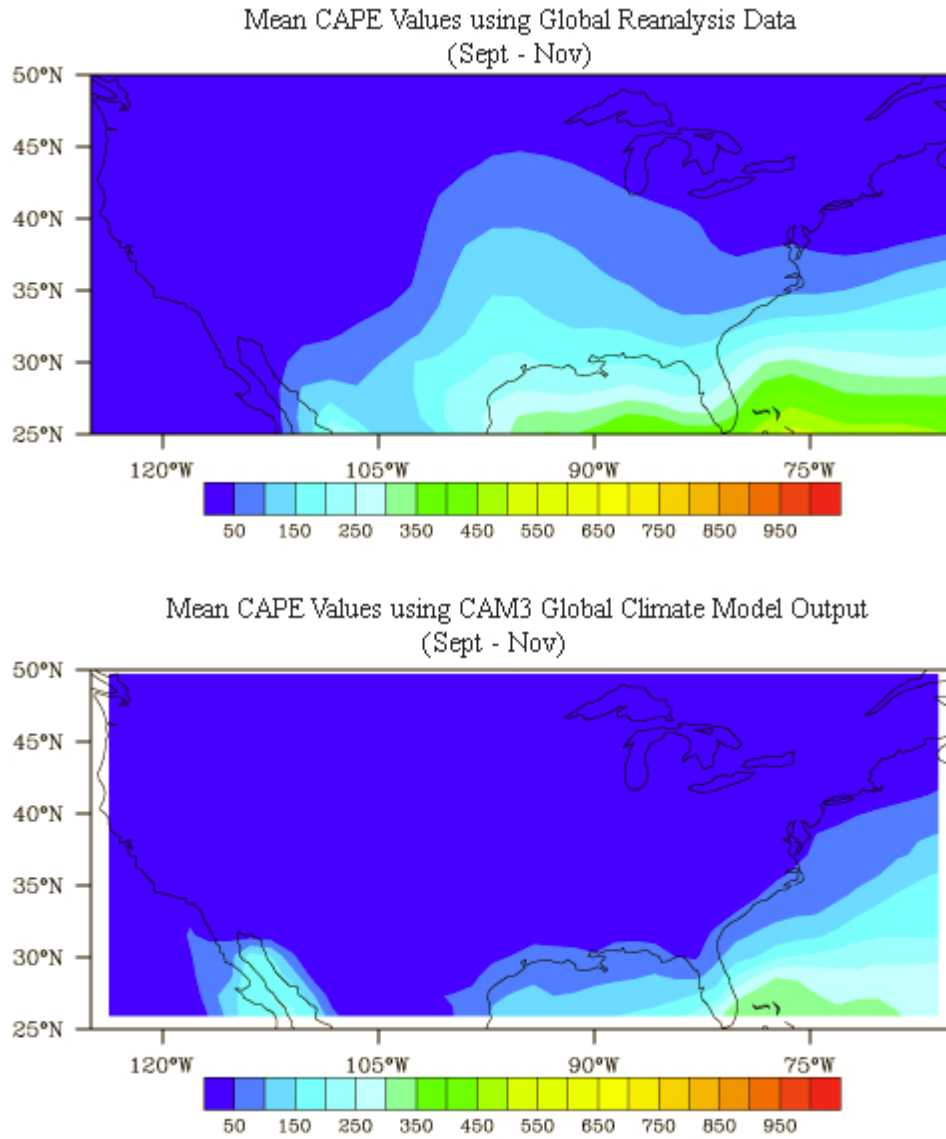


FIGURE 5. (Top) Distribution of all CAPE values between 1958 and 1999 using global reanalysis data. (Bottom) Distribution of all CAPE values for one year using CAM3 global model output.

