



**Weather INnovations Incorporated**



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[Beamsville Bench](#)  
[Niagara River](#)

[Creek Shores](#)  
[Short Hills Bench](#)

[Four Mile Creek](#)  
[St. David's Bench](#)

[Lincoln Lakeshore](#)  
[Twenty Mile Bench](#)

[Niagara Lakeshore](#)  
[Vinemount Ridge](#)

# February 2011:

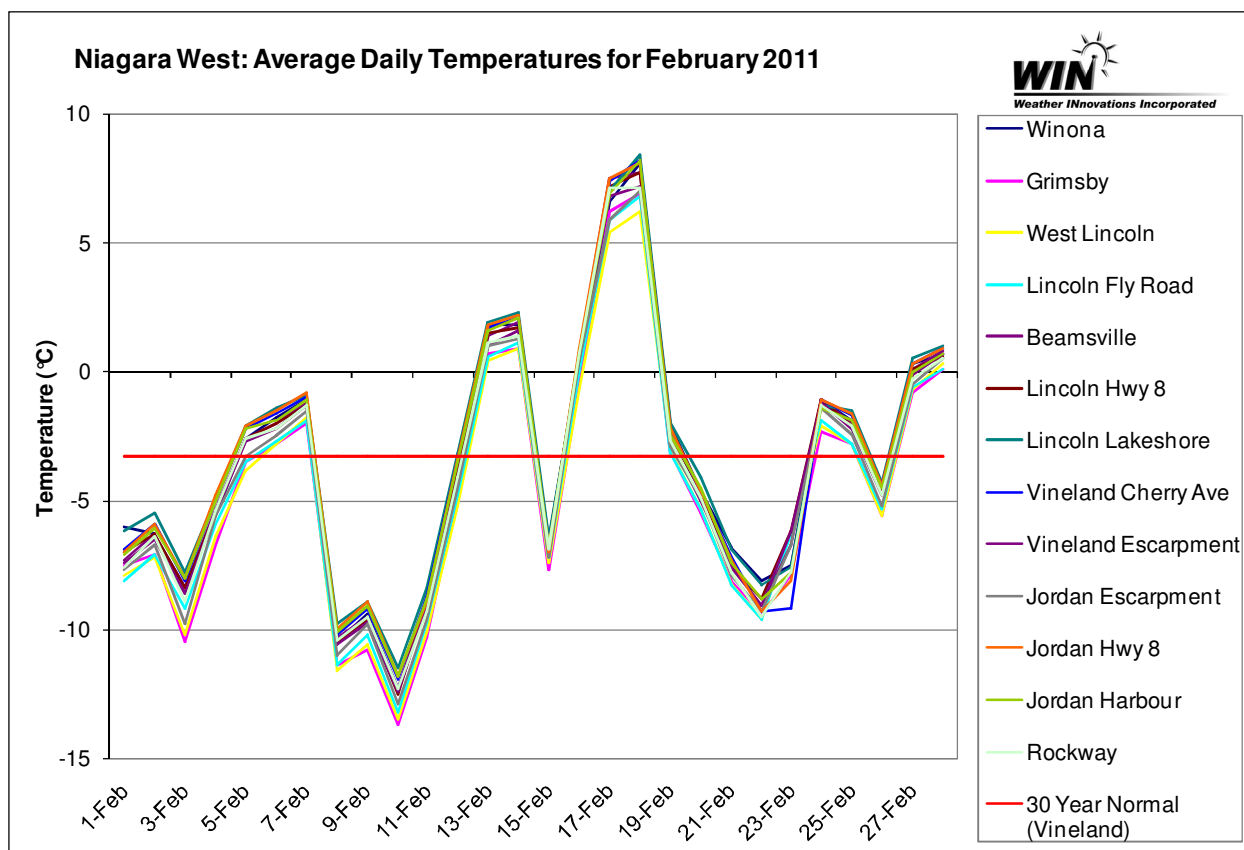
## Niagara Peninsula

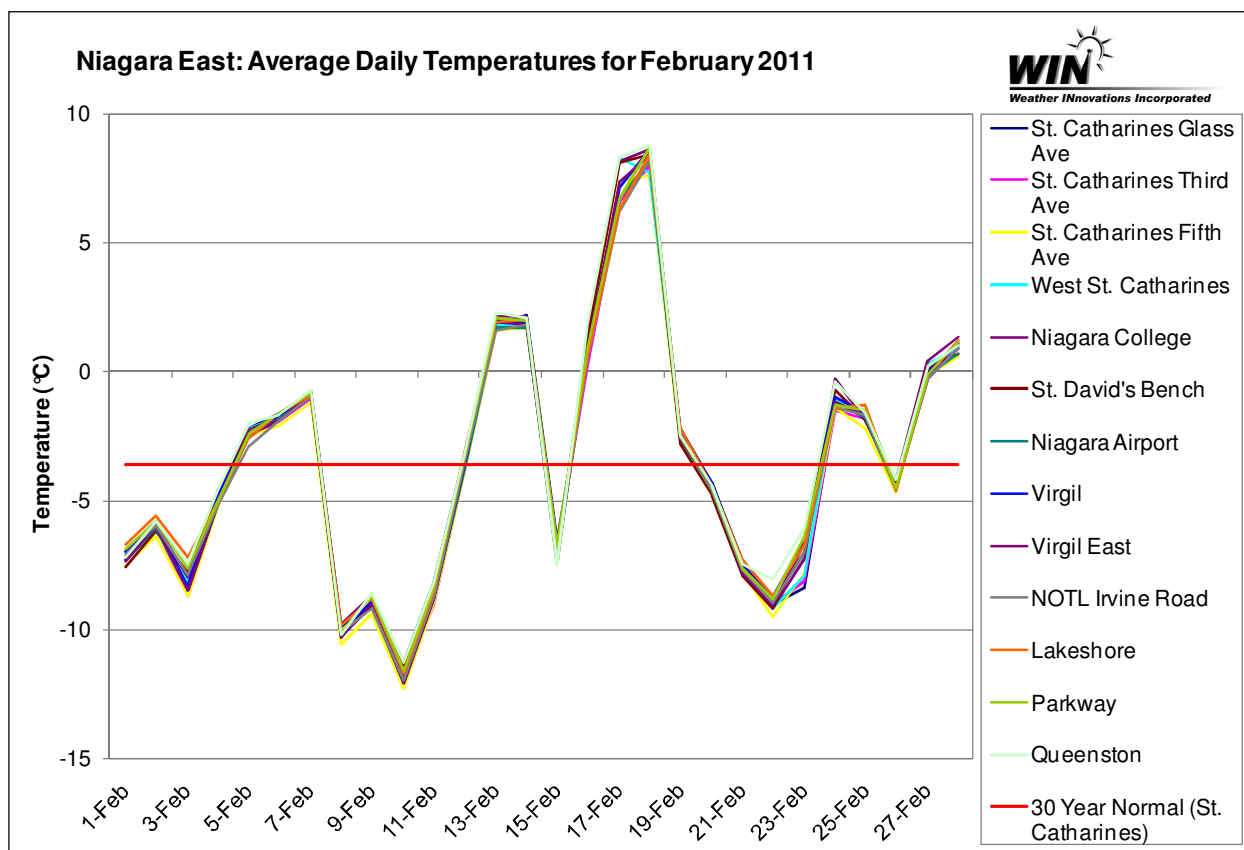
WIN Staff  
March 7, 2011



### OVERVIEW

The vine deacclimation process began in February, as the coldest winter temperatures passed and the temperature trend increased throughout the month. Overall, daily temperatures in February 2011 were near normal. The average monthly temperature across the Niagara West stations was 0.6°C below the normal daily mean, based on Environment Canada's 30-year normal for Vineland. The average monthly temperature across the Niagara East stations was 0.1°C above the normal daily mean, based on Environment Canada's 30-year normal for St. Catharines. Monthly minimums occurred during the overnight period on the 2<sup>nd</sup>-3<sup>rd</sup>, 10<sup>th</sup>-11<sup>th</sup>, and 22<sup>nd</sup>-23<sup>rd</sup>, with the coldest February temperature reaching -20.7°C at the Grimsby station. Throughout February there were a significant number of days suitable for icewine harvest; however, most, if not all, of the harvest would have taken place in December and January.





### TEMPERATURE ANALYSIS:

The minimum temperatures for February 2011 ranged from  $-15.8^{\circ}\text{C}$  at the Queenston station to  $-20.7^{\circ}\text{C}$  at the Grimsby station. These minimum temperatures were much lower than those in February 2010: ranging from  $-9.1^{\circ}\text{C}$  at the NOTL Lakeshore station to  $-15.4^{\circ}\text{C}$  at the Grimsby station. However, minimum temperatures were higher than in February 2009: ranging from  $-17.2^{\circ}\text{C}$  at the NOTL Lakeshore station to  $-26.1^{\circ}\text{C}$  at the Jordan Escarpment station! A brief warm spell on the 17<sup>th</sup> and 18<sup>th</sup> may have slightly accelerated the deacclimation process. There were 20 days in February when temperatures fell below  $-8^{\circ}\text{C}$  at one or more of the stations, as noted in the following figures.

## Niagara West: February 2011 Daily Minimums

Date	Winona	Grimsby	West Lincoln	Lincoln Fly Road	Beamsville	Lincoln Hwy 8	Lincoln Lakeshore	Vineland Cherry Ave.	Vineland Escarpment	Jordan Escarpment	Jordan Hwy 8	Jordan Harbour	Rockway
1-Feb	-7.7	-9.5	-10.3	-10.4	-9.6	-9.0	-8.5	-9.1	-9.8	-10.2	-9.4	-9.4	-10.0
2-Feb	-10.9	-13.7	-14.8	-11.9	-10.8	-11.0	-8.3	-9.1	-10.1	-11.7	-9.7	-9.6	-10.3
3-Feb	-16.2	-20.7	-18.4	-15.7	-14.4	-14.5	-15.1	-13.9	-15.4	-18.9	-16.8	-15.3	-17.2
4-Feb	-8.3	-9.1	-8.3	-8.0	-7.5	-8.0	-7.2	-7.1	-7.5	-7.6	-6.9	-7.1	-7.3
5-Feb	-4.7	-6.3	-9.1	-7.4	-5.1	-4.7	-5.1	-4.8	-5.5	-8.4	-5.8	-5.1	-5.3
6-Feb	-3.8	-4.8	-4.7	-4.8	-4.1	-4.1	-3.5	-3.6	-4.2	-4.3	-3.4	-3.9	-4.1
7-Feb	-6.1	-7.0	-6.8	-6.9	-6.1	-6.0	-5.4	-5.8	-6.3	-6.5	-5.6	-5.9	-6.2
8-Feb	-13.9	-15.4	-15.4	-15.2	-13.9	-14.1	-13.4	-13.2	-14.6	-15.6	-14.0	-13.8	-14.6
9-Feb	-12.5	-15.5	-15.8	-14.1	-13.5	-13.4	-12.7	-11.9	-13.2	-12.7	-12.0	-12.6	-12.4
10-Feb	-17.5	-19.5	-18.3	-17.9	-16.9	-16.9	-15.9	-15.5	-16.8	-17.1	-16.1	-15.8	-16.9
11-Feb	-15.2	-17.6	-16.8	-15.4	-14.4	-14.6	-14.2	-14.5	-14.8	-16.2	-17.6	-15.6	-18.3
12-Feb	-7.1	-12.4	-11.8	-10.9	-9.0	-8.0	-7.7	-7.5	-9.7	-10.9	-9.5	-9.1	-10.1
13-Feb	-7.0	-8.9	-8.8	-8.9	-7.6	-7.0	-6.8	-6.8	-8.4	-8.9	-7.6	-7.5	-8.1
14-Feb	-5.9	-7.2	-7.0	-7.0	-6.1	-6.2	-5.6	-6.0	-6.6	-6.9	-6.1	-6.2	-6.5
15-Feb	-12.4	-14.1	-13.6	-11.5	-11.7	-10.2	-9.7	-10.4	-11.5	-11.6	-10.4	-10.1	-11.1
16-Feb	-7.0	-8.9	-8.5	-6.1	-7.2	-6.6	-6.1	-6.0	-6.3	-7.4	-6.9	-6.0	-7.1
17-Feb	1.2	1.6	0.5	2.0	3.5	2.9	-1.8	1.9	2.7	1.1	1.8	0.9	1.3
18-Feb	2.5	1.7	1.5	1.6	2.4	2.1	2.9	2.8	2.3	2.1	3.1	2.5	2.3
19-Feb	-4.4	-5.5	-5.4	-5.2	-4.3	-4.3	-4.2	-4.3	-4.6	-5.2	-4.2	-4.6	-4.8
20-Feb	-8.3	-10.4	-8.9	-8.3	-8.8	-7.3	-6.8	-8.1	-8.9	-9.1	-9.4	-7.8	-9.4
21-Feb	-9.2	-10.5	-10.3	-10.5	-9.9	-9.8	-9.2	-9.4	-10.0	-10.2	-9.6	-9.6	-9.9
22-Feb	-13.1	-13.0	-12.2	-11.6	-12.9	-11.8	-14	-17.3	-14.5	-15.5	-14.8	-13.9	-15.1
23-Feb	-15.7	-16.6	-13.3	-12.5	-14.1	-13.6	-15.9	-19.0	-14.5	-15.8	-15.8	-17.2	-17.3
24-Feb	-9.2	-11.4	-9.6	-8.4	-6.9	-7.8	-8.1	-8.4	-7.0	-8.7	-8.4	-6.9	-7.9
25-Feb	-8.0	-11.8	-11.8	-9.2	-8.9	-8.5	-8.4	-8.0	-9.1	-9.8	-8.1	-8.1	-9.5
26-Feb	-8.9	-12.2	-12.1	-10.5	-9.5	-9.4	-8.9	-9.4	-9.6	-11.0	-9.8	-9.2	-10.5
27-Feb	-3.5	-5.7	-6.0	-5.1	-4.6	-4.0	-3.7	-3.6	-4.3	-4.8	-4.0	-4.2	-4.2
28-Feb	-3.3	-4.5	-5.2	-4.5	-3.6	-3.4	-2.4	-2.9	-3.7	-4.3	-3.2	-3.1	-3.9



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Legend:

	Days with Ice Wine Temperatures
	Monthly Minimum



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## Niagara East: February 2011 Daily Minimums

Date	St. Catharines Glass Ave	St. Catharines Third Ave	West St. Catharines Fifth St	Niagara College	St. David's Bench	Niagara Airport	Virgil	NOTL Irvine Road	Lakeshore	Parkway	Queenston		
1-Feb	-9.3	-9.7	-10.1	-9.7	-9.9	-10.3	-9.9	-9.5	-10.0	-9.5	-9.9		
2-Feb	-8.4	-8.4	-10.3	-9.3	-8.4	-8.6	-8.7	-8.3	-8.4	-8.5	-7.9	-8.4	
3-Feb	-17.2	-20.3	-15.9	-15.5	-15.2	-14.1	-16.8	-17.4	-18.2	-15.4	-16.0	-16.8	-14.1
4-Feb	-6.9	-6.9	-7.2	-7.3	-6.6	-6.8	-7	-6.4	-6.8	-6.9	-6.7	-8.7	-6.6
5-Feb	-5.8	-5.1	-4.6	-5.0	-5.4	-6.7	-6.2	-6.4	-8.1	-9.7	-9.5	-9.6	-5.7
6-Feb	-3.5	-3.9	-4.2	-4.0	-4.0	-3.8	-3.8	-3.5	-3.6	-3.6	-3.3	-3.4	-3.5
7-Feb	-5.7	-5.9	-6.1	-5.9	-6.3	-6.4	-6.2	-6.0	-6.1	-6.0	-5.4	-5.8	-6.2
8-Feb	-13.8	-14.2	-14.4	-14.2	-12.7	-12.8	-13.4	-12.8	-12.9	-13.1	-13.3	-13.1	-12.6
9-Feb	-12.2	-12.2	-12.1	-11.5	-11.4	-12.1	-13	-12.1	-12.7	-12.7	-12.5	-12.6	-11.7
10-Feb	-15.6	-15.9	-16.4	-16.6	-15.2	-15.2	-16.1	-15.5	-15.9	-16.1	-16.3	-16.2	-14.9
11-Feb	-17.3	-16.6	-16.3	-17.3	-13.8	-13.5	-16.3	-14.8	-15.6	-14.3	-14.7	-15.3	-13.6
12-Feb	-10.2	-13.1	-8.8	-9.0	-7.4	-7.8	-10.9	-10.9	-11.4	-9.1	-9.3	-9.1	-7.9
13-Feb	-7.2	-8.5	-7.8	-7.6	-7.2	-6.9	-8	-7.4	-7.5	-7.9	-6.9	-6.3	-6.3
14-Feb	-5.9	-6.1	-6.7	-6.5	-6.4	-6.9	-6.7	-6.3	-6.6	-6.3	-6.0	-6.0	-6.5
15-Feb	-10.0	-10.2	-11.0	-12.8	-14.4	-15.9	-12.6	-12.3	-12.5	-10.2	-9.8	-11.4	-15.2
16-Feb	-7.6	-7.4	-6.8	-6.5	-6.7	-7.3	-7.1	-6.4	-6.4	-6.4	-6.2	-6.3	-7.5
17-Feb	0.1	-0.2	1.5	2.2	0.7	2.7	-1.9	-0.2	-0.6	-1.5	-1.1	-0.8	2.3
18-Feb	2.9	2.8	2.4	2.7	2.8	2.4	2.5	2.7	2.6	2.5	2.8	2.8	2.7
19-Feb	-4.2	-4.7	-4.8	-4.5	-4.3	-4.7	-4.5	-4.6	-4.6	-4.7	-4.5	-4.6	-4.5
20-Feb	-7.9	-8.0	-10.1	-9.9	-10.6	-11.6	-9.2	-9.2	-8.0	-7.3	-6.7	-7.5	-10.9
21-Feb	-9.4	-9.5	-9.9	-9.6	-9.7	-10.0	-9.8	-9.5	-9.9	-9.8	-9.5	-9.6	-9.8
22-Feb	-16.2	-15.7	-16.3	-15.1	-14.8	-14.4	-14.5	-13.8	-13.8	-14.0	-14.2	-14.6	-13.1
23-Feb	-18.4	-17.6	-18.0	-17.6	-17.0	-15.5	-15.8	-15.3	-14.8	-15.5	-14.9	-15.6	-15.8
24-Feb	-8.6	-7.9	-8.1	-8.4	-5.6	-6.1	-7.1	-7.7	-6.6	-7.3	-7.3	-7.4	-5.4
25-Feb	-8.5	-8.4	-9.3	-9.6	-8.0	-7.5	-9.3	-7.8	-8.4	-7.8	-7.1	-7.5	-7.5
26-Feb	-10.4	-10.3	-10.5	-9.9	-9.1	-9.3	-9.8	-9.5	-9.8	-9.2	-9.4	-9.2	-9.2
27-Feb	-5.6	-5.4	-4.9	-4.4	-3.7	-4.0	-5.9	-6.7	-8.7	-5.4	-6.8	-7.0	-4.7
28-Feb	-2.8	-2.9	-3.7	-3.8	-3.2	-3.9	-3.2	-2.7	-3.1	-2.7	-2.1	-2.8	-3.7



Legend:

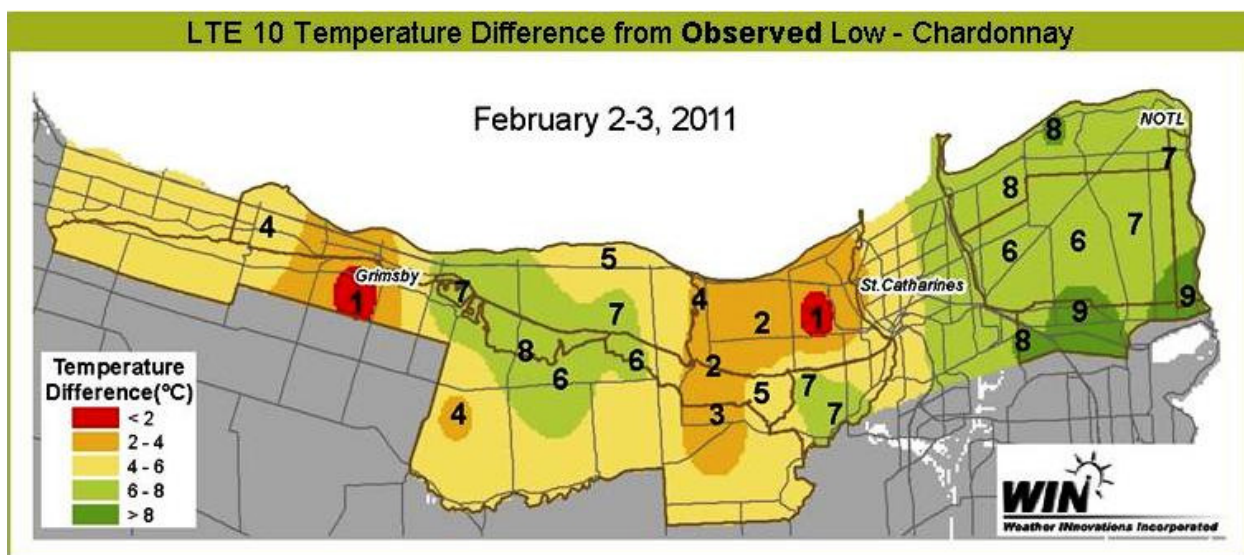
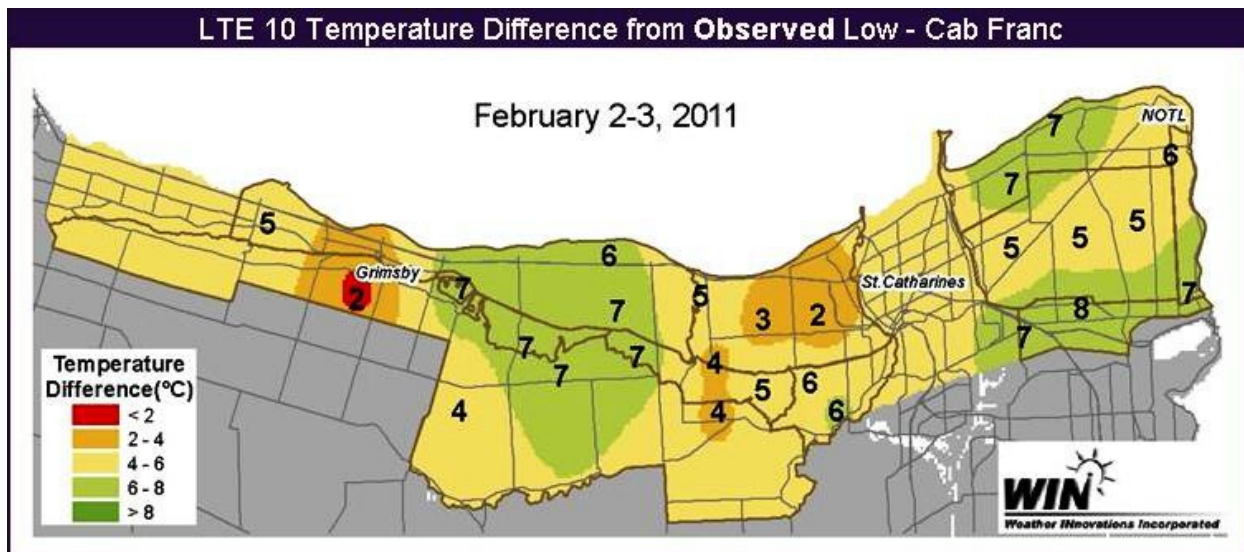
	Days with Ice Wine Temperatures
	Monthly Minimum

## BUD HARDINESS

Temperatures neared the estimated LTE10 values (the temperature at which 10% of primary buds would die) for Chardonnay and Cabernet Franc at a number of stations during the three coldest February events. Temperatures in the Creek Shores, Vinemount Ridge and Short Hills Bench appellations came the closest to reaching the LTE10 values for Cabernet Franc during these events, yet remained above the LTE10 values. However, significant bud damage already occurred in January when temperatures fell below the LTE10, LTE50 and LTE90 values in areas of these appellations. The following LTE10 maps show the temperature difference from the LTE10 value during each event. A positive number on the map indicates the number of degrees that the station remained above the LTE10 value; a negative number

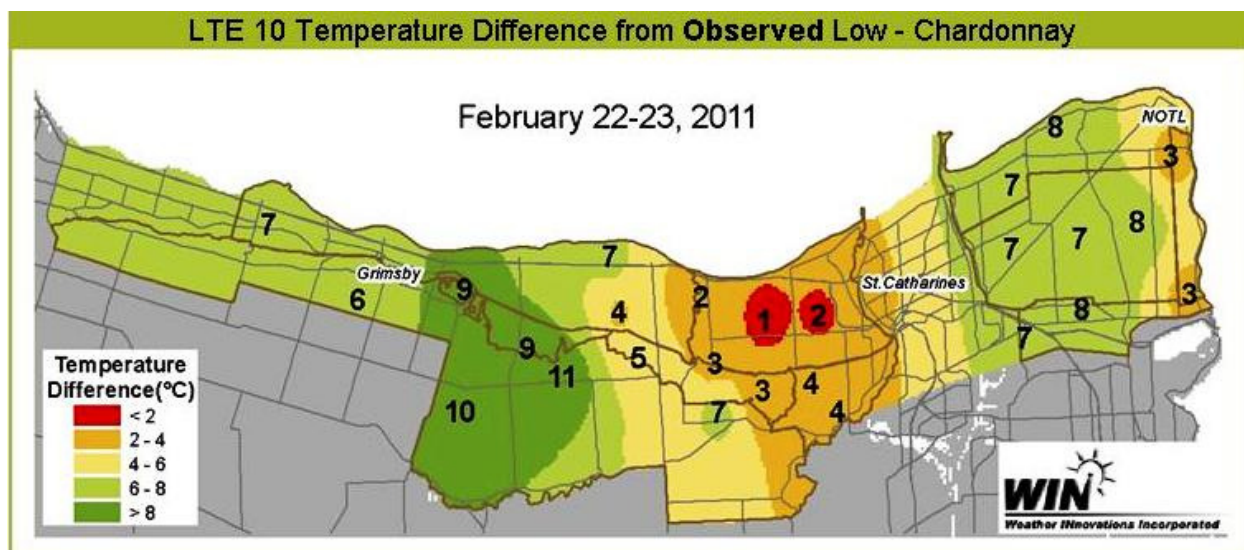


indicating a temperature is below the LTE10 value. A value of zero on the LTE10 map would indicate that a particular station reached the LTE10 value.









### SUMMARY:

Near normal temperatures were observed in February, while a pleasant absence of extreme temperature events was experienced. The coldest temperature reached in February 2011 was  $-20.7^{\circ}\text{C}$  compared to only  $-15.4^{\circ}\text{C}$  at the Grimsby station in February 2010, but much higher than  $-26.1^{\circ}\text{C}$  at the Jordan Escarpment station in February 2009! There were suitable hours for icewine harvest throughout the month of February; however, the majority of the harvest was completed in December and January. The temperature trend increased throughout the month of February, which prompted the deacclimation process. A brief warm spell on the 17<sup>th</sup> and 18<sup>th</sup> may have slightly accelerated this process. Continued near normal temperatures into the spring should help maintain a desired and gradual rate of deacclimation.