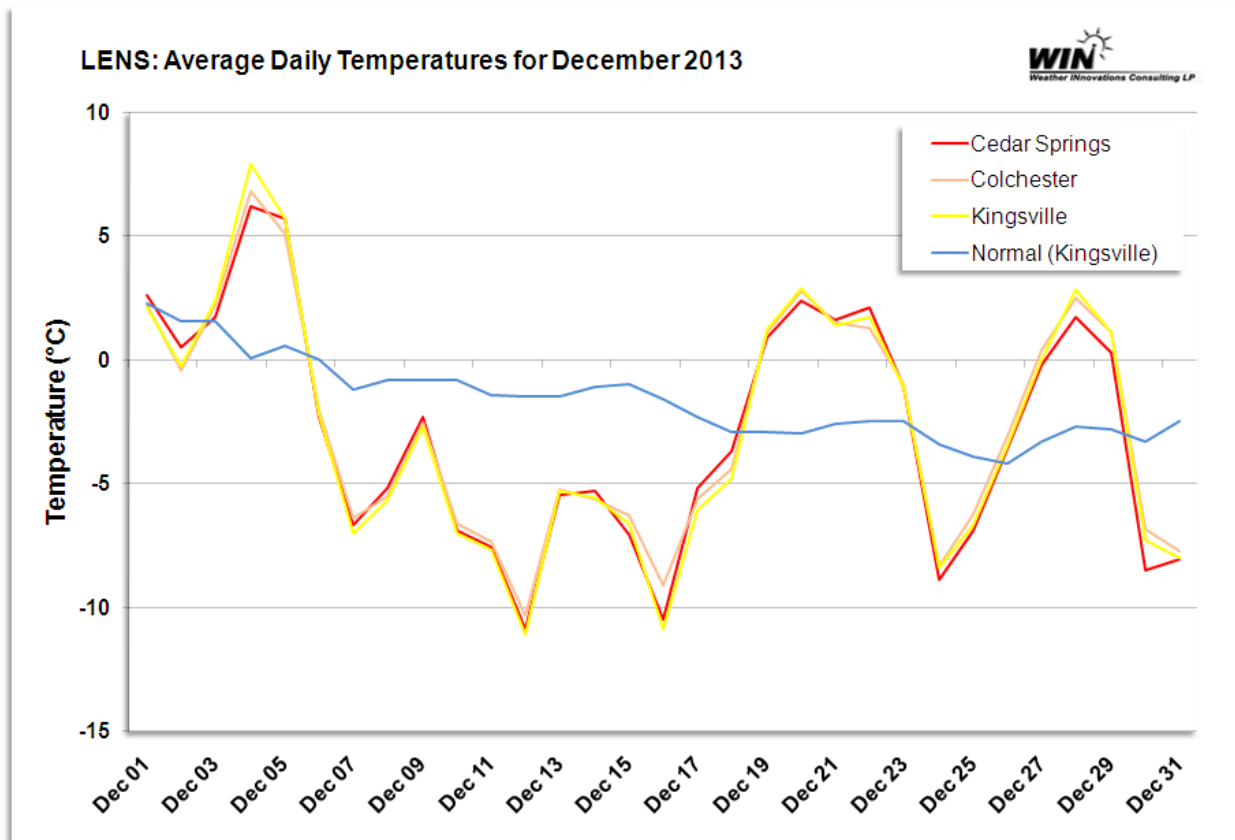


## December 2013

### Overview

A much colder-than-normal December in the Lake Erie North Shore appellation was a noticeable change, following two consecutive Decembers with above-normal temperatures. Average monthly temperatures at Cedar Springs, Colchester and Kingsville were  $-2.9^{\circ}\text{C}$ ,  $-2.7^{\circ}\text{C}$  and  $-2.9^{\circ}\text{C}$  respectively (compared to  $+1.8^{\circ}\text{C}$ ,  $+1.9^{\circ}\text{C}$  and  $+1.6^{\circ}\text{C}$  respectively in 2012). Accordingly, the average monthly temperatures were  $1.4^{\circ}\text{C}$  to  $1.6^{\circ}\text{C}$  below normal for this appellation (compared to  $2.9^{\circ}\text{C}$  to  $3.2^{\circ}\text{C}$  above normal in 2012). These statistics are based on Environment Canada's 30-year normal for Kingsville. This summary illustrates December 2013 minimum temperatures and icewine hours. For this report, icewine hours are defined as instances when the average hourly temperature was between  $-8.0^{\circ}\text{C}$  and  $-12.0^{\circ}\text{C}$ , inclusive.



### Temperature Analysis



The monthly minimum temperatures for each site in December 2013 were:  $-15.6^{\circ}\text{C}$  (compared to  $-9.8^{\circ}\text{C}$  in 2012) at the Cedar Springs station;  $-17.2^{\circ}\text{C}$  (compared to  $-14.7^{\circ}\text{C}$  in 2012) at the Kingsville station and  $-16.2^{\circ}\text{C}$  (compared to  $-13.7^{\circ}\text{C}$  in 2012) at the Colchester station. These monthly minimum temperatures



occurred on the 12<sup>th</sup> or 16<sup>th</sup> of December. There were 12 days this month, compared to only 2 days in December 2012, when temperatures, at one or more stations, dipped into icewine temperature ranges.

<b>LENS: December 2013 Daily Minimums</b>			
<b>Date</b>	<b>Cedar Springs</b>	<b>Colchester</b>	<b>Kingsville</b>
1-Dec	0.1	-1.2	-0.1
2-Dec	-1.5	-4.9	-3.8
3-Dec	-1.5	-4.6	-4
4-Dec	3.6	3.8	5.1
5-Dec	0.4	0	0
6-Dec	-5.5	-5.2	-5.9
7-Dec	-9.2	-10.2	-10.6
8-Dec	-10.4	-10.9	-11.3
9-Dec	-6.7	-6.3	-6.6
10-Dec	-9.1	-9.4	-10.4
11-Dec	-12.1	-12.9	-13.3
12-Dec	-15.6	-16.2	-16.8
13-Dec	-7.7	-7.2	-7.4
14-Dec	-7.4	-7.2	-7.7
15-Dec	-11.5	-8.9	-9.3
16-Dec	-14.8	-13.7	-17.2
17-Dec	-8.6	-10.4	-10.9
18-Dec	-5.8	-6.6	-7.1
19-Dec	-0.2	-2.6	-2.4
20-Dec	0.5	0.9	0.6
21-Dec	0	-0.2	-0.4
22-Dec	0.2	0	-0.1
23-Dec	-3.1	-4.6	-5
24-Dec	-13.8	-11.5	-12.3
25-Dec	-14	-11.7	-12.3
26-Dec	-5.6	-4.4	-6.1
27-Dec	-3.3	-2.2	-2.8
28-Dec	0.7	0.7	0.9
29-Dec	-5.3	-4.6	-4.4
30-Dec	-10.3	-8.6	-8.6
31-Dec	-9.6	-9.1	-9.6

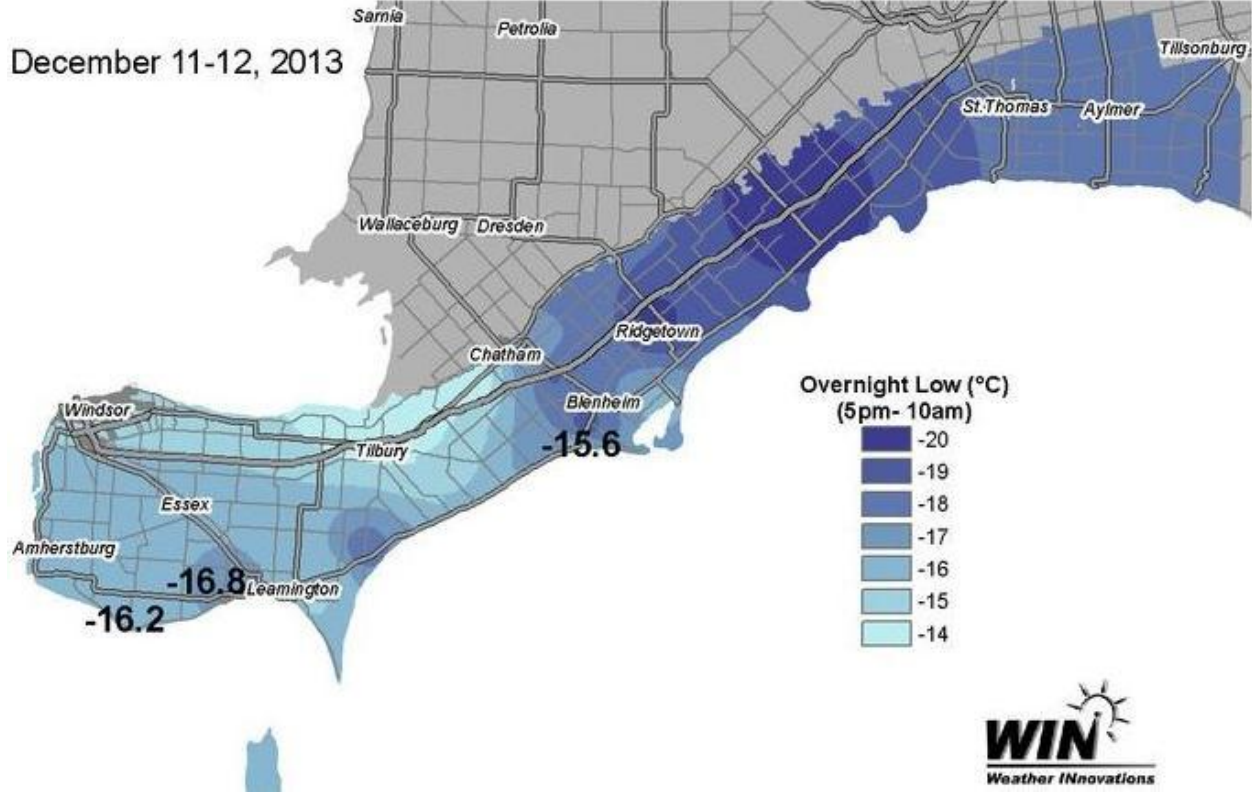
  

	Days with Icewine Temperatures
	Monthly Minimum



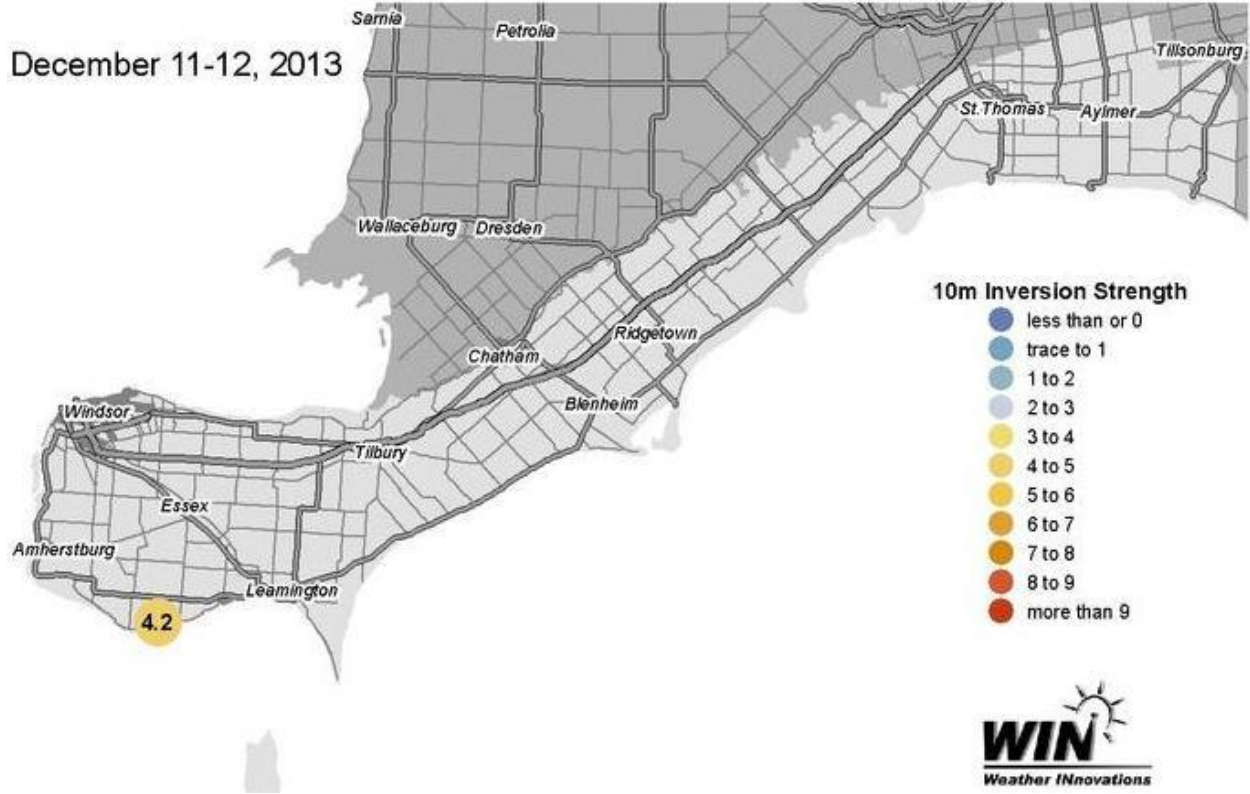
### Inversion Strength

The following 4 figures show the coldest December nights: December 11-12 and 16-17. Note that both of these nights had suitable inversion strengths for running wind machines.

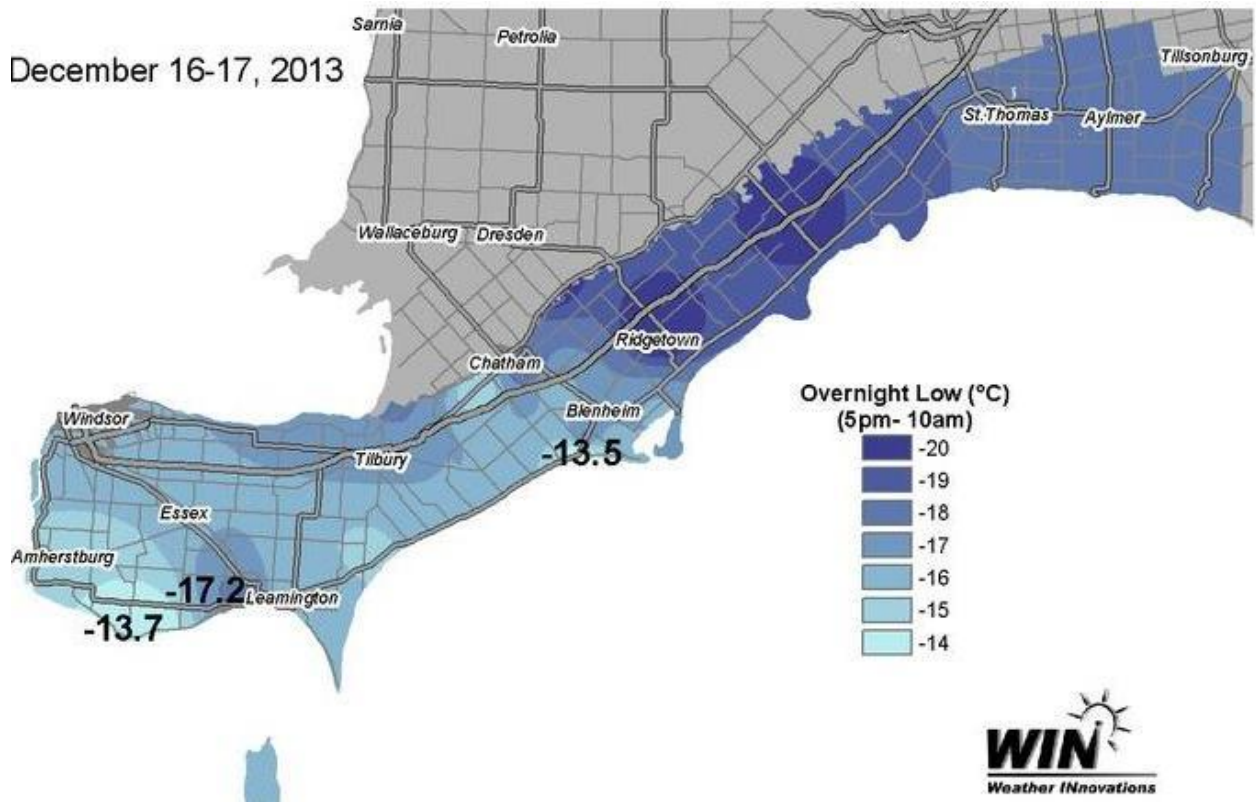


These **10m Inversion Strengths** were present during the 15-minute period at which the overnight low was reached.

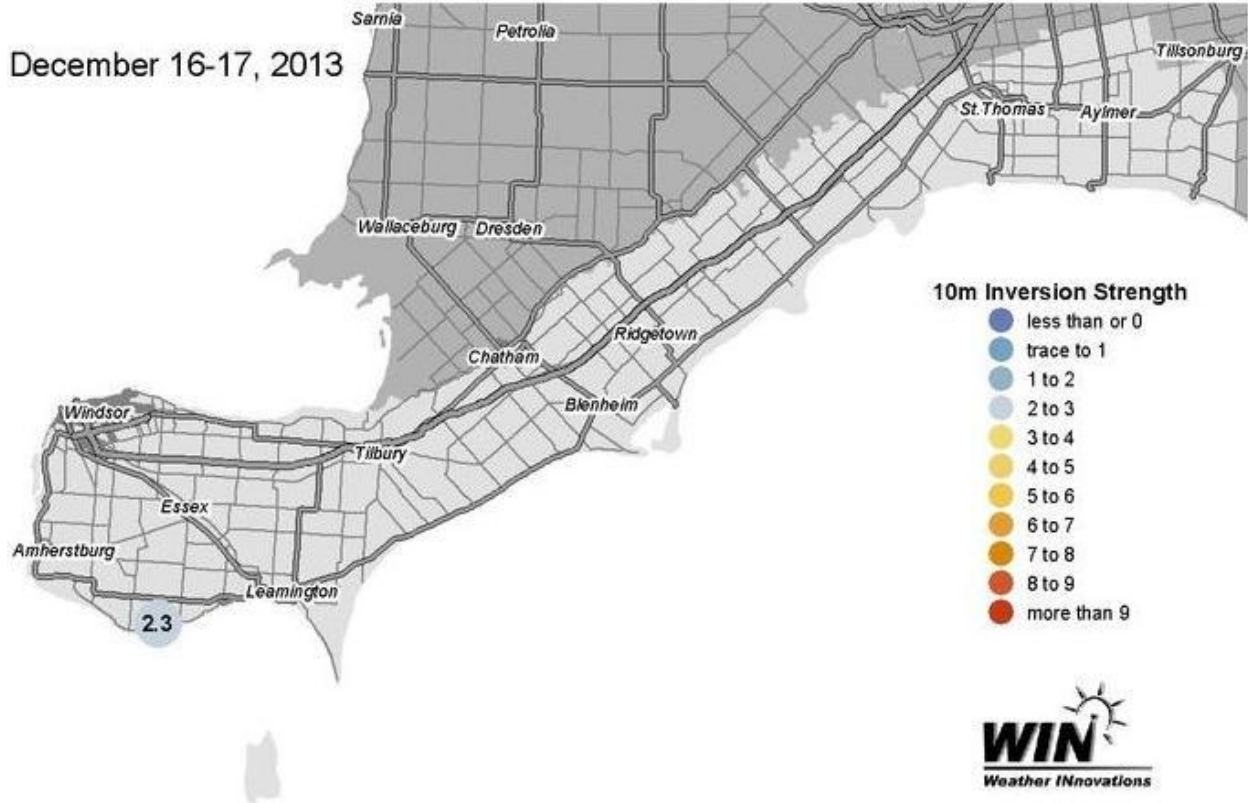
December 11-12, 2013



December 16-17, 2013

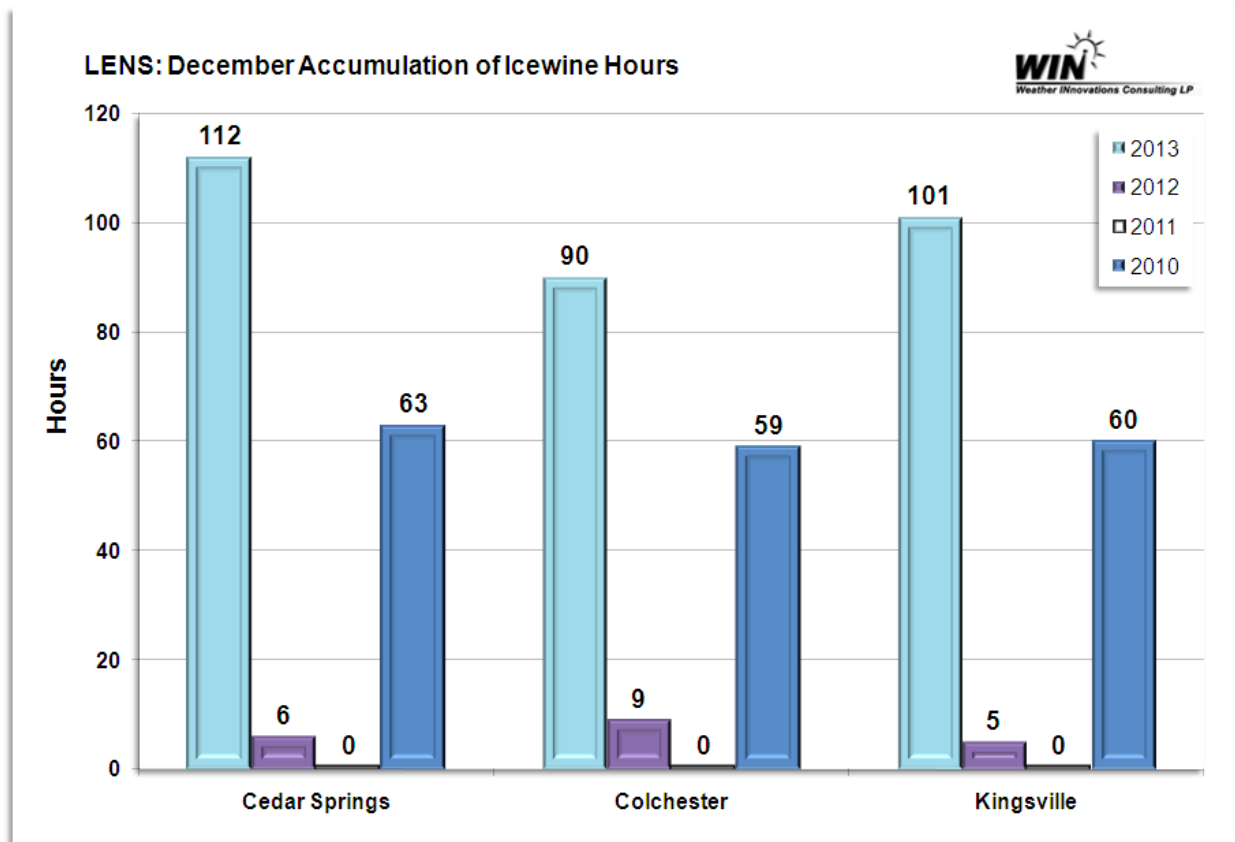


These **10m Inversion Strengths** were present during the 15-minute period at which the overnight low was reached.



### Icewine Hours Analysis

Icewine hours were abundant in both November and December, in contrast to previous years. The harvest began as early as November 23 for some locations. As seen in the following figure, all of the stations accumulated a greater number of icewine hours than in 2010, 2011 and 2012. The Lake Erie North Shore stations recorded between 90 and 112 icewine hours in December 2013, compared to between only 5 to 9 icewine hours in 2012! Due to the frequent icewine harvest opportunities, many completed the icewine harvest by the end of December.



### Summary

December 2013 temperatures were significantly below normal in the Lake Erie North Shore appellation; average temperatures for the month were 1.4°C to 1.6°C below the 30-year normals. The coldest temperature reached was -17.2°C on December 16<sup>th</sup> at the Kingsville station. November and December 2013 provided ample opportunities for harvesting icewine grapes at most locations, unlike the previous two years. These conditions led to an early completion of the icewine harvest for many this year.