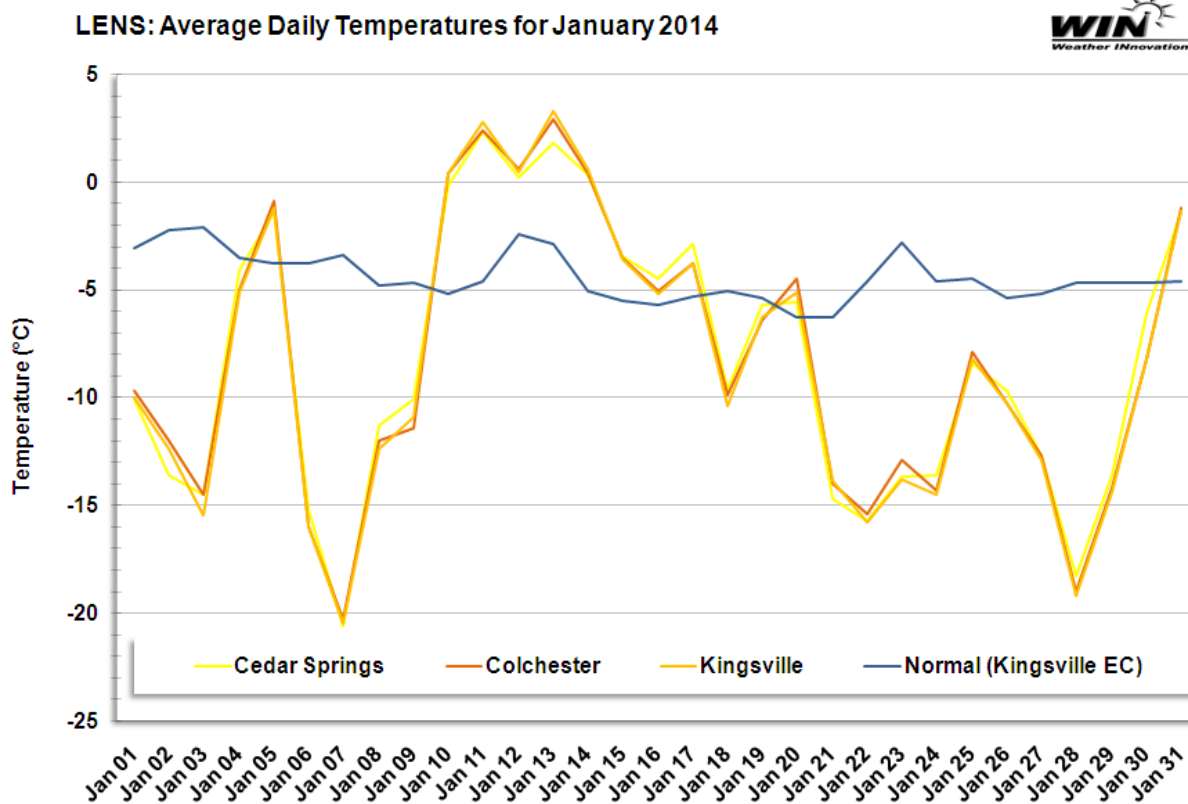


## Overview

The much colder-than-normal December temperatures experienced in Lake Erie North Shore continued into January 2014. This was in direct contrast to the previous two years, which experienced warmer-than-normal temperatures. Average monthly temperatures were  $-8.3^{\circ}\text{C}$  at Cedar Springs,  $-8.3^{\circ}\text{C}$  at Colchester and  $-8.5^{\circ}\text{C}$  at Kingsville (compared to  $-2.6^{\circ}\text{C}$ ,  $-2.3^{\circ}\text{C}$  and  $-2.5^{\circ}\text{C}$ , respectively, in 2013). Accordingly, the average monthly temperatures were  $3.8^{\circ}\text{C}$  –  $4.0^{\circ}\text{C}$  below normal for this appellation, compared to  $1.9^{\circ}\text{C}$  –  $2.2^{\circ}\text{C}$  above normal in 2013. These statistics are based on Environment Canada’s 30-year normal for Kingsville. This summary illustrates minimum January 2014 temperatures, as well as the icewine harvest opportunities that arose. For this report, icewine hours are defined as instances when the average hourly temperature ranged between  $-8.0^{\circ}\text{C}$  and  $-12.0^{\circ}\text{C}$ , inclusive.



## Temperature Analysis

The January 2014 monthly minimum temperature for each site was:  $-24.8^{\circ}\text{C}$  at the Cedar Springs station;  $-24.4^{\circ}\text{C}$  at the Colchester station and  $-24.2^{\circ}\text{C}$  at the Kingsville station (compared to  $-18.1^{\circ}\text{C}$ ,




-17.7°C and -18.2°C, respectively, in 2013). These monthly minimum temperatures occurred on the 6<sup>th</sup> and 9<sup>th</sup> of January. Note that there were a significantly greater-than-normal number of days when the minimum temperature was below -10°C and -20°C. There were 20 days, compared to 14 days in January 2013, when temperatures at one or more stations, dipped into icewine temperature ranges. These temperature characteristics are shown in the following figures.

<b>LENS: January 2014 Daily Minimums</b>			
<b>Date</b>	<b>Cedar Springs</b>	<b>Colchester</b>	<b>Kingsville</b>
1-Jan	-11.6	-11.1	-11.6
2-Jan	-15.5	-15.2	-15.4
3-Jan	-19	-19.4	-22.1
4-Jan	-9.5	-10.9	-11.1
5-Jan	-2.6	-3.6	-3.4
6-Jan	-24.8	-24.1	-24.2
7-Jan	-24.5	-23.5	-23.6
8-Jan	-15.9	-15.8	-16.5
9-Jan	-17.6	-24.4	-19.2
10-Jan	-3.5	-2.8	-3.1
11-Jan	0.5	0.5	0.6
12-Jan	-0.5	0.1	-0.1
13-Jan	-0.5	1.1	0.6
14-Jan	-1.9	-4.2	-3.3
15-Jan	-4.9	-5.7	-5.7
16-Jan	-6.1	-7.1	-7.2
17-Jan	-8.8	-9.4	-9.2
18-Jan	-13.2	-13.1	-13.7
19-Jan	-9.4	-12.4	-10
20-Jan	-10.5	-11.1	-11.3
21-Jan	-19.8	-20.7	-18.6
22-Jan	-21.1	-21.7	-21.5
23-Jan	-17.5	-19.9	-21.4
24-Jan	-17.1	-19.1	-19
25-Jan	-14.7	-14	-14.2
26-Jan	-16.6	-22.6	-16.7
27-Jan	-19.3	-20	-20.2
28-Jan	-21.6	-21.9	-22.2
29-Jan	-19.2	-18.8	-18.9
30-Jan	-8.7	-13	-12.4
31-Jan	-3.2	-3.1	-3.3

	Days with Icewine Temperatures
	Monthly Minimum





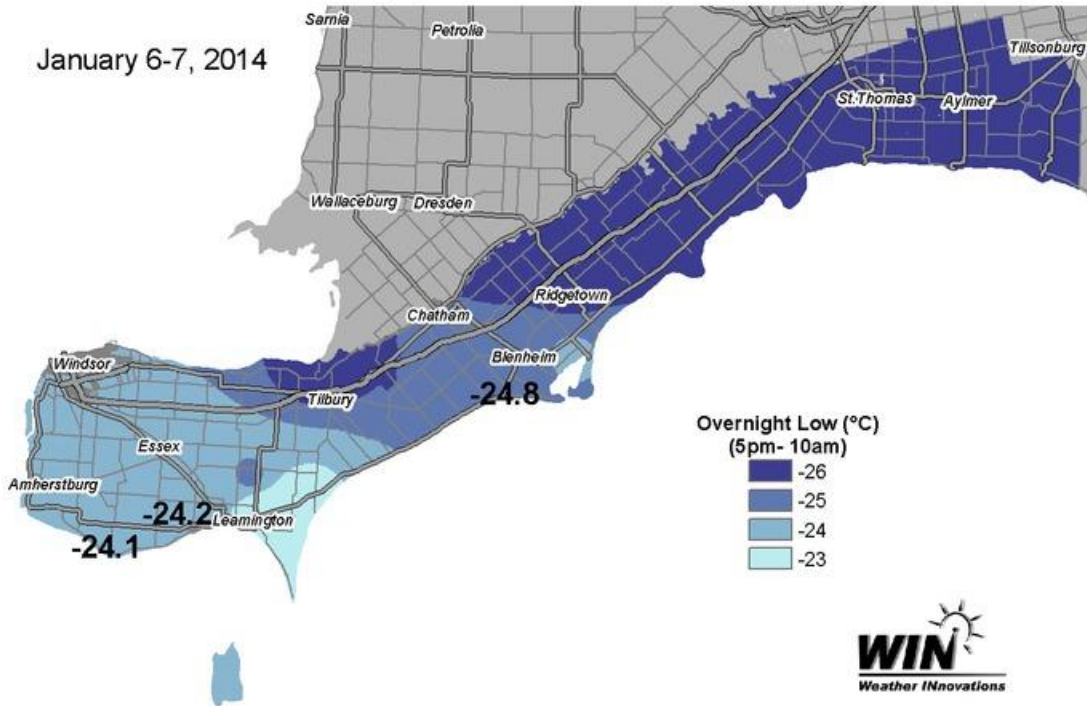
**LENS: January 2014 Daily Temperatures Compared to Normal**

	Cedar Springs	Colchester	Kingsville	Normal (Kingsville)
<b>Days with Maximum Temperature:</b>				
<= 0 °C	24	23	24	16.6
> 0 °C	7	8	7	14.5
> 10 °C	0	0	0	0.4
> 20 °C	0	0	0	0
> 30 °C	0	0	0	0
> 35 °C	0	0	0	0
<b>Days with Minimum Temperature:</b>				
> 0 °C	1	3	2	2
<= 2 °C	31	31	31	30.4
<= 0 °C	30	28	29	29
<= -2 °C	27	28	28	25
<= -10 °C	18	21	21	11.6
<= -20 °C	4	8	7	0.8
<= -30 °C	0	0	0	0

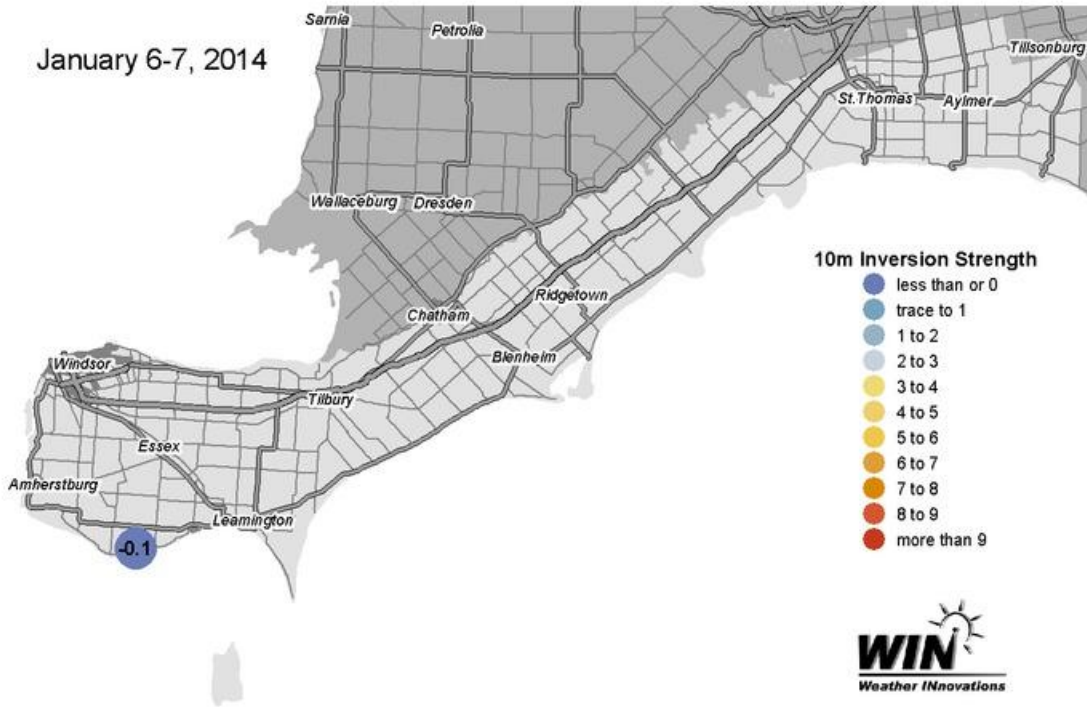
### Inversion Strength

The following 4 figures show the coldest January nights: January 6-7 and 8-9. Note that the January 6-7 event did not have an inversion, while the January 8-9 event did. The cold event on January 6-7 was the result of an extreme cold air mass entering the region with high wind speeds. These high wind speeds mix the 20-metre profile, preventing the formation of an inversion layer. Temperatures dipped below -24°C during these events, which was below the LTE50 for Chardonnay and Cab Franc at that time.

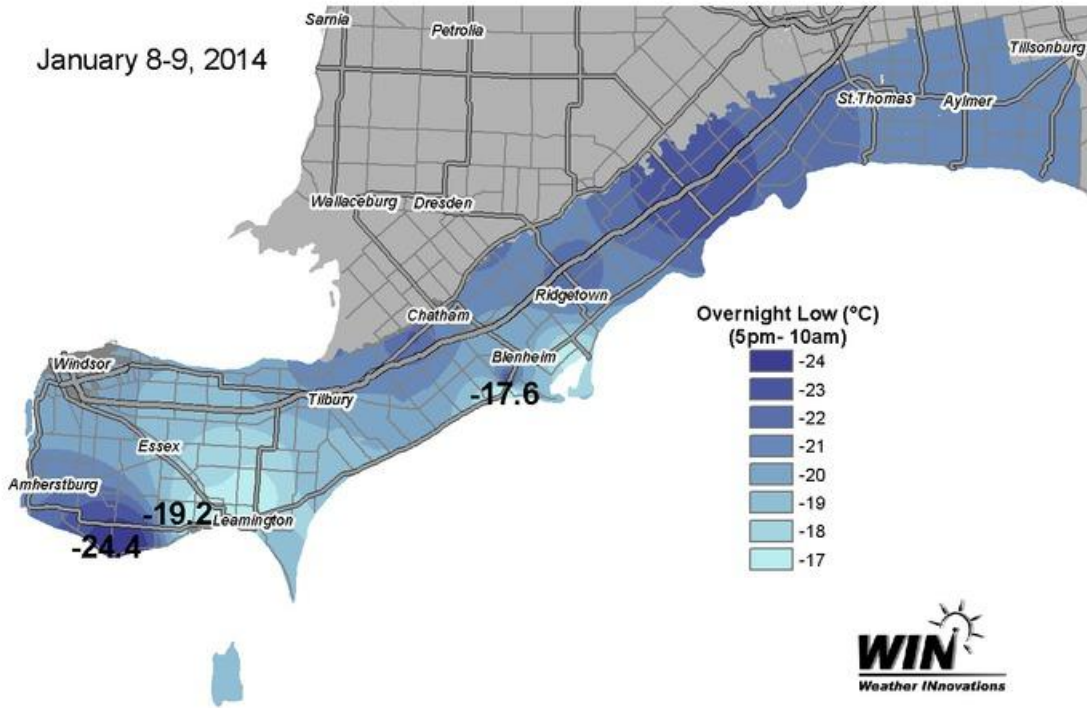
January 6-7, 2014



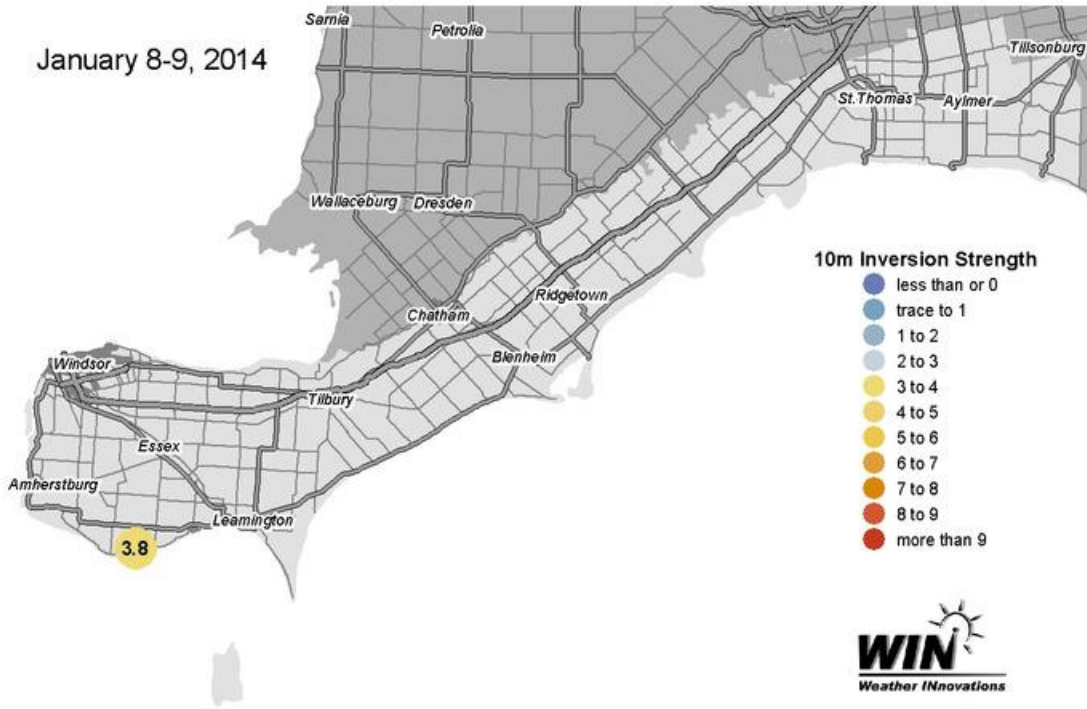
January 6-7, 2014



January 8-9, 2014

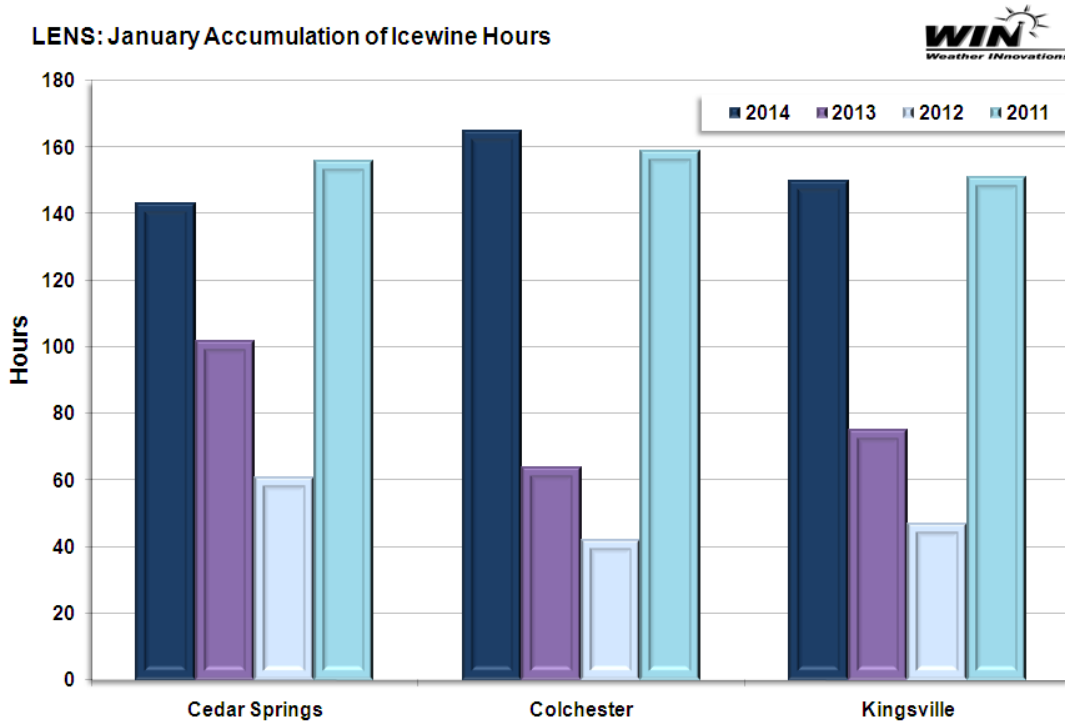


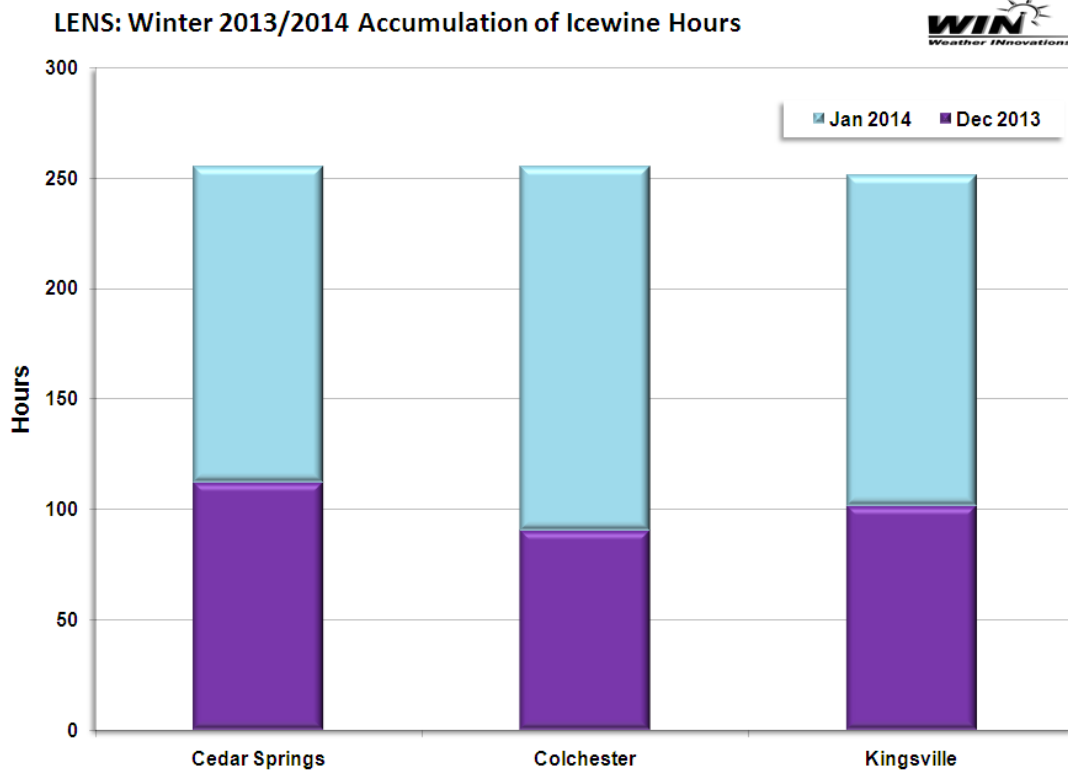
January 8-9, 2014



### Icewine Hours Analysis

Icewine hours continued to be in abundance into January. As seen in the following two figures, all of the stations accumulated a greater number of icewine hours than in 2013 and 2012 but similar to 2011. A total of 143 icewine hours were recorded at the Cedar Springs station (compared to 102 in 2013), while the Colchester station recorded 165 hours (compared to 64 hours in 2013) and the Kingsville station recorded 150 hours (compared to 75 hours in 2013). The 2013/2014 two month accumulations totaled between 251 and 255 hours. Due to the frequent icewine harvest opportunities this winter, many completed the icewine harvest already by the end of December. The following figures illustrate how the accumulation of icewine hours differed across the appellation.





### Summary

January 2014 temperatures were significantly below normal in the Lake Erie North Shore appellation; average temperatures for the month were 3.8°C to 4.0°C below the 30-year normal. The coldest events took place on the 6<sup>th</sup> and the 9<sup>th</sup>, with the coldest January temperature reaching -24.8°C at the Cedar Springs station. January 2014 provided a suitable number of opportunities for harvesting icewine grapes, following a significant number of hours accumulated in November and December 2013. These conditions led to an early completion of the icewine harvest for many this year.