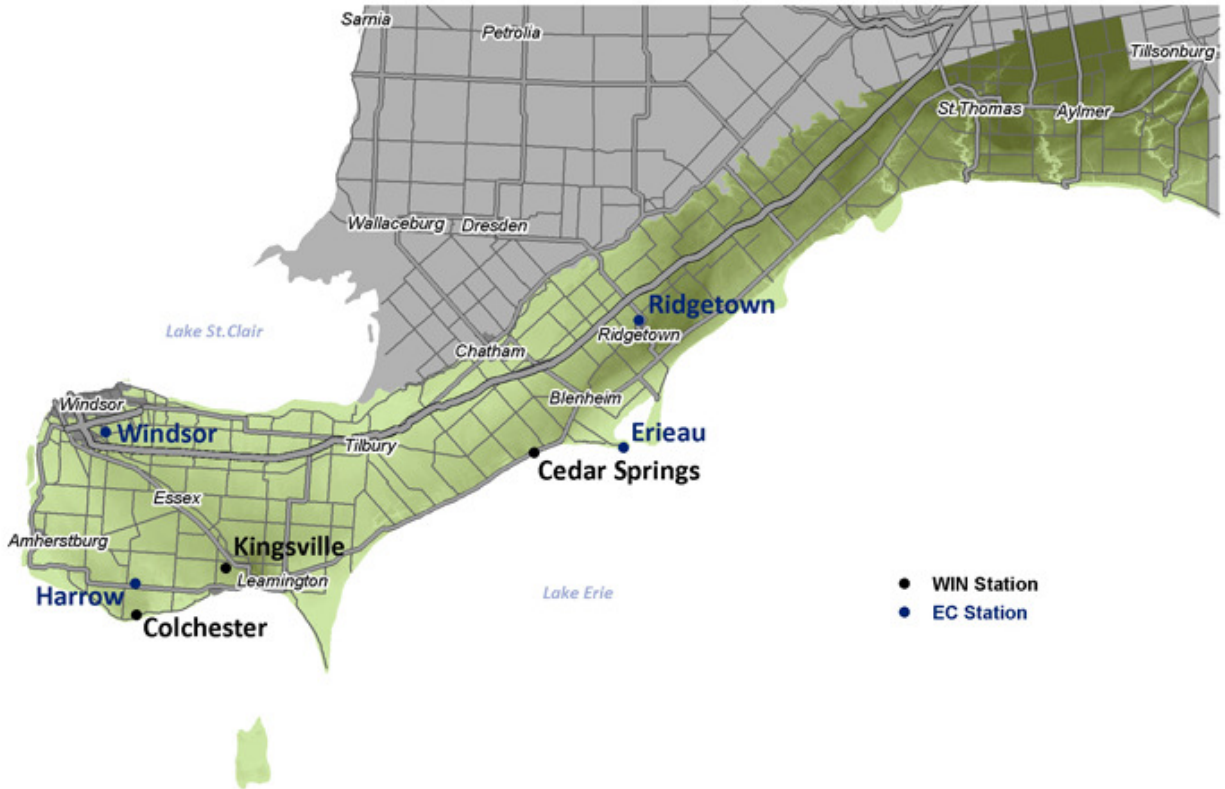




**Weather INnovations Incorporated**



# December 2010: Temperature & Icewine Hours Summary

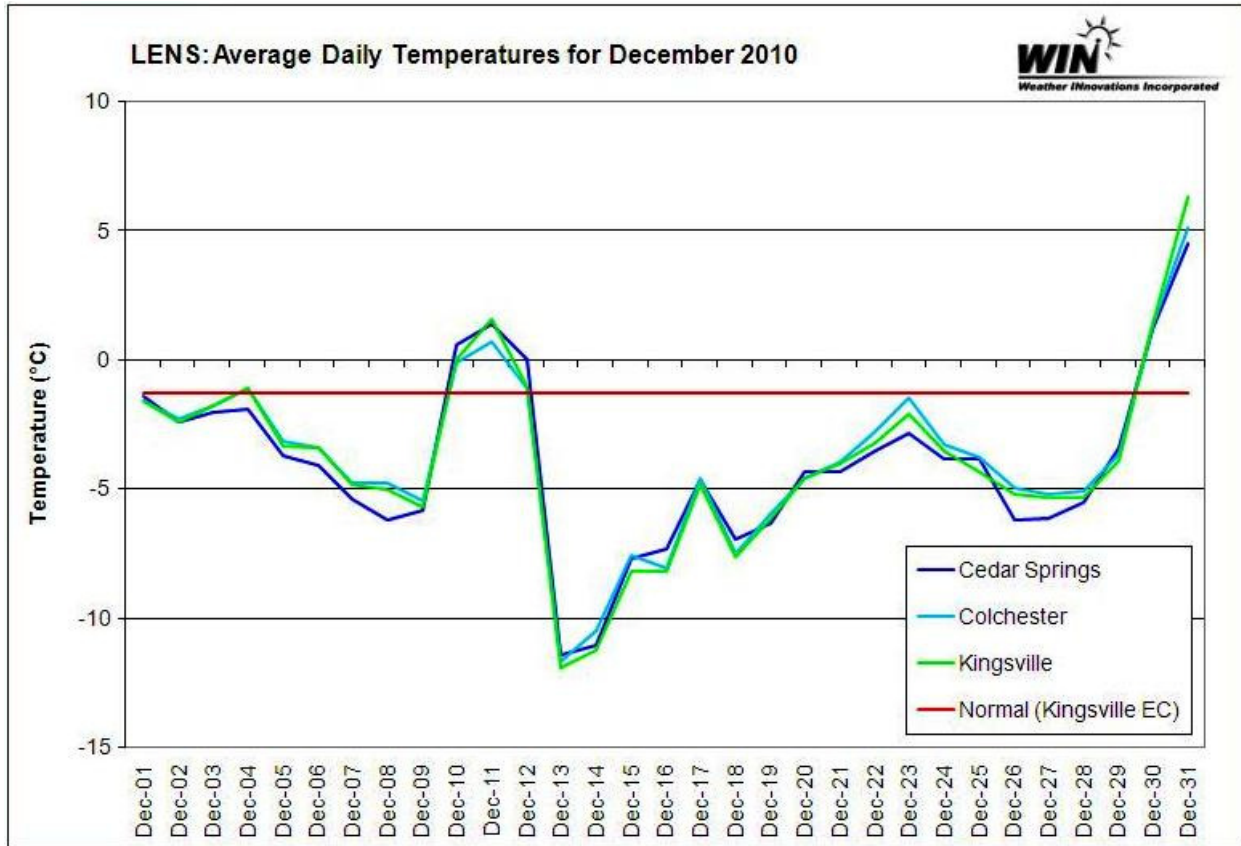
Lake Erie North Shore

WIN Staff  
January 13, 2011



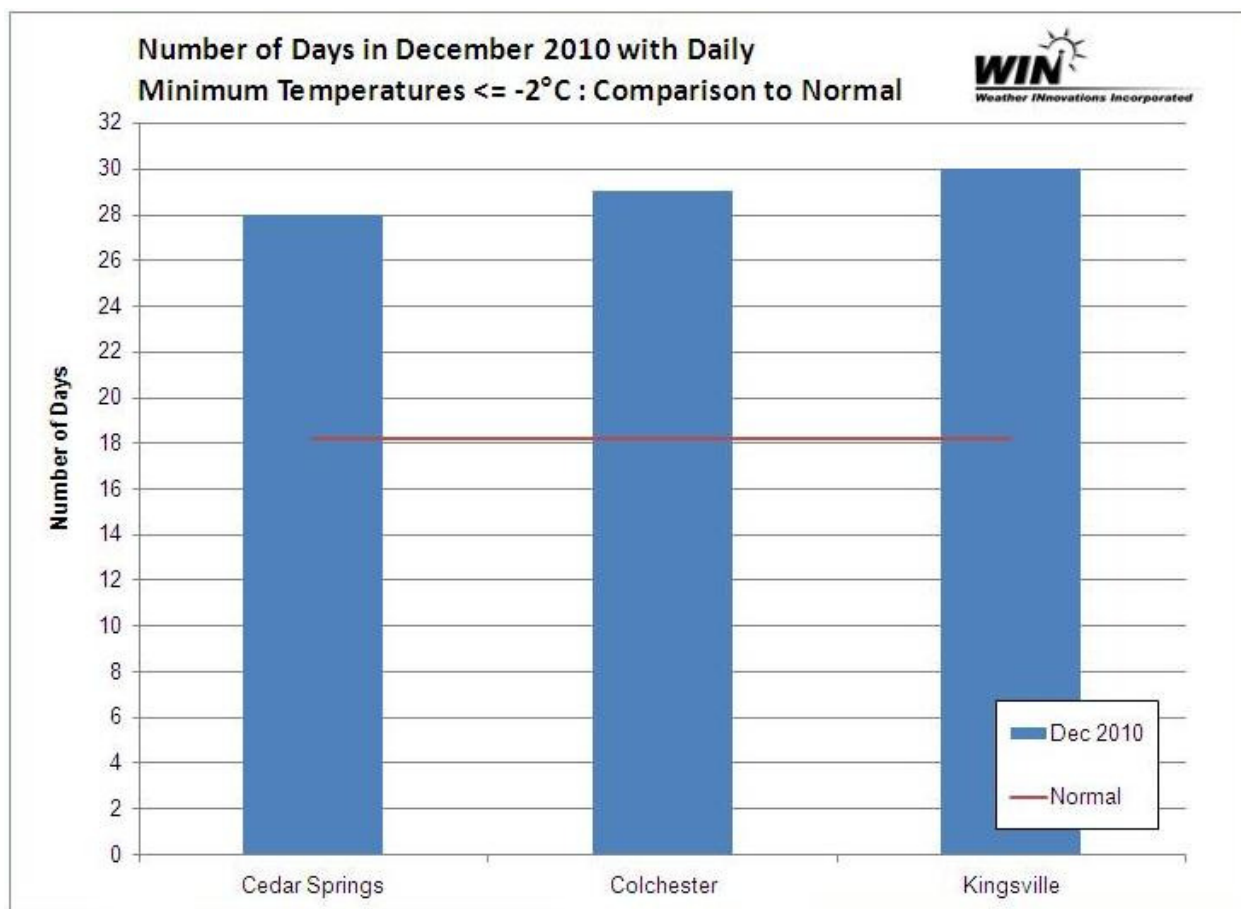
### OVERVIEW

A colder than normal December 2010 meant an early harvest for producers in the Lake Erie North Shore appellation, who chose to make icewine this year. Average monthly temperatures were  $-4.0^{\circ}\text{C}$  at Cedar Springs,  $-3.8^{\circ}\text{C}$  at Colchester and  $-3.9^{\circ}\text{C}$  at Kingsville. Accordingly, the average monthly temperatures were  $2.5^{\circ}\text{C}$  –  $2.7^{\circ}\text{C}$  below normal for this appellation, compared to only  $0.1^{\circ}\text{C}$  -  $0.2^{\circ}\text{C}$  below normal in December 2009. These statistics are based on Environment Canada’s 30-year normal for Kingsville. This summary illustrates minimum December 2010 temperatures, as well as the icewine harvest opportunities that arose. 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. Events are focused at opportunities encompassing a minimum 6 hour period.



## TEMPERATURE ANALYSIS


The monthly (December 2010) minimum temperatures for each site were: -14.4°C (compared to -10.9°C in 2009) at the Cedar Springs station; -14.4°C (compared to -10.7°C in 2009) at the Kingsville station and -17.4°C (compared to -10.6°C in 2009) at the Colchester station. These monthly minimum temperatures occurred on the 14<sup>th</sup> and 16<sup>th</sup> of December. The number of days that were below the long term daily minimum temperature for December further illustrates the colder than average December for the Lake Erie North Shore appellation. Kingsville experienced the most days when daily minimums were less than -2°C. This is 65% more often than the long term normal of 18.2 days for Kingsville. There were 12 days in December 2010, compared to 9 days in December 2009, when temperatures, at one or more stations, dipped into icewine temperature ranges. These details are shown in the following figures.



<b>LENS: December 2010 Daily Minimums</b>			
<b>Date</b>	<b>Cedar Springs</b>	<b>Colchester</b>	<b>Kingsville</b>
1-Dec	-3.7	-3.1	-3.2
2-Dec	-3.6	-3	-3.1
3-Dec	-3.8	-3.4	-3.1
4-Dec	-5.1	-2.8	-3.1
5-Dec	-5.6	-5.4	-5.4
6-Dec	-6.1	-5.3	-5.3
7-Dec	-6.7	-6	-6.5
8-Dec	-9.3	-7.3	-7.5
9-Dec	-11.3	-11.9	-12.8
10-Dec	-1.8	-2.4	-2.4
11-Dec	-5.3	-6.4	-4.7
12-Dec	-6.9	-8.7	-8.4
13-Dec	-13.1	-13.3	-13.8
14-Dec	-14.4	-13.9	-14.4
15-Dec	-11.7	-10.7	-12.5
16-Dec	-11.3	-17.4	-13.8
17-Dec	-7.4	-7.4	-7.2
18-Dec	-9.1	-9.4	-9.6
19-Dec	-7.6	-7.7	-7.6
20-Dec	-7.2	-8.2	-7.7
21-Dec	-7	-8.8	-7.5
22-Dec	-5.7	-6.8	-6.6
23-Dec	-4.1	-2.7	-3.2
24-Dec	-4.3	-4.1	-4.1
25-Dec	-6.5	-6.5	-7
26-Dec	-7.1	-6.2	-7
27-Dec	-8.6	-6.7	-6.4
28-Dec	-7.8	-8.1	-8.3
29-Dec	-6.9	-6.8	-7.7
30-Dec	-0.2	-1.6	-2
31-Dec	1.9	2.4	2.5

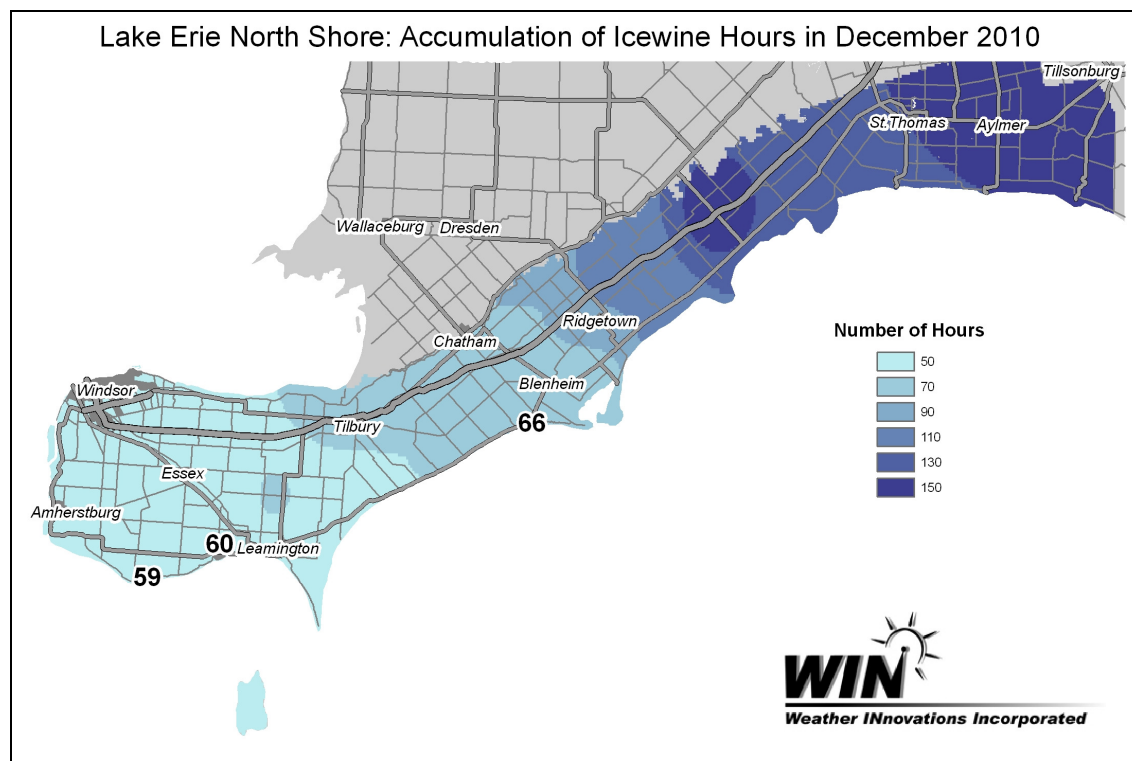
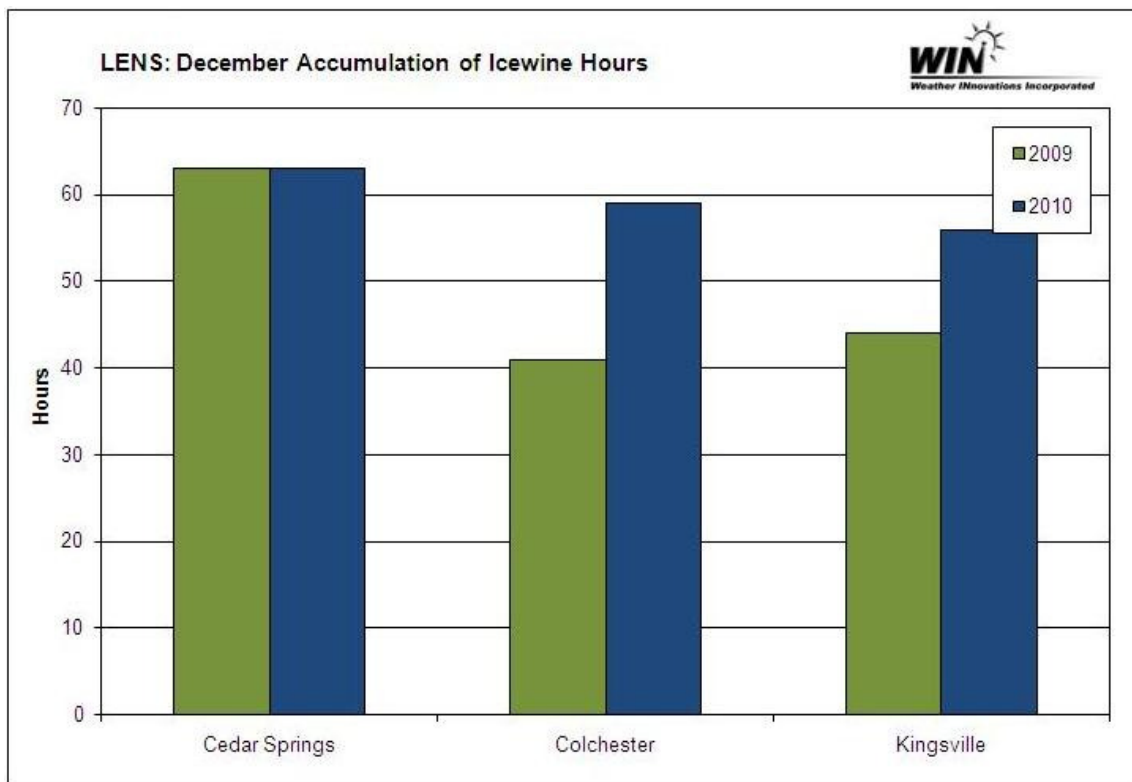
	Days with Icewine Temperatures
	Monthly Minimum

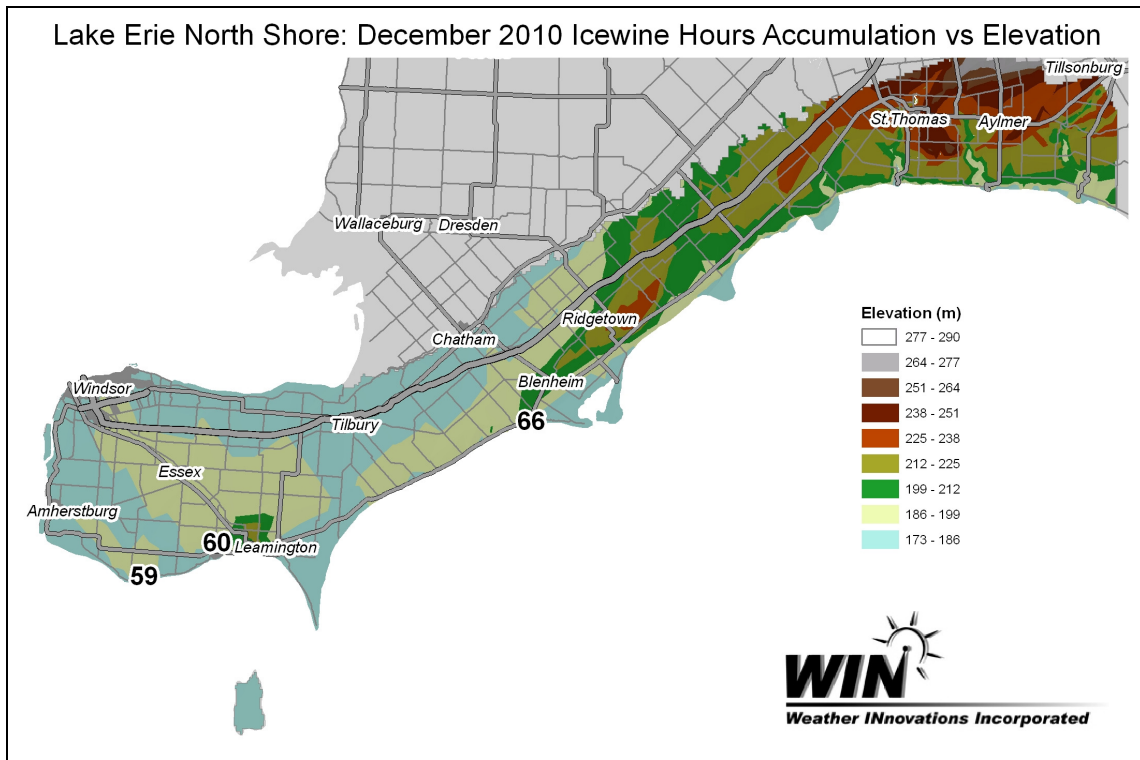
  


### ICEWINE HOURS ANALYSIS

The Cedar Springs location accumulated a greater number of icewine hours than Colchester and Kingsville in both December 2009 and December 2010, due to the colder temperatures experienced at this station. A total of 63 icewine hours were recorded at this station in December 2010, while the Kingsville station recorded 59 hours and the Colchester station recorded 56 hours. Thus, there were a high number of suitably cold hours at each location for harvesting icewine grapes in December 2010.

The maps shown below further illustrate the icewine harvesting hour variability across the appellation. Areas to the north of Ridgeway received a significantly higher number of icewine hours. This is influenced by the increase in elevation to the north of Ridgeway, as illustrated in the elevation map.






## SUMMARY

December 2010 temperatures were significantly below normal in the Lake Erie North Shore appellation; average temperatures for the month were 2.5°C – 2.7°C below the 30-year normal for Kingsville. There were 12 days when temperatures, at one or more stations, dipped into icewine temperature ranges. The coldest December event took place on the 10<sup>th</sup> of December, reaching -17.4°C at the Colchester station. This was much lower than the previous year when the coldest December event reached only -10.9°C at the Cedar Springs station. These conditions provided an early harvest for growers who chose to produce icewine this year.

APPENDIX – Potential Icewine Harvest Opportunities for Lake Erie North Shore

<b>LENS: Icewine Opportunities (6 Hour Minimum)</b>			
<b>Date &amp; Time</b>	<b>Cedar Springs</b>	<b>Colchester</b>	<b>Kingsville</b>
<b>Potential Icewine Opportunity</b>			
12/8/2010 21:00	-6.7	-4.3	-5.2
12/8/2010 22:00	-7.8	-4.7	-5
12/8/2010 23:00	-8.9	-4.8	-5.1
12/9/2010 0:00	-9.2	-5.5	-6.4
12/9/2010 1:00	-9.7	-6.7	-7.3
12/9/2010 2:00	-10.5	-8	-8.3
12/9/2010 3:00	-10.8	-9.5	-9.1
12/9/2010 4:00	-10.5	-10.5	-10.6
12/9/2010 5:00	-10.8	-9.7	-10.7
12/9/2010 6:00	-10.6	-10.4	-11.1
12/9/2010 7:00	-11.1	-11.8	-12
12/9/2010 8:00	-11	-11	-12.3
12/9/2010 9:00	-9.7	-9.1	-9.5
12/9/2010 10:00	-6.8	-5.5	-6.1
12/9/2010 11:00	-5.3	-3.8	-4
<b>Potential Icewine Opportunity</b>			
12/12/2010 22:00	-5.5	-7	-6.8
12/12/2010 23:00	-6.2	-7.8	-7.6
12/13/2010 0:00	-6.7	-8.6	-8.2
12/13/2010 1:00	-7.2	-9.3	-9
12/13/2010 2:00	-8.5	-9.9	-9.9
12/13/2010 3:00	-9.4	-10.5	-10.6
12/13/2010 4:00	-10	-11	-11.1
12/13/2010 5:00	-11	-11.5	-11.8
12/13/2010 6:00	-11.3	-11.3	-11.6
12/13/2010 7:00	-11.8	-11.2	-11.4
12/13/2010 8:00	-12.4	-11.7	-12
12/13/2010 9:00	-12.9	-12.4	-12.7
12/13/2010 10:00	-12.9	-12.5	-13
12/13/2010 11:00	-12.3	-12.3	-12.5
12/13/2010 12:00	-12.2	-11.6	-12
12/13/2010 13:00	-11.5	-11.5	-12.1
12/13/2010 14:00	-11	-11.4	-11.8
12/13/2010 15:00	-11.3	-11	-11.6
12/13/2010 16:00	-11.4	-11.3	-11.5
12/13/2010 17:00	-11.5	-11.9	-11.9
12/13/2010 18:00	-11.9	-12.4	-12.5



	Icewine Temperatures
	Below Icewine Temperatures

### LENS: Icewine Opportunities (6 Hour Minimum)

Date & Time	Cedar Springs	Colchester	Kingsville
12/13/2010 19:00	-12.3	-12.5	-12.7
12/13/2010 20:00	-12.3	-12.8	-13
12/13/2010 21:00	-12.2	-12.7	-12.9
12/13/2010 22:00	-12.3	-12.9	-12.8
12/13/2010 23:00	-12.4	-13	-13.1
12/14/2010 0:00	-12.4	-13.2	-13.6
12/14/2010 1:00	-12.6	-13.5	-13.8
12/14/2010 2:00	-12.8	-13.6	-13.8
12/14/2010 3:00	-13	-13.5	-14.2
12/14/2010 4:00	-13.1	-13.4	-13.9
12/14/2010 5:00	-13.3	-13.4	-13.8
12/14/2010 6:00	-13.7	-13.5	-13.9
12/14/2010 7:00	-14	-13.6	-14
12/14/2010 8:00	-14.3	-13.7	-14.4
12/14/2010 9:00	-13.9	-13.6	-13.9
12/14/2010 10:00	-12.7	-12.4	-12.8
12/14/2010 11:00	-11.6	-11.2	-11.5
12/14/2010 12:00	-10.5	-10.1	-10.5
12/14/2010 13:00	-9.7	-9	-9.8
12/14/2010 14:00	-9.6	-8.1	-8.8
12/14/2010 15:00	-9.4	-7.3	-7.9
12/14/2010 16:00	-9.3	-6.7	-7.3
12/14/2010 17:00	-9.9	-7	-7.6
12/14/2010 18:00	-12.3	-7.9	-8.9
12/14/2010 19:00	-9	-8.1	-9.3
12/14/2010 20:00	-7.1	-8.2	-9.2
12/14/2010 21:00	-7.4	-8.1	-9.1
12/14/2010 22:00	-7.9	-8.6	-10
12/14/2010 23:00	-8.4	-9.2	-10.5
12/15/2010 0:00	-8.7	-9.6	-10
12/15/2010 1:00	-9.4	-9.9	-10.3
12/15/2010 2:00	-9.7	-10.1	-10.7
12/15/2010 3:00	-10.2	-10.1	-10.8
12/15/2010 4:00	-10.7	-10.6	-10.8
12/15/2010 5:00	-10.5	-10.4	-10.6
12/15/2010 6:00	-11.4	-9.9	-11.6
12/15/2010 7:00	-11.1	-9.7	-11.8
12/15/2010 8:00	-11.5	-9.7	-11.2



	Icewine Temperatures
	Below Icewine Temperatures



### LENS: Icewine Opportunities (6 Hour Minimum)

Date & Time	Cedar Springs	Colchester	Kingsville
12/15/2010 9:00	-10.8	-9.5	-10.7
12/15/2010 10:00	-8.6	-8.1	-9.1
12/15/2010 11:00	-6.5	-6.7	-7.6
12/15/2010 12:00	-5.6	-5.4	-6
<b>Potential Icewine Opportunity</b>			
12/16/2010 2:00	-7.2	-7.6	-7.8
12/16/2010 3:00	-7.6	-7.7	-7.8
12/16/2010 4:00	-8.1	-8	-8
12/16/2010 5:00	-8.7	-9.1	-9
12/16/2010 6:00	-9.7	-11.8	-11.6
12/16/2010 7:00	-10.3	-14.8	-12
12/16/2010 8:00	-10.9	-16.1	-13.3
12/16/2010 9:00	-10.3	-16.9	-13.4
12/16/2010 10:00	-8.1	-12.1	-11.3
12/16/2010 11:00	-6.9	-7.4	-8
12/16/2010 12:00	-6.4	-6.3	-6.8
12/16/2010 13:00	-5.5	-5.2	-6.4
<b>Potential Icewine Opportunity</b>			
12/18/2010 0:00	-7.3	-7.1	-6.9
12/18/2010 1:00	-6.8	-7.7	-7.8
12/18/2010 2:00	-7.2	-8	-8.2
12/18/2010 3:00	-7.6	-8.2	-8.6
12/18/2010 4:00	-8	-8.5	-8.9
12/18/2010 5:00	-8	-8.9	-9.1
12/18/2010 6:00	-8	-9	-9.1
12/18/2010 7:00	-7.7	-9.3	-9.5
12/18/2010 8:00	-7.4	-9.1	-9.4
12/18/2010 9:00	-8.5	-8.5	-8.6
12/18/2010 10:00	-8.1	-8.2	-8.1
12/18/2010 11:00	-7	-8.3	-8.2
12/18/2010 12:00	-7	-7.9	-8.3
12/18/2010 13:00	-7.3	-7.4	-7.9
12/18/2010 14:00	-6.6	-6.6	-7



	Icewine Temperatures
	Below Icewine Temperatures