

BC HYDRO OPERATIONS - ICE OBSERVATION REPORT #24

Flight: Friday, March 13, 2009

Report: March 13, 2009

Report by Martin Jasek

The responsibility for ice observations on the Peace River passes to BC Hydro from Alberta Environment (AENV) when the ice front is upstream of Dunvegan. That responsibility was transferred on January 6, 2009. The numbering of reports is a continuation of the Alberta Environment reports.

Flight Observations

A flight observation was conducted out of the Fairview Airport on Friday, March 13, 2009. Air temperature at the Clayhurst Bridge was +6 °C and at Dunvegan it was +6 °C. Earlier that morning the minimum temperatures at the two locations reached -2 °C and -4 °C respectively. The weather was high overcast and windy.

Ice Observations

Location of the Ice Front: The ice front had receded 0.9 km downstream from the last observation on Mar 10 and was located at **km 205.3 on Mar 13, 2009 11:06 MDT**. This was approximately 91 km upstream of Dunvegan and about 41 km downstream of the Clayhurst Bridge near the BC/AB border. The average recession rate of the ice front between the last two observations was about 0.3 km/day. However, the ice front had been further upstream of this point since the previous observation on Mar 10. From shore ice observed upstream of the ice front, it was estimated that the ice front made to **km 199**. The ice had also consolidated down to km 212 since the last observation. The water level record at Dunvegan since the last observation showed three 0.2 m waves since the last flight indicating that the ice had consolidated 3 times since the last ice observation. Since the receding ice front was a result of the combination of thermal and mechanical processes, it was difficult to determine the time for the maximum upstream extent of the ice cover since Mar 10. However, from water temperature, air temperature data at upstream gauges and water level data at Dunvegan, it is estimated that the ice front was at this maximum upstream point on **Mar 11, 12:00 MDT** before it started receding. It may have in fact reached this point several times before it started receding.

Detailed Observations:

km 199	- most upstream extent of the ice cover since Mar 10
km 205.0	- upstream end of brash ice
km 205.3	- ice front at 11:06 MDT
km 205.3 to 206.7	- juxtaposed pans and shore ice pieces
km 206.7 to 209.5	- newly consolidated ice cover
km 209.5 to 210.1	- new open lead
km 210.1 to 212.0	- newly consolidated ice cover
km 212	- ice is mostly the same as the Mar 10 observational flight downstream of this point.



Looking upstream at the ice front at km 205.3 on Mar 13, 2009 11:06 MDT.



Looking downstream at the ice front at km 205.3 on Mar 13, 2009 11:06 MDT.



Brush Front at km 205.0 and Ice front at km 205.3 on Mar 13, 2009 11:06 MDT. Flow direction is left to right.



Looking downstream at the location (km 199) of the most upstream extent of the ice cover since the Feb 10 Flight.

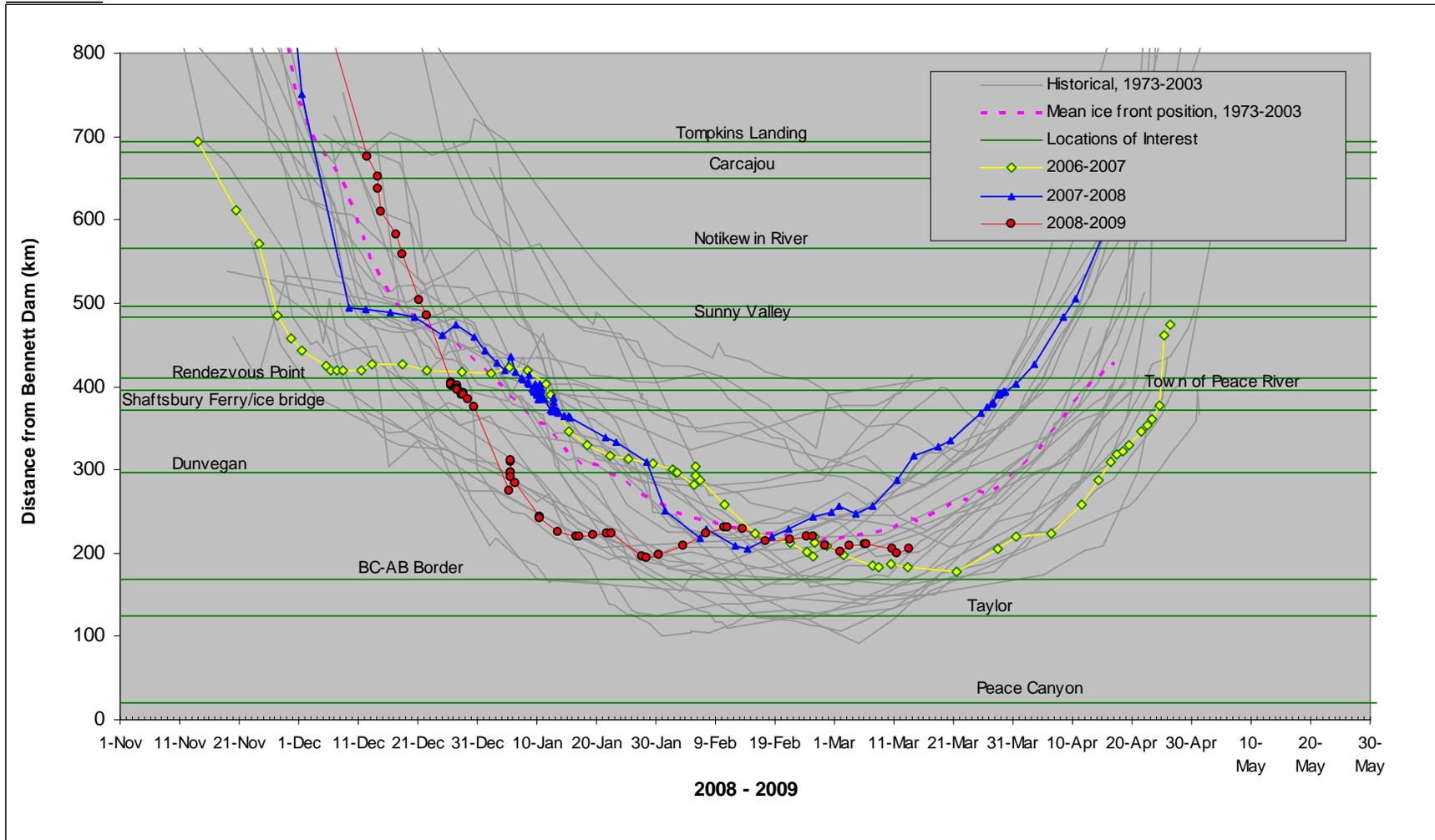


Consolidated ice (km 206.7 to 212.0) and open lead (km 209.5 to 210.1) that formed since the March 10 flight.

Environment Canada Temperatures (°C)			
		Fort St. John	Town of Peace River
Observed:		Max/Min	Max/Min
Sun	08-Mar-09	-15.6 / -25.1	-14.4 / -27.4
Mon	09-Mar-09	-22.3 / 31.2	-23.8 / -31.7
Tue	10-Mar-09	-16.8 / -30.2	-21.1 / -36.6
Wed	11-Mar-09	-4.1 / -23.7	-10.1 / -30.4
Thr	12-Mar-09	4.3 / -5.7	0.1 / -17
Forecast:			
Fri	13-Mar-09	5 / -12	5 / -1
Sat	14-Mar-09	-1 / -10	-2 / -11
Sun	15-Mar-09	-12 / -13	-5 / -6
Mon	16-Mar-09	-14 / -19	-10 / -13
Tue	17-Mar-09	-12 / -21	-10 / -16
Wed	18-Mar-09	-12 / -18	-9 / -16
Thr	19-Mar-09	-6 / -17	-5 / -16
Normal Max/Min		0 / -9	0 / -10

Continued next page.

Ice Front



The next ice observation flight is scheduled for Tuesday, March 17, 2009.