

1 Q. Reference: *2016 Standby Fuel Deferral Application*, Page 4, Lines 15-17.
2 *“Given current reservoir levels, in order for Hydro to achieve its 2015 Test Year*
3 *forecast hydraulic production, and achieve 80% of maximum storage at the end of*
4 *the spring runoff, Hydro would require approximately 28 precipitation events of*
5 *25mm of rain (or approximately 25 cm of snow) during the 20 week period from*
6 *February to June 2016”*

7 This evidence suggests a total of approximately 700mm of precipitation is required
8 to restore reservoir levels. Please provide the historical total precipitation for each
9 of the past 20 years over the period from February to June.

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12 A. Hydro’s hydrologic records are maintained primarily as inflows, in millions of cubic
13 metres, or as converted to energy in gigawatt hours. Hydro does have some
14 precipitation gauges in its system but none have been operating for more than five
15 years. Information regarding long term precipitation history is best obtained from
16 climate stations maintained by Environment Canada.

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18 In response to this question, Hydro offers a summary of data from two Environment
19 Canada stations:

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- Deer Lake, NL, Station Number 8401500

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- Bay d’Espoir Generating Station, Station Number 8400413

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23 The Bay d’Espoir station provides an indication of the precipitation over the Bay
24 d’Espoir system, though, it being on the coast, it likely overestimates the
25 precipitation further inland at Victoria and Meelpaeg Reservoirs.

1 The precipitation data at Deer Lake is provided to give an indication of the
 2 precipitation over the Hinds Lake and Cat Arm basins. After 2005, Bay d'Espoir
 3 station data were not consistently captured; likewise, data for Deer Lake were not
 4 consistently captured after 2003.
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Table 1 Five Month Total Precipitation, February to June, mm

Station Name	Bay d'Espoir Generating Station	Deer Lake
Station Number	8400413	8401500
1980	584	327
1981	688	444
1982	507	503
1983	625	467
1984	700	535
1985	635	381
1986	594	371
1987	496	295
1988	767	447
1989	457	267
1990	659	374
1991	559	383
1992	786	357
1993	777	489
1994	681	532
1995	436	468
1996	580	420
1997	345	402
1998	624	418
1999	738	378
2000	502	452
2001	525	278
2002	602	213
2003	438	137
2004	242	--
2005	419	--
Number of years examined:	26	24
Average	576	389
Years > 700 mm	4	0