October 3rd, 2014

Mr. Loic Didillon
Howse Minerals Limited (HML)
c/o Tata Steel Minerals Canada Ltd.
1000 Sherbrooke Street, Suite 1120
Montréal, Quebec H3A 3G4

Re: 2013-2014 HYDROLOGICAL CAMPAIGN FOR THE HOWSE PROPERTY
Field Report for Howse Minerals Limited
Our file: PR185-18-13
Your order: HPP-LD-20140813-1

Dear Mr. Didillon,

The Howse Property Project site is located in the Province of Newfoundland and Labrador, approximately 24 km northwest of Schefferville, Quebec. Between August 2013 and September 2014, Groupe Hémisphères installed and took stream gauge measurements at four instantaneous hydrometric stations in the Howse Property Project for Howse Minerals Limited (HML), with the goal of recording the instantaneous flow of all the watercourses flowing within the project footprint. The team also visited and took stream gauge measurements at an existing hydrometric station downstream from one of these watercourses. This field report presents the methodology used to install the hydrometric stations and take the stream gauging measurements, as well as the data gathered during fieldwork.

Please feel free to contact our office if you have any comments or questions regarding this document.

1 INSTALLATION OF STATIONS AND MEASUREMENTS

1.1 Field Program Chronology

Field logistics for the different field campaigns were jointly managed by Groupe Hémisphères and HML.

The first fieldwork was conducted by Hugo Robitaille and Corey Einish, a Naskapi assistant from Kawawachikamach, from August 13 to August 31, 2013. The work included setting up the stations, measuring the flow, visiting the watershed and validating the local hydrography. A total of three hydrometric stations were installed.

A lot of rain fell in the region during the month of August, more than twice the monthly average. During the site visits, the mean daily temperature diminished gradually from +14 °C to +5 °C. Light rain came down every day during the fieldwork, reaching a maximum of 42.9 mm according to the Schefferville airport weather station. The 1971-2000 climate normals and daily records from this government station can be found in Appendix I.

A second field campaign was conducted by Loic Didillon and Jean-François Dion on April 10, 2014. This time, the goals were to define the extent of watercourse dryness and to take stream gauging measurements at lower water levels, if possible. This survey was conducted in snowshoes over a thick layer of snow.

A third field campaign was conducted by Simon Barrette and Grégory Tison on July 4 and July 5, 2014.

The last field campaign was conducted by Daniel Néron and Jean-François Dion, on September 11, 2014, in order to take stream gauging measurements and add an additional station midcourse in Burnetta Creek, to better understand its contribution to the system.

1.2 Methodology

The surface water flow investigation involved the installation of temporary stations designed for the instantaneous measurement of the watercourses during one or more site visits. The main parameters measured at the hydrometric stations were water elevation and velocity.

The location of all hydrometric stations is shown in Figure 1, and detailed information for each station is presented in Table 1.

1.2.1 Hydrometric Station Installation

Previous studies have demonstrated that streams in the region are characterized by high flow variability, for which standard methods of measurement, such as flumes and weirs, are unsuitable, especially in remote areas with limited mobility and access to construction materials. It was therefore decided that a natural cross-section of the stream would be used for flow monitoring.

Each hydrometric station was installed in the most uniform, straight section of the stream that could be found, where a detailed cross-sectional area could be measured. Whenever possible, a uniform bed with laminar flow, in which there was mean velocity of at least 0.1 m/s, was favoured. Accessibility was also taken into account. The relationship between depth (from the free surface) and velocity in the stream section was established through stream gauging under various flow conditions, using two velocity meter models: the Swoffer 2100 and the GlobalWater FP111. Velocity readings were taken by slowly moving the propeller up and down at least three times over the height of the water column. The flow rate was obtained by multiplying the wetted area by the average velocity of the stream. This procedure, although time consuming, produces very accurate results (Patra, 2010).

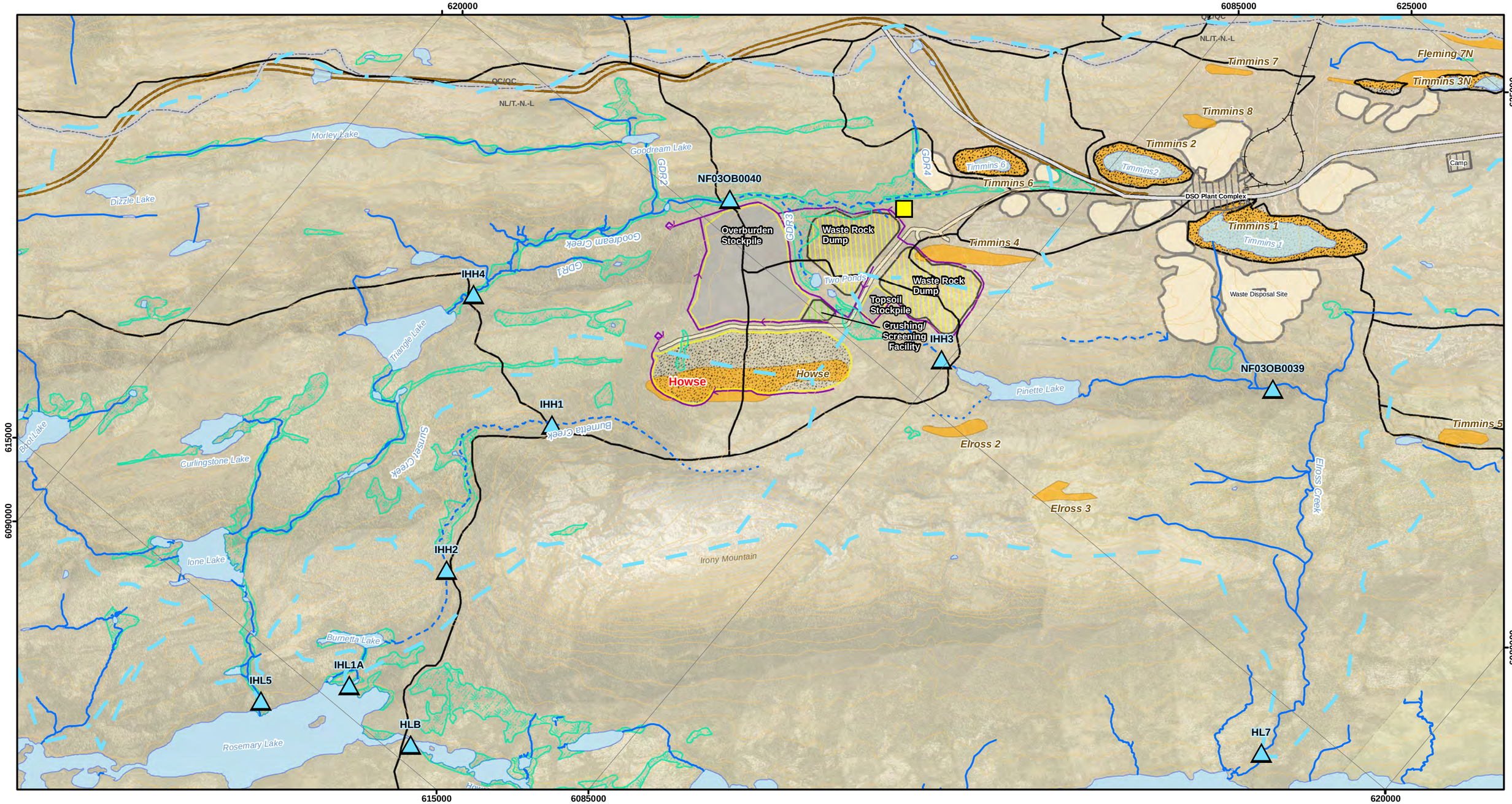
A graduated rope was attached from one bank of the stream to the other to ensure the repeatability of measurements at the same location and to allow for accurate data comparisons within a given time frame, such as data at high and low flow periods. Column interval varies with the width of the watercourse. A minimum of eight columns is preferable for optimal measurements over the wet cross-section.

1.2.2 Flow Estimation

The flow rate was calculated using the relationship between the average water velocity and the wetted area, according to the following general formula:

$$Q = VA$$

Where Q = water flow rate through a cross-section perpendicular to the watercourse (m^3/s)
V = water average velocity through a cross-section perpendicular to the watercourse (m/s)
A = the wetted area of the cross-section perpendicular to the watercourse (m^2)



LEGEND

Surveys

- Hydrometric Station
- Timmins 4 Sedimentation Pond-3

Basemap

- Permanent Watercourse
- Intermittent Watercourse
- Storm Runoff
- Disappearing Stream
- Artesian Spring
- Water Body
- Wetland
- Watershed Boundary
- Contour Line (50 pi)
- Provincial Border
- Existing Road
- Main Access Road

Infrastructure And Mining Components

- Proposed Howse Pit
- Proposed Topsoil/Overburden Stockpile
- Proposed Crushing/Screening Facility
- Proposed Waste Rock Dump
- Proposed Sedimentation Pond
- Mine Haul Road
- Proposed Ditch
- Potential Road To DSO Area 4
- Proposed Railroad
- Existing Dump
- Existing Pit
- Deposit
- Elross Lake Area Iron Ore Mine (ELAIOM) Plant Infrastructure footprint

*Hydronyms are oriented along the direction of water flow

FILE, VERSION, DATE, AUTHOR:
GH-0476b-01, 2014-09-22, E.D., J.T.

0 500 1 000 2 000
SCALE: 1:30 000 Meters UTM 19N NAD 83

SOURCES:

Basemap
Government of Canada, NTDB, 1:50,000, 1979
Government of NL and Government of Quebec, Boundary used for claims.
SLE, AMEC and GHI (October 2012). LabMag and Kémag Iron Ore Projects 2012 Mine Site Aquatic Program Field Report.
Groupe Hémisphères. Hydrology, Wetland, 2013.

Infrastructure and Mining Components
New Millennium Capital Corp., Mining sites and roads
TATA Steel Minerals Canada Limited/
MET-CHEM, Howse Deposit Design for General Layout, 2013

Surveys
SNC-Lavalin (May 2013) Taconite Project LabMag Mine Site 2012 Hydrology Field Report. Final Report done in collaboration with Groupe Hémisphères and AMEC for New Millennium Iron/TATA Steel, 25 pages and 5 appendices.

Hydrometric Stations

Howse Minerals Limited

GroupeHemispheres

Figure 1

For stations using a culvert, the flow rate is calculated using the California pipe method, based on the following formula (in U.S. units):

$$Q = 8.69\ (1- a/d)^{1.88}\ d^{2.48} \quad (1)$$

Where Q = flow rate in cubic feet per second
d = pipe diameter in feet
a = distance from the top of the inside surface of the pipe to the liquid surface, in feet

Flow rate was then converted from feet to metres.

1.2.3 Extent of Watercourse Drying

Low water levels occur at the end of the winter season in Labrador (Rollings 1997), meaning in late March or early April at this latitude. In order to define the extent of watercourse drying, the team travelled the watercourses during this period and regularly verified the presence of running water with a pole and an axe. The exact location of these observations was determined using a GPS apparatus.

1.3 Station Location and Summary

Table 1 shows the location and metadata of the three recently-installed stations and the one reclaimed from the nearby Taconite project (in progress). The new stations stand at an elevation of between 555 and 637 m a.s.l., while the old one, IHL1A, sits at 520 m a.s.l.

Table 1. Station Location and Metadata

STATION NO.	WATERCOURSE/ SECTION NAME	COORDINATE (NAD83)	STARTING DATE	DRAINAGE AREA (KM²)	COMMENT
IHH1	Burnetta Creek Upstream	54.91743 N, -67.16064 W	2013-08-30	2.716	
IHH2	Burnetta Creek Midcourse	54.91797 N, -67.17927 W	2014-09-07	4.645	
IHH3	Lake Pinette Inflow	54.89796 N, -67.12312 W	2013-08-31	0.660	Stream crossing 93 cm Ø culvert
IHH4	End of Goodream Creek before Triangle Lake	54.92791 N, -67.15383 W	2013-08-31	13.653	
IHL1A	Burnetta Lake Outflow	54.91717 N, -67.20282 W	2011-09-13	5.812	Nearby station from LabMag Project

2 RESULTS

Raw data from the flow measurements, including upstream and downstream photographs, is found in Appendix II. Instant flow estimates for each station are found in Table 2. Some visits showed that Burnetta Creek (IHH1 and IHH2) can dry up from midcourse to upstream in both winter and summer. It should be noted that very low flow rates were recorded at the IHH3 station, even though highly saturated soil conditions were generally expected because of abundant precipitation.

Table 2. Morphology and Instant Flow Rates

STATION NO.	OBSERVATION DATE	WETTED WIDTH (CM)	MEAN DEPTH (CM)	WETTED AREA (M²)	FLOW RATE (M³/S)
IHH1	2013-08-30	225	9.7	0.218	0.011
IHH1	2013-04-10	dry	dry	dry	dry
IHH1	2014-07-04	215	8.4	0.210	0.005
IHH1	2014-09-11	200	7.3	0.145	0.001
IHH2	2013-08-29*	dry	dry	dry	dry
IHH2	2014-09-11	97	5.6	0.048	0.001
IHH3	2013-08-31	32	2.1	0.007	0.003
IHH3	2014-07-04	6	0.2	<0.001	<0.001
IHH3	2014-09-07	dry	dry	dry	dry
IHH4	2013-08-31	361	23.6	0.851	0.703
IHH4	2014-07-04	360	15.7	0.565	0.397
IHL1A	2011-09-13	1033	12.2	1.259	0.257
IHL1A	2012-06-16	1053	11.2	1.177	0.285
IHL1A	2013-08-31	1150	15.8	1.820	0.855
IHL1A	2014-07-05	1096	16.5	1.812	0.663

*Observation by the aquatic fauna team

Surface runoff is affected by many factors, the most relevant being climate, physiography, land cover and geology. These factors exhibit local coherence, as does runoff. However, in a gauging network, the principal cause of flow rate (Q) variability is the varying size of the gauged drainage area (Da) (Church, 1997). Specific runoff (Q/Da) is a method for examining true local hydrology by discounting the effect of drainage basin area. Specific runoff for each station is found in Table 3. Compared to a mean annual regionally-specific runoff of 20.5 L/s/km² (NML and PFWA, 2009), it can be said that the first three stations show very low flow rates, while the IHH4 and IHL1A downstream stations experience higher flow rates.

Table 3. Specific Runoff

STATION NO.	WATERCOURSE/ SECTION NAME	AVERAGE FLOW RATE (M³/S)	SPECIFIC RUNOFF (L/S/KM²)
IHH1	Burnetta Creek Upstream	0.006	2.08
IHH2	Burnetta Creek Midcourse	0.001*	0.22*
IHH3	Lake Pinette Inflow	0.001	1.77
IHH4	End of Goodream Creek before Triangle Lake	0.550	40.29
IHL1A	Burnetta Lake Outflow	0.515	88.64

*Based on the only measurement available

3 CONCLUSION

The installation of four instantaneous stations allowed the size and flow rate of the watercourses within the Howse Project footprint to be assessed. The watercourse flow rate monitored for one of these stations, Lake Pinette Inflow (IHH3), was quite low. When taking the drainage area into account, the same can be said about upstream stations IHH1 and IHH2. Specific runoff analysis reveals a high flow rate for downstream stations compared to hydrometric reference stations. The measured flow rates represent instantaneous values for the summer period only.

Prepared by:

<Original signed by>

Daniel Néron, M.Sc.
Geographer Hydrologist

Revised by:

<Original signed by>

Christian Corbeil (permit No. 12621)
Member of
TECHNOLOGUE PROFESSIONNEL

4 REFERENCES

Bibliography

Church, M. (1997) *Regionalised Hydrological Estimates for British Columbia: First Approximation of Scale Effects*. Report for Resources Inventory and Data Management Branch, British Columbia Ministry of Environment, Lands and Parks, Victoria, BC, 47 p.

Patra, K.C. (2010) *Hydrology and Water Resources Engineering*. National Institute of Technology of India, Alpha Science International Ltd Ed., 2nd Edition, Oxford, 591 p.

NML and PFWA [New Millennium Capital Corp. and Paul F. Wilkinson & Associates] (2009). *Elross Lake Area Iron Ore Mine - Environmental Impact Statement Submitted to Government of Newfoundland and Labrador.* Montréal, QC, 554 p. and 11 appendices

Rollings, K.P. (1997) *The Hydrology of Labrador*. Government of Newfoundland and Labrador, Department of Environment and Labour, Water Resources Management Division, 105 p. and 19 appendices

Appendix I

Meteorological Data from Schefferville Airport

and

Detailed Data from the Hydrometric Stations

Government of Canada / Gouvernement du Canada

Canada

Climate

Home > Data

Daily Data

Daily Data Report for August 2013

Metadata including Station Name, Province, Latitude, Longitude, Elevation, Climate ID, WMO ID, TC ID

SCHEFFERVILLE A QUEBEC					
Latitude:	54°48'00.000" N	Longitude:	66°48'00.000" W	Elevation:	517.20 m
Climate ID:	7117827	WMO ID:	71828	TC ID:	GKL

Daily Data Report for August 2013

	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
DAY											
01 †	23.7	8.4	16.1	1.9	0.0	M	M	M			<31
02 †	23.1	12.3	17.7	0.3	0.0	M	M	M			<31
03 †	17.1	12.9	15.0	3.0	0.0	M	M	M			<31
04 †	14.4	10.5	12.5	5.5	0.0	M	M	29.0			<31
05 †	15.5	9.9	12.7	5.3	0.0	M	M	M			<31
06 †	15.2	10.5	12.9	5.1	0.0	M	M	M			<31
07 †	19.5	11.4	15.5	2.5	0.0	M	M	0.0			<31
08 †	23.3	10.9	17.1	0.9	0.0	M	M	2.9		18	44
09 †	17.6	11.6	14.6	3.4	0.0	M	M	M			<31
10 †	14.1	9.5	11.8	6.2	0.0	M	M	48.3		34	50
11 †	10.1	7.2	8.7	9.3	0.0	M	M	12.4		33	52
12 †	9.1	4.8	7.0	11.0	0.0	M	M	13.9		34	50
13 †	15.0	6.4	10.7	7.3	0.0	M	M	M			<31
14 †	16.7E	5.8E	11.3E	6.7E	0.0E	M	M	M			<31
15 †	16.8	6.6	11.7	6.3	0.0	M	M	0.0		1	39
16 †	19.5	6.8	13.2	4.8	0.0	M	M	0.4			<31
17											
18 †	19.8	8.8	14.3	3.7	0.0	M	M	4.4		32	39
19 †	11.3	1.6	6.5	11.5	0.0	M	M	0.8		35	41
20 †	15.2	0.4	7.8	10.2	0.0	M	M	5.4		18	41
21 †	21.1	14.3	17.7	0.3	0.0	M	M	19.0		25	37
22 †	14.6	7.0	10.8	7.2	0.0	M	M	42.9		31	48
23 †	11.5	1.9	6.7	11.3	0.0	M	M	0.4		31	46
24 †	13.1	2.0	7.6	10.4	0.0	M	M	0.0		25	52
25 †	19.8	5.6	12.7	5.3	0.0	M	M	0.3		24	39
26 †	16.1	10.8	13.5	4.5	0.0	M	M	3.1			<31
27 †	12.0	2.0	7.0	11.0	0.0	M	M	4.2		34	37
28 †	M	-1.1E	M	M	M	M	M	M			<31
29 †	17.5	2.3	9.9	8.1	0.0	M	M	4.6		22	56
30 †	13.0	2.3	7.7	10.3	0.0	M	M	M			<31
31 †	7.7	-0.4	3.7	14.3	0.0	M	M	0.0		32E	43E
Sum				187.6*	0.0*	0.0*	0.0*	192.0*			
Avg	16.0*	6.8*	11.5*								
Xtrm	23.7*	-1.1*								22*	56*

Government of Canada / Gouvernement du Canada

Canada

Climate

Home > Data

Daily Data Report for September 2013

SCHEFFERVILLE A QUEBEC					
Latitude:	54°48'19.000" N	Longitude:	66°48'19.000" W	Elevation:	520.90 m
Climate ID:	7117823	WMO ID:	71921	TC ID:	YKL

	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
DAY											
01 ‡	9.5	-0.6	4.5	13.5	0.0	M	M	0.0		32	32
02 ‡	14.2	-0.4	6.9	11.1	0.0	M	M	0.0		14	33
03 ‡	12.2	4.0	8.1	9.9	0.0	M	M	3.6		16	43
04 ‡	14.4	1.7	8.1	9.9	0.0	M	M	4.8		25	63
05 ‡	6.9	0.7	3.8	14.2	0.0	M	M	2.5		23	69
06 ‡	10.7	0.4	5.6	12.4	0.0	M	M	3.3		26	48
07 ‡	7.5	1.0	4.3	13.7	0.0	M	M	0.3			<31
08 ‡	6.0	-1.7	2.2	15.8	0.0	M	M	0.0		33	32
09 ‡	8.0	0.2	4.1	13.9	0.0	M	M	5.3		29	61
10 ‡	3.8	-2.1	0.9	17.1	0.0	M	M	0.0		32	46
11 ‡	11.8	-3.5	4.2	13.8	0.0	M	M	0.0		19	43
12 ‡	8.1	3.1	5.6	12.4	0.0	M	M	10.1		36	33
13 ‡	3.1	-2.0	0.6	17.4	0.0	M	M	0.0		1	43
14 ‡	8.7	-4.2	2.3	15.7	0.0	M	M	4.0		17	39
15 ‡	8.8	0.5	4.7	13.3	0.0	M	M	2.9		28	57
16 ‡	2.5	-1.9	0.3	17.7	0.0	M	M	0.3		29	59
17 ‡	9.4	-2.1	3.7	14.3	0.0	M	M	15.8		26	69
18 ‡	4.4	-2.0	1.2	16.8	0.0	M	M	4.3		34	50
19 ‡	0.3	-2.0	-0.9	18.9	0.0	M	M	0.0		30	33
20 ‡	4.6	-2.5	1.1	16.9	0.0	M	M	6.3		15	46
21 ‡	13.2	2.4	7.8	10.2	0.0	M	M	19.0		16	46
22 ‡	8.7	1.1	4.9	13.1	0.0	M	M	0.3		34	43
23 ‡	5.9	-1.4	2.3	15.7	0.0	M	M	0.0		1	44
24 ‡	8.7	-3.4	2.7	15.3	0.0	M	M	0.0			<31
25 ‡	12.4	2.1	7.3	10.7	0.0	M	M	0.0			<31
26 ‡	17.4	1.6	9.5	8.5	0.0	M	M	0.0			<31
27 ‡	19.7	1.7	10.7	7.3	0.0	M	M	0.0		26	32
28 ‡	22.2	7.1	14.7	3.3	0.0	M	M	0.0		26	63
29 ‡	22.1	13.6	17.9	0.1	0.0	M	M	0.0		23	57
30 ‡	13.7	7.6	10.7	7.3	0.0	M	M	0.0		28	46
Sum				380.2	0.0	0.0^	0.0^	82.8			
Avg	10.0	0.6	5.3								
Xtrm	22.2	-4.2								26	69S

Summary, average and extreme values are based on the data above.

Government of Canada / Gouvernement du Canada

Canada

Climate

Home > Data

Daily Data Report for July 2014

SCHEFFERVILLE A
QUEBEC

Latitude:	54°48'19.000" N	**Longitude:**	66°48'19.000" W	**Elevation:**	520.90 m
Climate ID:	7117823	**WMO ID:**	71921	**TC ID:**	YKL

	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
DAY											
01 ‡	25.2	15.0	20.1	0.0	2.1	M	M	4.1		30	46
02 ‡	22.9	15.4	19.2	0.0	1.2	M	M	4.6		22	43
03 ‡	15.6	6.7	11.2	6.8	0.0	M	M	1.1		24	65
04 ‡	12.5	5.6	9.1	8.9	0.0	M	M	0.8		29	56
05 ‡	18.1	5.5	11.8	6.2	0.0	M	M	0.0			<31
06 ‡	18.4	7.9	13.2	4.8	0.0	M	M	0.8		33	44
07 ‡	15.0	3.4	9.2	8.8	0.0	M	M	0.5		31	52
08 ‡	18.1	3.1	10.6	7.4	0.0	M	M	0.0			<31
09 ‡	13.8	7.4	10.6	7.4	0.0	M	M	12.1		10	44
10 ‡	14.7	8.6	11.7	6.3	0.0	M	M	4.1		29	67
11 ‡	13.2	8.1	10.7	7.3	0.0	M	M	1.3		32	43
12 ‡	19.4	8.0	13.7	4.3	0.0	M	M	1.0		27	32
13 ‡	18.8	11.6	15.2	2.8	0.0	M	M	0.3		11	33
14 ‡	11.5	9.3	10.4	7.6	0.0	M	M	13.6		11	44
15 ‡	17.2	10.1	13.7	4.3	0.0	M	M	3.3			<31
16 ‡	20.2	11.4	15.8	2.2	0.0	M	M	5.1		36	32
17 ‡	14.5	6.2	10.4	7.6	0.0	M	M	0.3			<31
18 ‡	20.5	4.8	12.7	5.3	0.0	M	M	0.0		30	35
19 ‡	25.7	11.4	18.6	0.0	0.6	M	M	M		26	33
20 ‡	27.9	13.2	20.6	0.0	2.6	M	M	0.0		25	37
21 ‡	27.8	12.1	20.0	0.0	2.0	M	M	0.0		26	44
22 ‡	21.8	12.9	17.4	0.6	0.0	M	M	5.3		27	57
23 ‡	13.5	7.7	10.6	7.4	0.0	M	M	13.3		33	44
24 ‡	14.9	5.9	10.4	7.6	0.0	M	M	0.0		27	43
25 ‡	16.1	9.6	12.9	5.1	0.0	M	M	0.6		26	43
26 ‡	14.8	8.2	11.5	6.5	0.0	M	M	12.5		14	37
27 ‡	17.3	8.2	12.8	5.2	0.0	M	M	2.4		16	32
28 ‡	16.6	8.9	12.8	5.2	0.0	M	M	13.6		24	33
29 ‡	18.4	8.4	13.4	4.6	0.0	M	M	28.1		25	39
30 ‡	19.6	8.0	13.8	4.2	0.0	M	M	0.0		28	56
31 ‡	22.1	7.3	14.7	3.3	0.0	M	M	0.0			<31
Sum				147.7	8.5	0.0^	0.0^	128.8^			
Avg	18.3	8.7	13.5								
Xtrm	27.9	3.1								29	67

Summary, average and extreme values are based on the data above.

Government of Canada / Gouvernement du Canada

Canada

Climate

Home > Data

Daily Data Report for September 2014

SCHEFFERVILLE A QUEBEC					
Latitude:	54°48'19.000" N	Longitude:	66°48'19.000" W	Elevation:	520.90 m
Climate ID:	7117823	WMO ID:	71921	TC ID:	YKL

	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
DAY											
01 ‡	16.9	6.3	11.6	6.4	0.0	M	M	0.0		22	33
02 ‡	18.7	8.0	13.4	4.6	0.0	M	M	2.3		21	57
03 ‡	13.8	6.5	10.2	7.8	0.0	M	M	0.0		28	56
04 ‡	13.9	5.6	9.8	8.2	0.0	M	M	0.3		30	57
05 ‡	12.4	4.8	8.6	9.4	0.0	M	M	10.6		11	56
06 ‡	12.7	2.3	7.5	10.5	0.0	M	M	1.9		26	56
07 ‡	10.5	3.8	7.2	10.8	0.0	M	M	M		34	37
08 ‡	11.0	3.6	7.3	10.7	0.0	M	M	1.0		27	37
09 ‡	M	3.6E	M	M	M	M	M	M		23	70
10 ‡	7.7	1.5	4.6	13.4	0.0	M	M	M		30	46
11 ‡	5.5	-0.3	2.6	15.4	0.0	M	M	15.3		2	48
12 ‡	5.5	-0.1	2.7	15.3	0.0	M	M	10.3		34	54
13 ‡	M	M	M	M	M	M	M	M		25	39
14 ‡	8.2	3.6	5.9	12.1	0.0	M	M	0.0			< 31
15 ‡	9.9	1.3	5.6	12.4	0.0	M	M	0.0		25	33
16 ‡	10.5	0.6	5.6	12.4	0.0	M	M	0.5		25	39
17 ‡	4.8	-2.0	1.4	16.6	0.0	M	M	M		28	67
18 ‡	4.8	-2.9	1.0	17.0	0.0	M	M	0.0		28	44
19 ‡	5.1	-1.0	2.1	15.9	0.0	M	M	0.0		30	46
20 ‡	7.6	0.3	4.0	14.0	0.0	M	M	5.1		23	44
21 ‡	7.2	2.2	4.7	13.3	0.0	M	M	0.3			< 31
22 ‡	2.6	-0.9	0.9	17.1	0.0	M	M	2.1		35	54
23 ‡	0.3	-2.7	-1.2	19.2	0.0	M	M	3.1		32	52
24 ‡	12.3	-1.2	5.6	12.4	0.0	M	M	18.5		28	52
25 ‡	12.5	1.7	7.1	10.9	0.0	M	M	12.8		31	61
26 ‡	8.6	1.6	5.1	12.9	0.0	M	M	9.8		34	46
27 ‡	M	1.1E	M	M	M	M	M	M		33	41
28 ‡	3.4	-3.5	-0.1	18.1	0.0	M	M	0.8		33	52
29 ‡	-0.6	-4.1	-2.4	20.4	0.0	M	M	0.0		33	52
30 ‡	3.1	-5.0	-1.0	19.0	0.0	M	M	0.3		28	61
Sum				356.2^	0.0^	0.0^	0.0^	95.0^			
Avg	8.5^	1.2^	4.8^								
Xtrm	18.7^	-5.0^								23	70

Summary, average and extreme values are based on the data above.

Notes on Data Quality.

Legend

- [empty] = No data available
- M = Missing
- E = Estimated
- A = Accumulated
- C = Precipitation occurred, amount uncertain
- L = Precipitation may or may not have occurred
- F = Accumulated and estimated
- N = Temperature missing but known to be > 0
- Y = Temperature missing but known to be < 0
- S = More than one occurrence
- T = Trace
- * = The value displayed is based on incomplete data
- † = Data for this day has undergone only preliminary quality checking
- ‡ = Partner data that is not subject to review by the National Climate Archives

Date modified: 2013-11-12

Government of Canada Gouvernement du Canada

Canada

Climate

Home > Data > Climate Normals & Averages

Canadian Climate Normals 1971-2000 Station Data

The minimum number of years used to calculate these Normals is indicated by a code for each element. A "+" beside an extreme date indicates that this date is the first occurrence of the extreme value. Values and dates in bold indicate all-time extremes for the location.

Data used in the calculation of these Normals may be subject to further quality assurance checks. This may result in minor changes to some values presented here.

Metadata including Station Name, Province, Latitude, Longitude, Elevation, Climate ID, WMO ID, TC ID

SCHEFFERVILLE A QUEBEC					
Latitude:	54°48'00.000" N	Longitude:	66°49'00.000" W	Elevation:	521.80 m
Climate ID:	7117825	WMO ID:	71828	TC ID:	YKL

1971 to 2000 Canadian Climate Normals station data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Temperature:														
Daily Average (°C)	-24.1	-22.6	-16	-7.3	1.2	8.5	12.4	11.2	5.4	-1.7	-9.8	-20.6	-5.3	C
Standard Deviation	3	3.5	3.3	2.6	1.8	1.8	1	1.2	1.5	1.7	2.3	3	1.2	C
Daily Maximum (°C)	-19	-16.9	-9.8	-1.5	6	13.7	17.2	15.8	8.9	1.3	-6.1	-15.9	-0.5	C
Daily Minimum (°C)	-29.2	-28.1	-22.2	-13.1	-3.6	3.3	7.6	6.5	1.7	-4.6	-13.5	-25.2	-10	C
Extreme Maximum (°C)	5.1	5.1	9.4	13.1	28.3	**34.3**	31.7	28.7	26.7	20.6	9.8	5		
Extreme Minimum (°C)	-48.3	**-50.6**	-45	-36.1	-23.3	-7.8	0	-3.3	-9.4	-19.4	-35.6	-47.2		
Precipitation:														
Rainfall (mm)	0.2	0.2	1.6	8.4	27.7	65.4	106.8	82.8	85.3	24.4	4.5	0.9	408.1	C
Snowfall (cm)	57.4	42.6	56.6	54.8	22.9	8	0.5	1.7	12.7	57.2	70.7	55.4	440.5	C
Precipitation (mm)	53.2	38.7	53.3	61.4	52.1	73.7	107.2	84.5	98.4	80.5	69.4	50.7	822.9	C
Average Snow Depth (cm)	62	70	71	69	18	0	0	0	0	7	26	49	31	C
Median Snow Depth (cm)	60	70	70	71	12	0	0	0	0	5	26	48	30	C
Snow Depth at Month-end (cm)	71	71	76	49	2	0	0	0	1	12	41	53	31	C
Extreme Daily Rainfall (mm)	24.6	2.8	10.6	23.4	29.5	51.3	**54.4**	48.5	45.2	34.3	34.8	5.8		
Extreme Daily Snowfall (cm)	30.6	29	**36.4**	30.2	33.2	23.7	9	23.9	28.4	35.6	29	25.4		
Extreme Daily Precipitation (mm)	29	29	36.8	32.8	33.8	51.3	**54.4**	48.5	49	41.2	35.8	24.6		
Extreme Snow Depth (cm)	163	188	**190**	163	132	38	0	18	18	53	89	115		
Days with Maximum Temperature:														
<= 0 °C	30.6	27.6	27.6	17.5	3.8	0.13	0	0	0.52	12.2	26	30.5	176.4	C
> 0 °C	0.41	0.65	3.4	12.5	27.2	29.9	31	31	29.5	18.9	4	0.55	188.9	C
> 10 °C	0	0	0	0.39	6.6	20.8	29.1	27.3	11.2	0.80	0	0	96.1	C
> 20 °C	0	0	0	0	0.39	4.6	9.2	6.5	0.43	0	0	0	21.1	C
> 30 °C	0	0	0	0	0	0.22	0	0	0	0	0	0	0.22	C
> 35 °C	0	0	0	0	0	0	0	0	0	0	0	0	0	C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Days with Minimum Temperature:														
> 0 °C	0	0	0	0.91	6.4	23	31	30.7	19.6	3.5	0.43	0.05	115.5	C
<= 2 °C	31	28.3	31	29.9	28.4	13.1	0.52	2.2	17.3	29.5	29.8	31	271.9	C
<= 0 °C	31	28.3	31	29.1	24.6	7	0	0.33	10.5	27.6	29.6	31	249.8	C
< -2 °C	31	28.1	30.6	27.2	18.9	2.1	0	0	3.6	21.7	29	30.9	222.9	C
< -10 °C	30.3	27.5	27.4	18.8	2.3	0	0	0	0	3.7	19.6	29.8	159.3	C
< -20 °C	27.3	23.9	19	6	0.04	0	0	0	0	0	5.3	22.6	104.1	C
< - 30 °C	16.1	12.8	6.4	0.22	0	0	0	0	0	0	0.29	9.6	45.3	C
Days with Rainfall:														
>= 0.2 mm	0.30	0.30	1	2.9	8.6	14.7	19	18.4	17.2	7.3	1.8	0.64	92.2	C
>= 5 mm	0	0	0.09	0.52	1.7	4.3	6.7	5.2	5.4	1.6	0.29	0.05	25.7	C
>= 10 mm	0	0	0.04	0.13	0.48	2	3.3	2.7	2.4	0.76	0.10	0	11.9	C
>= 25 mm	0	0	0	0	0	0.13	0.48	0.19	0.48	0	0	0	1.3	C
Days With Snowfall:														
>= 0.2 cm	17.4	14.3	16.6	14.6	10.3	3.4	0.17	0.33	6.4	19	21.3	19.2	142.9	C
>= 5 cm	3.8	2.4	3.2	3.3	1	0.35	0.04	0.10	0.78	3.7	4.6	3.2	26.5	C
>= 10 cm	1.4	0.91	1.4	1.4	0.39	0.13	0	0.05	0	1.1	1.9	1.4	9.9	C
>= 25 cm	0.09	0.04	0.14	0.30	0.04	0	0	0	0	0.14	0.14	0.05	0.94	C
Days with Precipitation:														
>= 0.2 mm	17.1	14.3	16.4	16.2	15.8	16.1	19	18.4	20.4	21.8	21.3	19	215.9	C
>= 5 mm	3.4	2.3	3.1	3.8	3.2	4.7	6.7	5.3	6.3	5.4	4.4	3	51.5	C
>= 10 mm	1.3	0.74	1.1	1.5	1.3	2.2	3.3	2.8	2.7	2	1.7	1.4	21.9	C
>= 25 mm	0.09	0.04	0.13	0.30	0.09	0.22	0.48	0.24	0.52	0.14	0.10	0	2.4	C
Days with Snow Depth:														
>= 1 cm	31	28.3	31	30	21.7	1.1	0	0.09	0.74	17.4	28.5	31	220.7	C
>= 5 cm	31	28.3	31	29	16.8	0.70	0	0.05	0.13	11.3	25.9	31	205.1	C
>= 10 cm	31	28.3	31	28.5	13.8	0.52	0	0	0.04	7.6	23.5	31	195.3	C
>= 20 cm	30.8	28.3	31	27.9	10.3	0.22	0	0	0	3.3	17.2	29.2	178.1	C
Wind:														
Speed (km/h)	16.4	16.8	17.4	16.5	16	16.2	15.1	15.6	16.9	17.8	17.3	16	16.5	A
Most Frequent Direction	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	A
Maximum Hourly Speed (km/h)	85	**97**	83	77	66	97	65	61	80	89	84	80		
Maximum Gust Speed (km/h)	134	148	148	130	101	126	103	117	137	137	142	**153**		
Direction of Maximum Gust	W	W	SW	W	W	W	W	W	SW	SW	SW	SW	SW	
Days with Winds >= 52 km/h	1.7	1.4	1.9	1.1	0.9	0.4	0.6	0.4	0.8	1.1	1.8	2.1	13.9	C
Days with Winds >= 63 km/h	0.7	0.5	0.4	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.6	3.3	C
Degree Days:														
Above 24 °C	0	0	0	0	0	0.2	0	0	0	0	0	0	0.2	C

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Above 18 °C	0	0	0	0	0	2.8	2.9	1.4	0.1	0	0	0	7.2	C
Above 15 °C	0	0	0	0	0	8.9	15.4	10.6	0.7	0	0	0	35.7	C
Above 10 °C	0	0	0	0	1.7	40.4	89.3	66	8.9	0	0	0	206.4	C
Above 5 °C	0	0	0	0.3	15.7	123.3	230.3	192.4	51.3	2.6	0.2	0	615.9	C
Above 0 °C	0	0.1	0.6	9.5	77.7	256.5	385.1	345.9	163.1	28.9	2.6	0.1	1270.1	C
Below 0 °C	741.7	637.9	497.1	228.5	39.5	0.7	0	0	2.7	81.5	296.3	637.6	3163.6	C
Below 5 °C	896.7	779.2	651.5	369.3	132.6	17.5	0.2	1.5	40.9	210.2	443.8	792.5	4335.8	C
Below 10 °C	1051.7	920.5	806.5	519	273.6	84.7	14.2	30.1	148.5	362.6	593.6	947.5	5752.6	C
Below 15 °C	1206.7	1061.8	961.5	669	426.9	203.1	95.3	129.7	290.4	517.6	743.6	1102.5	7408.1	C
Below 18 °C	1299.7	1146.5	1054.5	759	519.9	287	175.8	213.5	379.7	610.6	833.6	1195.5	8475.5	C
Bright Sunshine:														
Total Hours	80.4	116.3	156.4	173	187.4	179.9	188.1	173.3	91.7	61.5	47.8	58.2	1513.9	D
Days with measureable	20.6	22.3	24.7	24.3	26.4	25.5	27.7	27.2	22.3	20.8	16.4	18.1	276.1	D
% of possible daylight hours	32.9	42.6	42.7	41	37.6	34.8	36.3	37.4	24	18.8	18.8	25.6	32.7	D
Extreme Daily	8	10.5	11.9	14.7	16.5	**17**	16.8	15.1	12.2	11.4	8.4	7.6		C
Humidex:														
Extreme Humidex	5.5	4.6	10.2	12.8	26.8	35.7	**37.3**	32	30.5	21	10.6	5		
Days with Humidex >= 30	0	0	0	0	0	0.3	0.2	0.1	0	0	0	0	0.7	A
Days with Humidex >= 35	0	0	0	0	0	0	0	0	0	0	0	0	0	A
Days with Humidex >= 40	0	0	0	0	0	0	0	0	0	0	0	0	0	A
Wind Chill:														
Extreme Wind Chill	**-66.2**	-60.2	-56.9	-43.6	-36.6	-14	-7.1	-8.1	-14.8	-31.6	-44.1	-58.5		
Days with Wind Chill < -20	29.7	26.7	24.9	13.5	0.8	0	0	0	0	1	14.3	27.2	138	A
Days with Wind Chill < -30	26.6	22.6	17	3.4	0.1	0	0	0	0	0.1	2.8	19.3	92	A
Days with Wind Chill < -40	16.6	13.2	5.9	0.2	0	0	0	0	0	0	0.2	8.8	44.8	A
Humidity:														
Average Vapour Pressure (kPa)	0.1	0.1	0.2	0.3	0.5	0.8	1	1	0.7	0.5	0.3	0.1	0.5	A
Average Relative Humidity - 0600LST (%)	65.1	65.6	69	76.9	77.2	76	79.2	81	84.8	82.3	80.3	70.8	75.7	A
Average Relative Humidity - 1500LST (%)	63.7	60.3	59.8	62.2	60.3	56.6	59.2	59.4	67.7	72.7	76.2	70.2	64	A
Pressure:														
Average Station Pressure (kPa)	94.4	94.6	94.8	95.1	95.1	94.9	94.9	95	94.9	95	94.7	94.6	94.8	A
Average Sea Level Pressure (kPa)	101.1	101.3	101.4	101.6	101.5	101.2	101.1	101.3	101.2	101.4	101.2	101.3	101.3	A
Radiation:														

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Code
Extreme Global - RF1 (MJ/m2)	6.6	13.5	21.8	27.4	29.7	**33.7**	32.1	27.7	20.4	12.9	7.6	4.5		
Extreme Net - RF4 (MJ/m2)	0.6	2.3	1.7	13.9	17.2	**18.2**	16	15	10.5	5.2	0.8	-0.6		
Visibility (hours with):														
< 1 km	25.8	20.6	17.8	19.8	13.4	7.9	2.7	1.7	6.2	15.3	23.4	18.6	173	D
1 to 9 km	171.9	137.5	134.7	117.3	90.3	70.4	60.2	47.7	85.3	135.9	158.1	169.7	1378.8	D
> 9 km	546.4	520.8	591.6	583	640.3	641.7	681.2	694.6	628.6	592.9	538.4	555.8	7215.2	D
Cloud Amount (hours with):														
0 to 2 tenths	237.4	223.2	215.3	172.5	132	84.6	79.5	94.2	71	58.6	95.5	223.9	1687.6	D
3 to 7 tenths	151.5	138.9	133	121.6	127.5	156	172.4	180.5	130.2	101.9	110.9	133.5	1657.6	D
8 to 10 tenths	355.1	316.2	395.8	425.9	484.5	479.5	492	469.4	518.9	583.5	513.6	386.7	5421	D

Legend

- A = WMO "3 and 5 rule" (i.e. no more than 3 consecutive and no more than 5 total missing for **either** temperature **or** precipitation)
- B = At least 25 years
- C = At least 20 years
- D = At least 15 years

Date modified: 2014-02-13

Appendix II

Detailed Data and Photos from the Hydrometric Stations

Project: Howse

Hydrometric station no: **IHH1**

Burnetta Creek, upstream

General information

Type: **Instant**

Geographical information

Latitude (Nad83): 54.91743

Longitude (Nad83): -67.16064

Altitude: 588 m

Drainage area: 2.716 km²

Weather connection

Rain station:

Barometric station:

Probe information

Probe dealer:

Probe serial:

Probe unit:

High water mark: 33 cm

Probe elevation: cm

Cross-section invert: cm

Probe offset: cm

Startup date: 30-08-2013

Last record date:

Gauging information

Calibration curve type:

$$Q = aH^b$$

Constante 'a':

Constante 'b':

R²:

extrapolation: cm

Calculated Flow and Precipitation, per day

Project: Howse

Hydrometric station no: **IHH1**

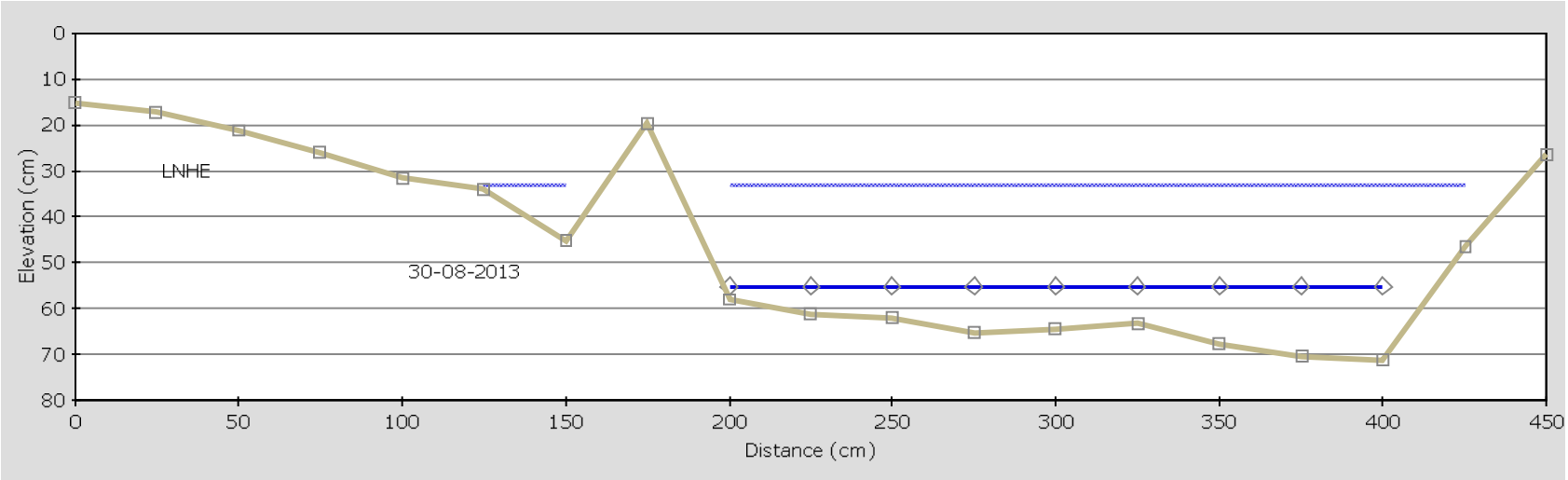
Burnetta Creek, upstream

Cross-Section Surveying and Gauging

Distance* (cm):	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450												
Topo (cm):**	15	17	21	26	31,5	34	45	19,5	58	61	62	65	64,5	63	67,5	70,5	71	46,5	26,5												
Date: 30-08-2013	**Depth (cm):**									3	6.5	7	10	9.5	8	12	15	16														
Head: ____ cm	**Speed (m/s):**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.12	0.09	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tech.: HR & CE																															
Date: 04-07-2014	**Depth (cm):**									1	5.5	6.4	9.3	11.6	12.1	12.7	12.2	13	0	0												
Head: ____ cm	**Speed (m/s):**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tech.: SB																															
Date: 11-09-2014	**Depth (cm):**										2	5	6	10	9	7.5	6.5	12														
Head: ____ cm	**Speed (m/s):**										0.00	0.00	0.00	0.01	0.01	0.03	0.01	0.00														
Tech.: DN																															

* The vertical distance from a defined zero point on the left bank
** Depth of the vertical, from the rope to the bed of the stream

Cross-Section Drawing



Project: Howse

Hydrometric station no: **IHH1**

Instant

Upstream

Downstream

Probe (if applicable)

Box (if applicable)

Project: Howse

Hydrometric station no: **IHH2**

Burnetta Creek, midcourse

General information

Type: **Instant**

Geographical information

Latitude (Nad83): 54.91797

Longitude (Nad83): -67.17927

Altitude: 555 m

Drainage area: _____ km²

Weather connection

Rain station: _____

Barometric station: _____

Probe information

Probe dealer: _____

Probe serial: _____

Probe unit: _____

High water mark: 0 cm

Probe elevation: _____ cm

Cross-section invert: _____ cm

Probe offset: _____ cm

Startup date: 11-09-2014

Last record date: _____

Gauging information

Calibration curve type:

$$Q = aH^b$$

Constante 'a':

Constante 'b':

R^2:

extrapolation: _____ cm

Calculated Flow and Precipitation, per day

Project: Howse

Hydrometric station no: **IHH2**

Burnetta Creek, midcourse

Cross-Section Surveying and Gauging

Distance* (cm):	0	50	60	70	80	90	100	110	120	125	150	170																		
Topo (cm):**	10	30	33	36	38	39	40	37	37	20	17	0	0																	
Depth (cm):		0	3	6	8	9	10	7	7	0																				
Speed (m/s):		0.00	0.01	0.02	0.04	0.04	0.05	0.02	0.01	0.00																				

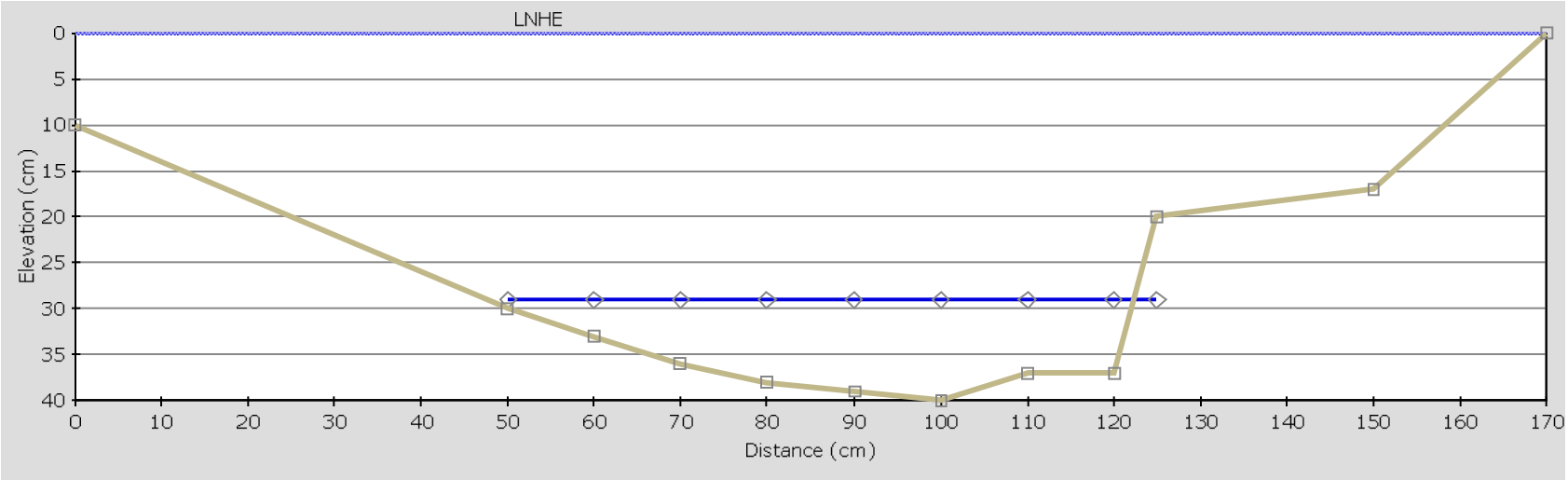
Date: 11-09-2014

Head: ____ cm

Tech.: DN

* The vertical distance from a defined zero point on the left bank
** Depth of the vertical, from the rope to the bed of the stream

Cross-Section Drawing



Project: Howse

Hydrometric station no: **IHH2**

Instant

Upstream

Downstream

Probe (if applicable)

Box (if applicable)

Project: Howse

Hydrometric station no: **IHH3**

Lake Pinette Inflow

General information

Type: **Instant**

Geographical information

Latitude (Nad83): 54.89796

Longitude (Nad83): -67.12312

Altitude: 637 m

Drainage area: 0.66 km²

Weather connection

Rain station:

Barometric station:

Probe information

Probe dealer:

Probe serial:

Probe unit:

High water mark: cm

Probe elevation: cm

Cross-section invert: cm

Probe offset: cm

Startup date: 31-08-2013

Last record date:

Gauging information

Calibration curve type:

$$Q = aH^b$$

Constante 'a':

Constante 'b':

R^2:

extrapolation: cm

Calculated Flow and Precipitation, per day

Project: Howse

Hydrometric station no: **IHH3**

Lake Pinette Inflow

Cross-Section Surveying and Gauging

Distance* (cm):																														
Topo (cm):**																														
Date: 31-08-2013	**Depth (cm):**																														
Head: 1,5 **cm**	**Speed (m/s):**																														
Tech.: HR & CE																														
Date: 04-07-2014	**Depth (cm):**																														
Head: 0,2 **cm**	**Speed (m/s):**																														
Tech.: SB																														
Date: 07-09-2014	**Depth (cm):**																														
Head: 0 **cm**	**Speed (m/s):**																														
Tech.: DN & GF																														

* The vertical distance from a defined zero point on the left bank
** Depth of the vertical, from the rope to the bed of the stream

Cross-Section Drawing

ChartData(): Invalid value.
Series 1

Project: Howse

Hydrometric station no: **IHH3**

Instant

Upstream

Downstream

Probe (if applicable)

Box (if applicable)

Project: Howse

Hydrometric station no: **IHH4**

End of Goodream Creek before Triangle Lake

General information

Type: **Instant**

Geographical information

Latitude (Nad83): 54.92791

Longitude (Nad83): -67.15383

Altitude: 590 m

Drainage area: 13.653 km²

Weather connection

Rain station:

Barometric station:

Probe information

Probe dealer:

Probe serial:

Probe unit:

High water mark: -50 cm

Probe elevation: cm

Cross-section invert: cm

Probe offset: cm

Startup date: 31-08-2013

Last record date:

Gauging information

Calibration curve type:

$$Q = aH^b$$

Constante 'a':

Constante 'b':

R^2:

extrapolation: cm

Calculated Flow and Precipitation, per day

Project: Howse

Hydrometric station no: **IHH4**

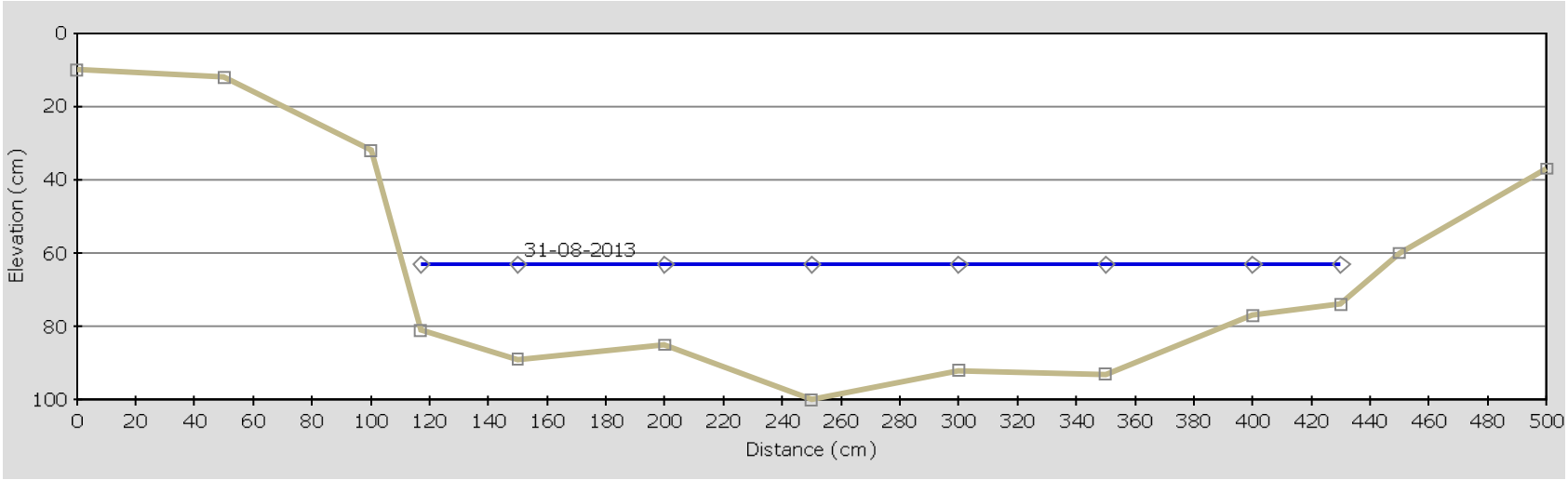
End of Goodream Creek before Triangle Lake

Cross-Section Surveying and Gauging

Distance* (cm):	0	50	100	117	150	200	250	300	350	400	430	450	500																	
Topo (cm):**	10	12	32	81	89	85	100	92	93	77	74	60	37																	
Date: 31-08-2013	**Depth (cm):**				16	24	24.5	43	32	28	14	7																			
Head: ____ cm	**Speed (m/s):**	0.00	0.00	0.00	0.06	0.06	0.98	1.34	1.10	0.46	0.76	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tech.: HR & CE																														
Date: 04-07-2014	**Depth (cm):**				10	20.5	13	27	19	23	8	5																			
Head: ____ cm	**Speed (m/s):**	0.00	0.00	0.00	0.21	0.37	0.98	1.13	1.34	0.03	0.09	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tech.: SB																														
Date:	**Depth (cm):**																													
Head: ____ cm	**Speed (m/s):**																													
Tech.: DN																														

* The vertical distance from a defined zero point on the left bank
** Depth of the vertical, from the rope to the bed of the stream

Cross-Section Drawing



Project: Howse

Hydrometric station no: **IHH4**

Instant

Upstream

Downstream

Probe (if applicable)

Box (if applicable)