



**Lakeland Industry & Community Association**

**JULY 2022**

**Monthly Ambient Air Quality Monitoring Report**

**LICA-202207**

**Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

Lakeland Industry & Community Association

August 22, 2022

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**August 22, 2022**

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**RE: LICA – July 2022 Monthly Ambient Air Quality Monitoring Report**

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Enclosed is the July 2022 Monthly Ambient Air Quality Monitoring Report for the continuous ambient air quality monitoring stations of the Lakeland Industry & Community Association (LICA) regional air quality monitoring network.

The representative of the Person Responsible for this monitoring program is

LICA Airshed

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This report has been reviewed by Michael Bisaga of the LICA Airshed.

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## LIST OF ACRONYMS

AAAQOs	Alberta Ambient Air Quality Objectives
AEP	Alberta Environment and Parks
AMD	Air Monitoring Directive
AT	Ambient Temperature
BP	Barometric Pressure
CH <sub>4</sub>	Methane
EPEA	Environmental Protection and Enhancement Act
H <sub>2</sub> S	Hydrogen Sulphide
kph	kilometers per hour
LICA	Lakeland Industry & Community Association
mb	millibar
mm	millimeter
NMHC	Non-Methane Hydrocarbons
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Oxide of Nitrogen
PAC	Polycyclic Aromatic Compounds
ppb	parts per billion
ppm	parts per million
RH	Relative Humidity
SO <sub>2</sub>	Sulphur Dioxide
ST	Station Temperature
STDWD	Standard Deviation Wind Direction
THC	Total Hydrocarbons
TRS	Total Reduced Sulphur
VWD	Vector Wind Direction
VWS	Vector Wind Speed
WD	Wind Direction
WS	Wind Speed
°C	Degrees Celsius

NETWORK STATION SUMMARY

**Listing of Continuous Monitoring Stations and Integrated Sampling Stations**

Station Name		Cold Lake South	Tamarack	St. Lina	Lac La Biche
Station ID		1174	1248	1250	1690
Coordinates		54.41402	54.604935	54.215961	54.76516
		-110.23316	-110.452637	-111.503304	-111.9714490
Continuous Monitoring Parameter	SO2	√	√	√	√
	H2S		√	√	√
	TRS	√			
	NOX	√	√	√	√
	NOX	√	√	√	√
	NO2	√	√	√	√
	O3	√	√	√	√
	THC	√	√	√	√
	CH4	√	√	√	√
	NMHC	√	√	√	√
	RH	√	√	√	√
	BP	√	√	√	√
	AT	√	√	√	√
	ST	√	√	√	√
	PRECEIPITATION		√	√	
	WS	√	√	√	√
	WD	√	√	√	√
STDWD	√	√	√	√	
Integrated Sampling	VOCs	√			
	PAHs	√			
	Partisol	√			
	Passive	√			√
	NMHC Canister				√
	PAC			√	

**List of Contractors performing air monitoring activities**

Sampling Program	Monitoring Activities Conducted By	Sample Analysis Conducted By	Data/Report Prepared By	Electronic Submission Conducted By
Continuous Monitoring Station	Bureau Veritas Canada	Bureau Veritas Canada	LICA / Bureau Veritas Canada	LICA
Intermittent (VOCs/PAHs)	Bureau Veritas Canada	InnoTech Alberta Inc	InnoTech Alberta Inc	LICA
Partisol	Bureau Veritas Canada	InnoTech Alberta Inc	InnoTech Alberta Inc	LICA
Passive	Bureau Veritas Canada	Bureau Veritas Canada	Bureau Veritas Canada	LICA
PAC	Bureau Veritas Canada	ECCC	AEP	Not Applicable
NMHC Canister	Bureau Veritas Canada	InnoTech Alberta Inc	InnoTech Alberta Inc	Not Applicable

**Monitoring Notes during the Month of July 2022**

**Cold Lake South**

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable, except PM2.5. One 24-hour PM2.5 exceedance was recorded on July 30, at concentration of 41 ug/m3. The possible source was believed to be the result of local buildup of emissions from wildfires. **AEP reference #: 402110.**
- All parameters met the 90% operational uptime requirement, except O3 (84.9%). **AEP reference #: 402798.**
- **O3:** Highly variable 1-minute data were recorded variable on July 27. The analyzer was reset to correct the issue on August 3. Data collected between July 27 and August 3 were considered invalid and were discarded. One hundred and twelve hours of downtime were recorded this month.

**Tamarack**

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- All parameters met the 90% operational uptime requirement.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- No major events were identified this month.

### St. Lina Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- All parameters met the 90% operational uptime requirement, except THC/CH<sub>4</sub>/NMHC. Operational uptime for June and July is 47.6% and 0.0%. The operational uptime for August also is not expected to meet the 90% uptime requirement. **AEP reference #: 402799.**
- **THC/CH<sub>4</sub>/NMHC:** Apparent NMHC noise/spikes were recorded throughout the month. Occasional noise/spikes were recorded since the Thermo 55i HC analyzer, s/n: 1180930026, was installed on April 12. The issue became progressively worse after the June 16 monthly calibration. As data are believed not to be real ambient concentrations, data collected from June 16 to August 4 when the analyzer was replaced were considered invalid and were discarded. Three hundred forty-three hours and seven hundred forty-four hours of downtime were recorded in June and July, respectively.

### Lac La Biche Station

- All data collected this month were compliant with the requirements outlined in the AMD 2016.
- Measured parameters were below Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) where applicable.
- All parameters met the 90% operational uptime requirement, except H<sub>2</sub>S (84.3%). **AEP reference #: 401251.**
- **H<sub>2</sub>S:** On July 7, the BV-supplied Teledyne T101 H<sub>2</sub>S analyzer, s/n: 1014, was removed, and the LICA-owned Thermo 450i H<sub>2</sub>S analyzer, s/n: CM17360002, was installed. An installation calibration was scheduled to be performed on July 8. However, due to Roger's network failure and restricted access to the station during the weekend hours, the calibration was delayed until July 11. The analyzer failed the installation calibration on July 11. The BV-supplied Teledyne T101 H<sub>2</sub>S analyzer, s/n: 1014, was reinstalled following a successful installation calibration on July 12. One hundred sixteen hours of downtime were recorded due to this event.

### Integrated Sampling

All the integrated sampling analytical results are included in the July 2022 Integrated Sampling Report.

- **VOCs Sampling System:**
  - The VOC sampler is programmed to collect a 24-hour sample of air every sixth day as per the National Air Pollution Surveillance schedule (NAPS).
  - Five samples were collected this month: on July 4, 10, 16, 22 and 28.
- **PAHs Sampling System:**
  - The PUF sampler is programmed to collect a 24-hour sample of air every sixth day as per the National Air Pollution Surveillance schedule (NAPS).
  - Five samples were collected this month: on July 4, 10, 16, 22 and 28.
- **Partisol Sampling System:**
  - The Partisol sampler is programmed to collect a 24-hour sample of air every sixth day as per National Air Pollution Surveillance schedule (NAPS).
  - Five samples were collected this month: on July 4, 10, 16, 22 and 28.
- **Passive Sampling System:**



- The passive sample filters were installed at the stations between May 31 and July 2, and were removed between July 28 and July 30.
- A total of 9 duplicate samples were collected: 2 for H<sub>2</sub>S, 3 for SO<sub>2</sub>, 2 for NO<sub>2</sub> and 2 for O<sub>3</sub>.
- **PAC Sampling System:**
  - The PAC sampling program began in November 2019, and is designed to collect a 2-month integrated sample.
  - The sample media for July and August 2022 were installed between June 28 and June 30. The sample media are scheduled to be collected in late August or early September.
- **NMHC canister Sampling System:**
  - The canister system was installed at the Lac La Biche station on July 7.
  - The canister sampling program collects a 1-hour sample of air when the continuously non-methane hydrocarbon (NMHC) concentration reaches a specified trigger point. The current trigger point is 0.3 ppm and is based on real-time monitoring data that are averaged over a 5-minute period.
  - One canister event was recorded: on July 13 at 13:05, at concentration of 0.66 ppm.

### **Revisions to Alberta's Ambient Air Quality Data Warehouse**

St. Lina THC/CH<sub>4</sub>/NMHC: Due to analyzer issues, data collected between June 16 hour 17 and June 30 hour 23 were deemed invalid and were discarded. The revised data were submitted to the Alberta's Ambient Air Quality Data Warehouse on August 29 (Report delivery confirmation # R4450027).

### **Deviations from Authorized Monitoring Methods**

No deviations from authorized monitoring methods were recorded this month.

### **Disclaimer**

Baseline correction were performed on the 1-minute data. 5-minute and hourly data were calculated based on the post-baseline correction 1-minute data set. Data verification/validation were then performed on the 5-minute and hourly data. Hourly data that are included in this report are the post-validation hourly data set.

Equipment calibration / maintenance records were provided by Bureau Veritas Canada.

## Certification

This report was prepared and submitted by Lily Lin in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).



Lily Lin, Data & Reporting Specialist, LICA Airshed

This report was reviewed by Michael Bisaga in accordance with Chapter 9 of the Air Monitoring Directive (AMD 2016).

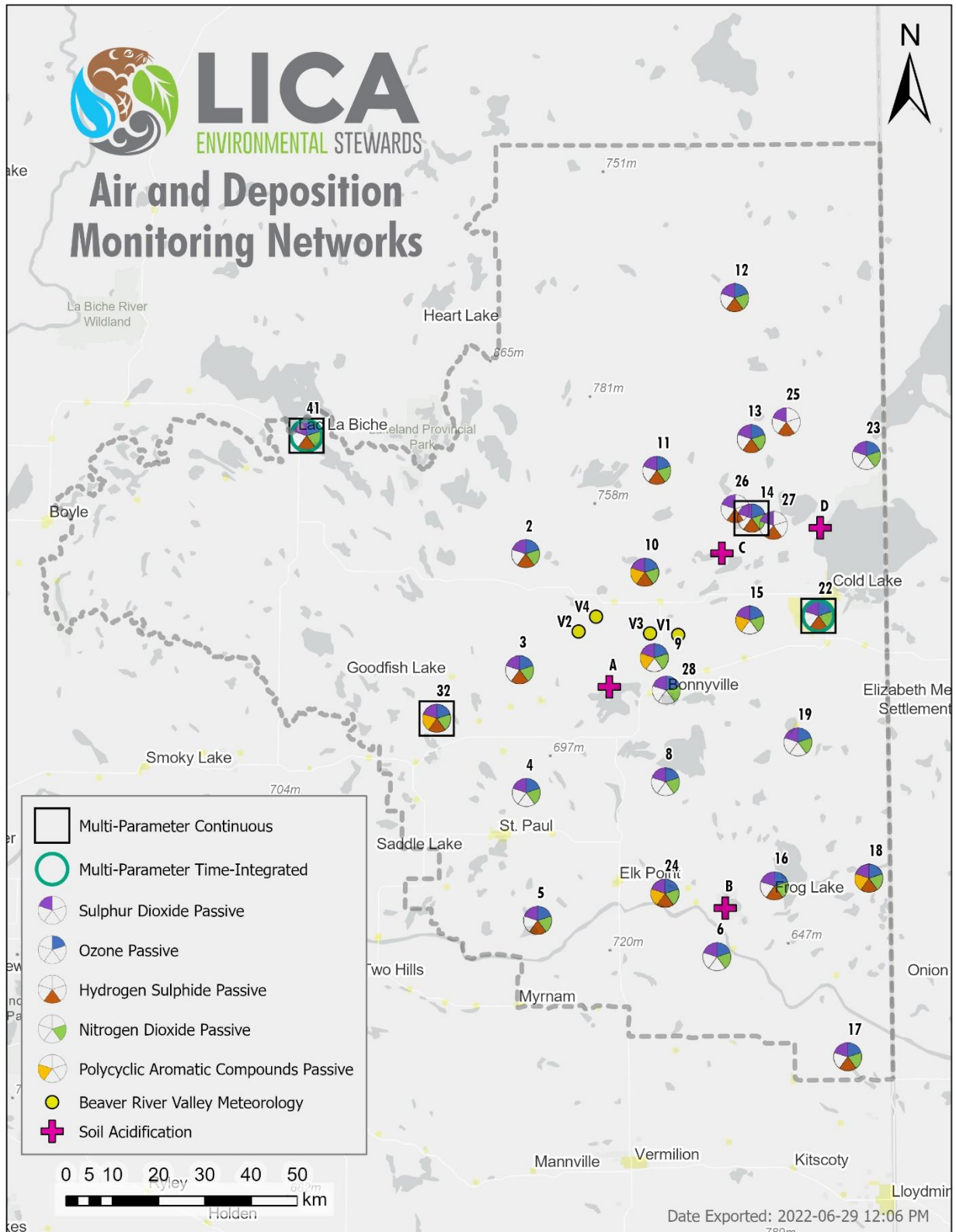
I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements. I also certify that at the time of this report's submission, all air data have been electronically uploaded to Alberta's Ambient Air Quality Data Warehouse as required by the AMD, with the exception of electronic submission for the results of intermittent samples, Partisol samples and passive samples. Electronic submission for the intermittent sample, Partisol sample and passive sample results will be performed during the preparation of the July 2022 integrated sampling report. Uploading of VOC data from the canister sampling program was not required at the time of completing this report.



Michael Bisaga, Monitoring Programs Manager, LICA Airshed

August 22, 2022

# Map of LICA Continuous Monitoring Network



## CONTINUOUS NETWORK EQUIPMENT AND MONITORING RESULTS SUMMARY

### Cold Lake South Station

#### Equipment Operation Summary

Parameter	Make / Model	Serial Number	Calibration Date
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	<b>Thermo / 43i-TLE</b>	<b>1180260018</b>	<b>July 27, 2022</b>
<ul style="list-style-type: none"> <li>• A successful monthly calibration was completed on July 5.</li> <li>• The analyzer span checks drifted low and became progressively worse on July 13. A repeat multi-point calibration was completed on July 13 to investigate the issue. The problem was caused by a depleted permeation tube. The permeation tube was replaced on July 27 following a successful multi-point calibration. The expected span value was adjusted on July 30. Eleven hours of downtime were recorded due to the additional quality checks.</li> </ul>			
<b>Total Reduced Sulphur (TRS)</b>	<b>Thermo / 450i</b>	<b>812728560</b>	<b>July 5, 2022</b>
<ul style="list-style-type: none"> <li>• No issues were identified this month.</li> </ul>			
<b>Total Hydrocarbons / Methane/ Non-methane Hydrocarbons (THC/CH<sub>4</sub>/NMHC)</b>	<b>Thermo / 55i</b>	<b>1180930025</b>	<b>July 13, 2022</b>
<ul style="list-style-type: none"> <li>• The span gas cylinder was replaced following a repeat zero-span check on July 4. Two hours of downtime were recorded due to this event.</li> <li>• A successful monthly calibration was completed on July 6.</li> <li>• A repeat multi-point calibration was completed on July 13 to correct daily zero drifts. Five hours of downtime were recorded due to this event.</li> </ul>			
<b>Oxide of Nitrogen / Nitric Oxide/ Nitrogen Dioxide (NO<sub>x</sub>/NO/NO<sub>2</sub>)</b>	<b>Thermo / 42i</b>	<b>1505664393</b>	<b>July 5, 2022</b>
<ul style="list-style-type: none"> <li>• A significant span drift was noted on July 22. A repeat zero-span check was initiated on July 23. The check results were within the acceptable range. No further action was required. Two hours of downtime were recorded due to the additional quality check.</li> </ul>			

Parameter	Make / Model	Serial Number	Calibration Date
Ozone (O3)	Thermo / 49i	700419951	July 27, 2022
<ul style="list-style-type: none"> <li>A successful monthly calibration was completed on July 6.</li> <li>A repeat multi-point calibration was completed on July 27 to correct the span drift issues. Five hours of downtime were recorded.</li> <li>During the monthly data review, it was noticed that highly variable 1-minute data were recorded, starting July 27 hour 8. The issue remained after the July 27 calibration. The analyzer was reset to correct the issue on August 3. Data collected between July 27 and August 3 were considered invalid and were discarded. One hundred and twelve hours of downtime were recorded this month.</li> </ul>			
Particulate Matter 2.5 (PM2.5)	Teledyne T640	575	July 6, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
Parameter	Make / Model	Serial Number	System Check Date
Relative Humidity (RH)	Rotronic HC2A-S3	202571103	June 15, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
Barometric Pressure (BP)	Met One / Part 092	Y23368	July 6, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
Ambient Temperature (AT)	Rotronic HC2A-S3	202571103	July 6, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
Station Temperature (ST)	BV-supplied	n/a	July 6, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
Wind Speed (WS) / Wind Direction (WD)/ Stand Deviation Wind Direction (STDWD)	RM Young 05305AQ	177354	July 6, 2022
<ul style="list-style-type: none"> <li>Wind direction data contained in this report represents where the wind is coming from.</li> <li>An annual wind system calibration was completed on July 6, 2022.</li> <li>No issues were identified this month.</li> </ul>			

### Monitored Data Summary for Cold Lake South Station

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	2	July 26 at hour 7	1.4	SW	0.4	July 26	98.5	93.7
TRS (ppb)	-	-	-	-	-	-	0.3	0	5	July 14 at hour 6	5.5	SW	0.9	July 17	100.0	95.0
NOx (ppb)	-	-	-	-	-	-	1.9	0	11	July 26 at hour 7	1.4	SW	3.4	July 25	99.7	94.6
NO (ppb)	-	-	-	-	-	-	0.1	0	6	July 26 at hour 7	1.4	SW	0.7	July 26	99.7	94.6
NO2 (ppb)	159	-	-	0	-	-	1.7	0	7	July 9 at hour 5	4.4	SW	3.0	July 25	99.7	94.6
O3 (ppb)	76	-	-	0	-	-	22.5	0.3	51.3	July 18 at hour 16	5.4	SW	31.6	July 16	84.9	80.8
THC (ppm)	-	-	-	-	-	-	2.01	1.84	2.92	July 18 at hour 5	0.8	SW	2.22	July 18	99.1	94.2
CH4 (ppm)	-	-	-	-	-	-	2.01	1.84	2.92	July 18 at hour 5	0.8	SW	2.22	July 18	99.1	94.2
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.06	July 29 at hour 23	2.1	ENE	0.00	July 29	99.1	94.2
PM2.5 (µg/m3)	80	29	-	0	1	-	8.5	1	65	July 29 at hour 22	5.6	ENE	41.0	July 30	100.0	99.9
RH (%)	-	-	-	-	-	-	68.2	30	100	July 2 at hour 1	0.2	ESE	88.5	July 8	100.0	100.0
BP (millibar)	-	-	-	-	-	-	950	941	956	July 1 at hour 20	0.2	ENE	955	July 2	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	18.2	6.4	29.4	July 28 at hour 16	6.9	SSW	22.8	July 16	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	21.1	19.8	23.1	July 11 at hour 5	5.9	WSW	21.7	July 22	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	1.3	0.0	18.0	July 24 at hour 16	18	NNW	10.9	July 20	100.0	99.7
WDV (sector)	-	-	-	-	-	-	263 (W)	-	-	-	-	-	-	-	100.0	99.7

1- Date/ Time given is the first minimum and maximum value that was recorded

**Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances**

The following exceedances of AAAQOs were observed at the Cold Lake South Station.

Date	Time (MST)	Parameter	Average Period	AAAQOs / AAAQGs	Concentration	Wind speed	Wind Direction	Reference #
July 30	-	PM2.5	24-Hour	29 µg/m3	41 µg/m3	3.4 km/hr	15° (NNE)	402110

The possible source of the exceedance of the PM2.5 objective was believed to be the result of local buildup of emissions.

## Tamarack Station

### Equipment Operation Summary

Parameter	Make / Model	Serial Number	Calibration Date
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	<b>Thermo / 43i-TLE</b>	<b>1180930031</b>	<b>July 25, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Hydrogen Sulphide (H<sub>2</sub>S)</b>	<b>Thermo / 450i</b>	<b>CM17360005</b>	<b>July 25, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Oxide of Nitrogen / Nitric Oxide/ Nitrogen Dioxide (NO<sub>x</sub>/NO/NO<sub>2</sub>)</b>	<b>Thermo / 42i</b>	<b>1180930028</b>	<b>July 25, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Ozone (O<sub>3</sub>)</b>	<b>Thermo 49iQ</b>	<b>1202068570</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Total Hydrocarbons / Methane/ Non-methane Hydrocarbons (THC/CH<sub>4</sub>/NMHC)</b>	<b>Thermo / 55i</b>	<b>1314057759</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> <li>A new span gas cylinder was installed during the monthly calibration on July 26.</li> </ul>			
<b>Particulate Matter 2.5 (PM<sub>2.5</sub>)</b>	<b>Thermo / Sharp 5030</b>	<b>CM 2209</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			



Parameter	Make / Model	Serial Number	System Check Date
<b>Relative Humidity (RH)</b>	<b>Rotronic / HC2A-S3</b>	<b>20433166</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Ambient Temperature (AT)</b>	<b>Rotronic / HC2A-S3</b>	<b>20433166</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Barometric Pressure (BP)</b>	<b>Met One / Part 090D</b>	<b>F4497</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Station Temperature (ST)</b>	<b>BV-supplied</b>	<b>n/a</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Precipitation (PRECIP)</b>	<b>Met One / Part 387</b>	<b>F4481</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>On July 15, the MetOne 387D tipping bucket, s/n: F4481, was removed following a system audit, and the MetOne 387D tipping bucket, s/n: C13580, was installed. This equipment swap was to address the frozen sensor issues in winter. Two hours of downtime were recorded due to this maintenance.</li> </ul>			
<b>Wind Speed (WS) / Wind Direction (WD)/ Stand Deviation Wind Direction (STDWD)</b>	<b>RM Young / 05305VK</b>	<b>161465</b>	<b>July 26, 2022</b>
<ul style="list-style-type: none"> <li>Wind direction data contained in this report represents where the wind is coming from.</li> <li>An annual wind system calibration was completed on July 26, 2022.</li> <li>No issues were identified this month.</li> </ul>			

### Monitored Data Summary for Tamarack Site

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.5	0	23	July 21 at hour 23	7.8	WNW	3.0	July 22	100.0	95.0
H2S (ppb)	10	3	-	0	0	-	0.1	0	4	July 27 at hour 2	0.7	SSW	0.4	July 17	100.0	95.0
NOx (ppb)	-	-	-	-	-	-	2.7	0	44	July 18 at hour 5	0.1	WSW	6.4	July 22	100.0	94.7
NO (ppb)	-	-	-	-	-	-	0.5	0	37	July 18 at hour 5	0.1	WSW	2.1	July 22	100.0	94.7
NO2 (ppb)	159	-	-	0	-	-	2.2	0	22	July 21 at hour 23	7.8	WNW	4.4	July 22	100.0	94.7
O3 (ppb)	76	-	-	0	-	-	22.1	1.8	52.9	July 18 at hour 12	8.5	SSW	33.6	July 18	100.0	95.1
THC (ppm)	-	-	-	-	-	-	1.97	1.84	2.70	July 27 at hour 4	0.5	NNE	2.10	July 27	100.0	95.1
CH4 (ppm)	-	-	-	-	-	-	1.97	1.84	2.70	July 27 at hour 4	0.5	NNE	2.10	July 27	100.0	95.1
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.07	July 16 at hour 23	5.3	WNW	0.00	July 22	100.0	95.1
PM2.5 (µg/m3)	80	29	-	0	0	-	6.5	1	45	July 29 at hour 21	3.4	ENE	23.1	July 30	100.0	99.9
RH (%)	-	-	-	-	-	-	71.2	28	100	July 1 at hour 6	7.3	E	95.6	July 5	100.0	100.0
BP (millibar)	-	-	-	-	-	-	938	929	944	July 2 at hour 7	4.8	NE	942	July 6	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	17.6	4.9	29.1	July 28 at hour 16	10	SSW	22.3	July 28	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	21.6	20.1	23.2	July 25 at hour 13	5.6	W	22.3	July 25	100.0	100.0
Precipitation (mm)*	-	-	-	-	-	-	24.7	0.0	3.1	July 25 at hour 17	4.8	N	3.4	July 30	99.7	99.7
WSV (km/hr)	-	-	-	-	-	-	1.7	0.0	17.6	July 13 at hour 16	17.6	W	10.8	July 20	100.0	99.9
WDV (sector)	-	-	-	-	-	-	245 (WSW)	-	-	-	-	-	-	-	100.0	99.9

1- Date/ Time given is the first minimum and maximum value that was recorded

\* Data represents the total (sum) for the indicated time frame

### Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.

## St. Lina Station

### Equipment Operation Summary

Parameter	Make / Model	Serial Number	Calibration Date
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	<b>Thermo / 43i-TLE</b>	<b>1180930030</b>	<b>July 21, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Hydrogen Sulphide (H<sub>2</sub>S)</b>	<b>API 101A</b>	<b>324</b>	<b>July 21, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Total Hydrocarbons / Methane/ Non-methane Hydrocarbons (THC/CH<sub>4</sub>/NMHC)</b>	<b>Thermo / 55i</b>	<b>1180930026</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>Apparent NMHC noise/spikes were recorded throughout the month. Occasional noise/spikes were recorded since the Thermo 55i HC analyzer, s/n: 1180930026, was installed on April 12. The issue became progressively worse after the June 16 monthly calibration. The analyzer passed both the June and July monthly calibrations and the August 4 shut-down calibration. However, as data are believed not to be real ambient concentrations, data collected between June 16 and Aug 4 were considered invalid and were discarded. Three hundred forty-three hours and seven hundred forty-four hours of downtime were recorded in June and July, respectively.</li> </ul>			
<b>Oxide of Nitrogen / Nitric Oxide/ Nitrogen Dioxide (NO<sub>x</sub>/NO/NO<sub>2</sub>)</b>	<b>Thermo / 42i</b>	<b>1180930029</b>	<b>July 21, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Ozone (O<sub>3</sub>)</b>	<b>Thermo / 49i</b>	<b>1002240371</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Particulate Matter 2.5 (PM<sub>2.5</sub>)</b>	<b>Thermo / Sharp 5030i</b>	<b>CM17091001</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			

<b>Parameter</b>	<b>Make / Model</b>	<b>Serial Number</b>	<b>System Check Date</b>
<b>Relative Humidity (RH)</b>	<b>Rotonic HC2-S3</b>	<b>20221366</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Ambient Temperature (AT)</b>	<b>Rotonic HC2-S3</b>	<b>20221366</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Barometric Pressure (BP)</b>	<b>Met One / Part 090D</b>	<b>F4998</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Station Temperature (ST)</b>	<b>BV-supplied</b>	<b>n/a</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Precipitation (PRECIP)</b>	<b>Met One / Part 387D</b>	<b>A23775</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Wind Speed (WS) / Wind Direction (WD)/ Stand Deviation Wind Direction (STDWD)</b>	<b>RM Young / 05305VK</b>	<b>161466</b>	<b>July 22, 2022</b>
<ul style="list-style-type: none"> <li>Wind direction data contained in this report represents where the wind is coming from.</li> <li>An annual wind system calibration was completed on July 22, 2022.</li> <li>No issues were identified this month.</li> </ul>			

### Monitored Data Summary for St. Lina Site

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	2	July 24 at hour 9	10	WSW	0.2	July 24	100.0	95.0
H2S (ppb)	10	3	-	0	0	-	0.1	0	3	July 17 at hour 7	3.7	SW	0.5	July 17	100.0	95.0
NOx (ppb)	-	-	-	-	-	-	1.2	0	7	July 4 at hour 5	8.2	ENE	2.0	July 4	100.0	94.6
NO (ppb)	-	-	-	-	-	-	0.0	0	2	July 2 at hour 6	5.1	ENE	0.3	July 2	100.0	94.6
NO2 (ppb)	159	-	-	0	-	-	1.2	0	6	July 4 at hour 5	8.2	ENE	2.0	July 4	100.0	94.6
O3 (ppb)	76	-	-	0	-	-	25.6	7.6	46.9	July 18 at hour 16	6	SW	37.2	July 18	100.0	95.0
THC (ppm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0
CH4 (ppm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0
NMHC (ppm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0
PM2.5 (µg/m3)	80	29	-	0	0	-	4.8	1	24	July 30 at hour 2	5.6	SSE	13.6	July 30	100.0	99.9
RH (%)	-	-	-	-	-	-	75.3	34	100	July 1 at hour 12	9	ENE	99.7	July 5	100.0	100.0
BP (millibar)	-	-	-	-	-	-	919	910	924	July 1 at hour 20	5.6	ENE	923	July 2	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	17.9	8.4	29.5	July 28 at hour 15	10.1	SW	23.0	July 28	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	22.5	21.5	25.1	July 21 at hour 16	9.8	WNW	23.7	July 2	100.0	100.0
Precipitation (mm)*	-	-	-	-	-	-	30.7	0.0	6.2	July 7 at hour 21	12.3	ESE	9.6	July 5	100.0	99.9
WSV (km/hr)	-	-	-	-	-	-	1.9	0.1	20.4	July 10 at hour 10	20.4	W	12.6	July 20	100.0	99.7
WDV (sector)	-	-	-	-	-	-	277 (W)	-	-	-	-	-	-	-	100.0	99.7

1- Date/ Time given is the first minimum and maximum value that was recorded

\* Data represents the total (sum) for the indicated time frame

### Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.

## Lac La Biche Station

### Equipment Operation Summary

Parameter	Make / Model	Serial Number	Calibration Date
<b>Sulphur Dioxide (SO<sub>2</sub>)</b>	<b>Thermo / 43i-TLE</b>	<b>1180320043</b>	<b>July 7, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> <li>The scheduled daily zero-span check on July 11 was interrupted by datalogger changes for H<sub>2</sub>S analyzer swap. A successful repeat zero-span check was completed on July 11 hour 12. One hour of downtime was recorded due to the additional quality check.</li> </ul>			
<b>Hydrogen Sulphide (H<sub>2</sub>S)</b>	<b>Teledyne / T100</b>	<b>1014</b>	<b>July 12, 2022</b>
<ul style="list-style-type: none"> <li>A repeat zero-span check was initiated on July 4 to investigate a zero drift issue. The analyzer passed the calibration check. One hour of downtime was recorded due to the additional quality check.</li> <li>On July 7, the BV-supplied Teledyne T101 H<sub>2</sub>S analyzer, s/n: 1014, was removed, and the LICA-owned Thermo 450i H<sub>2</sub>S analyzer, s/n: CM17360002, was installed. An installation calibration was scheduled to be performed on July 8. However, due to Roger's network failure and restricted access to the station during the weekend hours, the calibration was delayed until July 11. The analyzer failed the installation calibration on July 11. The BV-supplied Teledyne T101 H<sub>2</sub>S analyzer, s/n: 1014, was reinstalled following a successful installation calibration on July 12. One hundred sixteen hours of downtime were recorded due to this event</li> </ul>			
<b>Oxide of Nitrogen / Nitric Oxide/ Nitrogen Dioxide (NO<sub>x</sub>/NO/NO<sub>2</sub>)</b>	<b>Thermo / 42i</b>	<b>1180930027</b>	<b>July 7, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> <li>The scheduled daily zero-span check on July 11 was interrupted by datalogger changes for H<sub>2</sub>S analyzer swap. A successful repeat zero-span check was completed on July 11 hour 12. One hour of downtime was recorded due to the additional quality check.</li> </ul>			
<b>Ozone (O<sub>3</sub>)</b>	<b>Thermo 49i</b>	<b>1002240372</b>	<b>July 8, 2022</b>
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> <li>The scheduled daily zero-span check on July 11 was interrupted by datalogger changes for H<sub>2</sub>S analyzer swap. A successful repeat zero-span check was completed on July 11 hour 12. One hour of downtime was recorded due to the additional quality check.</li> </ul>			

Parameter	Make / Model	Serial Number	Calibration Date
<b>Total Hydrocarbons / Methane/ Non-methane Hydrocarbons (THC/CH4/NMHC)</b>	Thermo / 55i	1180320044	July 8, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> <li>The scheduled daily zero-span check on July 11 was interrupted by datalogger changes for H2S analyzer swap. A successful repeat zero-span check was completed on July 11 hour 12. One hour of downtime was recorded due to the additional quality check.</li> </ul>			
<b>Particulate Matter 2.5 (PM2.5)</b>	Thermo / Sharp 5030i	CM 17071016	July 8, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
Parameter	Make / Model	Serial Number	System Check Date
<b>Relative Humidity (RH)</b>	Rotronic / HC2A-S3	0020357518	July 8, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Ambient Temperature (AT)</b>	Rotronic / HC2A-S3	0020357518	July 8, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Barometric Pressure (BP)</b>	Met One / Part 092	Y23360	July 8, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Station Temperature (ST)</b>	BV-supplied	n/a	July 8, 2022
<ul style="list-style-type: none"> <li>No issues were identified this month.</li> </ul>			
<b>Wind Speed (WS) / Wind Direction (WD)/ Stand Deviation Wind Direction (STDWD)</b>	RM Young / 05305VK	56778	July 8, 2022
<ul style="list-style-type: none"> <li>Wind direction data contained in this report represents where the wind is coming from.</li> <li>The last annual wind system calibration was completed on May 9, 2022.</li> <li>No issues were identified this month.</li> </ul>			

### Monitored Data Summary for Lac La Biche Station

Parameter	Objectives/Guidelines			Exceedances			Monthly Avg.	Min. 1-hr	Max. 1-hr	Date/Time	VWS (km/hr)	VWD (sector)	Max. 24-hr	Date	Operational Uptime (%)	Valid Data (%)
	1-hr	24-hr	30-day	1-hr	24-hr	30-day										
SO2 (ppb)	172	48	11	0	0	0	0.0	0	3	July 18 at hour 11	9.1	SSW	0.5	July 18	99.9	94.9
H2S (ppb)	10	3	-	0	0	-	0.2	0	6	July 17 at hour 7	2.3	SW	1.0	July 17	84.3	79.7
NOx (ppb)	-	-	-	-	-	-	1.9	0	10	July 27 at hour 6	1.8	SSE	3.2	July 15	99.9	94.7
NO (ppb)	-	-	-	-	-	-	0.1	0	5	July 15 at hour 10	4.9	N	0.5	July 15	99.9	94.7
NO2 (ppb)	159	-	-	0	-	-	1.8	0	7	July 15 at hour 20	1.1	E	2.8	July 15	99.9	94.7
O3 (ppb)	76	-	-	0	-	-	24.8	2.0	54.0	July 14 at hour 15	7.4	WSW	39.6	July 18	99.9	95.0
THC (ppm)	-	-	-	-	-	-	2.02	1.90	2.48	July 5 at hour 1	3.7	ESE	2.12	July 15	99.9	95.0
CH4 (ppm)	-	-	-	-	-	-	2.02	1.90	2.48	July 16 at hour 1	0.7	E	2.12	July 15	99.9	95.0
NMHC (ppm)	-	-	-	-	-	-	0.00	0.00	0.46	July 5 at hour 1	3.7	ESE	0.02	July 5	99.9	95.0
PM2.5 (µg/m3)	80	29	-	0	0	-	5.5	1	39	July 30 at hour 2	9	SE	17.2	July 30	100.0	99.9
RH (%)	-	-	-	-	-	-	70.2	29	100	July 2 at hour 3	0.7	NE	92.2	July 8	100.0	100.0
BP (millibar)	-	-	-	-	-	-	947	938	953	July 1 at hour 20	3.5	NE	952	July 2	100.0	100.0
Ext. Temp. (°C)	-	-	-	-	-	-	18.4	7.6	30.3	July 28 at hour 15	9.8	SSW	24.3	July 28	100.0	100.0
Stn. Temp. (°C)	-	-	-	-	-	-	21.4	18.2	24.6	July 12 at hour 14	9.7	SSE	22.2	July 8	100.0	100.0
WSV (km/hr)	-	-	-	-	-	-	1.7	0.1	20.5	July 19 at hour 11	20.5	WNW	13.0	July 19	100.0	100.0
WDV (sector)	-	-	-	-	-	-	271 (W)	-	-	-	-	-	-	-	100.0	100.0

1- Date/ Time given is the first minimum and maximum value that was recorded

### Alberta Ambient Air Quality Objectives (AAAQOs) and/or Alberta Ambient Air Quality Guidelines (AAAQGs) Exceedances

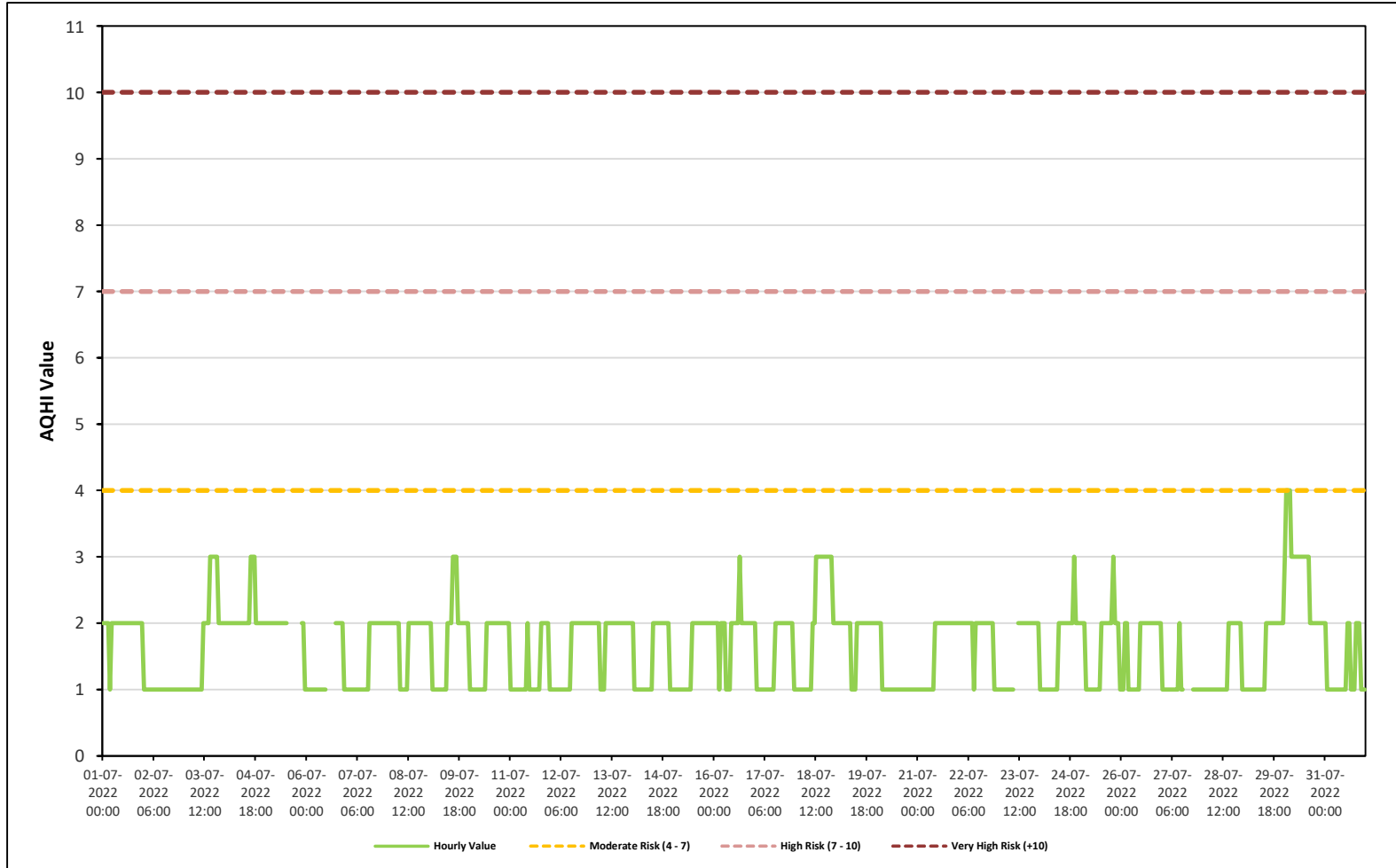
The measured ambient air quality was within the AAAQOs and/or AAAQGs for all monitored parameters.



## TABLES AND CHARTS

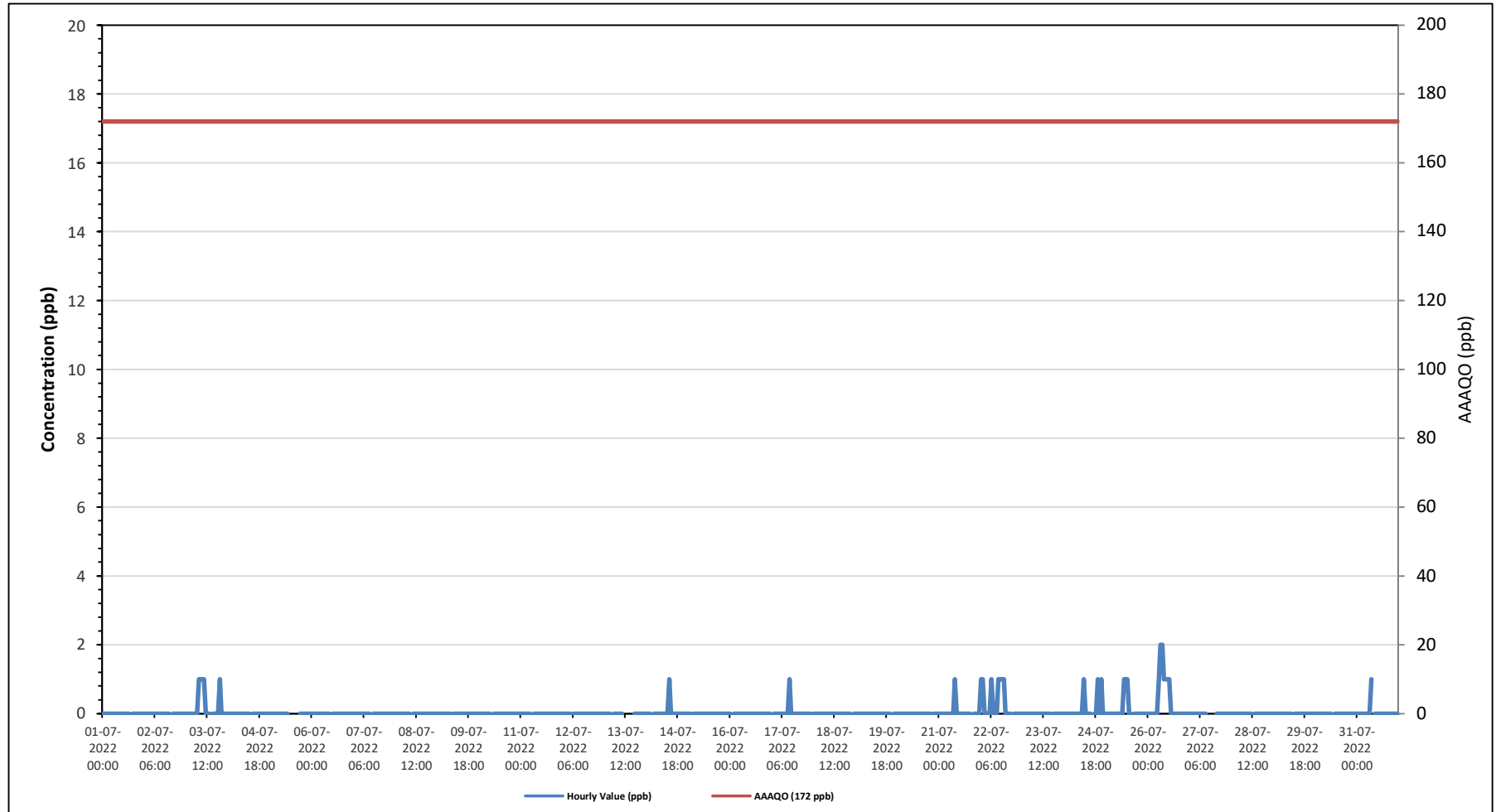
**COLD LAKE SOUTH STATION**

**Timeseries Chart of Hourly Average for AQHI - Cold Lake South Station**

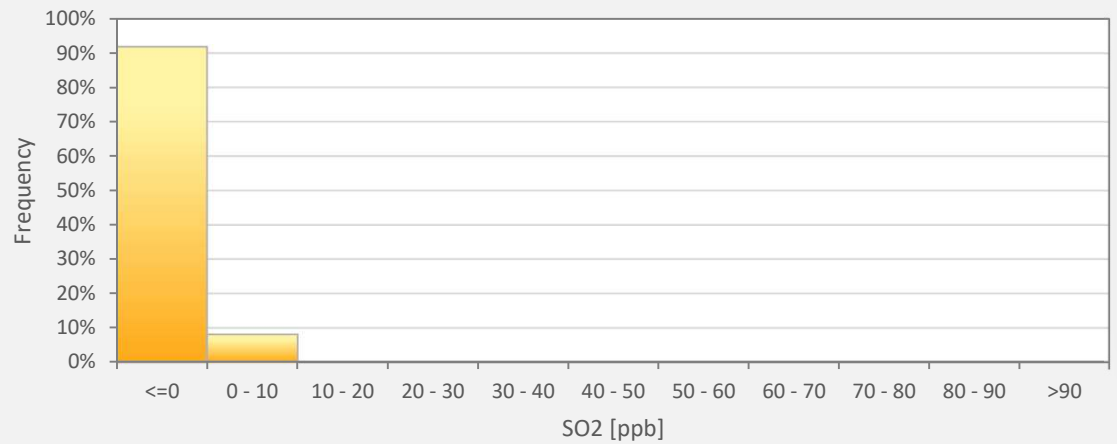




**Timeseries Chart of Hourly Average for SO2 - Cold Lake South Station**



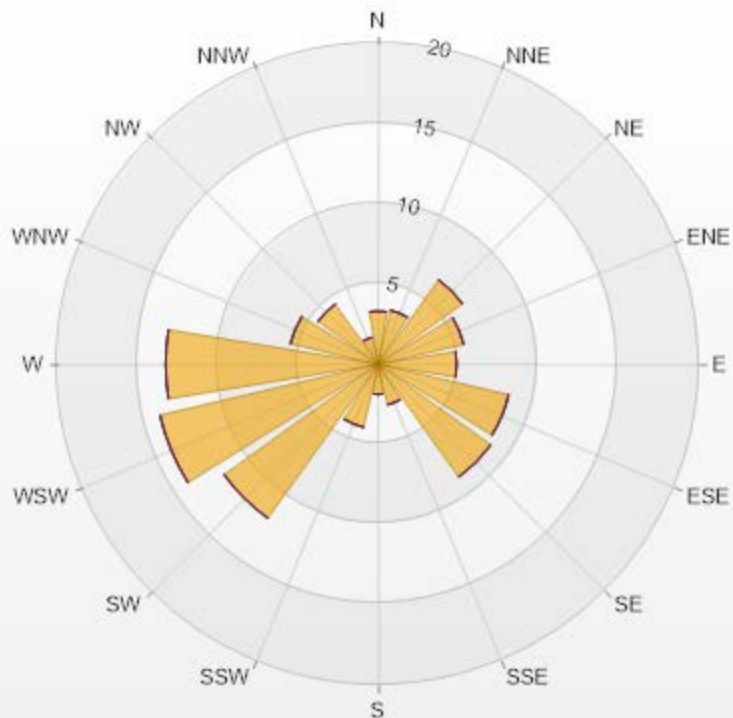
SO2[ppb] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.



Classes	SO2
<=0	91.82%
0 - 10	8.18%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-SO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 93.41% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	3.31	0	0	0	0	3.31
NNE	3.45	0	0	0	0	3.45
NE	6.47	0	0	0	0	6.47
ENE	5.47	0	0	0	0	5.47
E	4.89	0	0	0	0	4.89
ESE	8.35	0	0	0	0	8.35
SE	8.63	0	0	0	0	8.63
SSE	2.59	0	0	0	0	2.59
S	1.87	0	0	0	0	1.87
SSW	4.03	0	0	0	0	4.03
SW	11.8	0	0	0	0	11.8
WSW	13.96	0	0	0	0	13.96
W	13.24	0	0	0	0	13.24
WNW	5.61	0	0	0	0	5.61
NW	4.6	0	0	0	0	4.6
NNW	1.73	0	0	0	0	1.73
Summary	100	0	0	0	0	100



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% Icon Classes (ppb)

100 0-10

0 10-50

0 50-100

0 100-172

0 >172.0





# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

**Cold Lake South Station - July 2022**

**Summary of Hourly Averages**

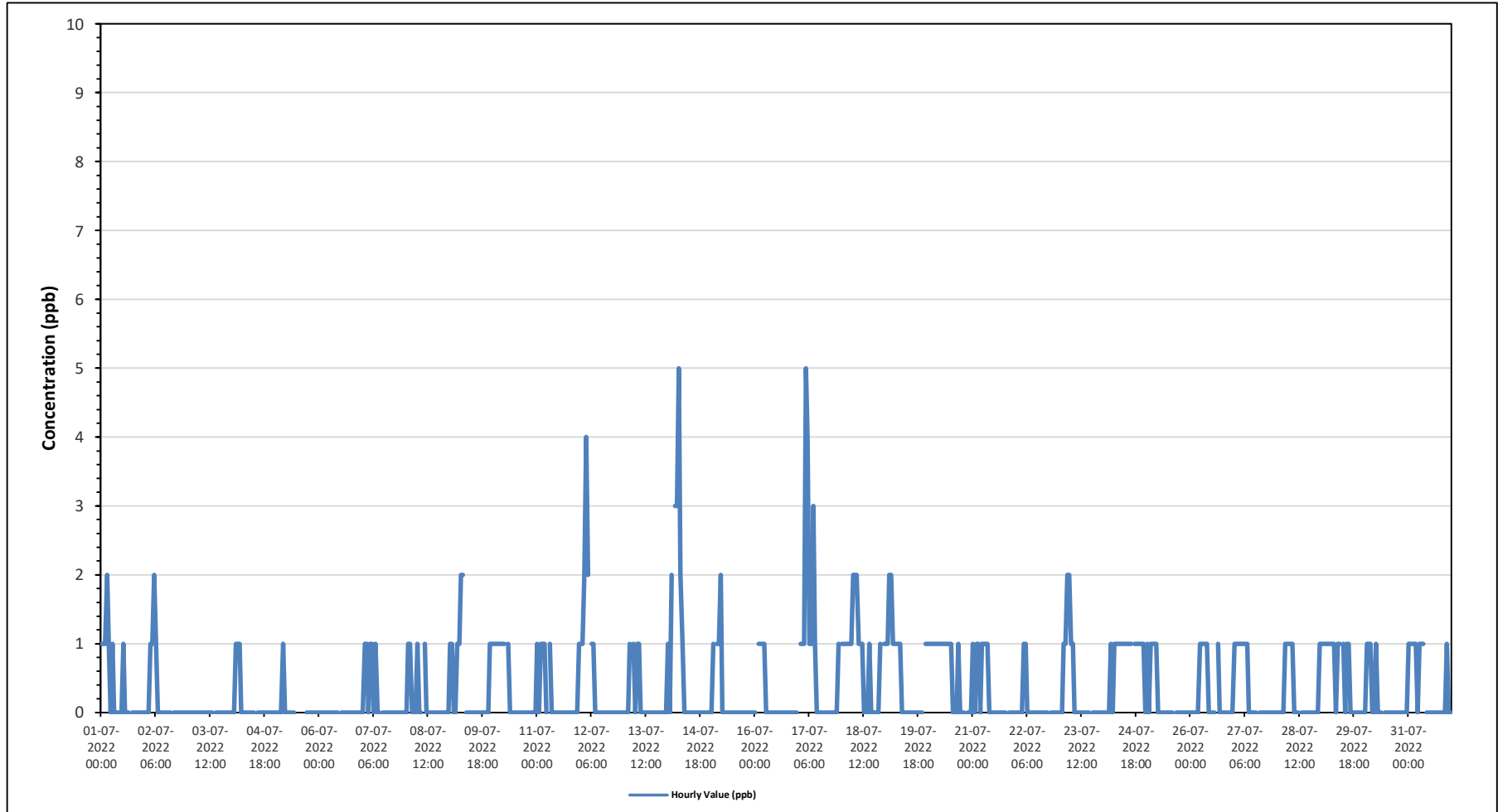
**TOTAL REDUCED SULPHUR (TRS) in ppb**

Maximum Hourly Value:	5 ppb on July 14 at hour 6	Hours in Service:	744
Maximum Daily Value:	0.9 ppb on July 17	Hours of Data:	707
Minimum Hourly Value:	0 ppb on July 1 at hour 5	Hours of Missing Data:	0
Minimum Daily Value:	0.0 ppb on July 3	Hours of Calibration:	37
Monthly Average:	0.3 ppb	Operational Uptime:	100.0

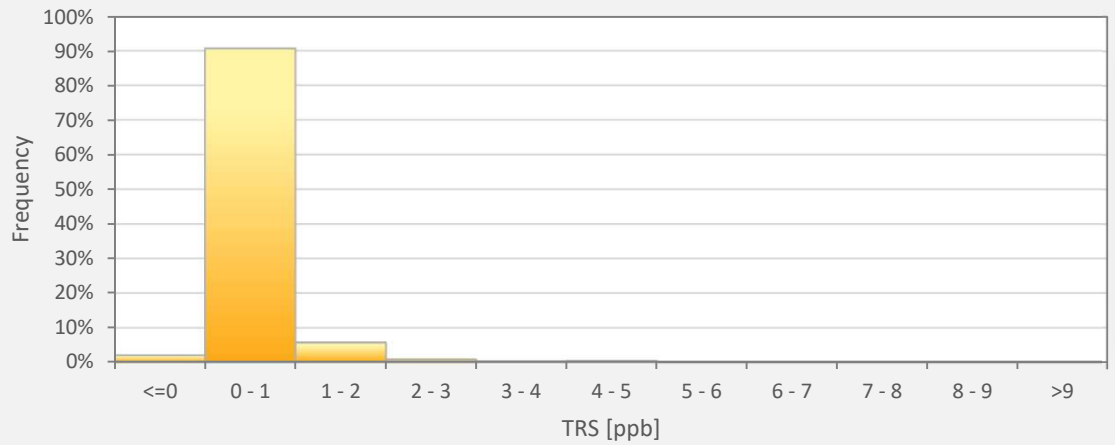
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23		
Jul 1	1	1	1	2	1	0	1	0	0	0	0	0	1	0	0	0	S	0	0	0	0	0	0	0	0	0	2	0.3	
Jul 2	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	2	0.2	
Jul 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 4	0	0	1	1	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 5	0	0	0	0	1	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 6	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 7	0	1	1	0	1	1	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	
Jul 8	0	1	1	0	0	1	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2		
Jul 9	1	1	0	0	1	2	2	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0.4	
Jul 10	1	1	1	1	1	1	1	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3	
Jul 11	1	0	1	1	1	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3	
Jul 12	1	1	2	4	2	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.5	
Jul 13	0	0	0	1	S	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	
Jul 14	1	0	2	S	3	3	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.7	
Jul 15	0	1	S	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	
Jul 16	0	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	
Jul 17	S	1	1	1	5	4	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.9	
Jul 18	1	1	1	1	1	1	2	2	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0.8	
Jul 19	1	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	1	0	2	0.6
Jul 20	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	S	0	0	0	0	0	0	1	0.6
Jul 21	1	0	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.3
Jul 22	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0.1
Jul 23	0	0	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	2	0.3
Jul 24	0	0	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	S	1	1	1	1	1	0	1	0.7
Jul 25	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0.2
Jul 26	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	1	0.3
Jul 27	1	1	1	1	1	1	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.3
Jul 28	0	0	0	0	1	1	1	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	1	0	1	0.3
Jul 29	1	1	1	1	1	1	1	1	0	1	1	S	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.6
Jul 30	0	1	1	1	0	0	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2
Jul 31	1	1	1	1	1	0	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.4
Diurnal Maximum	1.00	1.00	2.00	4.00	5.00	4.00	5.00	2.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Diurnal Average	0.47	0.50	0.77	0.83	1.07	0.93	0.87	0.70	0.50	0.21	0.17	0.11	0.14	0.04	0.07	0.14	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.10	0.13	0.17	0.17	0.17	
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance												
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure				
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																				
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																													
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																													

*Timeseries Chart of Hourly Average for TRS - Cold Lake South Station*



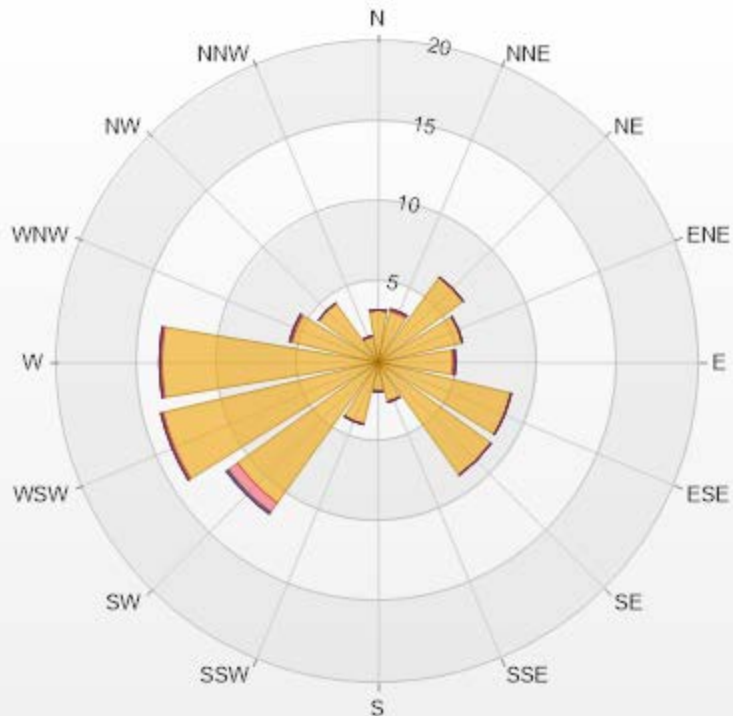
TRS[ppb] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.



Classes	TRS
<=0	2.12%
0 - 1	90.66%
1 - 2	5.66%
2 - 3	0.85%
3 - 4	0.28%
4 - 5	0.42%
5 - 6	0.00%
6 - 7	0.00%
7 - 8	0.00%
8 - 9	0.00%
>9	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-TRS[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	3.26	0	0	0	0	3.26
NNE	3.26	0.14	0	0	0	3.4
NE	6.52	0	0	0	0	6.52
ENE	5.39	0	0	0	0	5.39
E	4.68	0.14	0	0	0	4.82
ESE	8.51	0	0	0	0	8.51
SE	8.65	0	0	0	0	8.65
SSE	2.55	0	0	0	0	2.55
S	1.84	0	0	0	0	1.84
SSW	3.97	0	0	0	0	3.97
SW	10.78	0.71	0.14	0	0	11.63
WSW	13.76	0.14	0	0	0	13.9
W	13.48	0.14	0	0	0	13.62
WNW	5.53	0.14	0	0	0	5.67
NW	4.54	0	0	0	0	4.54
NNW	1.7	0	0	0	0	1.7
Summary	98.42	1.41	0.14	0	0	100



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% Icon Classes (ppb)

98 0-2

1 2-5

0 5-10

0 10-50

0 >50.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Cold Lake South Station - July 2022**

**Summary of Hourly Averages**

**OXIDES OF NITROGEN (NOx) in ppb**

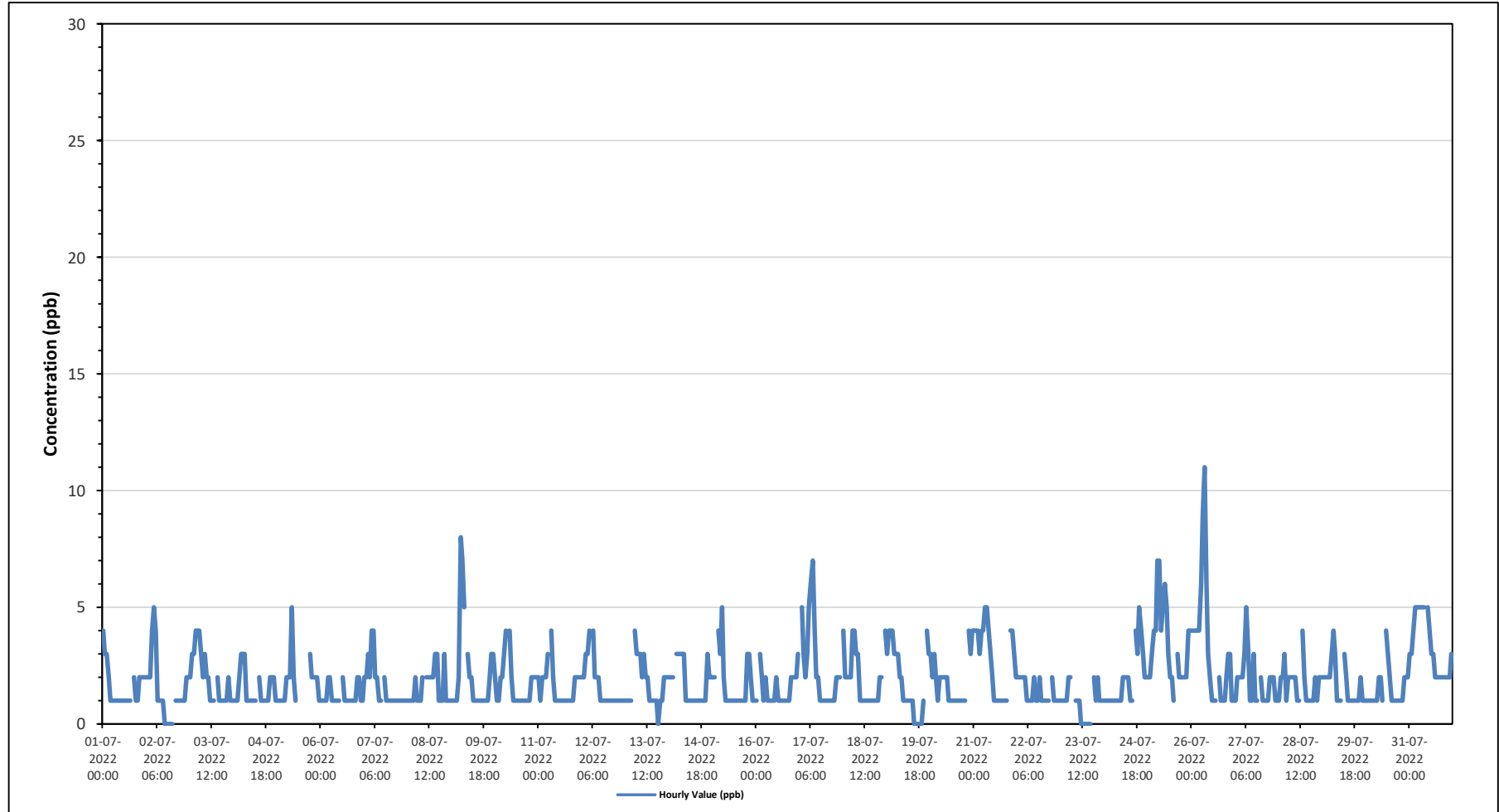
Maximum Hourly Value:	11 ppb on July 26 at hour 7	Hours in Service:	744
Maximum Daily Value:	3.4 ppb on July 25	Hours of Data:	704
Minimum Hourly Value:	0 ppb on July 2 at hour 10	Hours of Missing Data:	2
Minimum Daily Value:	0.9 ppb on July 23	Hours of Calibration:	38
Monthly Average:	1.9 ppb	Operational Uptime:	99.7

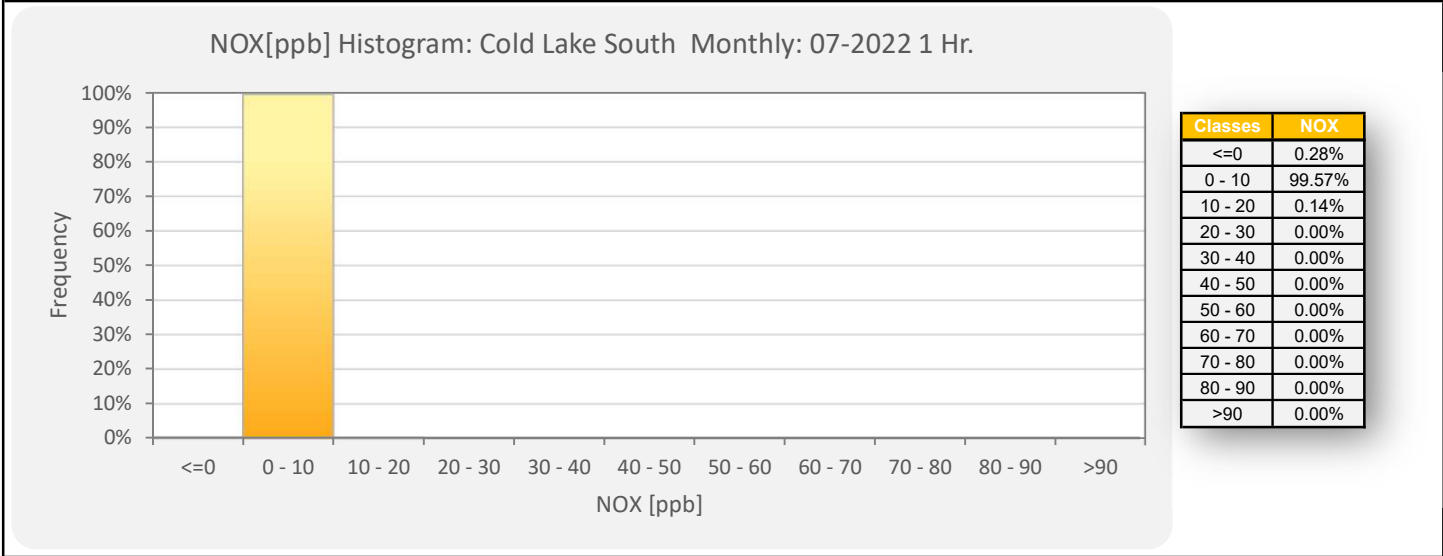
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1	1	2	2	2	1	4	1.6		
Jul 2	2	2	2	4	5	4	1	1	1	1	0	0	0	0	0	S	1	1	1	1	1	1	2	2	0	5	1.4	
Jul 3	2	3	3	4	4	4	3	2	3	2	2	1	1	1	S	2	1	1	1	1	1	2	1	1	1	4	2.0	
Jul 4	1	1	1	2	3	3	3	1	1	1	1	1	S	2	1	1	1	1	1	1	2	2	2	1	1	3	1.5	
Jul 5	1	1	1	1	1	2	2	2	5	2	1	C	C	C	C	C	C	C	3	2	2	2	2	1	1	5	-	
Jul 6	1	1	1	1	2	2	1	1	1	1	1	S	2	1	1	1	1	1	1	1	2	2	1	1	1	2	1.2	
Jul 7	2	2	3	2	4	4	2	2	1	1	S	2	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.6	
Jul 8	1	1	1	1	2	1	1	1	2	S	2	2	2	2	2	3	3	1	1	1	3	1	1	1	1	3	1.6	
Jul 9	1	1	1	1	2	8	7	5	S	3	2	2	1	1	1	1	1	1	1	1	1	2	3	3	1	8	2.2	
Jul 10	2	1	1	2	2	3	4	S	4	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	4	1.7	
Jul 11	2	1	2	2	2	S	S	4	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	4	1.6	
Jul 12	2	2	3	3	4	S	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.7	
Jul 13	1	1	1	1	S	4	3	3	3	2	3	2	2	1	1	1	1	1	0	1	1	2	2	2	0	4	1.7	
Jul 14	2	2	2	S	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1	3	1.7	
Jul 15	2	2	S	4	3	5	2	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	1	1	1	5	1.7	
Jul 16	1	S	3	2	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	2	2	3	1	3	1.5	
Jul 17	S	5	3	2	3	5	6	7	4	2	2	1	1	1	1	1	1	1	1	1	2	2	2	S	1	7	2.5	
Jul 18	4	2	2	2	4	4	3	3	1	1	1	1	1	1	1	1	1	1	1	1	2	2	S	4	1	4	2.0	
Jul 19	3	4	4	4	3	3	3	2	2	1	1	1	1	1	1	0	0	0	0	0	1	S	4	3	0	4	1.8	
Jul 20	3	2	3	2	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	S	4	3	4	1	4	1.8	
Jul 21	4	4	4	3	4	4	5	5	4	3	2	1	1	1	1	1	1	1	1	1	S	4	3	2	1	5	2.7	
Jul 22	2	2	2	2	2	1	1	1	1	2	1	2	1	1	1	1	1	1	S	2	1	1	1	1	1	1	2	1.3
Jul 23	1	1	1	1	2	2	NRM	NRM	1	1	1	0	0	0	0	0	0	0	S	2	1	2	1	1	1	0	2	0.9
Jul 24	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	S	S	4	3	5	4	3	2	2	1	5	1.9	
Jul 25	2	2	3	4	4	7	7	4	5	6	5	3	2	2	1	S	3	2	2	2	2	2	2	4	4	1	7	3.4
Jul 26	4	4	4	4	4	6	9	11	6	3	2	1	1	1	S	2	1	1	1	2	3	3	1	1	1	11	3.3	
Jul 27	1	2	2	2	2	3	5	3	1	1	3	1	1	S	2	1	1	1	1	2	2	2	1	1	1	5	1.8	
Jul 28	1	2	2	3	1	2	2	2	2	2	1	1	S	4	2	1	1	1	1	1	2	1	2	2	1	4	1.7	
Jul 29	2	2	2	2	2	3	4	3	1	1	1	S	3	2	1	1	1	1	1	1	1	2	1	1	1	4	1.7	
Jul 30	1	1	1	1	1	1	1	2	2	1	S	4	3	2	1	1	1	1	1	1	1	2	2	2	1	4	1.5	
Jul 31	3	3	4	5	5	5	5	5	5	S	5	4	3	3	2	2	2	2	2	2	2	2	2	3	2	5	3.3	
Diurnal Maximum	4	5	4	5	5	8	9	11	6	6	5	4	3	4	2	3	3	4	3	5	4	4	4	4	4	4	4	
Diurnal Average	2.0	2.0	2.2	2.3	2.5	3.3	3.2	2.8	2.4	1.7	1.6	1.4	1.3	1.3	1.1	1.1	1.1	1.2	1.2	1.4	1.9	2.0	1.9	1.9	1.9	1.9		

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for NOx - Cold Lake South Station**

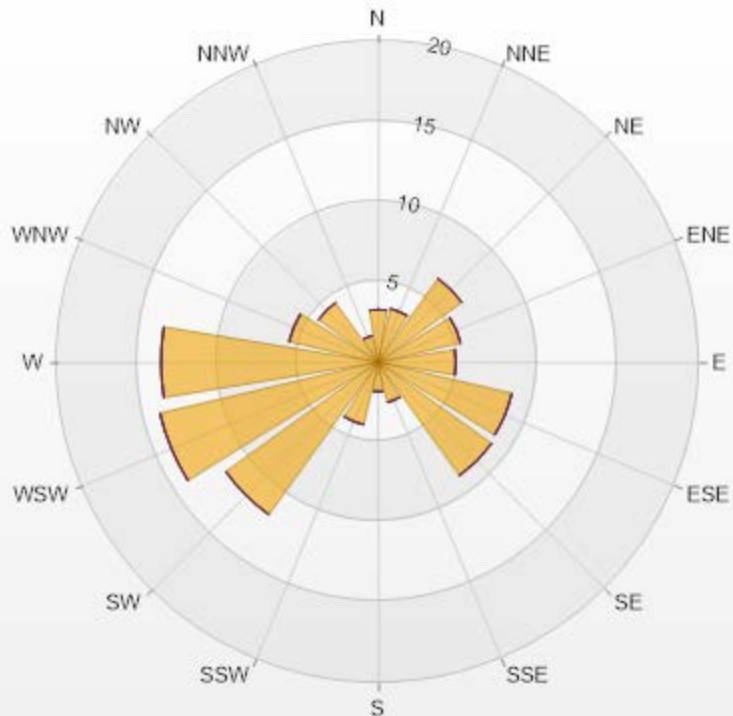






Wind: Cold Lake South Poll.: Cold Lake South-NOX[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.28	0	0	0	0	3.28
NNE	3.42	0	0	0	0	3.42
NE	6.41	0	0	0	0	6.41
ENE	5.27	0	0	0	0	5.27
E	4.84	0	0	0	0	4.84
ESE	8.55	0	0	0	0	8.55
SE	8.69	0	0	0	0	8.69
SSE	2.56	0	0	0	0	2.56
S	1.85	0	0	0	0	1.85
SSW	3.99	0	0	0	0	3.99
SW	11.68	0	0	0	0	11.68
WSW	13.96	0	0	0	0	13.96
W	13.53	0	0	0	0	13.53
WNW	5.7	0	0	0	0	5.7
NW	4.56	0	0	0	0	4.56
NNW	1.71	0	0	0	0	1.71
Summary	100	0	0	0	0	100



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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

0  76-159

0  >159.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Cold Lake South Station - July 2022**

**Summary of Hourly Averages**

**NITRIC OXIDE (NO) in ppb**

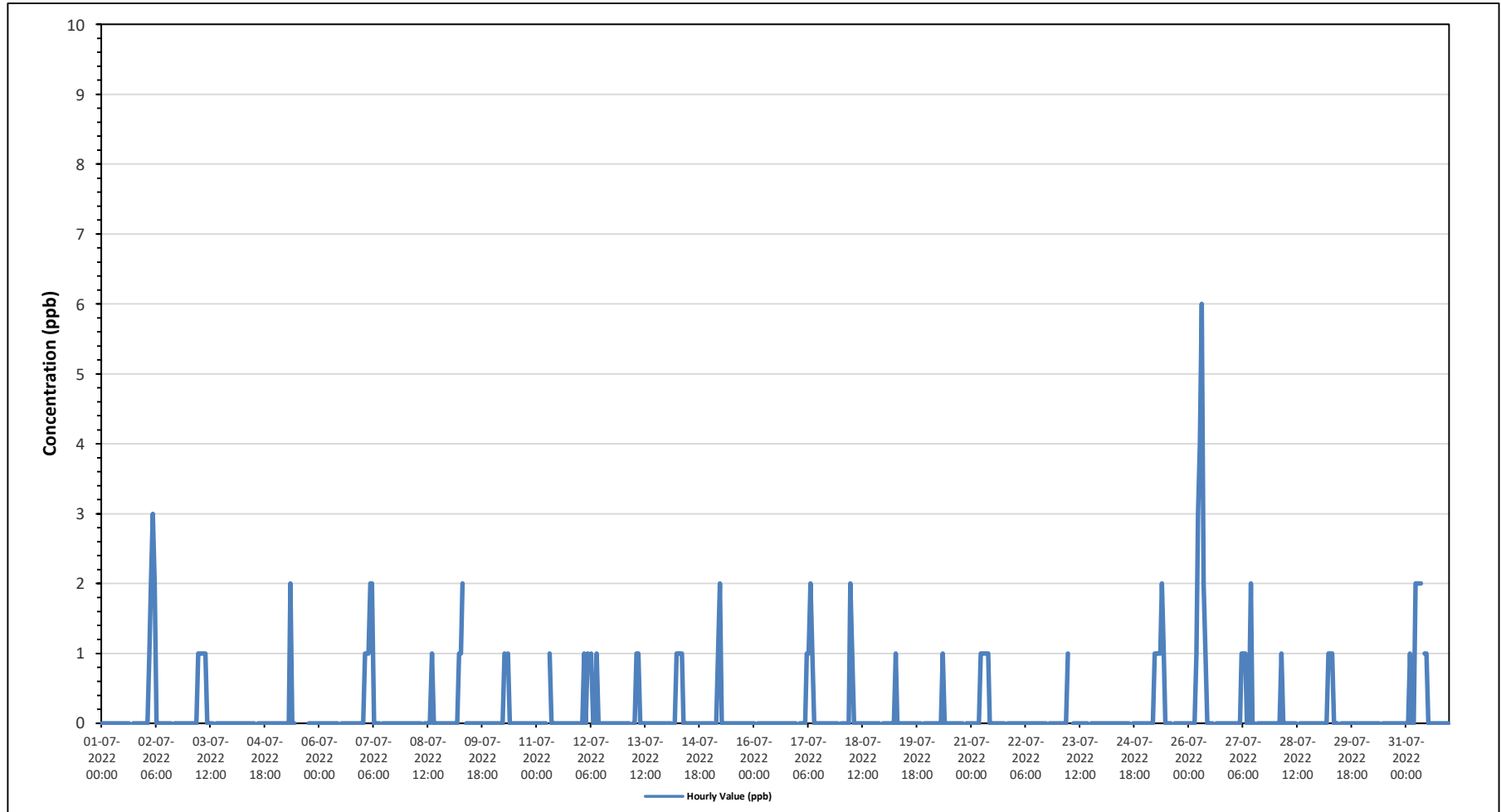
Maximum Hourly Value:	6 ppb	on July 26 at hour 7	Hours in Service:	744
Maximum Daily Value:	0.7 ppb	on July 26	Hours of Data:	704
Minimum Hourly Value:	0 ppb	on July 1 at hour 0	Hours of Missing Data:	2
Minimum Daily Value:	0.0 ppb	on July 1	Hours of Calibration:	38
Monthly Average:	0.1 ppb		Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23							
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jul 2	0	0	1	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.3
Jul 3	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-	
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 7	0	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3		
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0			
Jul 9	0	0	0	0	0	1	1	2	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2		
Jul 10	0	0	0	0	0	0	1	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1			
Jul 11	0	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0			
Jul 12	0	0	1	0	1	S	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2		
Jul 13	0	0	0	0	S	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1		
Jul 14	0	0	0	0	S	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2		
Jul 15	0	0	S	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1		
Jul 16	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 17	S	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2		
Jul 18	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.1		
Jul 19	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0.0		
Jul 20	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0		
Jul 21	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2		
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 23	0	0	0	0	0	1	NRM	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	0.0		
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
Jul 25	0	0	0	0	0	1	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3		
Jul 26	0	0	0	0	1	3	4	6	2	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	6	0.7			
Jul 27	0	0	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2		
Jul 28	0	0	0	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0			
Jul 29	0	0	0	0	0	1	1	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1			
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0		
Jul 31	0	0	1	0	0	2	2	2	2	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.5		
Diurnal Maximum	0	1	1	2	3	3	4	6	2	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Diurnal Average	0.0	0.0	0.1	0.1	0.3	0.7	0.6	0.7	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

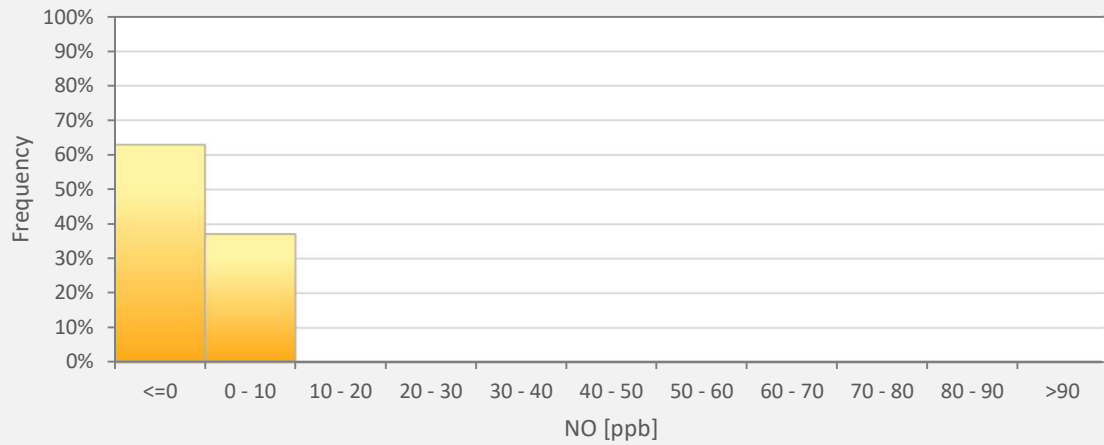
<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for NO - Cold Lake South Station**



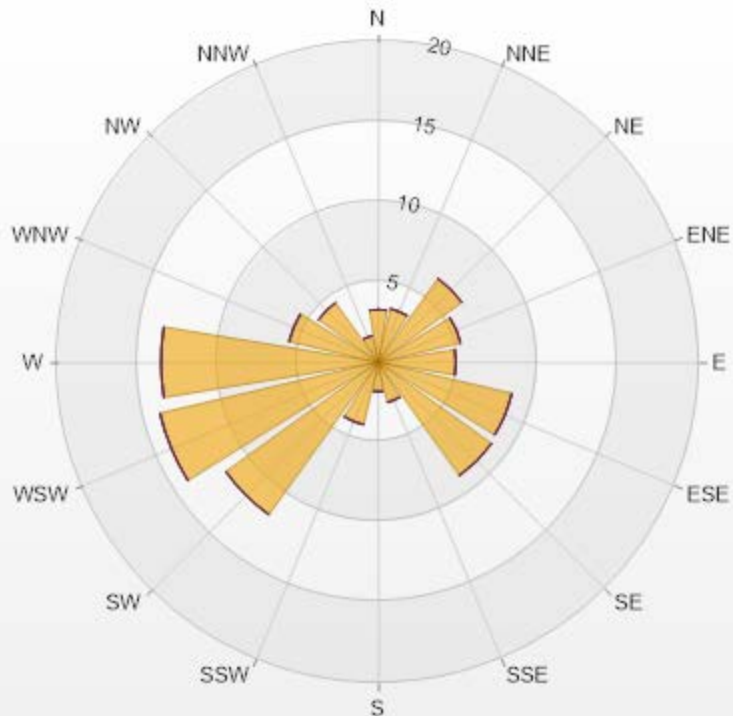
NO[ppb] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.



Classes	NO
<=0	62.93%
0 - 10	37.07%
10 - 20	0.00%
20 - 30	0.00%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-NO[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.28	0	0	0	0	3.28
NNE	3.42	0	0	0	0	3.42
NE	6.41	0	0	0	0	6.41
ENE	5.27	0	0	0	0	5.27
E	4.84	0	0	0	0	4.84
ESE	8.55	0	0	0	0	8.55
SE	8.69	0	0	0	0	8.69
SSE	2.56	0	0	0	0	2.56
S	1.85	0	0	0	0	1.85
SSW	3.99	0	0	0	0	3.99
SW	11.68	0	0	0	0	11.68
WSW	13.96	0	0	0	0	13.96
W	13.53	0	0	0	0	13.53
WNW	5.7	0	0	0	0	5.7
NW	4.56	0	0	0	0	4.56
NNW	1.71	0	0	0	0	1.71
Summary	100	0	0	0	0	100




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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

0  76-159

0  >159.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - July 2022

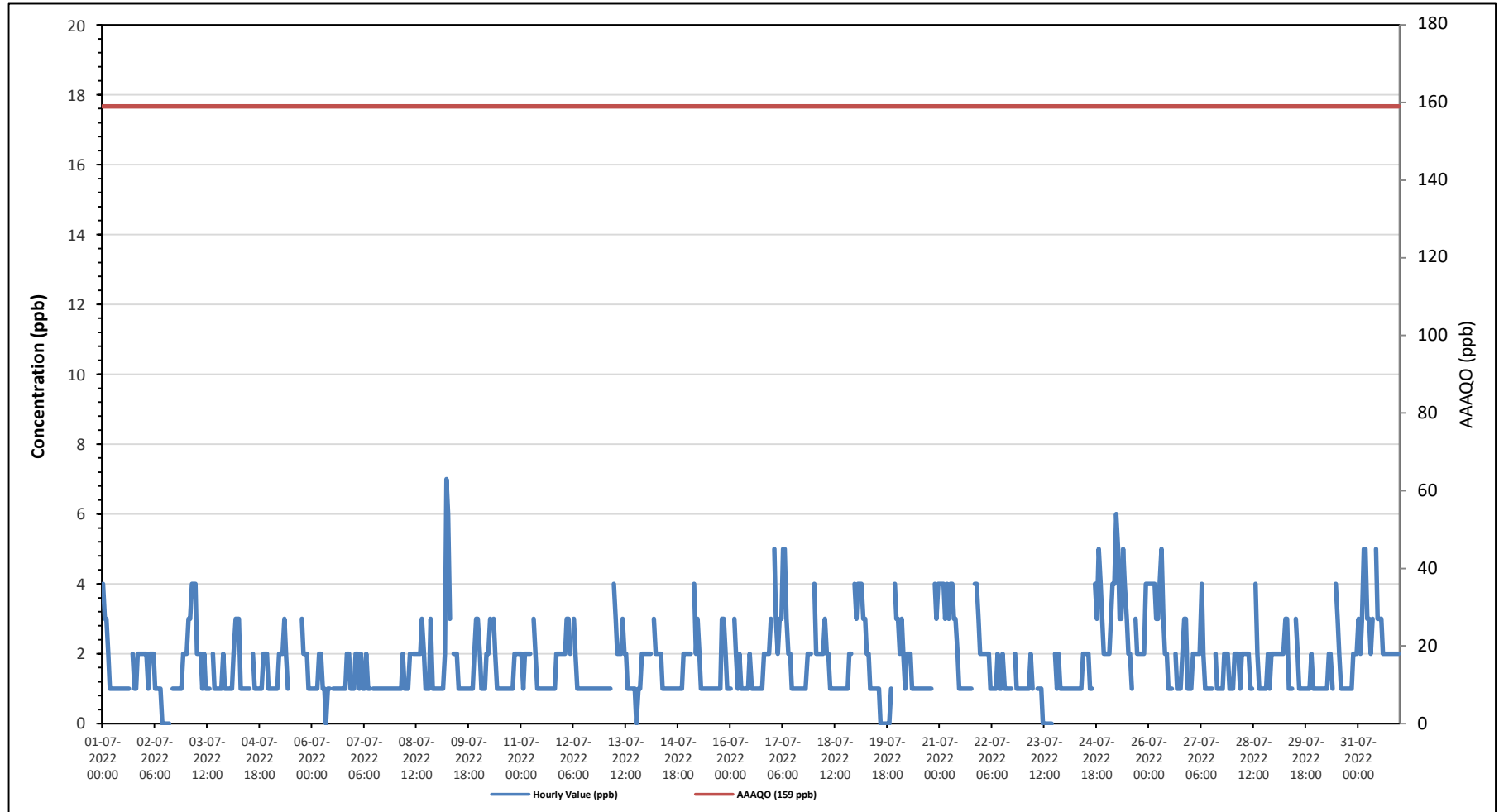
Summary of Hourly Averages

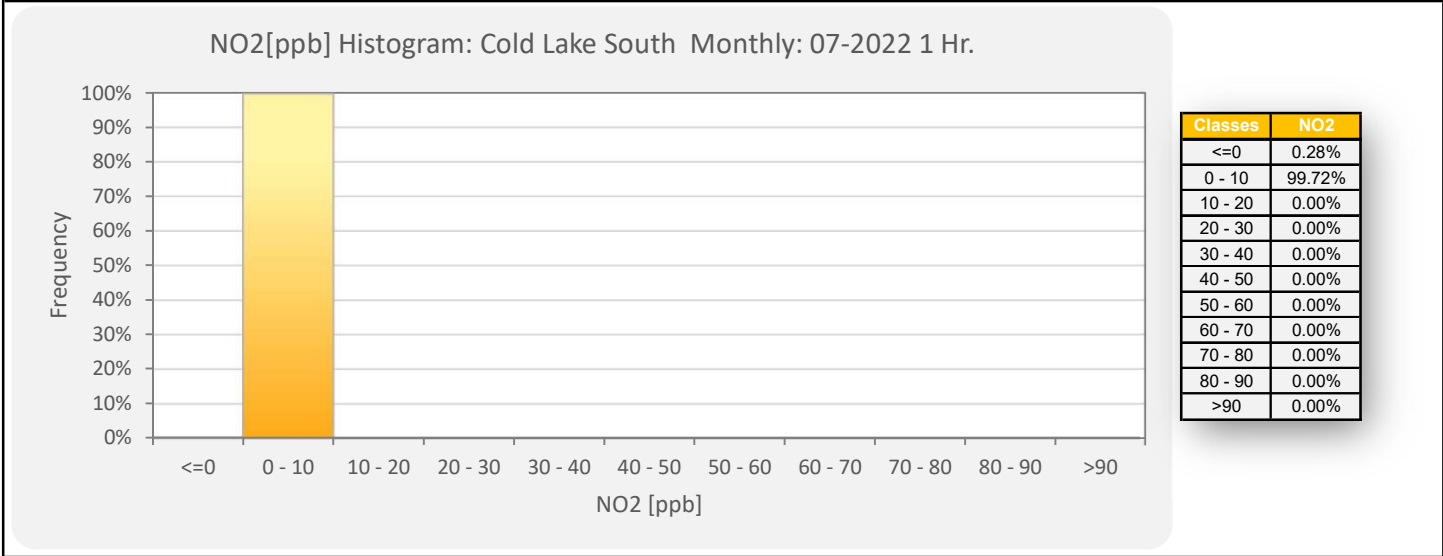
NITROGEN DIOXIDE (NO<sub>2</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb																																																							
Number of 1-Hour Exceedances: 0																																																							
Maximum Hourly Value: 7 ppb on July 9 at hour 5													Hours in Service: 744																																										
Maximum Daily Value: 3.0 ppb on July 25													Hours of Data: 704																																										
Minimum Hourly Value: 0 ppb on July 2 at hour 10													Hours of Missing Data: 2																																										
Minimum Daily Value: 0.9 ppb on July 23													Hours of Calibration: 38																																										
Monthly Average: 1.7 ppb													Operational Uptime: 99.7																																										
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																												
Jul 1	4	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1	1	2	2	2	2	1	4	1.6																												
Jul 2	2	2	1	2	2	2	1	1	1	1	0	0	0	0	0	S	1	1	1	1	1	1	2	2	0	2	1.1																												
Jul 3	2	3	3	4	4	4	2	2	2	1	2	1	1	1	S	2	1	1	1	1	1	2	1	1	1	4	1.9																												
Jul 4	1	1	1	2	3	3	3	1	1	1	1	1	1	S	2	1	1	1	1	1	2	2	2	1	1	3	1.5																												
Jul 5	1	1	1	1	1	2	2	2	3	2	1	1	C	C	C	C	C	C	3	2	2	2	1	1	1	3	-																												
Jul 6	1	1	1	1	2	2	1	1	0	1	1	S	1	1	1	1	1	1	1	1	2	2	1	1	0	2	1.1																												
Jul 7	1	2	2	1	2	1	1	2	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.2																												
Jul 8	1	1	1	1	2	1	1	1	1	S	2	2	2	2	2	3	2	1	1	1	3	1	1	1	1	3	1.5																												
Jul 9	1	1	1	1	2	7	6	3	S	2	2	2	1	1	1	1	1	1	1	1	1	2	3	3	1	7	2.0																												
Jul 10	2	1	1	1	2	2	3	S	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	3	1.5																												
Jul 11	2	1	2	2	2	2	S	3	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	3	1.5																												
Jul 12	2	2	3	3	2	S	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1.4																												
Jul 13	1	1	1	1	S	4	3	2	2	2	3	2	2	1	1	1	1	1	0	1	1	2	2	2	0	4	1.6																												
Jul 14	2	2	2	S	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	3	1.5																												
Jul 15	2	2	S	4	2	3	2	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	1	1	1	4	1.6																												
Jul 16	1	S	3	2	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	2	2	3	1	3	1.5																												
Jul 17	S	5	3	2	3	3	5	5	3	2	2	1	1	1	1	1	1	1	1	1	2	2	2	S	1	5	2.2																												
Jul 18	4	2	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	S	4	1	4	1.7																												
Jul 19	3	4	4	4	3	3	2	2	1	1	1	1	1	1	0	0	0	0	0	0	1	S	4	3	0	4	1.7																												
Jul 20	3	2	3	2	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	S	4	3	4	1	4	1.7																												
Jul 21	4	4	4	3	4	3	4	4	3	3	2	1	1	1	1	1	1	1	1	1	S	4	3	2	1	4	2.6																												
Jul 22	2	2	2	2	2	1	1	1	1	2	1	1	2	1	1	1	1	1	1	S	2	1	1	1	1	2	1.3																												
Jul 23	1	1	1	1	2	1	NRM	NRM	1	1	1	0	0	0	0	0	0	0	0	S	2	1	2	1	1	0	2	0.9																											
Jul 24	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	S	4	3	5	4	3	2	2	1	5	1.9																												
Jul 25	2	2	3	4	4	6	5	3	3	5	4	3	2	2	1	S	3	2	2	2	2	2	4	4	1	6	3.0																												
Jul 26	4	4	4	4	3	3	4	5	3	2	2	1	1	1	S	2	1	1	1	2	3	3	1	1	1	5	2.4																												
Jul 27	1	2	2	2	2	2	4	2	1	1	1	1	1	S	2	1	1	1	1	2	2	2	1	1	1	4	1.6																												
Jul 28	1	2	2	2	1	2	2	2	2	2	1	1	S	4	2	1	1	1	1	1	2	1	2	2	1	4	1.7																												
Jul 29	2	2	2	2	2	2	3	3	1	1	1	S	3	2	1	1	1	1	1	1	1	2	1	1	1	3	1.6																												
Jul 30	1	1	1	1	1	1	1	2	2	1	S	4	3	2	1	1	1	1	1	1	1	2	2	2	1	4	1.5																												
Jul 31	3	2	3	5	5	3	3	2	3	S	5	3	3	3	2	2	2	2	2	2	2	2	2	2	2	5	2.7																												
Diurnal Maximum	4	5	4	5	5	7	6	5	3	5	5	4	3	4	2	3	3	4	3	5	4	4	4	4	4																														
Diurnal Average	1.9	2.0	2.1	2.2	2.2	2.4	2.5	2.1	1.7	1.5	1.5	1.4	1.3	1.3	1.1	1.1	1.1	1.2	1.2	1.4	1.9	2.0	1.8	1.9																															
C	Monthly Calibration													S	Daily Zero-Span Check													Q	Quality Assurance																										
K	Collection Error													N	No Data (Machine Not in Service)													Y	Routine Maintenance													P	Power Failure												
X	Invalid Data (Equipment Malfunction /Recovery)													NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																								
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																																							
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																							



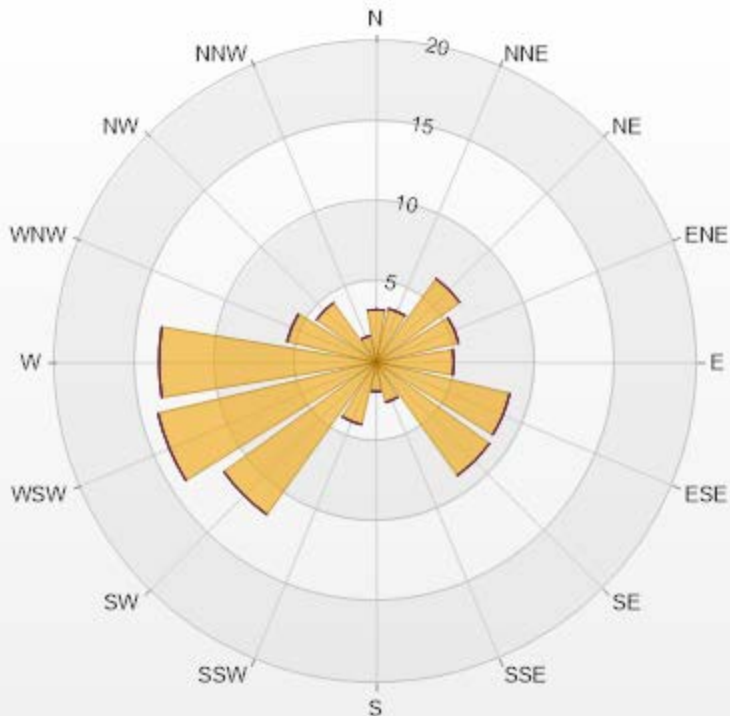
**Timeseries Chart of Hourly Average for NO2 - Cold Lake South Station**





Wind: Cold Lake South Poll.: Cold Lake South-NO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.28	0	0	0	0	3.28
NNE	3.42	0	0	0	0	3.42
NE	6.41	0	0	0	0	6.41
ENE	5.27	0	0	0	0	5.27
E	4.84	0	0	0	0	4.84
ESE	8.55	0	0	0	0	8.55
SE	8.69	0	0	0	0	8.69
SSE	2.56	0	0	0	0	2.56
S	1.85	0	0	0	0	1.85
SSW	3.99	0	0	0	0	3.99
SW	11.68	0	0	0	0	11.68
WSW	13.96	0	0	0	0	13.96
W	13.53	0	0	0	0	13.53
WNW	5.7	0	0	0	0	5.7
NW	4.56	0	0	0	0	4.56
NNW	1.71	0	0	0	0	1.71
Summary	100	0	0	0	0	100



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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

0  76-159

0  >159.0



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

## Cold Lake South Station - July 2022

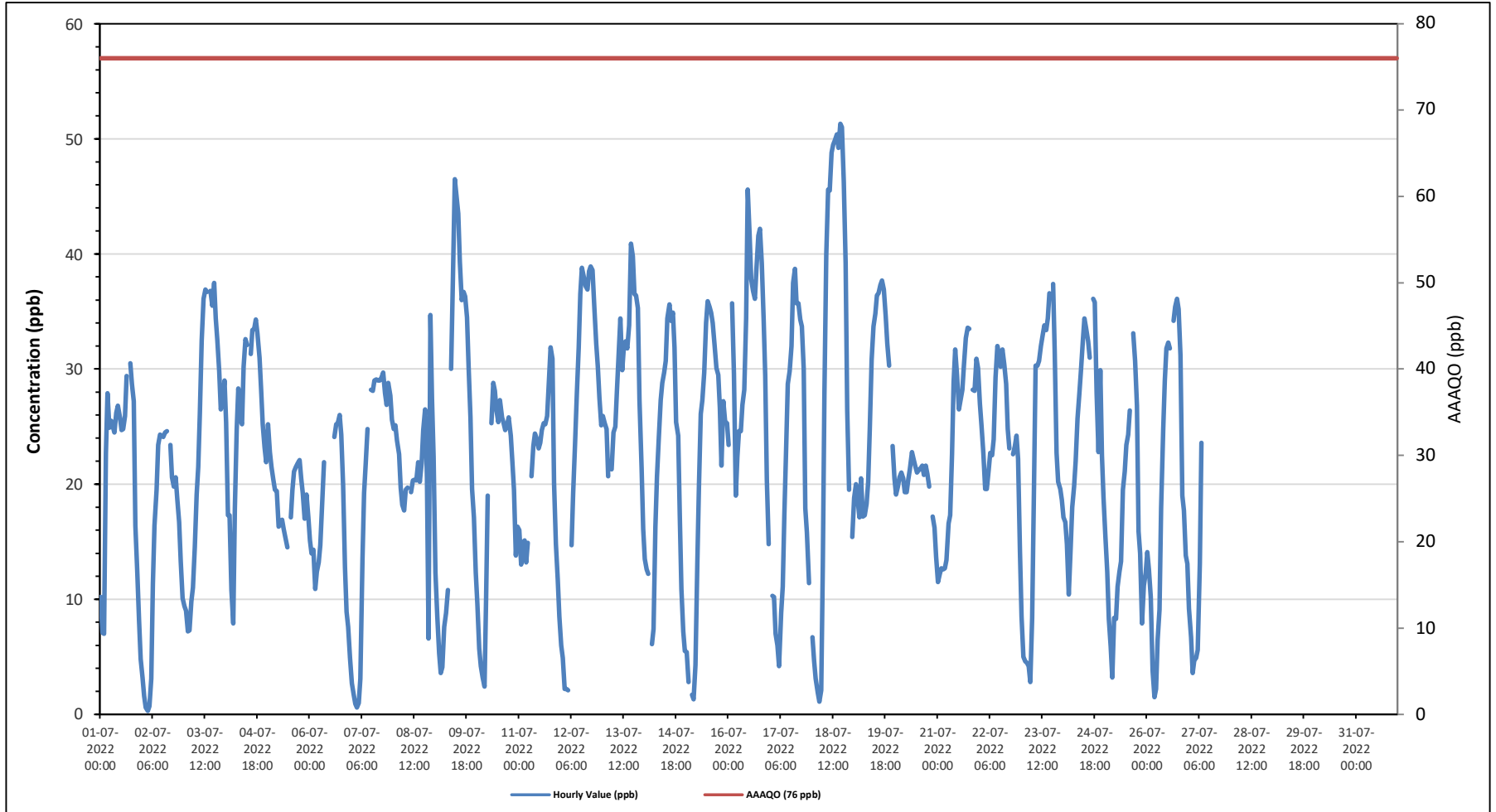
### Summary of Hourly Averages

#### OZONE (O<sub>3</sub>) in ppb

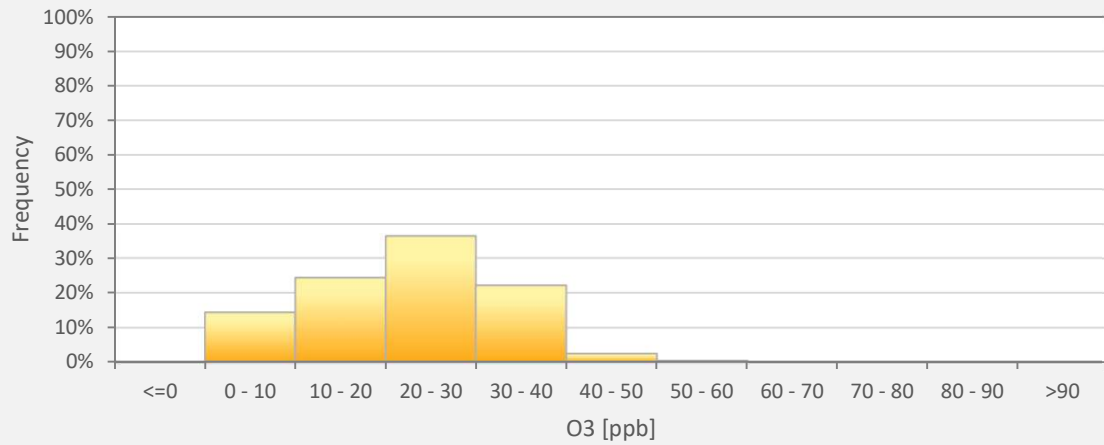
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb																																											
Number of 1-Hour Exceedances: 0																																											
Maximum Hourly Value: 51.3 ppb on July 18 at hour 16												Hours in Service: 744																															
Maximum Daily Value: 31.6 ppb on July 16												Hours of Data: 601																															
Minimum Hourly Value: 0.3 ppb on July 2 at hour 3												Hours of Missing Data: 112																															
Minimum Daily Value: 15.0 ppb on July 2												Hours of Calibration: 31																															
Monthly Average: 22.5 ppb												Operational Uptime: 84.9																															
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																
Jul 1	10.2	7.1	7	22.7	27.9	24.9	25.5	25	24.5	26.2	26.8	25.8	24.7	24.8	25.9	29.4	S	30.5	28.7	27.2	16.4	12.5	8.1	4.8	4.8	30.5	21.2																
Jul 2	3.2	1.6	0.6	0.3	0.7	3.1	11.3	16.4	19.5	23.4	24.3	24.2	24.1	24.5	24.6	S	23.4	20.6	19.8	20.6	18.7	16.7	13.3	10.1	0.3	24.6	15.0																
Jul 3	9.4	9	7.2	7.3	9.8	11	14.5	19.1	21.5	26.1	32.5	36.1	36.9	36.7	S	36.8	35.5	37.5	34.4	32.5	29.8	26.5	27.5	29	7.2	37.5	24.6																
Jul 4	25.4	17.3	17.3	10.8	7.9	17.9	24.8	28.3	25.6	25.2	30.2	32.6	32.1	S	31.3	33.4	33.5	34.3	33.1	31	28.2	25.2	23.2	21.9	7.9	34.3	25.7																
Jul 5	25.2	22.8	21.5	20.4	19.5	19.4	16.3	16.5	16.9	16.1	15.4	14.5	S	17.1	19.5	21.1	21.5	21.8	22.1	20.5	19.2	17	19.1	17.1	14.5	25.2	19.2																
Jul 6	15.1	14	14.3	10.9	12.4	13.2	14.7	18.3	21.9	C	C	C	C	C	24.1	25.2	25.3	26	24.3	19.9	12.8	8.9	7.6	4.9	4.9	26.0	16.5																
Jul 7	2.7	1.7	0.9	0.6	1	3.1	13.5	19.2	21.7	24.8	S	28.2	28.1	29	29.1	29	29	29.3	29.7	27.9	26.9	28.8	27.7	25.6	0.6	29.7	19.9																
Jul 8	24.8	25.1	23.8	22.6	19.7	18.2	17.7	19.5	19.7	S	19.3	20.3	20.4	20.3	21.9	20.2	21.8	24.7	26.5	20.6	6.6	34.7	27.4	22.4	6.6	34.7	21.7																
Jul 9	12.3	8.5	5.3	3.6	4.1	7.6	8.8	10.8	S	30	38	46.5	45.1	43.5	39.3	36	36.7	36.3	34.5	30.2	25.8	19.6	17.1	12.3	3.6	46.5	24.0																
Jul 10	9.6	5.7	4.2	3.2	2.4	10.2	19	S	25.3	28.8	28.1	26.4	25.4	27.3	25.8	25.3	24.7	25.1	25.8	24.2	21.9	19.5	13.8	16.3	2.4	28.8	19.0																
Jul 11	16	13	14.9	15.1	13.2	14.9	S	20.7	23.3	24.4	24	23.1	23.6	24.7	25.3	25.2	25.9	29.1	31.9	30.9	20.1	14.8	11.7	8.5	8.5	31.9	20.6																
Jul 12	6	4.9	2.2	2.2	2.1	S	14.7	19.2	23.4	27.9	31.9	36.5	38.8	38	37.2	36.9	38.5	38.9	38.6	35.3	32.2	30.2	27.5	25.1	2.1	38.9	25.6																
Jul 13	25.9	25.3	24.8	20.7	S	21.3	24.5	25	28.1	31.5	34.4	29.9	32.2	32.4	31.8	33.8	40.9	39.8	36.5	36.4	35.3	27.3	21.4	16.1	16.1	40.9	29.4																
Jul 14	13.5	12.6	12.2	S	6.1	7.4	16.3	20.7	24.1	27.3	28.8	29.7	30.7	34.4	35.6	34.2	34.9	31.9	25.4	24.2	17.2	10.9	7.2	5.5	5.5	35.6	21.3																
Jul 15	5.4	2.8	S	1.7	1.3	4.3	13.1	19.7	26.1	27.3	29.7	34	35.9	35.4	34.9	34	32.1	30.1	29.5	26.6	21.6	27.2	25.4	25.3	1.3	35.9	22.8																
Jul 16	23.4	S	35.7	29.6	19	22.4	24.6	24.6	26.9	28.2	34.4	45.6	41.7	37.8	36.8	36.1	38.8	41.6	42.2	39.2	34.3	29.4	20.4	14.8	14.8	45.6	31.6																
Jul 17	S	10.3	10.2	7	6	4.2	8.8	11.1	17.3	23.3	28.7	29.8	32	37.5	38.7	35.7	35.7	34.3	33.7	30	17.9	15.8	11.4	S	4.2	38.7	21.8																
Jul 18	6.7	4.7	3.1	1.9	1.1	2.1	12.9	27.8	39.9	45.6	45.5	48.8	49.5	50.4	49.2	51.3	51	46.3	39.2	26.4	19.5	S	15.4	1.1	51.3	29.9																	
Jul 19	18.8	20	18.5	17.1	20.5	17.2	17.3	18.3	20.2	24.8	30.8	33.7	34.8	36.4	36.6	37.3	37.7	36.9	34.6	32.2	30.3	S	23.3	20.5	17.1	37.7	26.9																
Jul 20	19.1	19.8	20.6	21	20.5	19.3	19.3	20.4	21.3	22.8	22.2	21.6	21	21.2	21.4	21.6	20.8	21.6	20.9	19.8	S	17.2	16.2	13.7	13.7	22.8	20.1																
Jul 21	11.5	12.2	12.7	12.6	12.7	13.4	16.6	17.3	22.6	28.9	31.7	29.4	26.5	27.4	28.2	30.4	32.7	33.6	33.5	S	28.2	28.1	30.9	30.1	11.5	33.6	24.0																
Jul 22	27	25.1	22.7	19.6	19.6	21.2	22.7	22.5	23.9	29.3	32	31.3	30.2	31.7	30.4	28.7	24.8	23.1	S	22.6	23.3	24.2	22.2	14.2	14.2	32.0	24.9																
Jul 23	8.5	5	4.6	4.5	4.2	2.8	8.4	19.9	30.3	30.3	30.7	32	33	33.8	33.4	34.4	36.6	S	37.4	31.5	22.7	20.2	19.6	18.6	2.8	37.4	21.8																
Jul 24	17.1	16.7	14.8	10.4	14.4	18	19.8	22	25.7	27.9	29.9	32.4	34.4	33.6	32.4	31	S	36.1	35.8	27.9	22.8	29.9	22.5	18.8	10.4	36.1	25.0																
Jul 25	15.5	12.4	8.3	5.9	3.2	8.4	8.3	11.1	12.4	13.3	19.5	21.1	23.4	24.3	26.4	S	33.1	30.7	26.8	15.9	14	7.9	11.2	12.3	3.2	33.1	15.9																
Jul 26	14.1	12.6	10.2	3.8	1.5	2.2	6.5	9.1	17.9	24.8	29	31.8	32.3	31.8	S	34.2	35.4	36.1	35.2	31.2	19	17.7	13.8	13.1	1.5	36.1	20.1																
Jul 27	9.2	6.7	3.6	4.7	4.9	5.6	13.1	23.6	X	X	NRM	NRM	NRM	NRM	NRM	X	X	X	X	X	X	X	X	X	3.6	23.6	-																
Jul 28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
Jul 29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
Jul 30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
Jul 31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
Diurnal Maximum	27	25	36	30	28	25	26	28	40	46	46	49	50	50	50	49	51	51	46	39	35	35	31	30																			
Diurnal Average	14.4	12.2	12.4	10.8	9.8	12.1	15.9	19.5	23.2	26.6	29.1	30.6	31.5	31.4	30.9	31.6	32.1	32.0	31.5	27.9	22.9	21.2	18.8	16.7																			
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance																				
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance										P	Power Failure									
X	Invalid Data (Equipment Malfunction /Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for O3 - Cold Lake South Station**



O3[ppb] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.

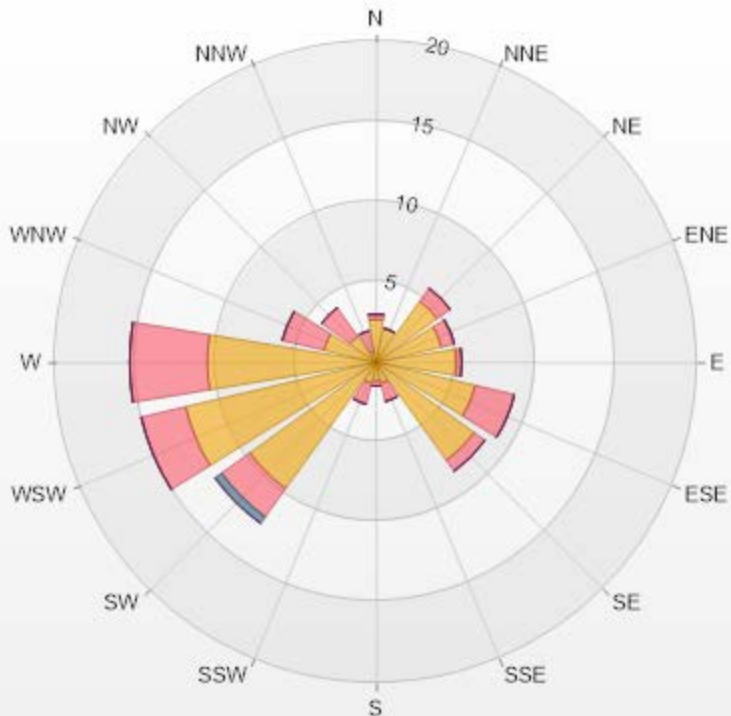


Classes	O3
<=0	0.00%
0 - 10	14.31%
10 - 20	24.29%
20 - 30	36.27%
30 - 40	22.13%
40 - 50	2.50%
50 - 60	0.50%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-O3[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 80.51% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.67	0.33	0	0	0	3
NNE	2.17	0	0	0	0	2.17
NE	4.67	1	0	0	0	5.67
ENE	4.17	0.83	0	0	0	5
E	5.01	0.33	0	0	0	5.34
ESE	6.34	2.5	0	0	0	8.84
SE	7.51	0.83	0	0	0	8.34
SSE	1.34	1.17	0	0	0	2.51
S	1.17	0.33	0	0	0	1.5
SSW	1.34	1.34	0	0	0	2.68
SW	9.68	2.17	0.5	0	0	12.35
WSW	12.19	2.84	0	0	0	15.03
W	10.52	4.84	0	0	0	15.36
WNW	3.34	2.67	0	0	0	6.01
NW	2	2.17	0	0	0	4.17
NNW	0.67	1.34	0	0	0	2.01
Summary	74.79	24.69	0.5	0	0	100





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% Icon Classes (ppb)

75 0-30

25 30-50

1 50-76

0 76-159

0 >159.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - July 2022

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

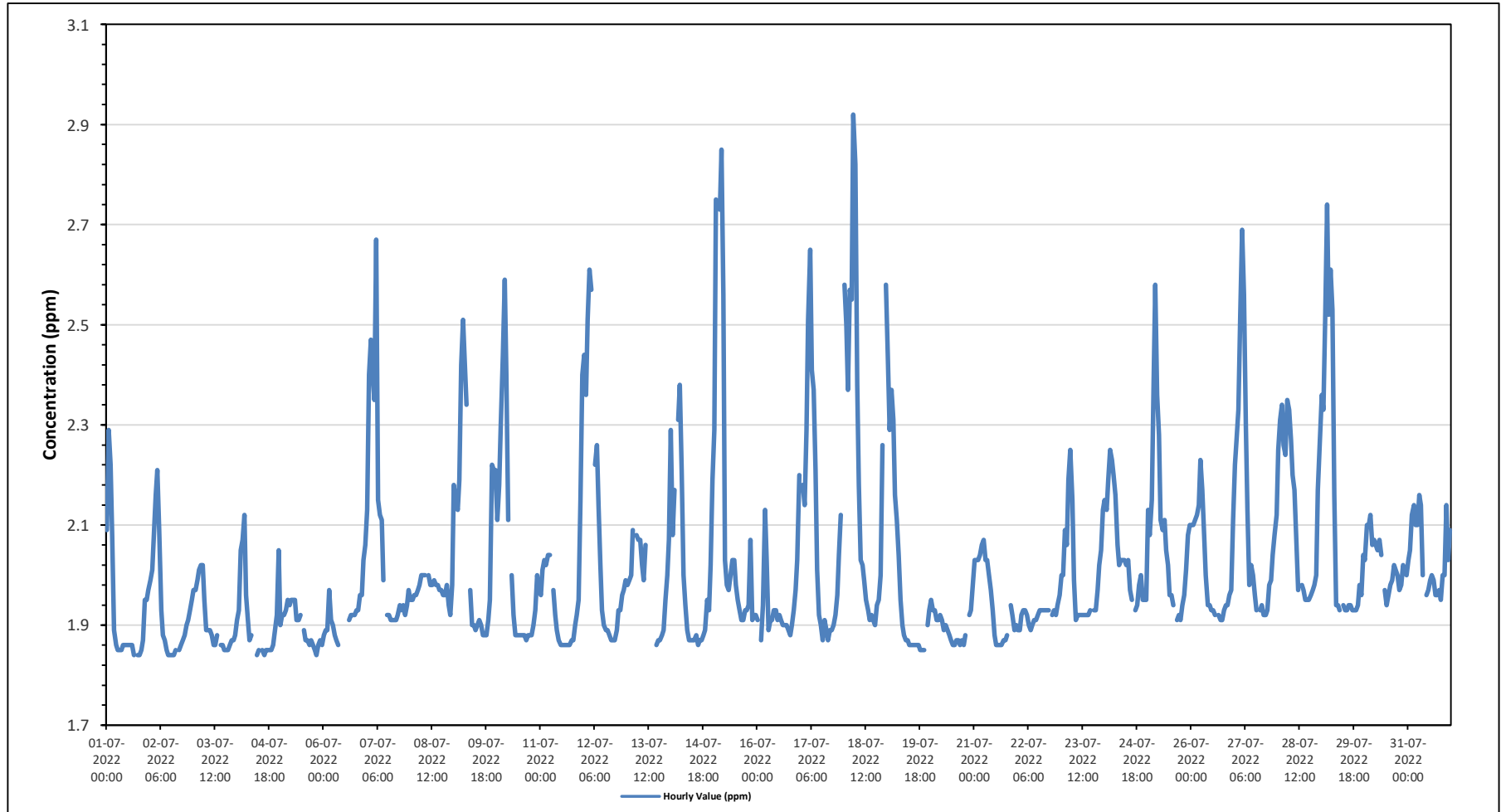
Maximum Hourly Value:	2.92 ppm	on July 18 at hour 5	Hours in Service:	744
Maximum Daily Value:	2.22 ppm	on July 18	Hours of Data:	701
Minimum Hourly Value:	1.84 ppm	on July 1 at hour 15	Hours of Missing Data:	7
Minimum Daily Value:	1.90 ppm	on July 5	Hours of Calibration:	36
Monthly Average:	2.01 ppm		Operational Uptime:	99.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2.09	2.29	2.22	2.08	1.89	1.86	1.85	1.85	1.85	1.86	1.86	1.86	1.86	1.86	1.86	1.84	S	1.84	1.84	1.85	1.87	1.95	1.95	1.97	1.84	2.29	1.92	
Jul 2	1.99	2.01	2.08	2.16	2.21	2.09	1.93	1.88	1.87	1.85	1.84	1.84	1.84	1.84	1.85	S	1.85	1.86	1.87	1.88	1.90	1.91	1.93	1.95	1.84	2.21	1.93	
Jul 3	1.97	1.97	1.99	2.01	2.02	2.02	1.95	1.89	1.89	1.89	1.89	1.88	1.86	1.86	1.88	S	1.86	1.86	1.85	1.85	1.85	1.86	1.87	1.87	1.88	1.85	2.02	1.91
Jul 4	1.91	1.93	2.05	2.07	2.12	1.96	1.91	1.87	1.88	NRM	NRM	1.84	1.85	S	1.85	1.84	1.85	1.85	1.85	1.85	1.86	1.89	1.92	2.05	1.84	2.12	1.91	
Jul 5	1.90	1.92	1.92	1.93	1.95	1.94	1.95	1.95	1.95	1.91	1.91	1.92	S	1.89	1.87	1.87	1.86	1.87	1.86	1.85	1.84	1.86	1.87	1.86	1.84	1.95	1.90	
Jul 6	1.88	1.89	1.89	1.97	1.91	1.90	1.88	1.87	1.86	C	C	C	C	C	1.91	1.92	1.92	1.92	1.93	1.93	1.96	1.96	2.03	2.06	1.86	2.06	1.93	
Jul 7	2.13	2.40	2.47	2.41	2.35	2.67	2.15	2.12	2.11	1.99	S	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.94	1.93	1.94	1.92	1.94	1.97	1.91	2.67	2.08	
Jul 8	1.95	1.95	1.96	1.96	1.97	1.98	2.00	2.00	2.00	S	2.00	1.98	1.98	1.99	1.98	1.98	1.97	1.97	1.96	1.96	1.98	1.94	1.92	1.98	1.92	2.00	1.97	
Jul 9	2.18	2.15	2.13	2.19	2.42	2.51	2.43	2.34	S	1.97	1.90	1.90	1.89	1.90	1.91	1.90	1.88	1.88	1.88	1.91	1.95	2.22	2.21	2.21	1.88	2.51	2.08	
Jul 10	2.11	2.18	2.30	2.44	2.59	2.40	2.11	S	2.00	1.92	1.88	1.88	1.88	1.88	1.88	1.88	1.87	1.88	1.88	1.88	1.90	1.93	2.00	1.97	1.87	2.59	2.03	
Jul 11	1.96	2.01	2.03	2.02	2.04	2.04	S	1.97	1.92	1.89	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.87	1.87	1.87	1.90	1.92	1.95	2.15	2.40	1.96		
Jul 12	2.44	2.36	2.51	2.61	2.57	S	2.22	2.26	2.14	2.02	1.93	1.90	1.89	1.89	1.88	1.87	1.87	1.87	1.89	1.93	1.92	1.96	1.97	1.99	1.87	2.61	2.08	
Jul 13	1.98	1.99	2.00	2.09	S	2.08	2.07	2.07	2.02	1.99	2.06	NRM	NRM	NRM	NRM	NRM	1.86	1.87	1.87	1.88	1.89	1.95	2.00	2.07	1.86	2.09	1.99	
Jul 14	2.29	2.08	2.17	S	2.31	2.38	2.21	2.00	1.94	1.89	1.87	1.87	1.87	1.88	1.86	1.87	1.87	1.88	1.89	1.95	1.93	2.02	2.19	1.86	2.38	2.00		
Jul 15	2.29	2.75	S	2.73	2.85	2.56	2.03	1.98	1.97	2.00	2.03	2.03	1.98	1.95	1.93	1.91	1.91	1.93	1.93	1.94	2.07	1.91	1.92	1.92	1.91	2.85	2.11	
Jul 16	1.91	S	1.87	1.94	2.13	2.03	1.89	1.91	1.91	1.93	1.93	1.91	1.92	1.91	1.90	1.90	1.90	1.89	1.88	1.90	1.93	1.97	2.03	2.20	1.87	2.20	1.94	
Jul 17	S	2.18	2.14	2.29	2.51	2.65	2.41	2.37	2.21	2.01	1.92	1.90	1.87	1.91	1.89	1.87	1.89	1.89	1.90	1.92	1.96	2.04	2.12	S	1.87	2.65	2.08	
Jul 18	2.58	2.50	2.37	2.57	2.55	2.92	2.82	2.38	2.18	2.03	2.02	1.99	1.95	1.93	1.91	1.92	1.91	1.90	1.94	1.95	2.00	2.26	S	2.58	1.90	2.92	2.22	
Jul 19	2.44	2.29	2.37	2.31	2.16	2.11	2.04	1.95	1.90	1.88	1.87	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.85	1.85	1.85	S	1.90	1.93	1.85	2.44	1.99	
Jul 20	1.95	1.93	1.93	1.91	1.91	1.92	1.91	1.89	1.90	1.89	1.88	1.87	1.86	1.86	1.87	1.87	1.86	1.87	1.86	1.88	S	1.92	1.93	1.98	1.86	1.98	1.90	
Jul 21	2.03	2.03	2.03	2.04	2.06	2.07	2.03	2.03	2.00	1.97	1.93	1.88	1.86	1.86	1.86	1.86	1.87	1.87	1.88	S	1.94	1.92	1.89	1.90	1.86	2.07	1.95	
Jul 22	1.89	1.89	1.92	1.93	1.93	1.92	1.90	1.89	1.90	1.91	1.91	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	S	1.92	1.93	1.92	1.94	1.89	1.96	1.92	
Jul 23	2.00	2.00	2.09	2.06	2.19	2.25	2.15	1.99	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	S	1.93	1.93	1.97	2.02	2.05	2.13	
Jul 24	2.15	2.13	2.19	2.25	2.23	2.20	2.16	2.06	2.02	2.03	2.03	2.03	2.02	2.03	1.97	1.95	S	1.93	1.94	1.98	2.00	1.95	1.95	1.95	1.93	2.25	2.05	
Jul 25	2.13	2.08	2.15	2.39	2.58	2.36	2.28	2.11	2.09	2.11	2.05	2.02	1.96	1.96	1.94	S	1.91	1.92	1.91	1.94	1.96	2.01	2.08	2.10	1.91	2.58	2.09	
Jul 26	2.10	2.10	2.11	2.12	2.14	2.23	2.17	2.08	2.00	1.94	1.94	1.93	1.93	1.92	S	1.92	1.91	1.91	1.93	1.94	1.94	1.96	1.97	2.11	1.91	2.23	2.01	
Jul 27	2.22	2.27	2.33	2.52	2.69	2.56	2.30	2.13	1.98	2.02	2.00	1.96	1.93	S	1.93	1.94	1.92	1.92	1.93	1.98	1.99	2.04	2.08	2.12	1.92	2.69	2.12	
Jul 28	2.25	2.31	2.34	2.26	2.24	2.35	2.33	2.27	2.20	2.17	2.07	1.97	S	1.98	1.97	1.95	1.95	1.95	1.96	1.97	1.98	2.00	2.17	2.26	1.95	2.35	2.13	
Jul 29	2.36	2.33	2.52	2.74	2.52	2.61	2.53	2.16	1.94	1.94	1.93	S	1.94	1.93	1.93	1.94	1.94	1.93	1.93	1.93	1.94	1.98	1.96	2.04	1.93	2.74	2.13	
Jul 30	2.03	2.10	2.10	2.12	2.06	2.07	2.06	2.05	2.07	2.04	S	1.97	1.94	1.96	1.98	1.99	2.02	2.01	2.00	1.97	1.98	2.02	2.01	2.00	1.94	2.12	2.02	
Jul 31	2.03	2.05	2.12	2.14	2.10	2.10	2.16	2.14	2.00	S	1.96	1.97	1.99	2.00	1.99	1.96	1.96	1.97	1.95	2.00	2.00	2.14	2.03	2.09	1.95	2.16	2.04	
Diurnal Maximum	2.58	2.75	2.52	2.74	2.85	2.92	2.82	2.38	2.21	2.17	2.07	2.03	2.02	2.03	1.99	1.99	2.02	2.01	2.00	2.00	2.07	2.26	2.21	2.58				
Diurnal Average	2.10	2.14	2.14	2.21	2.24	2.22	2.13	2.05	1.99	1.96	1.94	1.92	1.91	1.91	1.91	1.90	1.90	1.90	1.90	1.92	1.94	1.98	1.99	2.06				

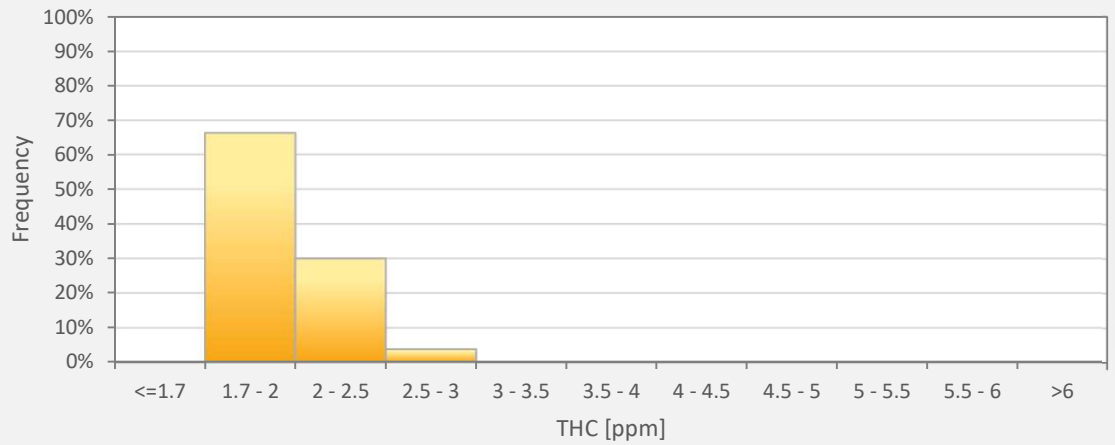
<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for THC - Cold Lake South Station**



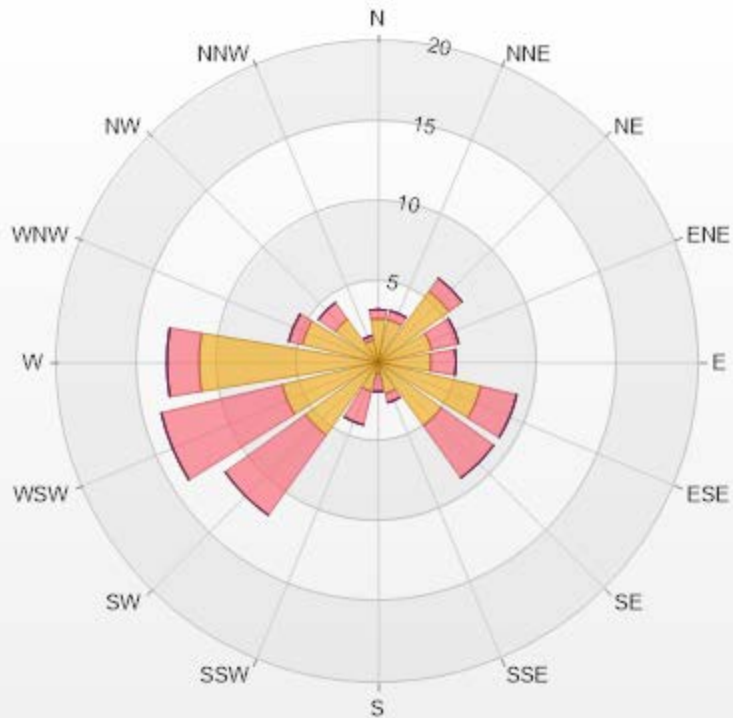
THC55[ppm] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.



Classes	THC55
<=1.7	0.00%
1.7 - 2	66.19%
2 - 2.5	29.96%
2.5 - 3	3.85%
3 - 3.5	0.00%
3.5 - 4	0.00%
4 - 4.5	0.00%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-THC55[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 93.95% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	2.72	0.57	0	0	0	3.29
NNE	2.72	0.57	0	0	0	3.29
NE	5.44	1	0	0	0	6.44
ENE	3.43	1.72	0	0	0	5.15
E	3.29	1.57	0	0	0	4.86
ESE	6.58	2.29	0	0	0	8.87
SE	4.86	4.01	0	0	0	8.87
SSE	2	0.57	0	0	0	2.57
S	0.72	1.14	0	0	0	1.86
SSW	1.86	2.15	0	0	0	4.01
SW	5.58	6.15	0	0	0	11.73
WSW	6.15	7.73	0	0	0	13.88
W	11.16	2	0	0	0	13.16
WNW	4.86	0.86	0	0	0	5.72
NW	3.29	1.29	0	0	0	4.58
NNW	1.43	0.29	0	0	0	1.72
Summary	66.09	33.91	0	0	0	100



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% Icon Classes (ppm)

66

0-2

34

2-5

0

5-10

0

10-40

0

>40.0



### LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

#### Cold Lake South Station - July 2022

#### Summary of Hourly Averages

#### METHANE (CH4) in ppm

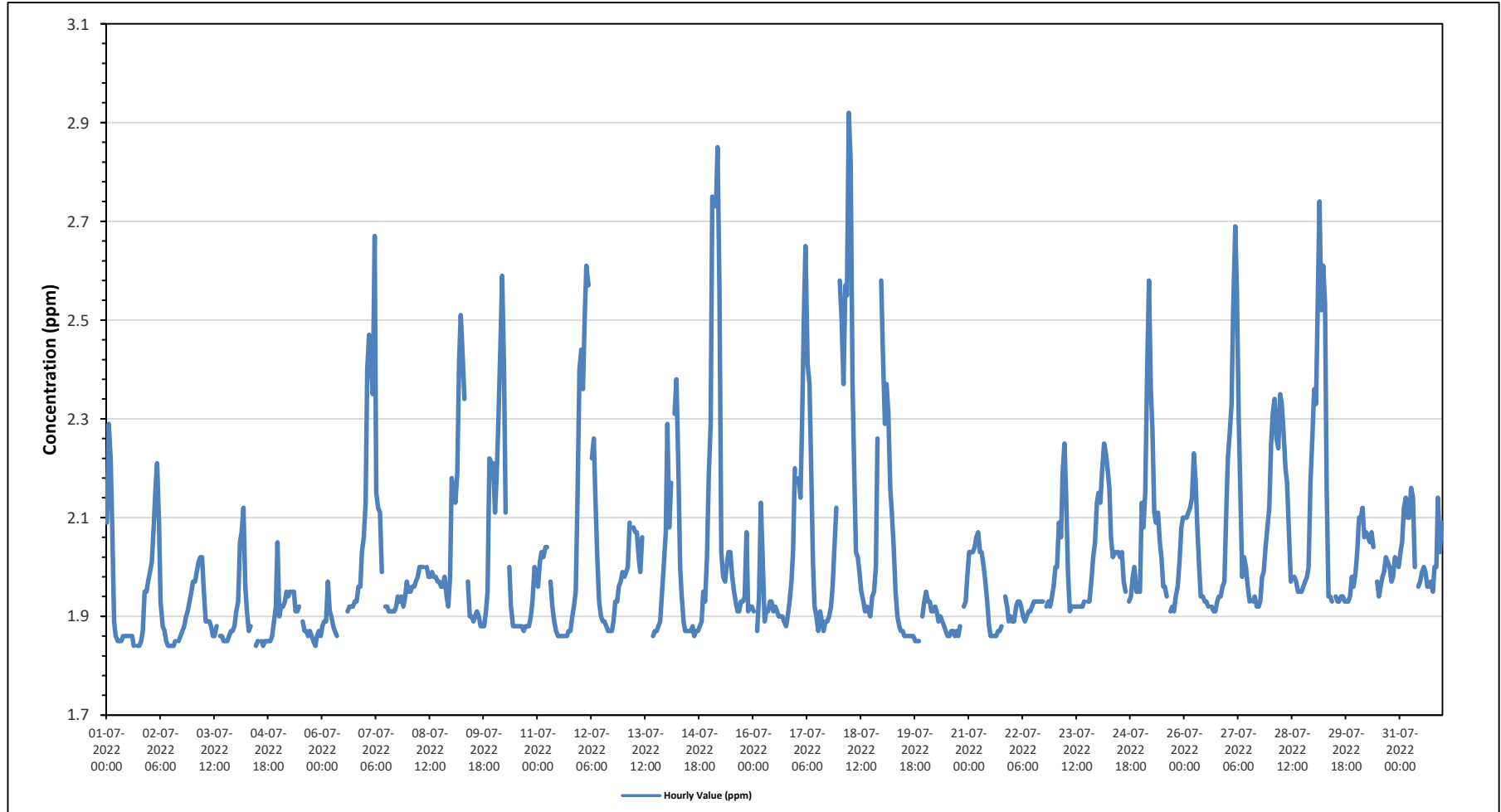
Maximum Hourly Value:	2.92 ppm on July 18 at hour 5	Hours in Service:	744
Maximum Daily Value:	2.22 ppm on July 18	Hours of Data:	701
Minimum Hourly Value:	1.84 ppm on July 1 at hour 15	Hours of Missing Data:	7
Minimum Daily Value:	1.90 ppm on July 5	Hours of Calibration:	36
Monthly Average:	2.01 ppm	Operational Uptime:	99.1

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	2.09	2.29	2.22	2.08	1.89	1.86	1.85	1.85	1.85	1.86	1.86	1.86	1.86	1.86	1.86	1.84	S	1.84	1.84	1.85	1.87	1.95	1.95	1.97	1.84	2.29	1.92
Jul 2	1.99	2.01	2.08	2.16	2.21	2.09	1.93	1.88	1.87	1.85	1.84	1.84	1.84	1.84	1.85	S	1.85	1.86	1.87	1.88	1.90	1.91	1.93	1.95	1.84	2.21	1.93
Jul 3	1.97	1.97	1.99	2.01	2.02	2.02	1.95	1.89	1.89	1.89	1.88	1.86	1.86	1.88	S	1.86	1.86	1.85	1.85	1.85	1.86	1.87	1.87	1.88	1.85	2.02	1.91
Jul 4	1.91	1.93	2.05	2.07	2.12	1.96	1.91	1.87	1.88	NRM	NRM	1.84	1.85	S	1.85	1.84	1.85	1.85	1.85	1.85	1.86	1.89	1.92	2.05	1.84	2.12	1.91
Jul 5	1.90	1.92	1.92	1.93	1.95	1.94	1.95	1.95	1.95	1.91	1.91	1.92	S	1.89	1.87	1.87	1.86	1.87	1.86	1.85	1.84	1.86	1.87	1.86	1.84	1.95	1.90
Jul 6	1.88	1.89	1.89	1.97	1.91	1.90	1.88	1.87	1.86	C	C	C	C	C	1.91	1.92	1.92	1.92	1.93	1.93	1.96	1.96	2.03	2.06	1.86	2.06	1.93
Jul 7	2.13	2.40	2.47	2.41	2.35	2.67	2.15	2.12	2.11	1.99	S	1.92	1.92	1.91	1.91	1.91	1.91	1.92	1.94	1.93	1.94	1.92	1.94	1.97	1.91	2.67	2.08
Jul 8	1.95	1.95	1.96	1.96	1.97	1.98	2.00	2.00	2.00	S	2.00	1.98	1.98	1.99	1.98	1.98	1.97	1.97	1.96	1.96	1.98	1.94	1.92	1.98	1.92	2.00	1.97
Jul 9	2.18	2.15	2.13	2.19	2.42	2.51	2.43	2.34	S	1.97	1.90	1.90	1.89	1.90	1.91	1.90	1.88	1.88	1.88	1.88	1.91	1.95	2.22	2.21	1.88	2.51	2.08
Jul 10	2.11	2.18	2.30	2.44	2.59	2.40	2.11	S	2.00	1.92	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.87	1.88	1.88	1.88	1.90	1.93	2.00	1.87	2.59	2.03
Jul 11	1.96	2.01	2.03	2.02	2.04	2.04	S	1.97	1.92	1.89	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.87	1.87	1.87	1.90	1.92	1.95	2.15	2.40	1.96	
Jul 12	2.44	2.36	2.51	2.61	2.57	S	2.22	2.26	2.14	2.02	1.93	1.90	1.89	1.89	1.88	1.87	1.87	1.87	1.89	1.93	1.92	1.96	1.97	1.99	1.87	2.61	2.08
Jul 13	1.98	1.99	2.00	2.09	S	2.08	2.07	2.07	2.02	1.99	2.06	NRM	NRM	NRM	NRM	NRM	1.86	1.87	1.87	1.88	1.89	1.95	2.00	2.07	1.86	2.09	1.99
Jul 14	2.29	2.08	2.17	S	2.31	2.38	2.21	2.00	1.94	1.89	1.87	1.87	1.87	1.88	1.86	1.87	1.87	1.88	1.89	1.95	1.93	2.02	2.19	1.86	2.38	2.00	
Jul 15	2.29	2.75	S	2.73	2.85	2.56	2.03	1.98	1.97	2.00	2.03	2.03	1.98	1.95	1.93	1.91	1.91	1.93	1.93	1.94	2.07	1.91	1.92	1.92	1.91	2.85	2.11
Jul 16	1.91	S	1.87	1.94	2.13	2.03	1.89	1.91	1.91	1.93	1.93	1.91	1.92	1.91	1.90	1.90	1.90	1.89	1.88	1.90	1.93	1.97	2.03	2.20	1.87	2.20	1.94
Jul 17	S	2.18	2.14	2.29	2.51	2.65	2.41	2.37	2.21	2.01	1.92	1.90	1.87	1.91	1.89	1.87	1.89	1.89	1.90	1.92	1.96	2.04	2.12	S	1.87	2.65	2.08
Jul 18	2.58	2.50	2.37	2.57	2.55	2.92	2.82	2.37	2.18	2.03	2.02	1.99	1.95	1.93	1.91	1.92	1.91	1.90	1.94	1.95	2.00	2.26	S	2.58	1.90	2.92	2.22
Jul 19	2.44	2.29	2.37	2.31	2.16	2.11	2.04	1.95	1.90	1.88	1.87	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.85	1.85	1.85	S	1.90	1.93	1.85	2.44	1.99
Jul 20	1.95	1.93	1.93	1.91	1.91	1.92	1.91	1.89	1.90	1.89	1.88	1.87	1.86	1.86	1.87	1.87	1.86	1.87	1.86	1.88	S	1.92	1.93	1.98	1.86	1.98	1.90
Jul 21	2.03	2.03	2.03	2.04	2.06	2.07	2.03	2.03	2.00	1.97	1.93	1.88	1.86	1.86	1.86	1.86	1.87	1.87	1.88	S	1.94	1.92	1.89	1.90	1.86	2.07	1.95
Jul 22	1.89	1.89	1.92	1.93	1.93	1.92	1.90	1.89	1.90	1.91	1.91	1.92	1.93	1.93	1.93	1.93	1.93	1.93	S	1.92	1.93	1.92	1.94	1.96	1.89	1.96	1.92
Jul 23	2.00	2.00	2.09	2.06	2.19	2.25	2.15	1.99	1.91	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	S	1.93	1.93	1.97	2.02	2.05	2.13
Jul 24	2.15	2.13	2.19	2.25	2.23	2.20	2.16	2.06	2.02	2.03	2.03	2.03	2.02	2.03	1.97	1.95	S	1.93	1.94	1.98	2.00	1.95	1.95	1.95	1.93	2.25	2.05
Jul 25	2.13	2.08	2.15	2.39	2.58	2.36	2.28	2.11	2.09	2.11	2.05	2.02	1.96	1.96	1.94	S	1.91	1.92	1.91	1.94	1.96	2.01	2.08	2.10	1.91	2.58	2.09
Jul 26	2.10	2.10	2.11	2.12	2.14	2.23	2.17	2.08	2.00	1.94	1.94	1.93	1.93	1.92	S	1.92	1.91	1.91	1.93	1.94	1.94	1.96	1.97	2.11	1.91	2.23	2.01
Jul 27	2.22	2.27	2.33	2.52	2.69	2.56	2.30	2.13	1.98	2.02	2.00	1.96	1.93	S	1.93	1.94	1.92	1.92	1.93	1.98	1.99	2.04	2.08	2.12	1.92	2.69	2.12
Jul 28	2.25	2.31	2.34	2.26	2.24	2.35	2.33	2.27	2.20	2.17	2.07	1.97	S	1.98	1.97	1.95	1.95	1.95	1.96	1.97	1.98	2.00	2.17	2.26	1.95	2.35	2.13
Jul 29	2.36	2.33	2.52	2.74	2.52	2.61	2.53	2.16	1.94	1.94	1.93	S	1.94	1.93	1.93	1.94	1.94	1.93	1.93	1.93	1.94	1.98	1.96	1.99	1.93	2.74	2.13
Jul 30	2.03	2.10	2.10	2.12	2.06	2.07	2.06	2.05	2.07	2.04	S	1.97	1.94	1.96	1.98	1.99	2.02	2.01	2.00	1.97	1.98	2.02	2.01	2.00	1.94	2.12	2.02
Jul 31	2.03	2.05	2.12	2.14	2.10	2.10	2.16	2.14	2.00	S	1.96	1.97	1.99	2.00	1.99	1.96	1.96	1.97	1.95	2.00	2.00	2.14	2.03	2.09	1.95	2.16	2.04
Diurnal Maximum	2.58	2.75	2.52	2.74	2.85	2.92	2.82	2.37	2.21	2.17	2.07	2.03	2.02	2.03	1.99	1.99	2.02	2.01	2.00	2.00	2.07	2.26	2.21	2.58			
Diurnal Average	2.10	2.14	2.14	2.21	2.24	2.22	2.13	2.05	1.99	1.96	1.94	1.92	1.91	1.91	1.91	1.90	1.90	1.90	1.90	1.92	1.94	1.98	1.99	2.06			

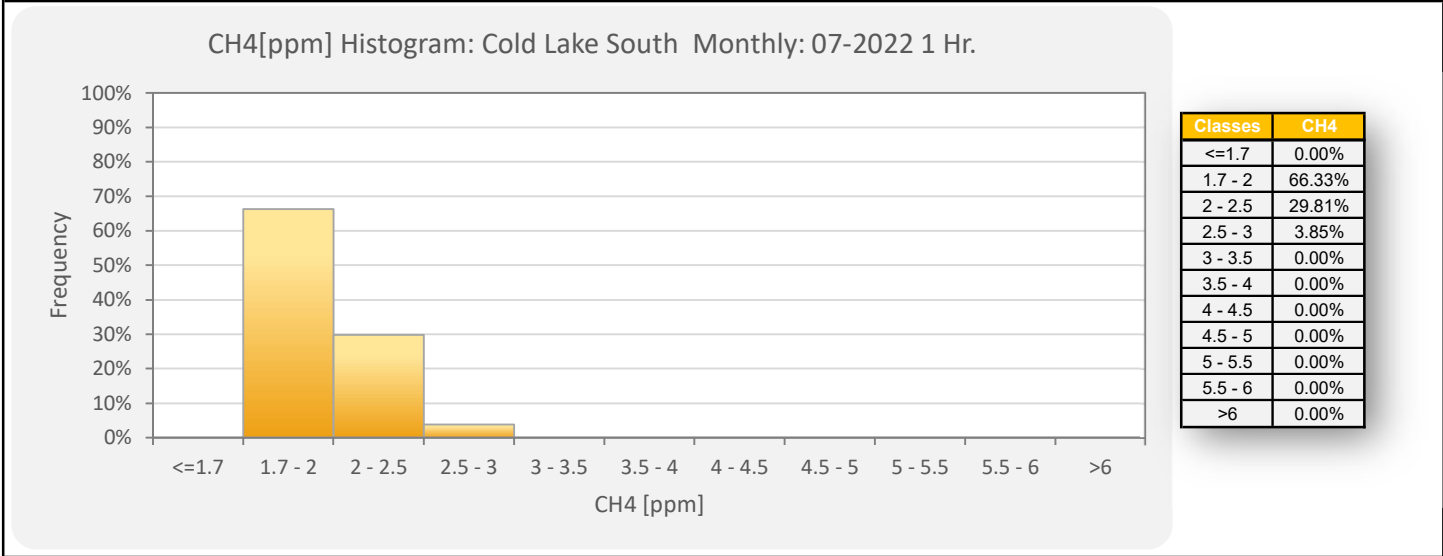
<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for CH4 - Cold Lake South Station**

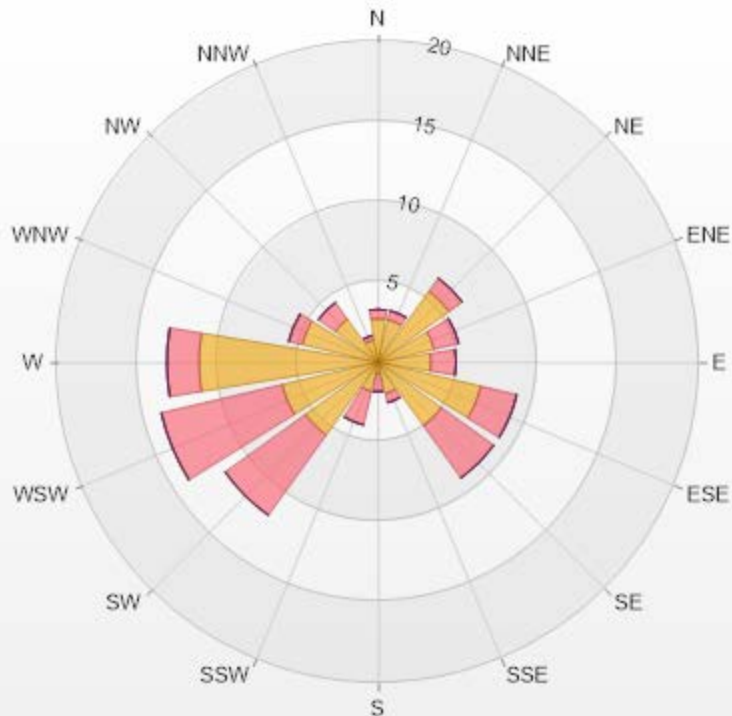






Wind: Cold Lake South Poll.: Cold Lake South-CH4[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 93.95% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	2.72	0.57	0	0	0	3.29
NNE	2.72	0.57	0	0	0	3.29
NE	5.44	1	0	0	0	6.44
ENE	3.58	1.57	0	0	0	5.15
E	3.29	1.57	0	0	0	4.86
ESE	6.58	2.29	0	0	0	8.87
SE	4.86	4.01	0	0	0	8.87
SSE	2	0.57	0	0	0	2.57
S	0.72	1.14	0	0	0	1.86
SSW	1.86	2.15	0	0	0	4.01
SW	5.58	6.15	0	0	0	11.73
WSW	6.15	7.73	0	0	0	13.88
W	11.16	2	0	0	0	13.16
WNW	4.86	0.86	0	0	0	5.72
NW	3.29	1.29	0	0	0	4.58
NNW	1.43	0.29	0	0	0	1.72
Summary	66.24	33.76	0	0	0	100



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% Icon Classes (ppm)

66 0-2

34 2-5

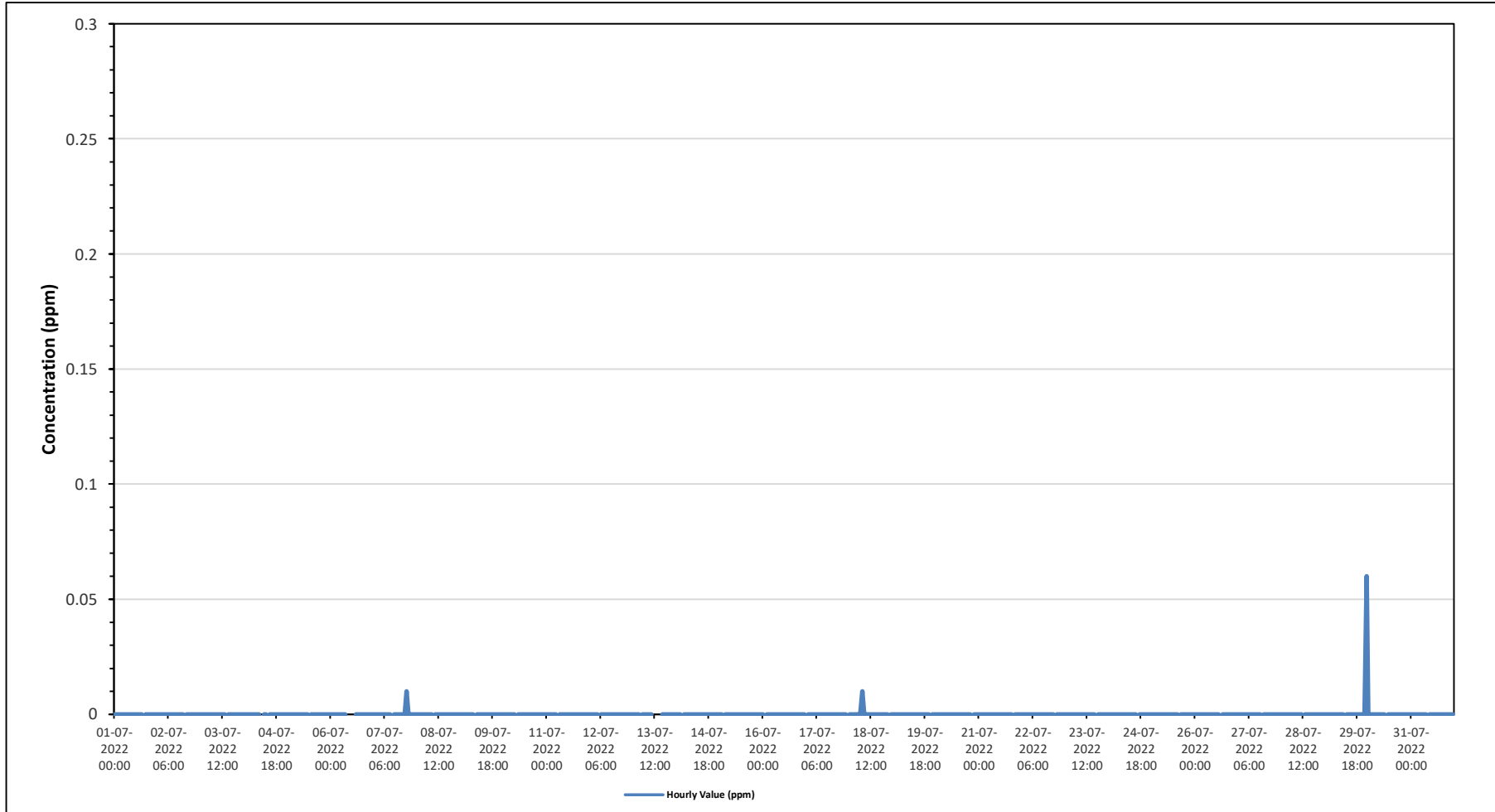
0 5-10

0 10-20

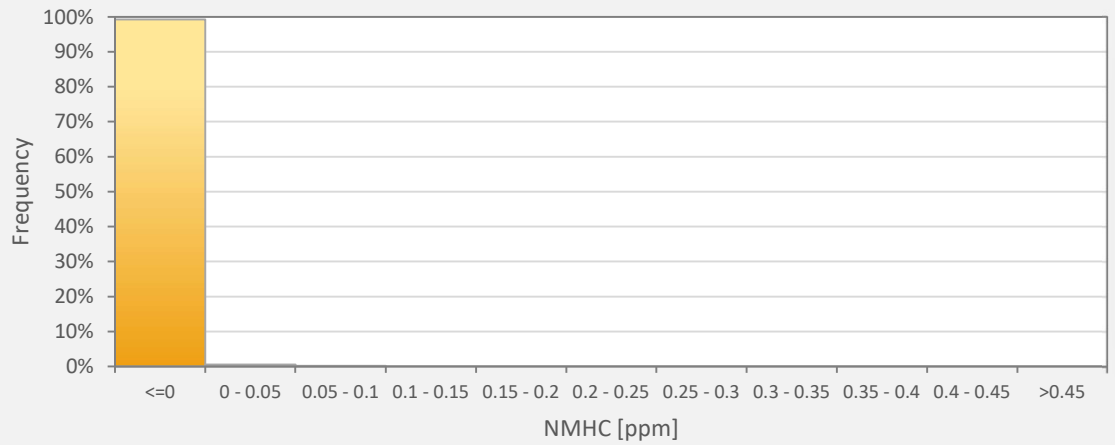
0 >20.0



**Timeseries Chart of Hourly Average for NMHC - Cold Lake South Station**



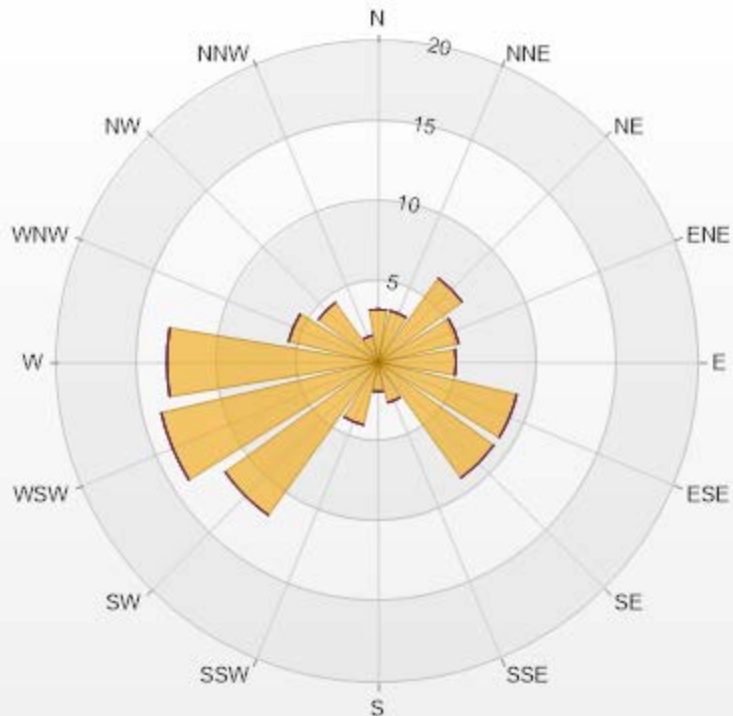
NMHC[ppm] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.



Classes	NMHC
<=0	99.29%
0 - 0.05	0.57%
0.05 - 0.1	0.14%
0.1 - 0.15	0.00%
0.15 - 0.2	0.00%
0.2 - 0.25	0.00%
0.25 - 0.3	0.00%
0.3 - 0.35	0.00%
0.35 - 0.4	0.00%
0.4 - 0.45	0.00%
>0.45	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-NMHC[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 93.95% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	3.29	0	0	0	0	3.29
NNE	3.29	0	0	0	0	3.29
NE	6.44	0	0	0	0	6.44
ENE	5.15	0	0	0	0	5.15
E	4.86	0	0	0	0	4.86
ESE	8.87	0	0	0	0	8.87
SE	8.87	0	0	0	0	8.87
SSE	2.58	0	0	0	0	2.58
S	1.86	0	0	0	0	1.86
SSW	4.01	0	0	0	0	4.01
SW	11.73	0	0	0	0	11.73
WSW	13.88	0	0	0	0	13.88
W	13.16	0	0	0	0	13.16
WNW	5.72	0	0	0	0	5.72
NW	4.58	0	0	0	0	4.58
NNW	1.72	0	0	0	0	1.72
Summary	100	0	0	0	0	100



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% Icon Classes (ppm)

100 0-0.1

0 0.1-0.3

0 0.3-1

0 1-2

0 >2.0





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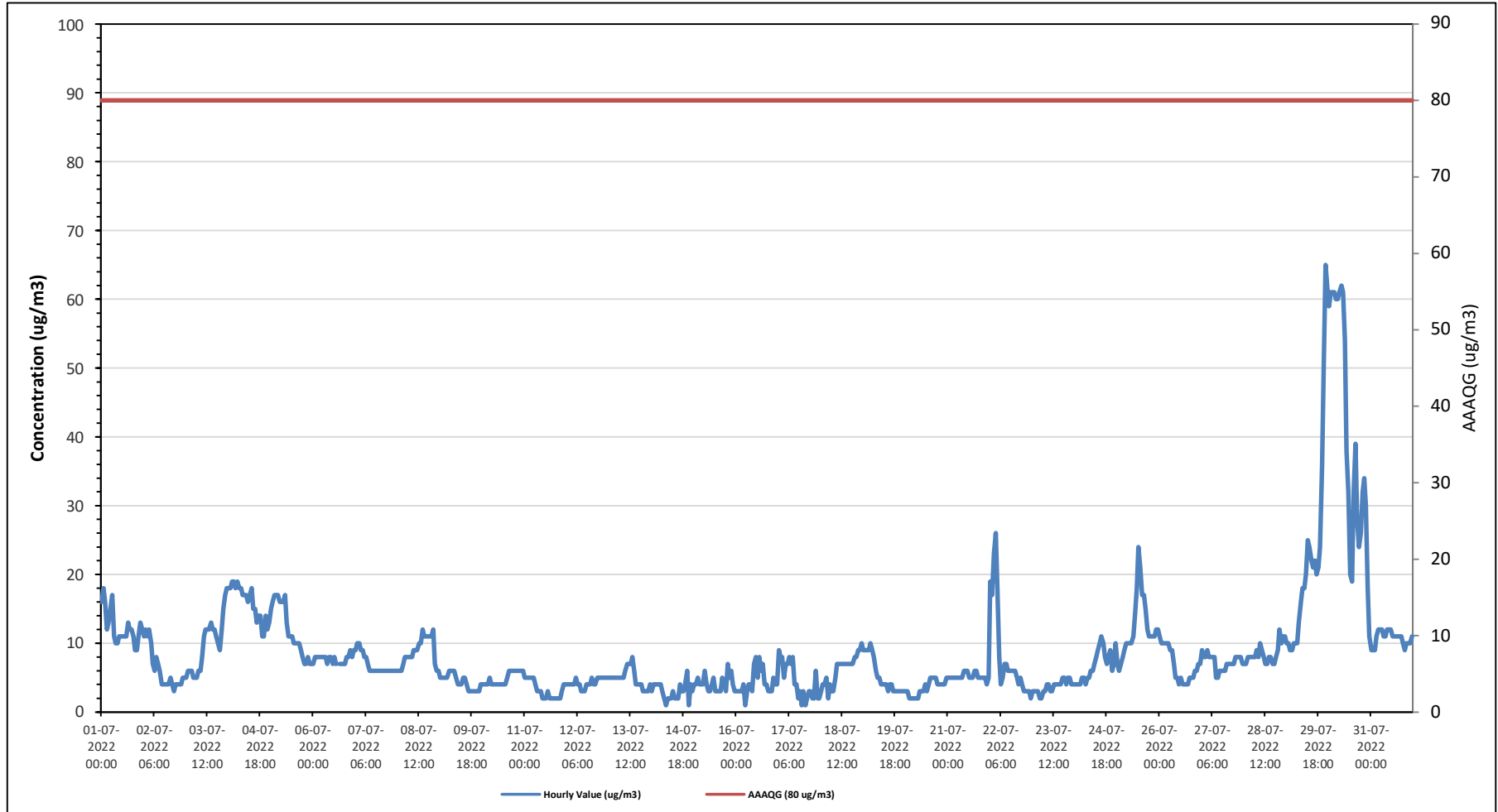
Cold Lake South Station - July 2022

Summary of Hourly Averages

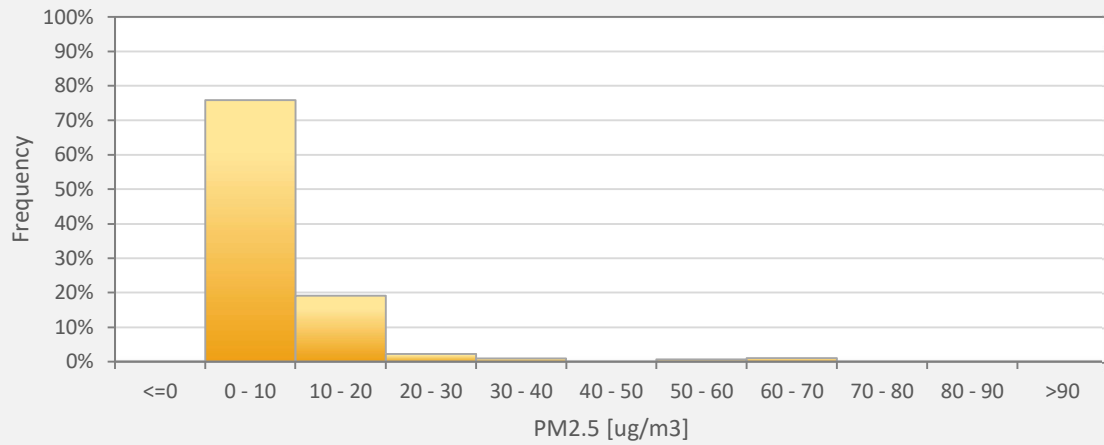
### PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>) in µg/m<sup>3</sup>

Alberta Ambient Air Quality Guideline (AAQG): 1-Hour 80 µg/m <sup>3</sup> , Alberta Ambient Air Quality Objective (AAQO): 24-Hour 29 µg/m <sup>3</sup>																																	
Number of 1-Hour Exceedances: 0										Number of 24-Hour Exceedances: 1																							
Maximum Hourly Value: 65 µg/m <sup>3</sup> on July 29 at hour 22										Hours in Service: 744																							
Maximum Daily Value: 41.0 µg/m <sup>3</sup> on July 30										Hours of Data: 743																							
Minimum Hourly Value: 1 µg/m <sup>3</sup> on July 14 at hour 8										Hours of Missing Data: 0																							
Minimum Daily Value: 3 µg/m <sup>3</sup> on July 14										Hours of Calibration: 1																							
Monthly Average: 8.5 µg/m <sup>3</sup>										Operational Uptime: 100.0																							
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23						
Jul 1	16	18	16	12	13	15	17	11	10	10	11	11	11	11	11	13	12	12	11	9	9	11	13	12	9	18	12.3						
Jul 2	11	12	11	12	10	7	6	8	7	6	4	4	4	4	4	5	4	3	4	4	4	4	5	5	3	12	6.2						
Jul 3	5	6	6	6	5	5	5	6	6	6	11	12	12	12	13	12	12	11	10	9	12	15	17	18	5	18	9.8						
Jul 4	18	18	19	19	18	19	18	18	17	17	17	16	17	18	15	15	13	14	14	11	11	14	12	13	11	19	15.9						
Jul 5	15	16	17	17	17	16	16	16	17	13	11	11	11	10	10	10	10	9	8	7	7	8	7	7	7	17	11.9						
Jul 6	7	8	8	8	8	8	8	8	7	8	8	7	8	7	C	7	7	7	7	8	8	9	8	9	7	9	7.7						
Jul 7	9	10	10	9	9	8	8	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	10	6.9						
Jul 8	6	6	6	7	8	8	8	8	8	9	9	9	10	10	12	11	11	11	11	11	12	7	6	6	6	12	8.8						
Jul 9	5	5	5	5	6	6	6	6	6	5	4	4	4	5	5	4	3	3	3	3	3	3	3	4	3	6	4.4						
Jul 10	4	4	4	4	5	4	4	4	4	4	4	4	4	4	5	6	6	6	6	6	6	6	6	6	4	6	4.8						
Jul 11	5	5	5	5	5	5	4	3	3	3	2	2	2	3	2	2	2	2	2	2	2	2	3	4	2	5	3.2						
Jul 12	4	4	4	4	4	5	4	4	3	3	3	3	4	4	5	4	4	5	5	5	5	5	5	5	3	5	4.3						
Jul 13	5	5	5	5	5	5	5	5	5	6	7	7	7	8	6	4	4	4	4	4	3	3	3	4	3	8	4.9						
Jul 14	3	4	4	4	4	4	3	2	1	2	2	2	3	2	2	2	4	3	3	4	6	1	4	3	1	6	3.0						
Jul 15	4	4	5	4	4	4	6	4	3	3	4	5	3	3	3	5	4	3	7	5	6	4	3	3	7	4.1							
Jul 16	3	3	3	3	4	1	3	4	4	3	7	8	5	8	6	7	4	4	3	3	3	5	4	4	1	8	4.3						
Jul 17	9	8	8	5	7	7	8	7	8	4	4	2	3	1	3	1	2	3	3	2	2	6	2	2	1	9	4.5						
Jul 18	3	4	4	5	2	4	3	3	5	7	7	7	7	7	7	7	7	7	7	8	8	9	9	10	2	10	6.1						
Jul 19	9	9	9	9	10	9	8	6	5	5	4	4	4	4	3	4	4	3	3	3	3	3	3	3	3	3	10	5.3					
Jul 20	3	3	2	2	2	2	2	2	3	3	3	4	3	4	5	5	5	5	4	4	4	4	4	5	2	5	3.5						
Jul 21	5	5	5	5	5	5	5	5	5	6	6	6	5	5	6	6	6	5	5	5	5	5	4	5	4	6	5.2						
Jul 22	19	17	23	26	18	8	4	5	7	7	6	6	6	6	6	5	4	5	4	3	3	3	2	2	2	26	8.2						
Jul 23	3	3	3	3	2	2	3	3	4	4	3	3	4	4	4	4	4	5	4	5	5	4	4	4	2	5	3.7						
Jul 24	4	4	4	4	5	5	4	5	5	6	6	7	8	9	10	11	10	8	7	8	9	6	7	10	4	11	6.8						
Jul 25	7	6	7	8	9	10	10	10	11	14	18	24	21	17	17	15	12	11	11	11	11	12	12	6	24	12.3							
Jul 26	11	10	10	10	10	10	9	9	7	5	5	4	5	4	4	4	4	5	5	6	6	7	7	4	11	6.8							
Jul 27	9	8	8	9	8	8	8	8	5	5	6	6	6	6	7	7	7	7	7	8	8	8	8	7	5	9	7.3						
Jul 28	7	7	8	8	8	8	8	9	8	10	9	8	7	7	8	8	7	7	8	9	12	10	11	7	12	8.5							
Jul 29	10	10	9	9	10	10	10	13	16	18	18	20	25	24	22	21	22	20	21	24	36	50	65	62	9	65	22.7						
Jul 30	59	61	61	61	60	60	61	62	61	54	38	32	20	19	32	39	28	24	26	32	34	30	18	11	11	62	41.0						
Jul 31	9	9	9	11	12	12	12	11	11	12	12	12	11	11	11	11	11	11	10	9	10	10	10	9	12	10.8							
Diurnal Maximum	59	61	61	61	60	60	61	62	61	54	38	32	25	24	32	39	28	24	26	32	36	50	65	62									
Diurnal Average	9.3	9.4	9.6	9.6	9.4	9.0	8.9	8.8	8.6	8.5	8.1	8.1	8.0	8.0	8.3	8.4	7.8	7.5	7.3	7.5	8.3	8.8	8.8	8.7									
<b>C</b>	Monthly Calibration										<b>S</b>	Daily Zero-Span Check										<b>Q</b>	Quality Assurance										
<b>K</b>	Collection Error										<b>N</b>	No Data (Machine Not in Service)										<b>Y</b>	Routine Maintenance					<b>P</b>	Power Failure				
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)										<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																					
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																	
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																	

**Timeseries Chart of Hourly Average for PM2.5 - Cold Lake South Station**



PM2.5[ug/m3(L)] Histogram: Cold Lake South Monthly: 07-2022 1 Hr.



Classes	PM2.5
<=0	0.00%
0 - 10	75.91%
10 - 20	19.11%
20 - 30	2.29%
30 - 40	0.94%
40 - 50	0.00%
50 - 60	0.67%
60 - 70	1.08%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Cold Lake South Poll.: Cold Lake South-PM2.5[ug/m3(L)] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 99.60% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	3.1	0	0	0	0	3.1
NNE	3.64	0	0	0	0	3.64
NE	6.21	0.13	0	0	0	6.34
ENE	4.72	0.54	0	0	0	5.26
E	5.13	0.27	0	0	0	5.4
ESE	8.23	0.27	0	0	0	8.5
SE	8.64	0.13	0	0	0	8.77
SSE	2.7	0	0	0	0	2.7
S	1.89	0	0	0	0	1.89
SSW	3.78	0	0	0	0	3.78
SW	11.34	0.13	0	0	0	11.47
WSW	13.36	0	0	0	0	13.36
W	13.9	0	0	0	0	13.9
WNW	5.26	0.13	0	0	0	5.39
NW	4.32	0.13	0	0	0	4.45
NNW	2.02	0	0	0	0	2.02
Summary	98.24	1.73	0	0	0	100





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - July 2022

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

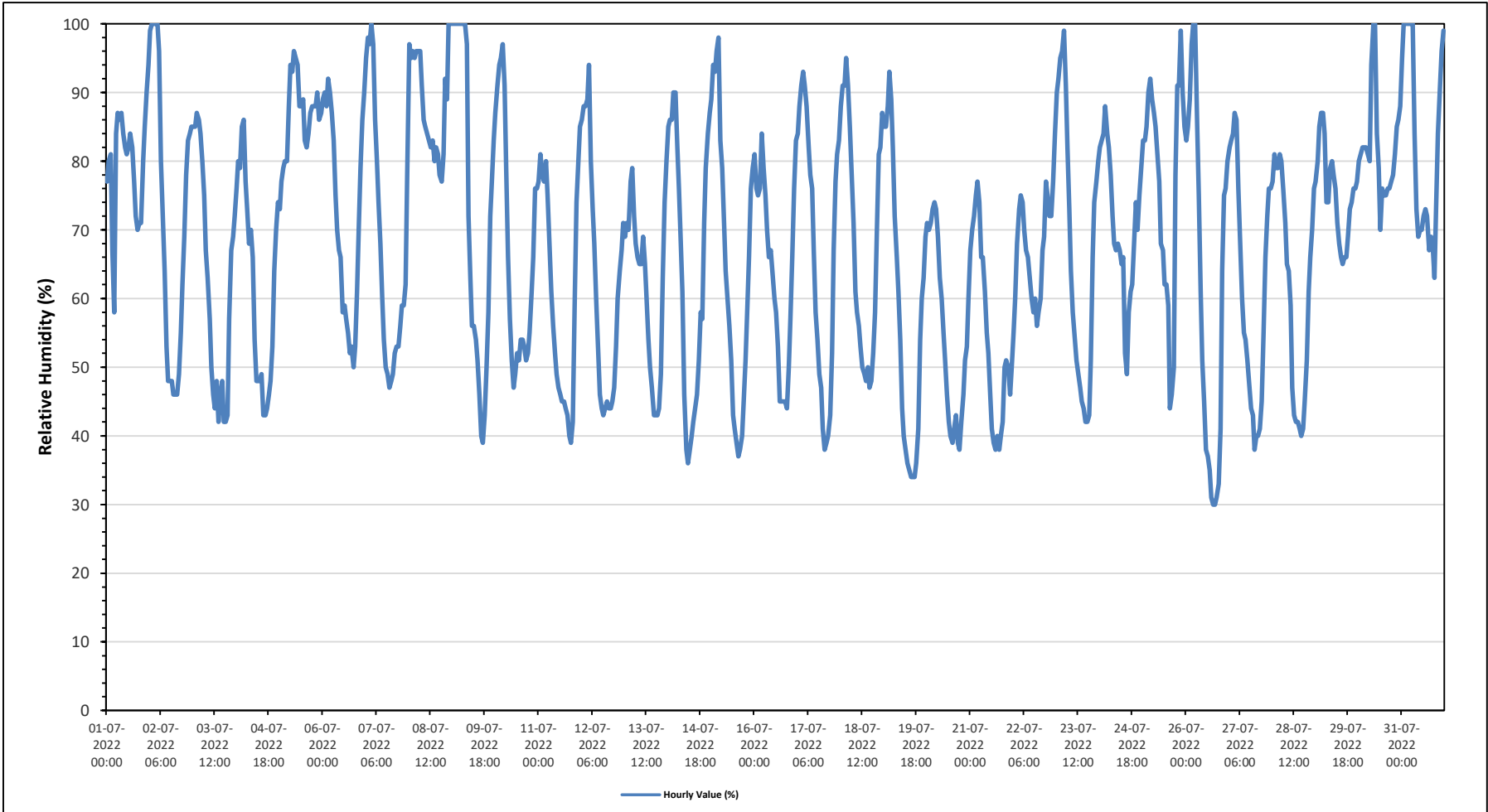
Maximum Hourly Value:	100 %	on July 2 at hour 1	Hours in Service:	744
Maximum Daily Value:	88.5 %	on July 8	Hours of Data:	744
Minimum Hourly Value:	30 %	on July 26 at hour 15	Hours of Missing Data:	0
Minimum Daily Value:	54.4 %	on July 21	Hours of Calibration:	0
Monthly Average:	68.2 %		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																								Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
Jul 1	77	80	81	67	58	84	87	86	87	84	82	81	82	84	82	77	72	70	71	80	85	90	94	58	94	79.7		
Jul 2	99	100	100	100	100	96	80	72	64	53	48	48	48	46	46	46	49	55	62	69	78	83	84	85	46	100	71.3	
Jul 3	85	85	87	86	84	80	75	67	63	57	50	46	44	48	42	46	48	42	42	43	57	67	69	72	42	87	61.9	
Jul 4	76	80	79	85	86	77	73	68	70	66	54	48	48	48	49	43	43	44	46	48	53	64	70	74	43	86	62.2	
Jul 5	73	77	79	80	80	88	94	93	96	95	94	88	88	89	83	82	84	87	88	88	88	90	86	87	73	96	86.5	
Jul 6	89	90	88	92	90	87	83	75	70	67	66	58	59	57	55	52	53	50	53	61	71	79	86	90	50	92	71.7	
Jul 7	95	98	97	100	97	86	80	74	68	60	54	50	49	47	48	49	52	53	56	59	59	62	78	47	100	67.7		
Jul 8	97	95	96	95	96	96	96	91	86	85	84	83	82	83	80	82	81	78	77	81	92	89	100	100	77	100	88.5	
Jul 9	100	100	100	100	100	100	100	100	100	97	72	63	56	56	54	51	46	40	39	43	50	58	72	77	83	39	100	73.2
Jul 10	87	91	94	95	97	91	79	66	57	51	47	49	52	51	54	54	53	51	52	55	61	66	76	76	47	97	66.9	
Jul 11	77	81	78	77	80	75	68	61	56	52	49	47	46	45	45	44	43	40	39	42	59	74	80	85	39	85	60.1	
Jul 12	86	88	88	89	94	80	73	68	60	52	46	44	43	44	45	44	44	45	47	53	60	64	67	71	43	94	62.3	
Jul 13	69	71	70	77	79	72	68	66	65	65	69	65	60	54	50	47	43	43	43	44	49	63	74	80	43	80	61.9	
Jul 14	85	86	86	90	90	82	76	68	61	46	38	36	38	40	42	44	46	51	58	57	71	79	84	87	36	90	64.2	
Jul 15	89	94	93	96	98	83	79	71	64	60	56	51	43	41	39	37	38	40	45	51	59	66	76	79	37	98	64.5	
Jul 16	81	76	75	76	84	79	75	70	66	67	64	60	58	53	45	45	45	45	44	50	57	66	76	83	44	84	64.2	
Jul 17	84	88	91	93	91	88	82	78	76	67	58	54	49	47	41	38	39	40	43	52	67	77	81	83	38	93	67.0	
Jul 18	88	91	91	95	91	85	78	71	61	58	56	53	50	49	48	50	47	48	52	58	70	81	82	87	47	95	68.3	
Jul 19	85	85	88	93	89	82	72	66	61	54	44	40	38	36	35	34	34	34	36	41	54	60	63	69	34	93	58.0	
Jul 20	71	70	71	73	74	73	69	63	60	55	51	46	42	40	39	41	43	39	38	42	46	51	53	60	38	74	54.6	
Jul 21	67	70	72	75	77	74	66	66	61	55	52	46	41	39	38	40	38	40	42	50	51	50	46	50	38	77	54.4	
Jul 22	55	60	68	73	75	74	70	67	66	63	60	58	60	56	58	60	67	69	77	75	72	72	77	84	55	84	67.3	
Jul 23	90	92	95	96	99	91	82	73	64	58	54	51	49	47	45	44	42	42	43	51	66	74	77	80	42	99	66.9	
Jul 24	82	83	84	88	84	82	78	72	68	67	68	67	65	66	62	52	49	58	61	62	68	74	70	75	79	49	88	70.9
Jul 25	83	83	85	90	92	89	87	85	81	77	68	67	62	62	59	44	46	50	78	91	91	99	90	85	44	99	76.8	
Jul 26	83	85	89	97	100	100	85	75	61	51	45	38	37	35	31	30	30	31	33	41	64	75	76	80	30	100	61.3	
Jul 27	82	83	84	87	86	76	68	60	55	54	51	48	44	43	38	40	40	41	45	55	66	72	76	76	38	87	61.3	
Jul 28	77	81	79	79	81	80	76	71	65	64	59	47	43	42	42	41	40	41	45	51	61	66	70	76	40	81	61.5	
Jul 29	77	80	85	87	87	84	74	74	79	80	78	76	71	68	66	65	66	66	69	73	74	76	76	77	65	87	75.3	
Jul 30	80	81	82	82	82	81	80	94	100	100	84	79	70	76	75	76	76	77	78	81	85	86	88	70	100	82.0		
Jul 31	95	100	100	100	100	100	100	84	73	69	70	70	72	73	72	67	69	68	63	73	84	91	96	99	63	100	82.8	
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	94	88	88	89	83	82	84	87	88	91	92	99	100	100				
Diurnal Average	82.7	84.6	85.6	87.5	87.8	84.4	79.1	74.0	69.7	64.6	60.1	56.5	54.5	53.6	51.5	50.2	50.6	50.9	53.7	58.6	66.9	73.1	76.8	80.5				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

*Timeseries Chart of Hourly Average for RH - Cold Lake South Station*





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

### Cold Lake South Station - July 2022

#### Summary of Hourly Averages

#### BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	956	mb	on July 1 at hour 20	Hours in Service:	744
Maximum Daily Value:	955	mb	on July 2	Hours of Data:	744
Minimum Hourly Value:	941	mb	on July 13 at hour 5	Hours of Missing Data:	0
Minimum Daily Value:	943	mb	on July 19	Hours of Calibration:	0
Monthly Average:	950	mb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	952	952	952	951	952	954	953	952	953	954	954	954	955	955	955	955	955	955	955	955	956	956	956	956	951	956	954
Jul 2	956	956	956	956	956	956	956	956	956	955	955	955	955	954	954	954	953	953	953	953	954	954	954	954	953	956	955
Jul 3	954	954	953	953	953	953	953	953	953	952	952	952	952	952	952	952	952	951	951	951	952	952	953	953	951	954	952
Jul 4	952	952	952	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	953	954	954	954	952	954	953
Jul 5	955	954	954	954	954	954	954	954	954	954	954	954	954	954	954	954	954	954	953	953	953	953	954	954	953	955	954
Jul 6	954	954	954	954	954	954	954	955	955	955	955	955	955	955	955	954	954	954	954	954	954	955	955	955	954	955	954
Jul 7	955	955	955	955	955	955	955	955	955	955	955	955	954	954	954	953	953	953	952	952	952	951	951	951	951	955	954
Jul 8	951	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	949	949	949	949	949	950	950	949	951	950
Jul 9	949	949	949	949	950	950	949	950	950	950	949	949	949	949	949	949	948	948	948	948	948	948	949	949	948	950	949
Jul 10	949	949	949	948	948	949	949	949	949	949	948	948	949	949	949	949	949	949	949	950	950	950	950	948	950	949	949
Jul 11	951	951	951	951	952	952	952	952	952	952	951	951	951	951	951	950	950	950	950	950	950	950	951	951	950	952	951
Jul 12	951	951	950	950	951	950	950	950	950	949	949	949	948	948	947	947	946	946	945	945	944	944	944	943	943	951	948
Jul 13	943	942	942	942	942	941	942	942	942	942	942	942	942	942	942	942	944	945	945	945	946	947	947	948	941	948	943
Jul 14	948	948	949	949	950	950	950	950	950	950	950	950	950	949	949	949	949	949	949	949	949	950	950	948	950	949	949
Jul 15	950	950	950	950	951	950	950	950	951	951	950	950	949	949	948	948	947	947	947	947	947	946	946	946	946	951	949
Jul 16	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	947	947	948	948	946	948	946
Jul 17	948	948	948	948	948	949	949	949	949	949	948	948	948	948	948	947	947	947	947	946	947	947	947	947	946	949	948
Jul 18	947	947	947	947	946	946	946	946	945	945	944	944	943	943	942	942	942	942	942	942	942	942	942	942	942	947	944
Jul 19	942	942	942	942	943	943	943	943	943	943	943	943	943	943	943	943	943	943	943	944	944	945	946	946	942	946	943
Jul 20	946	946	946	947	947	947	948	948	948	947	947	947	946	946	946	946	946	946	945	945	945	946	946	946	945	948	946
Jul 21	946	946	946	946	946	946	946	946	945	945	945	944	944	944	944	944	944	944	944	944	945	945	945	944	946	945	945
Jul 22	945	946	946	946	947	947	948	948	948	948	948	949	949	949	950	950	950	951	951	952	952	953	953	945	953	949	949
Jul 23	953	953	953	954	954	954	954	954	955	955	955	954	954	954	954	954	954	953	953	953	953	954	954	954	953	955	954
Jul 24	953	953	953	953	953	952	951	951	950	950	950	949	949	949	950	950	950	951	951	951	951	951	951	951	949	953	951
Jul 25	951	951	951	951	951	951	951	951	951	951	951	952	951	951	951	951	951	951	951	951	951	951	952	951	951	952	951
Jul 26	951	951	951	951	952	952	952	952	952	952	952	952	952	951	951	951	951	951	951	951	951	952	952	952	951	952	952
Jul 27	952	952	953	953	953	954	954	954	955	955	955	955	955	955	955	955	954	954	954	954	954	954	954	952	955	954	954
Jul 28	954	954	954	954	954	953	953	953	953	953	952	952	952	951	951	951	950	949	949	949	948	948	948	948	948	954	951
Jul 29	948	947	947	947	948	948	948	948	949	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	947	950	949
Jul 30	950	950	950	949	949	948	948	950	949	949	949	950	950	950	951	951	951	951	952	952	952	952	953	953	948	953	950
Jul 31	952	952	952	952	952	952	952	952	951	951	951	951	951	951	951	951	950	950	950	950	950	950	950	950	950	952	951
Diurnal Maximum	956	956	956	956	956	956	956	956	956	955	955	955	955	955	955	955	955	955	955	955	956	956	956	956	956	956	956
Diurnal Average	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	949	949	950	950	950	950	950	950	950

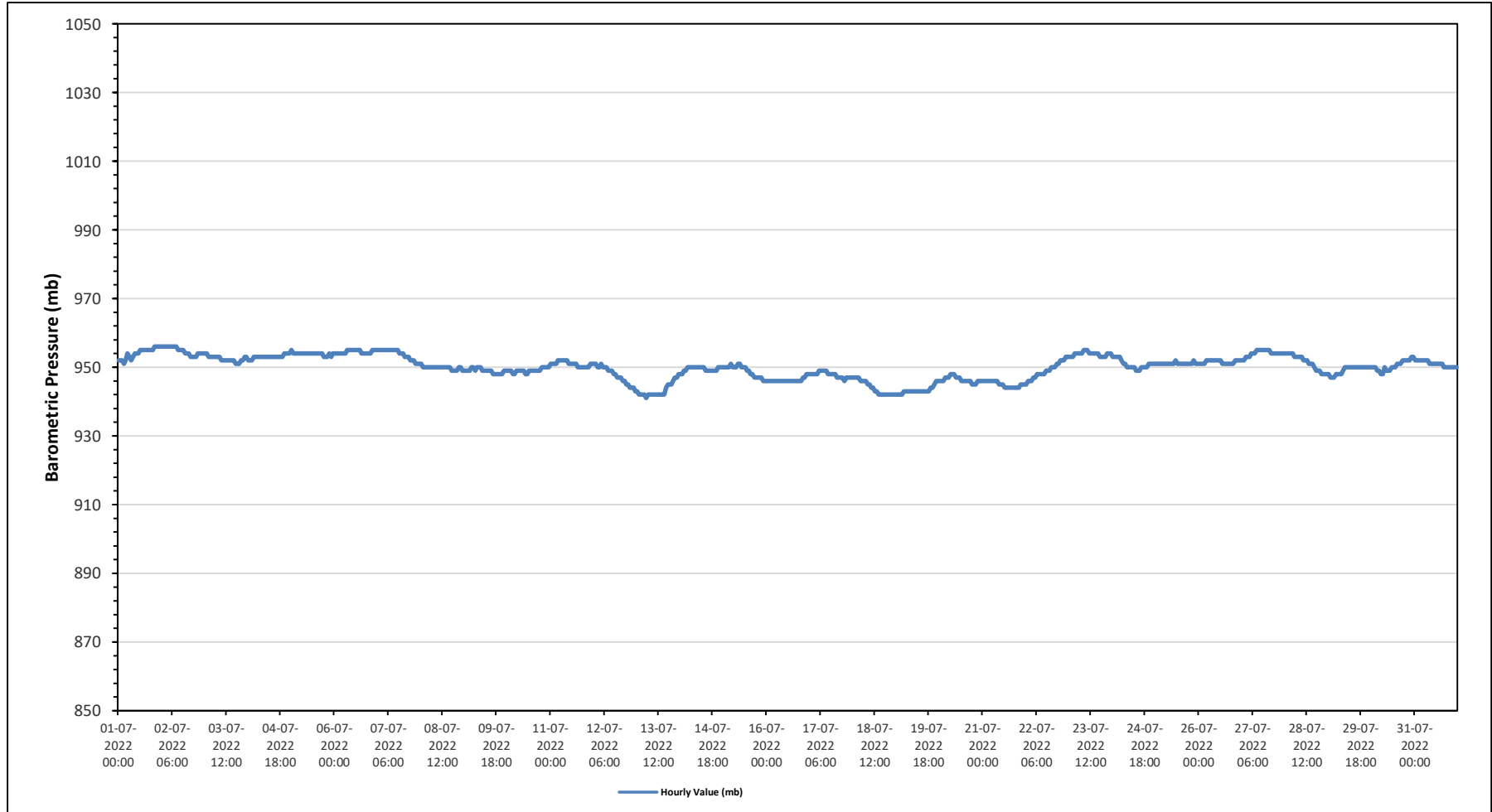
  

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>N</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> Invalid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Timeseries Chart of Hourly Average for BP - Cold Lake South Station**





### LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

#### Cold Lake South Station - July 2022

#### Summary of Hourly Averages

#### AMBIENT TEMPERATURE (AT) in Degree Celsius

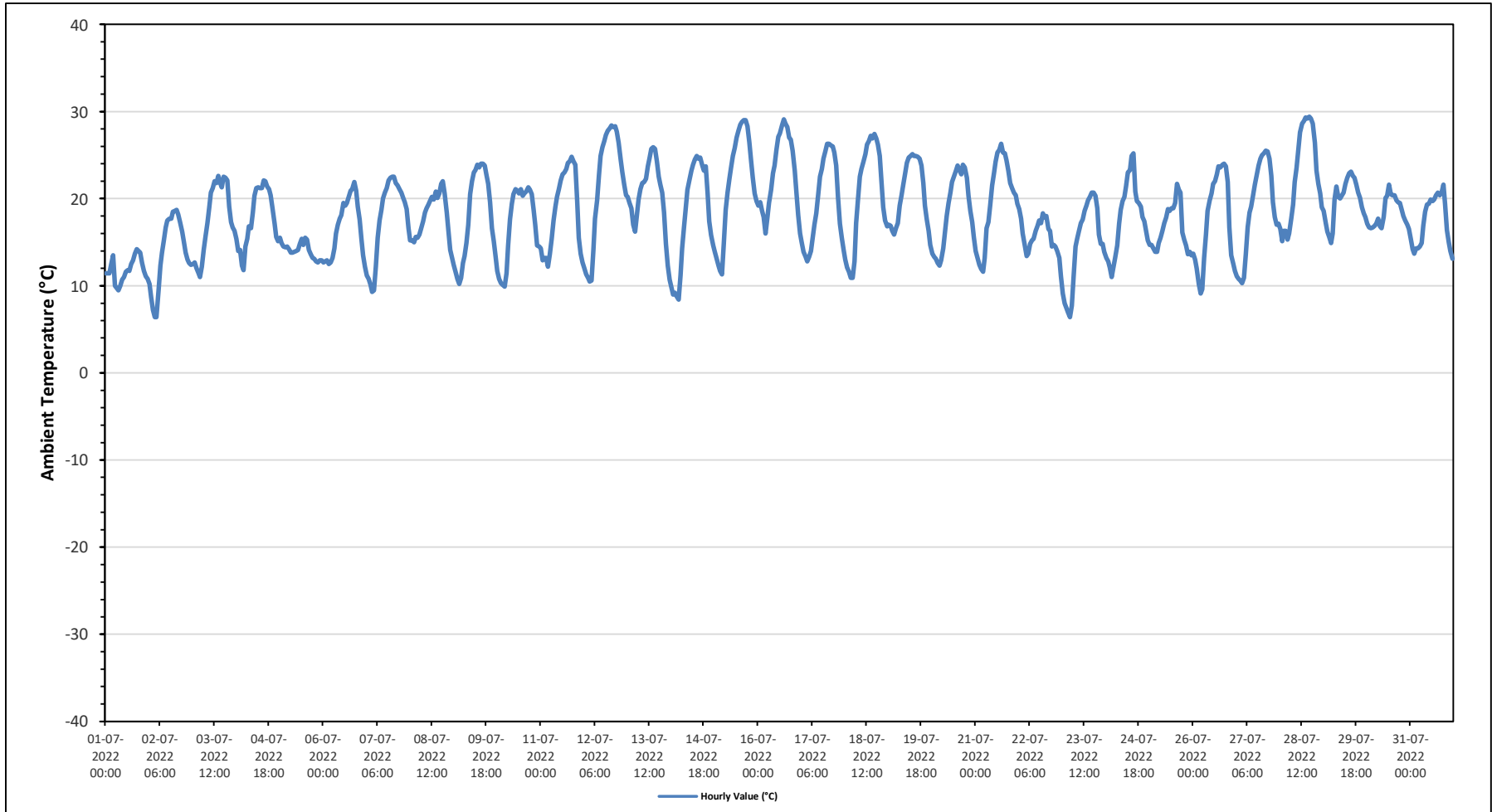
Maximum Hourly Value:	29.4 °C	on July 28 at hour 16	Hours in Service:	744
Maximum Daily Value:	22.8 °C	on July 16	Hours of Data:	744
Minimum Hourly Value:	6.4 °C	on July 2 at hour 3	Hours of Missing Data:	0
Minimum Daily Value:	11.8 °C	on July 1	Hours of Calibration:	0
Monthly Average:	18.2 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jul 1	11.4	11.4	11.4	12.5	13.5	10	9.7	9.5	10	10.7	11	11.6	11.8	11.7	12.5	12.9	13.7	14.2	14	13.8	12.6	11.7	11.1	10.8	9.5	14.2	11.8
Jul 2	10.2	8.7	7.2	6.4	6.4	9.4	12.3	13.8	15.2	16.7	17.5	17.7	17.7	18.5	18.6	18.7	18.2	17.3	16.2	15.1	13.8	13	12.6	12.4	6.4	18.7	13.9
Jul 3	12.5	12.7	12	11.5	11	12.2	14.1	15.7	17.2	19	20.7	21.2	22	21.8	22.6	21.8	21.3	22.5	22.4	22.1	19.1	17.3	16.7	16.3	11.0	22.6	17.7
Jul 4	15.4	14	14.1	12.3	11.8	14.5	15.4	16.8	16.6	18.4	20.3	21.2	21.3	21.2	21.2	22.1	22	21.4	21.1	20.4	18.9	17.1	15.6	15.1	11.8	22.1	17.8
Jul 5	15.5	14.9	14.5	14.4	14.5	14.2	13.8	13.8	13.9	14	14.1	14.8	15.4	14.7	15.5	15.3	14.1	13.6	13.2	13.1	12.8	12.7	12.9	12.9	12.7	15.5	14.1
Jul 6	12.7	12.8	12.9	12.5	12.7	13.2	14.3	16	17	17.7	18.1	19.5	19.2	19.5	20.2	20.9	21.1	21.9	20.9	19.1	17.6	15.3	13.5	12.2	12.2	21.9	16.7
Jul 7	11.2	10.8	10.1	9.3	9.5	12.2	15.5	17.5	18.7	20	20.7	21.2	22.1	22.4	22.5	22.5	21.8	21.5	21.1	20.7	20.1	19.6	18.8	16.6	9.3	22.5	17.8
Jul 8	15.2	15.2	15	15.6	15.5	15.9	16.5	17.4	18.4	18.9	19.3	19.8	20.2	19.9	20.8	20.1	20.6	21.7	22	20.6	18.4	16.4	14.1	13.2	13.2	22.0	17.9
Jul 9	12.4	11.6	10.8	10.2	10.9	12.6	13.4	14.9	17	20.5	22	23	23.3	23.9	23.6	24	24	23.8	22.8	21.7	19.6	16.6	15.1	13.3	10.2	24.0	18.0
Jul 10	11.7	10.8	10.3	10.1	9.9	11.4	14.6	17.6	19.4	20.5	21.1	20.9	20.6	21.1	20.3	20.6	20.8	21.3	21	20.5	18.7	17	14.6	14.5	9.9	21.3	17.1
Jul 11	14.3	12.9	13.2	13.2	12.2	13.6	15.4	17.5	19.1	20.2	21.1	22.1	22.8	23	23.4	24.1	24.3	24.8	24.3	23.9	19.7	15.5	13.7	12.7	12.2	24.8	18.6
Jul 12	12.1	11.3	10.9	10.5	10.6	14.1	17.7	19.8	22.7	24.9	25.9	26.6	27.3	27.8	28.1	28.4	28.2	28.3	27.7	26.4	24.4	23	21.6	20.4	10.5	28.4	21.6
Jul 13	20.2	19.5	18.9	17	16.2	18.2	19.9	21.1	21.8	21.9	22.3	23.7	24.6	25.7	25.9	25.7	24.3	22.5	21.6	20.7	18.4	14.8	12.3	10.7	10.7	25.9	20.3
Jul 14	9.9	9	9.2	8.8	8.4	11.2	14.3	16.7	19	21	22.2	23.2	23.9	24.5	24.9	24.6	24.7	23.8	23.2	23.7	20.6	17.4	15.8	14.6	8.4	24.9	18.1
Jul 15	13.9	13.1	12.3	11.7	11.3	14.9	18.7	20.7	22.3	23.5	24.9	25.8	27	27.8	28.5	28.8	29	29	28.3	26.5	24.2	22.4	20.6	19.7	11.3	29.0	21.9
Jul 16	19.2	19.6	18.6	17.9	16	17.8	19.5	21	22.9	23.8	25.6	27.1	27.5	28.4	29.1	28.6	28.2	27	26.8	25.5	23.2	20.8	18.1	16	16.0	29.1	22.8
Jul 17	15	13.9	13.3	12.8	13.3	14	15.4	17	18.3	20.4	22.5	23.4	24.6	25.4	26.3	26.3	26.1	26	25.3	23.8	20.1	17.1	15.5	14.1	12.8	26.3	19.6
Jul 18	13	12.1	11.6	10.9	10.9	12.8	17.2	19.9	22.5	23.4	24.3	25.1	26.2	26.6	27.2	26.9	27.4	26.9	26.2	24.9	21.7	19	17.5	16.8	10.9	27.4	20.5
Jul 19	17	16.9	16.3	15.9	16.6	17.2	19.2	20.4	21.5	22.8	24.1	24.7	24.9	25.1	24.9	24.9	24.8	24.6	23.8	21.8	19.2	17.6	16.3	14.7	14.7	25.1	20.6
Jul 20	13.7	13.3	13.1	12.6	12.3	12.9	14.3	16.3	18	19.5	20.7	21.9	22.5	23.2	23.8	23.3	22.8	23.9	23.6	22.4	20.3	18.6	17.3	15.6	12.3	23.9	18.6
Jul 21	14	13.2	12.4	11.9	11.6	13.2	16.6	17.3	19.3	21.5	22.9	24.2	25.3	25.6	26.3	25.3	25.2	24.4	23.2	21.8	21.2	20.7	20.4	19.4	11.6	26.3	19.9
Jul 22	18.8	17.7	16	14.6	13.4	13.7	14.8	15.2	15.4	16.3	16.9	17.5	17.2	18.3	17.8	18	16.5	16.3	14.5	14.7	14.5	14	13.2	11.1	11.1	18.8	15.7
Jul 23	9.1	8	7.5	6.9	6.4	7.7	11.2	14.5	15.4	16.3	17.2	17.6	18.6	19.2	19.8	20.2	20.7	20.7	20.3	18.9	15.9	14.8	14.8	13.9	6.4	20.7	14.8
Jul 24	13.2	12.8	12.1	11	12.2	13.2	14.6	17.1	18.7	19.7	20.2	21.4	23	23.3	24.9	25.2	20.8	19.7	19.5	19.1	17.9	17.4	16.2	15.2	11.0	25.2	17.9
Jul 25	14.7	14.7	14.3	13.9	13.9	14.9	15.5	16.3	17.2	17.8	18.8	18.6	18.9	18.9	19.5	21.7	21	20.7	16.1	15.3	14.6	13.6	13.9	13.5	13.5	21.7	16.6
Jul 26	13.7	13	12	10.2	9.1	9.6	13.2	15.9	18.6	19.8	20.6	21.7	22	22.8	23.7	23.6	23.9	24	23.7	21.9	16.7	13.5	12.5	11.7	9.1	24.0	17.4
Jul 27	11.1	10.8	10.6	10.3	10.9	13.6	16.7	18.4	19.1	20.3	21.6	22.7	23.8	24.6	25	25.2	25.5	25.4	24.6	22.6	19.6	17.9	17	17.1	10.3	25.5	18.9
Jul 28	16.5	15.1	16.3	16.3	15.3	16	17.7	19.3	21.9	23.5	25.7	27.6	28.6	28.9	29.3	29.2	29.4	29.2	28.6	26.4	23.2	21.7	20.6	19	15.1	29.4	22.7
Jul 29	18.6	17.2	16.2	15.6	14.9	16	19.9	21.4	20.2	20	20.4	20.7	21.7	22.4	22.9	23.1	22.6	22.4	21.6	20.7	20.1	19	18.3	17.9	14.9	23.1	19.7
Jul 30	17.1	16.7	16.6	16.7	16.9	17.1	17.7	16.8	16.6	17.9	20.1	20.3	21.6	20.5	20.4	20.4	19.8	19.6	19.5	18.7	18	17.5	17	16.5	16.5	21.6	18.3
Jul 31	15.4	14.2	13.7	14.3	14.3	14.5	14.9	16.9	18.5	19.3	19.4	19.9	19.7	19.9	20.4	20.7	20.4	20.7	21.6	19.4	16.4	15	14	13.1	13.1	21.6	17.4
Diurnal Maximum	20.2	19.6	18.9	17.9	16.9	18.2	19.9	21.4	22.9	24.9	25.9	27.6	28.6	28.9	29.3	29.2	29.4	29.2	28.6	26.5	24.4	23.0	21.6	20.4			
Diurnal Average	14.2	13.5	13.0	12.5	12.3	13.6	15.6	17.2	18.5	19.7	20.7	21.5	22.1	22.5	22.9	23.0	22.7	22.6	21.9	20.8	18.8	17.0	15.9	14.9			

C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for AT - Cold Lake South Station**





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - July 2022

Summary of Hourly Averages

STATION TEMPERATURE (ST) in Degree Celsius

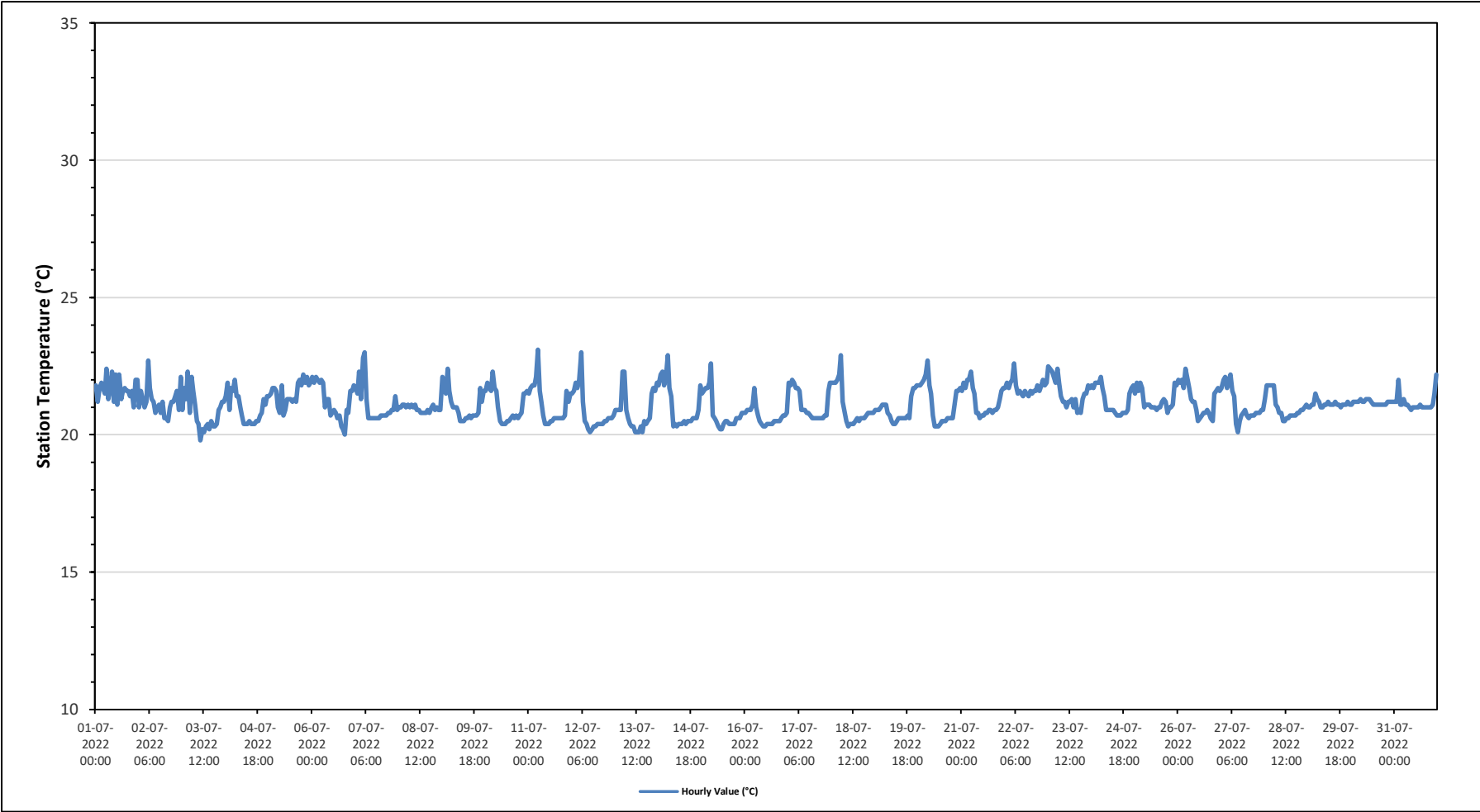
Maximum Hourly Value:	23.1 °C	on July 11 at hour 5	Hours in Service:	744
Maximum Daily Value:	21.7 °C	on July 22	Hours of Data:	744
Minimum Hourly Value:	19.8 °C	on July 3 at hour 10	Hours of Missing Data:	0
Minimum Daily Value:	20.7 °C	on July 16	Hours of Calibration:	0
Monthly Average:	21.1 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	21.8	21.2	21.7	21.9	21.7	21.5	22.4	21.3	21.8	22.3	21.2	22.2	21.1	22.2	21.3	21.6	21.7	21.6	21.6	21.4	21.6	21.0	22.0	22.0	21.0	22.4	21.7	
Jul 2	21.0	21.6	21.3	21.0	21.2	22.7	21.7	21.3	21.2	20.8	21.0	21.1	20.8	21.2	20.6	20.6	20.5	21.0	21.2	21.2	21.4	21.6	20.9	22.1	20.5	22.7	21.2	
Jul 3	20.9	21.7	21.3	22.3	20.8	22.1	21.6	21.1	20.5	20.4	19.8	20.2	20.1	20.3	20.4	20.2	20.5	20.3	20.3	20.4	20.9	21.0	21.2	21.2	19.8	22.3	20.8	
Jul 4	21.4	21.9	20.9	21.7	21.6	22.0	21.4	21.4	21.0	20.7	20.4	20.4	20.4	20.5	20.4	20.4	20.4	20.5	20.5	20.7	20.8	21.3	21.1	21.4	20.4	22.0	21.0	
Jul 5	21.4	21.5	21.7	21.7	21.6	21.0	20.8	21.8	20.7	20.9	21.3	21.3	21.3	21.2	21.3	21.2	21.9	22.0	21.8	22.2	21.9	22.1	21.8	21.9	20.7	22.2	21.5	
Jul 6	22.1	21.9	22.1	22.0	21.9	22.0	21.9	21.0	21.3	21.3	20.7	20.8	20.9	20.8	20.6	20.7	20.3	20.2	20.0	20.9	20.8	21.6	21.6	21.8	20.0	22.1	21.2	
Jul 7	21.7	21.5	22.3	21.3	22.8	23.0	21.3	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.7	20.7	20.7	20.7	20.8	20.8	20.9	20.9	21.4	20.9	20.6	23.0	21.1	
Jul 8	21.0	21.0	21.1	21.1	21.0	21.1	21.0	21.1	21.0	21.1	20.9	20.9	20.8	20.8	20.8	20.8	20.9	20.8	21.0	21.1	20.9	21.0	20.9	20.9	20.8	21.1	21.0	
Jul 9	22.1	22.0	21.5	22.4	21.6	21.2	21.0	21.0	21.0	20.8	20.5	20.5	20.5	20.6	20.6	20.7	20.6	20.7	20.7	20.7	20.8	21.7	21.2	21.6	20.5	22.4	21.1	
Jul 10	21.6	21.9	21.7	21.6	22.3	21.7	21.6	21.0	20.5	20.4	20.4	20.4	20.5	20.5	20.6	20.7	20.6	20.7	20.6	20.7	20.8	21.5	21.5	21.6	20.4	22.3	21.1	
Jul 11	21.5	21.7	21.8	21.8	22.1	23.1	21.6	21.2	20.7	20.4	20.4	20.4	20.5	20.5	20.6	20.6	20.6	20.6	20.6	20.6	20.7	21.6	21.2	21.5	20.4	23.1	21.1	
Jul 12	21.5	21.6	21.9	21.7	22.0	23.0	21.2	20.5	20.4	20.2	20.1	20.2	20.3	20.3	20.4	20.4	20.4	20.4	20.5	20.5	20.6	20.6	21.2	21.5	20.4	20.1	23.0	20.8
Jul 13	20.9	20.9	20.9	20.9	22.3	22.3	20.9	20.6	20.4	20.3	20.3	20.1	20.1	20.1	20.3	20.1	20.5	20.4	20.5	20.6	21.5	21.7	21.6	21.9	20.1	22.3	20.8	
Jul 14	21.8	22.2	22.3	21.8	22.1	22.9	21.7	21.4	20.3	20.4	20.3	20.4	20.4	20.4	20.5	20.4	20.5	20.5	20.5	20.6	20.6	20.6	20.9	21.8	20.3	22.9	21.1	
Jul 15	21.5	21.6	21.7	21.7	21.9	22.6	20.7	20.6	20.5	20.3	20.2	20.2	20.4	20.5	20.5	20.4	20.4	20.4	20.4	20.6	20.6	20.6	20.8	20.8	20.2	22.6	20.8	
Jul 16	20.8	20.9	20.9	20.9	21.1	21.7	21.0	20.7	20.5	20.4	20.3	20.3	20.4	20.4	20.4	20.4	20.5	20.5	20.5	20.5	20.6	20.7	20.7	20.8	20.3	21.7	20.7	
Jul 17	21.9	21.8	22.0	21.9	21.7	21.7	21.6	20.9	20.9	20.9	20.8	20.8	20.7	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.7	20.7	21.6	21.9	20.6	22.0	21.1	
Jul 18	21.9	21.9	21.9	22.0	22.2	22.9	21.2	20.8	20.5	20.3	20.4	20.4	20.4	20.5	20.6	20.5	20.6	20.6	20.6	20.6	20.7	20.8	20.8	20.8	20.3	22.9	21.0	
Jul 19	20.9	20.9	20.9	21.0	21.1	21.1	21.1	20.8	20.7	20.5	20.4	20.4	20.5	20.6	20.6	20.6	20.6	20.6	20.7	20.6	21.4	21.7	21.7	21.8	20.4	21.8	20.9	
Jul 20	21.8	21.8	21.9	22.0	22.2	22.7	21.8	21.5	20.7	20.3	20.3	20.4	20.5	20.5	20.5	20.6	20.6	20.6	20.6	20.6	21.1	21.6	21.6	21.7	20.3	22.7	21.2	
Jul 21	21.6	21.9	21.7	22.0	22.0	22.3	21.7	21.5	20.8	20.6	20.7	20.7	20.8	20.8	20.9	20.9	20.8	20.9	20.8	20.9	21.0	21.3	21.6	21.7	20.6	22.3	21.2	
Jul 22	21.7	21.9	21.7	21.9	22.0	22.6	21.8	21.5	21.6	21.5	21.4	21.6	21.5	21.4	21.6	21.5	21.6	21.6	21.8	21.6	21.8	22.0	21.8	21.9	21.4	22.6	21.7	
Jul 23	22.5	22.4	22.3	22.1	21.9	22.4	21.9	21.4	21.2	21.2	21.0	21.2	21.2	21.3	21.0	21.3	20.8	20.9	20.8	21.3	21.5	21.5	21.8	21.7	20.8	22.5	21.5	
Jul 24	21.8	21.7	21.9	21.9	21.9	22.1	21.7	21.4	20.9	20.9	20.9	20.9	20.8	20.7	20.7	20.7	20.8	20.8	20.8	20.8	20.9	21.5	21.7	21.8	20.7	22.1	21.3	
Jul 25	21.5	21.9	21.6	21.9	21.7	21.0	21.1	21.1	21.1	21.0	21.0	21.0	20.9	21.0	21.0	21.2	21.3	21.2	20.8	21.0	21.0	21.1	21.9	21.8	20.8	21.9	21.3	
Jul 26	22.0	21.9	22.0	21.7	22.4	22.1	21.7	21.3	21.2	21.2	20.9	20.5	20.6	20.7	20.8	20.8	20.9	20.8	20.6	20.5	21.5	21.6	21.7	21.6	20.5	22.4	21.3	
Jul 27	21.7	22.0	22.1	21.7	22.0	22.2	21.6	21.4	20.4	20.1	20.5	20.7	20.8	20.9	20.7	20.6	20.7	20.7	20.7	20.7	20.8	20.8	20.9	20.9	20.1	22.2	21.1	
Jul 28	21.3	21.8	21.8	21.8	21.8	21.8	21.1	21.0	20.8	20.8	20.5	20.5	20.6	20.6	20.7	20.7	20.7	20.7	20.8	20.8	20.9	20.9	21.0	21.1	20.5	21.8	21.0	
Jul 29	21.0	21.0	21.1	21.1	21.5	21.3	21.2	21.0	21.0	21.1	21.1	21.2	21.1	21.1	21.1	21.2	21.1	21.1	21.0	21.1	21.1	21.1	21.2	21.1	21.0	21.5	21.1	
Jul 30	21.1	21.2	21.2	21.2	21.2	21.3	21.2	21.2	21.3	21.3	21.2	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.2	21.2	21.2	21.2	21.1	21.3	21.2	
Jul 31	21.2	21.2	22.0	21.1	21.1	21.3	21.1	21.1	21.0	20.9	21.0	21.0	21.0	21.0	21.1	21.0	21.0	21.0	21.0	21.0	21.0	21.1	21.5	22.2	20.9	22.2	21.2	
Diurnal Maximum	22.5	22.4	22.3	22.4	22.8	23.1	22.4	21.8	21.8	22.3	21.4	22.2	21.5	22.2	21.6	21.6	21.9	22.0	21.8	22.2	21.9	22.1	22.0	22.2				
Diurnal Average	21.5	21.6	21.7	21.6	21.8	22.0	21.4	21.1	20.9	20.8	20.7	20.7	20.7	20.8	20.7	20.7	20.8	20.8	20.8	20.9	21.0	21.2	21.3	21.5				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

*Timeseries Chart of Hourly Average for ST - Cold Lake South Station*





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Cold Lake South Station - July 2022**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr**

Maximum Hourly Value:	18.0 kph on July 24 at hour 16	Hours in Service:	744
Maximum Daily Value:	10.9 kph on July 20	Hours of Data:	742
Minimum Hourly Value:	0.0 kph on July 7 at hour 2	Hours of Missing Data:	0
Minimum Daily Value:	0.5 kph on July 2	Hours of Calibration:	2
Monthly Average:	1.3 kph	Operational Uptime:	100.0

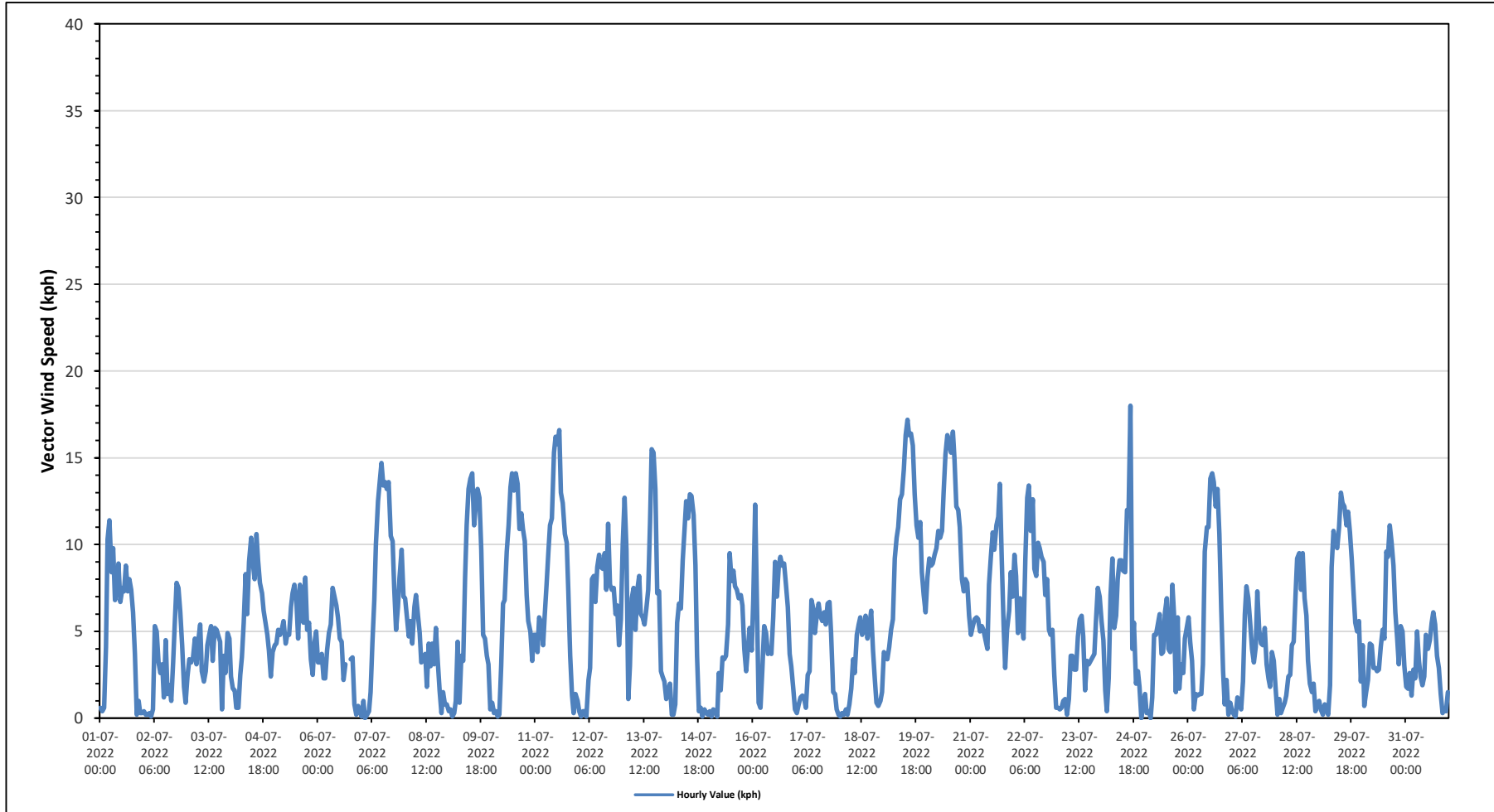
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	0.6	0.4	0.6	4.1	10.3	11.4	8.4	9.8	6.8	7.5	8.9	6.7	7.5	7.3	8.8	7.3	8.0	7.4	6.1	3.7	0.2	1.0	0.3	0.3	0.2	11.4	5.0
Jul 2	0.4	0.2	0.2	0.3	0.1	0.5	5.3	5.0	3.2	2.6	3.1	1.2	4.5	1.4	1.9	1.0	3.2	5.4	7.8	7.5	6.1	4.2	1.8	0.9	0.1	7.8	0.5
Jul 3	2.4	3.4	3.2	3.5	4.6	3.1	4.5	5.4	2.7	2.1	2.7	4.2	4.8	5.3	3.3	5.2	5.1	4.7	4.4	0.5	3.6	2.6	4.9	4.6	0.5	5.4	2.4
Jul 4	2.4	1.7	1.6	0.6	0.6	2.5	3.5	5.5	8.3	6.0	9.0	10.4	9.0	8.0	10.6	9.1	7.8	7.2	6.2	5.5	4.8	3.9	2.4	3.8	0.6	10.6	5.1
Jul 5	4.2	4.3	5.1	4.8	5.1	5.6	4.3	4.8	4.8	6.4	7.2	7.7	6.9	4.6	7.7	6.0	5.5	8.1	5.1	5.5	3.4	2.5	4.3	5.0	2.5	8.1	4.9
Jul 6	3.2	3.2	3.7	2.3	2.3	3.9	4.9	5.4	7.5	7.0	6.5	5.8	4.6	4.4	2.2	3.1	C	C	3.4	3.5	0.8	0.2	0.7	0.4	0.2	7.5	2.9
Jul 7	0.1	1.0	0.0	0.2	0.4	1.5	4.4	6.8	10.0	12.5	13.7	14.7	13.4	13.6	13.2	13.6	10.5	10.2	7.5	5.1	6.4	8.1	9.7	7.0	0.0	14.7	7.5
Jul 8	6.9	5.8	4.7	5.6	4.3	6.4	7.1	6.0	4.9	3.2	3.4	3.7	1.8	4.3	3.0	4.3	3.1	5.2	3.3	1.6	0.3	1.5	0.8	0.8	0.3	7.1	2.8
Jul 9	0.4	0.5	0.1	0.3	1.0	4.4	0.9	3.6	3.3	8.1	11.1	13.2	13.8	14.1	11.1	12.4	13.2	12.7	9.7	4.8	4.6	3.6	3.1	0.5	0.1	14.1	6.0
Jul 10	0.9	0.3	0.4	0.1	0.2	3.0	6.6	6.8	9.6	11.1	13.3	14.1	13.1	14.1	13.5	10.9	11.8	10.9	10.2	7.1	5.6	5.0	3.3	4.8	0.1	14.1	7.1
Jul 11	4.8	3.8	5.8	5.5	4.2	5.9	7.7	9.6	11.1	11.5	15.3	16.2	15.8	16.6	13.0	12.4	10.6	10.1	7.3	3.6	1.3	0.3	1.4	1.0	0.3	16.6	7.8
Jul 12	0.4	0.1	0.4	0.4	0.1	2.2	2.9	8.0	8.2	6.7	8.7	9.4	8.7	8.6	9.5	7.4	11.2	7.7	7.4	7.5	6.0	6.5	4.2	5.7	0.1	11.2	5.4
Jul 13	10.0	12.7	9.7	1.1	3.0	6.9	7.5	5.1	7.4	8.2	6.0	5.8	5.4	6.3	7.4	11.3	15.5	15.3	13.2	7.2	7.3	2.7	2.4	2.1	1.1	15.5	3.6
Jul 14	1.1	1.5	2.0	0.2	0.2	0.8	5.5	6.6	6.3	9.1	10.9	12.5	11.5	12.9	12.8	11.7	8.8	3.6	0.4	0.6	0.1	0.5	0.3	0.2	0.1	12.9	4.9
Jul 15	0.4	0.1	0.5	0.4	0.1	2.6	1.6	3.5	3.4	3.6	5.4	9.5	7.9	8.5	7.6	7.4	6.9	7.1	6.5	4.0	2.7	3.9	5.2	3.9	0.1	9.5	3.4
Jul 16	6.9	12.3	6.3	0.9	0.6	2.8	5.3	4.9	3.7	3.9	3.7	5.8	9.0	7.0	8.8	9.3	8.8	8.9	7.7	6.4	3.7	3.0	1.8	0.5	0.5	12.3	3.5
Jul 17	0.3	0.8	1.2	1.3	1.2	0.6	2.5	2.7	6.8	6.3	4.9	5.9	6.6	5.9	5.6	6.1	5.4	6.6	6.7	4.9	1.5	1.4	0.5	0.2	0.2	6.8	3.3
Jul 18	0.1	0.3	0.2	0.5	0.2	0.8	1.7	3.4	2.6	4.8	5.4	5.8	4.8	5.1	5.9	4.6	5.4	6.2	3.9	2.2	0.9	0.7	1.0	1.5	0.1	6.2	2.7
Jul 19	3.8	3.6	3.4	4.1	5.1	5.7	9.2	10.4	11.0	12.6	12.9	14.3	16.3	17.2	16.3	16.4	15.7	12.9	11.1	10.4	11.3	8.4	7.1	6.1	3.4	17.2	9.9
Jul 20	8.1	9.2	8.8	8.9	9.4	9.8	10.8	10.4	10.8	13.0	15.2	16.3	15.8	15.3	16.5	14.9	12.2	12.0	11.0	8.0	7.3	8.0	7.8	5.9	5.9	16.5	10.9
Jul 21	4.8	5.3	5.7	5.8	5.7	5.0	5.3	5.1	4.5	4.0	7.7	9.3	10.7	9.7	11.1	11.6	13.5	9.2	5.4	2.9	5.1	6.2	8.4	7.0	2.9	13.5	6.8
Jul 22	9.4	8.2	4.9	6.9	5.7	4.6	9.2	12.7	13.4	10.8	12.6	8.6	8.2	10.1	9.8	9.3	9.0	7.1	8.0	5.1	4.8	5.1	2.5	0.6	0.6	13.4	6.6
Jul 23	0.6	0.5	0.6	1.0	1.1	0.2	1.1	3.6	3.6	2.8	2.8	4.7	5.7	5.9	4.7	1.6	3.3	3.1	3.3	3.5	3.7	5.6	7.5	7.0	0.2	7.5	2.0
Jul 24	5.6	4.5	1.6	0.4	2.3	7.1	9.2	5.2	5.9	8.0	9.1	9.1	8.5	8.4	12.0	11.9	18.0	4.0	5.5	2.0	2.7	1.8	0.0	0.9	0.0	18.0	2.6
Jul 25	1.4	0.3	0.4	0.0	1.2	4.8	4.8	5.3	6.0	3.7	3.8	6.1	6.9	4.0	3.8	7.7	6.0	1.5	5.8	1.7	3.1	2.6	4.6	5.2	0.0	7.7	3.1
Jul 26	5.8	4.4	3.3	0.5	1.4	1.3	1.4	1.4	3.1	9.6	11.0	11.0	13.8	14.1	13.6	12.2	13.2	10.6	6.3	2.7	0.8	2.2	0.2	0.9	0.2	14.1	4.9
Jul 27	0.4	0.2	0.1	1.2	0.8	0.5	2.1	6.0	7.6	6.9	5.5	4.0	3.2	4.1	7.3	5.1	4.3	4.2	5.2	3.1	2.3	1.8	3.8	3.3	0.1	7.6	2.6
Jul 28	1.7	0.2	1.1	0.3	0.6	0.9	1.3	2.4	2.5	4.2	4.4	7.1	9.2	9.5	7.4	9.5	6.9	5.9	3.3	2.0	1.5	2.0	0.4	0.8	0.2	9.5	3.2
Jul 29	1.0	0.5	0.2	0.8	0.5	0.2	1.9	8.7	10.8	10.0	9.8	11.0	13.0	12.4	12.2	11.1	11.9	10.7	9.1	7.4	5.5	5.0	5.6	2.1	0.2	13.0	6.2
Jul 30	4.2	0.7	1.5	2.2	4.3	4.2	2.9	2.9	2.7	2.8	4.1	5.1	4.6	9.6	9.3	11.1	10.1	8.8	6.1	4.6	3.1	5.3	5.0	3.0	0.7	11.1	3.4
Jul 31	1.8	1.7	2.6	1.3	2.8	2.3	5.0	3.3	2.4	1.9	2.4	4.8	4.0	4.5	5.5	6.1	5.4	3.6	2.9	1.4	0.3	0.5	0.4	1.5	0.3	6.1	2.4
Diurnal Maximum	10	13	10	9	10	11	11	13	13	13	15	16	16	17	17	16	18	15	13	10	11	8	10	7			
Diurnal Average	3.0	3.0	2.6	2.1	2.6	3.6	4.8	5.8	6.3	6.8	7.8	8.5	8.7	8.8	8.9	8.8	9.0	7.7	6.4	4.4	3.6	3.4	3.3	2.8			

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

*Timeseries Chart of Hourly Average for VWS - Cold Lake South Station*

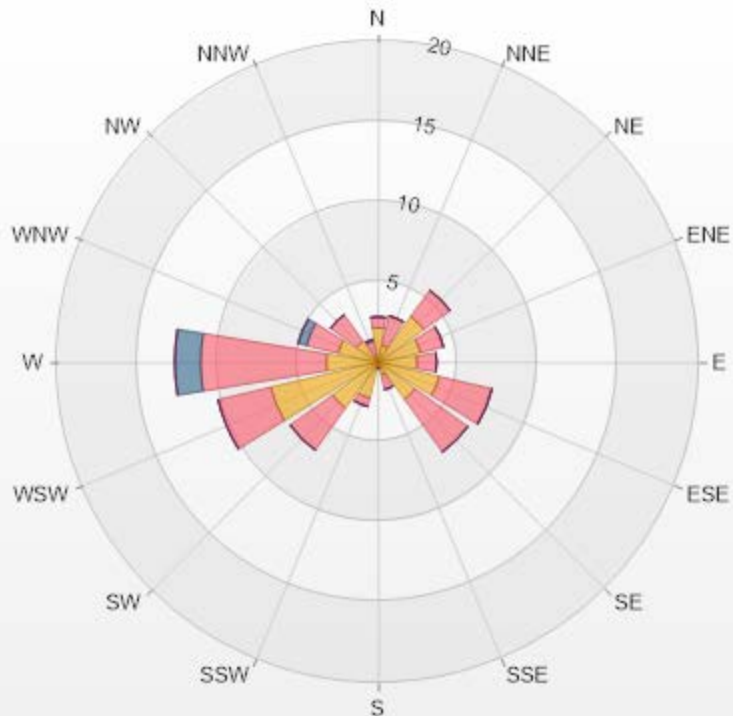


Wind: Cold Lake South Monitor: WDS [kph] Monthly: 07-2022 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.

Calm: 21.83% Valid Data: 99.73%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	2.16	0.67	0	0	0	2.83
NNE	1.08	1.89	0	0	0	2.97
NE	3.5	2.02	0	0	0	5.52
ENE	2.7	1.48	0	0	0	4.18
E	2.43	1.21	0	0	0	3.64
ESE	3.91	3.37	0	0	0	7.28
SE	2.83	4.04	0	0	0	6.87
SSE	0.81	0.94	0	0	0	1.75
S	0.27	0.13	0	0	0	0.4
SSW	2.29	0.54	0	0	0	2.83
SW	3.5	3.23	0	0	0	6.73
WSW	6.87	3.37	0	0	0	10.24
W	3.23	7.82	1.62	0	0	12.67
WNW	2.56	2.02	0.54	0	0	5.12
NW	1.62	2.02	0	0	0	3.64
NNW	0.27	1.08	0.13	0	0	1.48
Summary	40.03	35.83	2.29	0	0	78.15





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% Icon Classes (kph)	40	1.8-6.0	36	6.0-15.0	2	15.0-29.0	0	29.0-39.0	0	>39.0
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## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

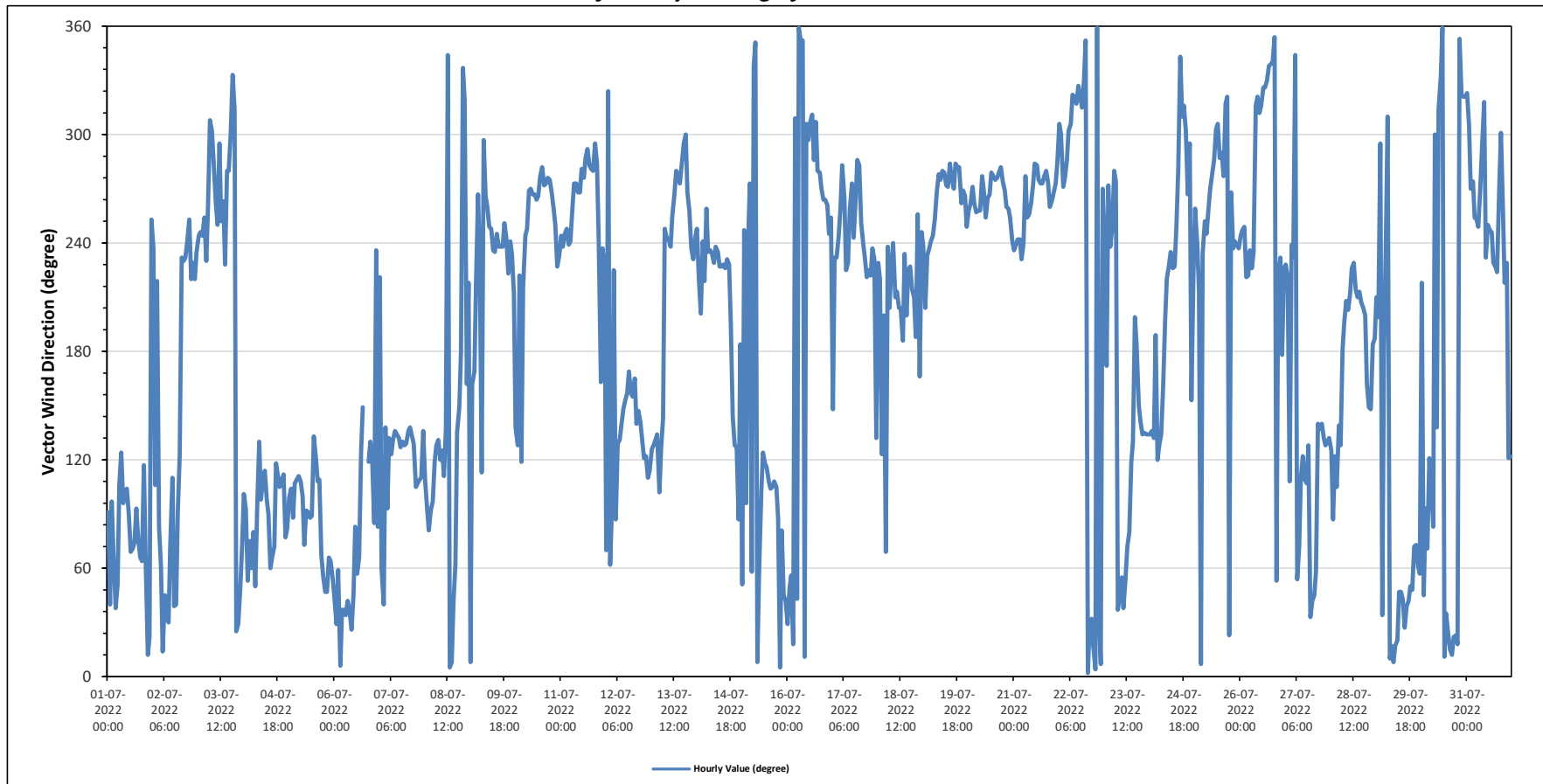
Cold Lake South Station - July 2022

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

Monthly Average:		263 (W) degree													Hours in Service:		744										
															Hours of Data:		742										
															Hours of Missing Data:		0										
															Hours of Calibration:		2										
															Operational Uptime:		100.0										
Day	Hourly Period Starting at (MST)																							Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	E	NE	E	ENE	NE	NE	ESE	ESE	E	E	ESE	E	ENE	ENE	ENE	E	ENE	ENE	ENE	ESE	ENE	NNE	NNE	WSW	81	E	
Jul 2	SW	ESE	SW	E	ENE	NNE	NE	NE	NNE	ENE	ESE	NE	NE	E	ESE	SW	SW	WSW	WSW	SW	SW	SW	SW	SW	233	SW	
Jul 3	WSW	WSW	WSW	WSW	SW	WSW	NW	WNW	WNW	W	WSW	WNW	WSW	W	SW	W	W	WNW	NNW	NW	NNE	NNE	NE	ENE	283	W	
Jul 4	E	E	NE	ENE	ENE	E	NE	E	SE	E	ESE	ESE	E	E	ENE	ENE	ENE	ESE	ESE	ESE	ESE	ESE	ESE	E	94	E	
Jul 5	E	ESE	E	ESE	ESE	ESE	ESE	E	ENE	E	E	E	E	E	SE	ESE	ESE	ESE	ENE	NE	NE	NE	ENE	ENE	90	E	
Jul 6	NE	NNE	ENE	N	NE	NE	NE	NE	NE	NNE	NE	E	ENE	ENE	ESE	SSE	C	C	ESE	SE	ESE	E	SW	E	56	NE	
Jul 7	SW	ENE	NE	SE	E	SE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	SE	128	SE	
Jul 8	ESE	E	E	E	E	ESE	SE	SE	ESE	SE	ESE	SE	NNW	N	N	ENE	SE	SSE	S	NNW	NW	SSE	SW	SW	104	ESE	
Jul 9	N	SSE	SSE	SW	W	SW	ESE	WNW	W	WSW	WSW	WSW	SW	SW	WSW	SW	SW	WSW	WSW	SW	WSW	SW	SSW	SSW	243	WSW	
Jul 10	SE	SE	SW	ESE	SW	WSW	WSW	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	267	W	
Jul 11	WSW	SW	WSW	WSW	WSW	WSW	WSW	W	W	W	W	W	W	W	W	WNW	WNW	W	W	WNW	WNW	WSW	SSE	SW	SW	272	W
Jul 12	ENE	NW	ENE	E	SW	E	SE	SE	SE	SE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	142	SE	
Jul 13	SE	SE	SE	SE	E	SE	SE	WSW	WSW	WSW	SW	WSW	W	W	W	W	WNW	WNW	WNW	W	WSW	SW	SW	WSW	248	WSW	
Jul 14	WSW	SW	SSW	WSW	SW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SSW	SE	SE	E	S	SSW	230	SW	
Jul 15	NE	WSW	E	SW	W	ENE	NNW	N	N	ENE	E	ESE	ESE	ESE	ESE	ESE	ESE	E	N	E	NE	NE	NE	91	E		
Jul 16	NNE	NE	NE	NNE	NW	NE	N	N	N	NNE	NW	WNW	NW	WNW	NW	W	W	W	W	W	W	W	WSW	WSW	317	NW	
Jul 17	SE	SW	SW	WSW	WSW	W	W	SW	SW	WSW	W	WSW	W	WNW	W	WSW	WSW	SW	SW	SW	SW	SW	SW	SE	248	WSW	
Jul 18	SW	SW	ESE	SSW	ENE	SW	SSW	SW	WSW	SSW	SSW	SSW	SSW	S	SW	SSW	SW	SW	SSW	SSW	S	WSW	SSE	WSW	214	SSW	
Jul 19	SW	SSW	SW	SW	WSW	WSW	WSW	W	W	W	W	W	W	W	W	WNW	W	W	WNW	W	W	W	W	W	WSW	270	W
Jul 20	WSW	W	W	W	WSW	WSW	WSW	W	W	WSW	W	W	W	W	W	W	W	W	W	W	W	W	W	WSW	WSW	268	W
Jul 21	SW	WSW	WSW	WSW	SW	WSW	W	WSW	WSW	W	W	WNW	W	W	W	W	W	W	W	WSW	W	W	W	WNW	267	W	
Jul 22	NW	WNW	W	W	WNW	WNW	NW	NW	NW	NW	NW	NW	NNW	N	N	NNE	NNE	NNE	N	N	NNE	N	W	W	330	NNW	
Jul 23	WSW	S	W	SW	WSW	W	W	NE	NE	NE	NE	NE	ENE	E	ESE	SE	SSW	S	SSE	SE	SE	SE	SE	SE	112	ESE	
Jul 24	SE	SE	SE	S	ESE	SE	SE	SSE	SSW	SW	SW	SW	SW	SW	WSW	W	NNW	NW	NNW	W	WNW	W	WNW	SSW	233	SW	
Jul 25	WSW	WSW	SSW	N	SW	WSW	WSW	WSW	W	W	WNW	WNW	NW	WNW	WNW	W	NW	NW	NW	W	SW	WSW	WSW	SW	277	W	
Jul 26	WSW	WSW	WSW	SW	SW	SW	SW	SW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	N	NE	SW	SW	S	SW	319	NW	
Jul 27	SW	SW	ESE	WSW	SW	NNW	NE	ENE	ESE	ESE	ESE	ESE	SE	NNE	NE	ENE	SE	SE	SE	SE	SE	SE	SE	SE	100	E	
Jul 28	SE	E	ESE	ESE	SE	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	SSE	SE	S	S	SSW	205	SSW	
Jul 29	SSW	SSW	WNW	NE	S	WSW	NW	N	NNE	N	NNE	NNE	NE	NE	NE	NNE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	36	NE	
Jul 30	SW	NE	E	ENE	ESE	ESE	E	WNW	SE	NW	NNW	N	NNE	NE	NNE	NNE	NNE	NNE	NNE	N	NW	NW	NW	NW	15	NNE	
Jul 31	NW	WNW	W	W	WSW	WSW	WSW	W	WNW	NW	SW	WSW	WSW	WSW	SW	SW	SW	W	WNW	WSW	SW	SW	ESE	ESE	253	WSW	
C	Monthly Calibration						S	Daily Zero-Span Check						Q	Quality Assurance												
K	Collection Error						N	No Data (Machine Not in Service)						Y	Routine Maintenance						P	Power Failure					
X	Invalid Data (Machine Malfunction /Recovery)						NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																			
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																											

**Timeseries Chart of Hourly Average for VWD - Cold Lake South Station**





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

*Cold Lake South Station - July 2022*

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector**

WIND SPEED																											
Maximum Hourly Value:	18.0	kph	on July 24 at hour 16	Hours in Service:	744																						
Maximum Daily Value:	10.9	kph	on July 20	Hours of Data:	742																						
Minimum Hourly Value:	0.0	kph	on July 7 at hour 2	Hours of Missing Data:	0																						
Minimum Daily Value:	0.5	kph	on July 2	Hours of Calibration:	2																						
Monthly Average:	1.3	kph		Operational Uptime:	100																						
WIND DIRECTION																											
Monthly Average:	263	(W)	degree																								
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	0.6	0.4	0.6	4.1	10.3	11.4	8.4	9.8	6.8	7.5	8.9	6.7	7.5	7.3	8.8	7.3	8.0	7.4	6.1	3.7	0.2	1.0	0.3	0.3	0.2	11.4	5.0
Jul 2	0.4	0.2	0.2	0.3	0.1	0.5	5.3	5.0	3.2	2.6	3.1	1.2	4.5	1.4	1.9	1.0	3.2	5.4	7.8	7.5	6.1	4.2	1.8	0.9	0.1	7.8	0.5
Jul 3	2.4	3.4	3.2	3.5	4.6	3.1	4.5	5.4	2.7	2.1	2.7	4.2	4.8	5.3	3.3	5.2	5.1	4.7	4.4	0.5	3.6	2.6	4.9	4.6	0.5	5.4	2.4
Jul 4	2.4	1.7	1.6	0.6	0.6	2.5	3.5	5.5	8.3	6.0	9.0	10.4	9.0	8.0	10.6	9.1	7.8	7.2	6.2	5.5	4.8	3.9	2.4	3.8	0.6	10.6	5.1
Jul 5	4.2	4.3	5.1	4.8	5.1	5.6	4.3	4.8	4.8	6.4	7.2	7.7	6.9	4.6	7.7	6.0	5.5	8.1	5.1	5.5	3.4	2.5	4.3	5.0	2.5	8.1	4.9
Jul 6	3.2	3.2	3.7	2.3	2.3	3.9	4.9	5.4	7.5	7.0	6.5	5.8	4.6	4.4	2.2	3.1	<b>C</b>	<b>C</b>	3.4	3.5	0.8	0.2	0.7	0.4	0.2	7.5	2.9
Jul 7	0.1	1.0	<b>0.0</b>	0.2	0.4	1.5	4.4	6.8	10.0	12.5	13.7	14.7	13.4	13.6	13.2	<b>C</b>	<b>C</b>	10.2	7.5	5.1	6.4	8.1	9.7	7.0	<b>0.0</b>	14.7	7.5
Jul 8	6.9	5.8	4.7	5.6	4.3	6.4	7.1	6.0	4.9	3.2	3.4	3.7	1.8	4.3	3.0	4.3	3.1	5.2	3.3	1.6	0.3	1.5	0.8	0.8	0.3	7.1	2.8
Jul 9	0.4	0.5	0.1	0.3	1.0	4.4	0.9	3.6	3.3	8.1	11.1	13.2	13.8	14.1	11.1	12.4	13.2	12.7	9.7	4.8	4.6	3.6	3.1	0.5	0.1	14.1	6.0
Jul 10	0.9	0.3	0.4	0.1	0.2	3.0	6.6	6.8	9.6	11.1	13.3	14.1	13.1	14.1	13.5	10.9	11.8	10.9	10.2	7.1	5.6	5.0	3.3	4.8	0.1	14.1	7.1
Jul 11	4.8	3.8	5.8	5.5	4.2	5.9	7.7	9.6	11.1	11.5	15.3	16.2	15.8	16.6	13.0	12.4	10.6	10.1	7.3	3.6	1.3	0.3	1.4	1.0	0.3	16.6	7.8
Jul 12	0.4	0.1	0.4	0.4	0.1	2.2	2.9	8.0	8.2	6.7	8.7	9.4	8.7	8.6	9.5	7.4	11.2	7.7	7.4	7.5	6.0	6.5	4.2	5.7	0.1	11.2	5.4
Jul 13	10.0	12.7	9.7	1.1	3.0	6.9	7.5	5.1	7.4	8.2	6.0	5.8	5.4	6.3	7.4	11.3	15.5	15.3	13.2	7.2	7.3	2.7	2.4	2.1	1.1	15.5	3.6
Jul 14	1.1	1.5	2.0	0.2	0.2	0.8	5.5	6.6	6.3	9.1	10.9	12.5	11.5	12.9	12.8	11.7	8.8	3.6	0.4	0.6	0.1	0.5	0.3	0.2	0.1	12.9	4.9
Jul 15	0.4	0.1	0.5	0.4	0.1	2.6	1.6	3.5	3.4	3.6	5.4	9.5	7.9	8.5	7.6	7.4	6.9	7.1	6.5	4.0	2.7	3.9	5.2	3.9	0.1	9.5	3.4
Jul 16	6.9	12.3	6.3	0.9	0.6	2.8	5.3	4.9	3.7	3.9	3.7	5.8	9.0	7.0	8.8	9.3	8.8	8.9	7.7	6.4	3.7	3.0	1.8	0.5	0.5	12.3	3.5
Jul 17	0.3	0.8	1.2	1.3	1.2	0.6	2.5	2.7	6.8	6.3	4.9	5.9	6.6	5.9	5.6	6.1	5.4	6.6	6.7	4.9	1.5	1.4	0.5	0.2	0.2	6.8	3.3
Jul 18	0.1	0.3	0.2	0.5	0.2	0.8	1.7	3.4	2.6	4.8	5.4	5.8	4.8	5.1	5.9	4.6	5.4	6.2	3.9	2.2	0.9	0.7	1.0	1.5	0.1	6.2	2.7
Jul 19	3.8	3.6	3.4	4.1	5.1	5.7	9.2	10.4	11.0	12.6	12.9	14.3	16.3	17.2	16.3	16.4	15.7	12.9	11.1	10.4	11.3	8.4	7.1	6.1	3.4	17.2	9.9
Jul 20	8.1	9.2	8.8	8.9	9.4	9.8	10.8	10.4	10.8	13.0	15.2	16.3	15.8	15.3	16.5	14.9	12.2	12.0	11.0	8.0	7.3	8.0	7.8	5.9	5.9	16.5	<b>10.9</b>
	WSW	W	W	W	WSW	WSW	WSW	W	W	WSW	W	W	W	W	W	W	W	W	W	W	WSW	WSW	WSW	WSW			



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED		Maximum Hourly Value: 18.0 kph on July 24 at hour 16		Hours in Service: 744																																				
WIND DIRECTION		Maximum Daily Value: 10.9 kph on July 20		Hours of Data: 742																																				
		Minimum Hourly Value: 0.0 kph on July 7 at hour 2		Hours of Missing Data: 0																																				
		Minimum Daily Value: 0.5 kph on July 2		Hours of Calibration: 2																																				
		Monthly Average: 1.3 kph		Operational Uptime: 100																																				
Monthly Average: 263 (W) degree																																								
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23																
Jul 21	4.8	5.3	5.7	5.8	5.7	5.0	5.3	5.1	4.5	4.0	7.7	9.3	10.7	9.7	11.1	11.6	13.5	9.2	5.4	2.9	5.1	6.2	8.4	7.0	2.9	13.5	6.8													
	SW	WSW	WSW	WSW	SW	WSW	W	WSW	WSW	W	W	WNW	W	W	W	W	W	W	W	W	WSW	W	W	WNW																
Jul 22	9.4	8.2	4.9	6.9	5.7	4.6	9.2	12.7	13.4	10.8	12.6	8.6	8.2	10.1	9.8	9.3	9.0	7.1	8.0	5.1	4.8	5.1	2.5	0.6	0.6	13.4	6.6													
	NW	WNW	W	W	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NNW	N	N	NNE	NNE	NNE	N	N	NNE	N	W																
Jul 23	0.6	0.5	0.6	1.0	1.1	0.2	1.1	3.6	3.6	2.8	2.8	4.7	5.7	5.9	4.7	1.6	3.3	3.1	3.3	3.5	3.7	5.6	7.5	7.0	0.2	7.5	2.0													
	WSW	S	W	SW	WSW	W	W	NE	NE	NE	NE	NE	ENE	E	ESE	SE	SSW	S	SSE	SE	SE	SE	SE	SE																
Jul 24	5.6	4.5	1.6	0.4	2.3	7.1	9.2	5.2	5.9	8.0	9.1	9.1	8.5	8.4	12.0	11.9	18.0	4.0	5.5	2.0	2.7	1.8	0.0	0.9	0.0	18.0	2.6													
	SE	SE	SE	S	ESE	SE	SE	SSE	SSW	SW	SW	SW	SW	SW	WSW	W	NNW	NW	WNW	W	WNW	W	WNW	SSE	SW															
Jul 25	1.4	0.3	0.4	0.0	1.2	4.8	4.8	5.3	6.0	3.7	3.8	6.1	6.9	4.0	3.8	7.7	6.0	1.5	5.8	1.7	3.1	2.6	4.6	5.2	0.0	7.7	3.1													
	WSW	WSW	SSW	N	SW	WSW	WSW	WSW	W	W	WNW	WNW	NW	WNW	WNW	W	NW	NW	NNE	W	SW	WSW	WSW	SW																
Jul 26	5.8	4.4	3.3	0.5	1.4	1.3	1.4	1.4	3.1	9.6	11.0	11.0	13.8	14.1	13.6	12.2	13.2	10.6	6.3	2.7	0.8	2.2	0.2	0.9	0.2	14.1	4.9													
	WSW	WSW	WSW	SW	SW	SW	SW	SW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	N	NE	SW	SW	S	SW																
Jul 27	0.4	0.2	0.1	1.2	0.8	0.5	2.1	6.0	7.6	6.9	5.5	4.0	3.2	4.1	7.3	5.1	4.3	4.2	5.2	3.1	2.3	1.8	3.8	3.3	0.1	7.6	2.6													
	SW	SW	ESE	WSW	SW	NNW	NE	ENE	ESE	ESE	ESE	ESE	SE	NNE	NE	NE	ENE	SE	SE	SE	SE	SE	SE	SE																
Jul 28	1.7	0.2	1.1	0.3	0.6	0.9	1.3	2.4	2.5	4.2	4.4	7.1	9.2	9.5	7.4	9.5	6.9	5.9	3.3	2.0	1.5	2.0	0.4	0.8	0.2	9.5	3.2													
	SE	E	ESE	ESE	SE	S	SSW	SSW	SSW	SSW	SW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	SSE	S	S	S																
Jul 29	1.0	0.5	0.2	0.8	0.5	0.2	1.9	8.7	10.8	10.0	9.8	11.0	13.0	12.4	12.2	11.1	11.9	10.7	9.1	7.4	5.5	5.0	5.6	2.1	0.2	13.0	6.2													
	SSW	SSW	WNW	NE	S	WSW	NW	N	NNE	N	NNE	NNE	NE	NE	NNE	NE	NE	NE	NE	NE	ENE	ENE	ENE	ENE																
Jul 30	4.2	0.7	1.5	2.2	4.3	4.2	2.9	2.9	2.7	2.8	4.1	5.1	4.6	9.6	9.3	11.1	10.1	8.8	6.1	4.6	3.1	5.3	5.0	3.0	0.7	11.1	3.4													
	SW	NE	E	ENE	ESE	ESE	E	WNW	SE	NW	NNW	N	NNE	NE	NNE	NNE	NNE	NNE	NNE	NNE	N	NW	NW	NW																
Jul 31	1.8	1.7	2.6	1.3	2.8	2.3	5.0	3.3	2.4	1.9	2.4	4.8	4.0	4.5	5.5	6.1	5.4	3.6	2.9	1.4	0.3	0.5	0.4	1.5	0.3	6.1	2.4													
	NW	WNW	W	W	WSW	WSW	WSW	W	WNW	NW	SW	WSW	WSW	WSW	SW	SW	SW	W	WNW	WSW	WSW	SW	ESE	ESE																
<b>C</b>	Monthly Calibration										<b>S</b> Daily Zero-Span Check										<b>Q</b> Quality Assurance																			
<b>K</b>	Collection Error										<b>N</b> No Data (Machine Not in Service)										<b>Y</b> Routine Maintenance										<b>P</b> Power Failure									
<b>X</b>	InValid Data (Equipment Malfunction/Recovery)										<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																													

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Cold Lake South Station - July 2022

Summary of Hour Standard Deviations

### STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

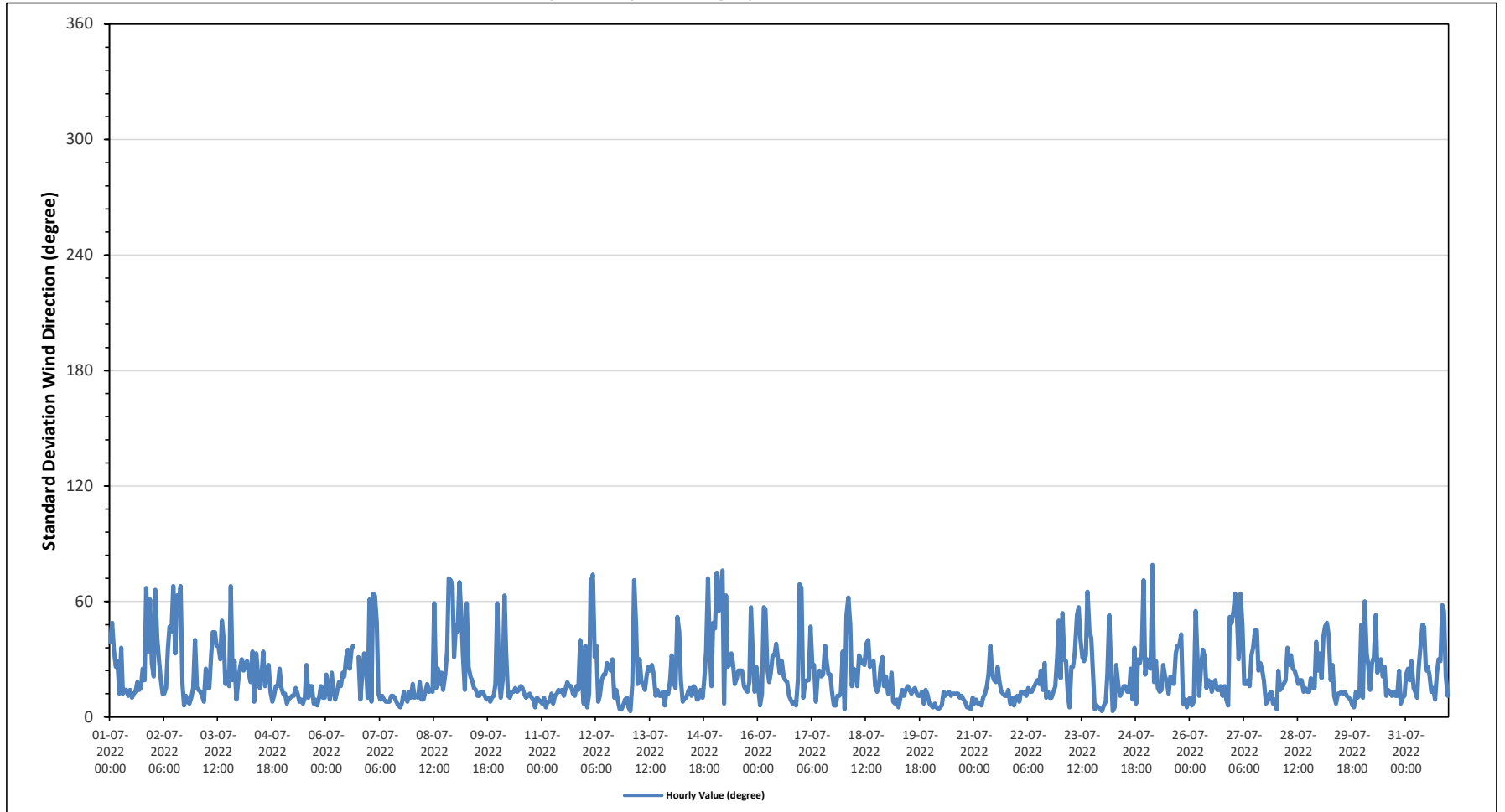
Maximum Hourly Value:	79 degree on July 25 at hour 3	Hours in Service:	744
Minimum Hourly Value:	3 degree on July 13 at hour 1	Hours of Data:	742
		Hours of Missing Data:	0
		Hours of Calibration:	2
		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum																		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			23																	
Jul 1	39	49	34	26	29	12	36	12	14	14	11	14	10	12	13	18	14	15	25	19	67	34	61	28	10	67																	
Jul 2	21	66	41	29	20	12	12	15	36	47	44	68	33	63	59	68	17	6	11	8	7	10	15	40	6	68																	
Jul 3	15	14	13	11	8	25	15	15	32	44	44	37	37	30	50	40	17	23	16	68	19	29	9	19	8	68																	
Jul 4	25	30	24	28	29	22	18	34	8	33	21	15	22	34	16	24	27	13	8	11	16	16	25	15	8	34																	
Jul 5	12	12	7	9	10	11	11	15	12	8	9	7	10	27	10	16	16	7	9	6	10	16	10	10	6	27																	
Jul 6	22	14	9	23	13	9	13	18	16	23	21	31	35	25	35	37	C	C	31	9	24	33	26	10	9	37																	
Jul 7	61	8	64	63	49	12	9	11	9	8	8	8	11	11	10	8	6	5	7	13	10	8	13	10	5	64																	
Jul 8	17	10	11	10	18	9	9	13	17	13	14	13	59	15	25	17	23	14	22	34	72	71	69	31	9	72																	
Jul 9	48	44	70	53	32	14	59	26	21	19	15	14	11	11	13	13	11	9	10	8	10	11	17	59	8	70																	
Jul 10	19	10	19	63	33	11	10	13	13	15	13	14	16	15	12	10	11	12	10	9	5	10	9	8	5	63																	
Jul 11	7	10	5	8	8	12	7	11	12	14	13	14	11	15	18	16	16	12	11	16	14	40	20	7	5	40																	
Jul 12	37	5	12	70	74	31	37	8	11	19	22	22	28	26	24	30	10	14	8	4	4	6	9	10	4	74																	
Jul 13	5	3	17	71	48	17	30	18	17	14	22	26	24	27	22	11	14	11	11	13	6	13	12	19	3	71																	
Jul 14	32	18	15	52	44	19	8	10	10	13	15	11	16	15	9	10	14	10	19	34	72	38	16	49	8	72																	
Jul 15	46	75	55	65	76	7	63	26	27	33	28	17	20	24	24	16	14	13	18	57	33	13	26	7	76																		
Jul 16	16	6	12	57	56	25	18	23	32	32	38	30	23	29	21	19	18	11	9	7	8	6	19	69	6	69																	
Jul 17	67	10	18	19	19	47	26	27	8	20	24	21	22	37	28	22	22	13	6	6	11	11	12	34	6	67																	
Jul 18	4	53	62	48	16	25	24	16	32	30	28	27	38	40	26	28	29	16	13	16	26	31	16	21	4	62																	
Jul 19	12	14	23	8	7	9	5	10	14	11	14	16	14	12	14	15	12	11	11	13	7	14	12	7	5	23																	
Jul 20	6	5	7	5	4	5	6	13	11	12	13	11	12	12	12	10	11	9	8	5	5	4	10	4	13																		
Jul 21	7	9	7	7	6	10	12	16	22	37	22	19	18	26	18	13	12	11	11	14	7	10	6	10	6	37																	
Jul 22	11	8	13	13	12	11	15	13	13	15	17	19	17	24	14	28	10	13	10	10	13	16	31	50	8	50																	
Jul 23	20	54	30	29	11	5	26	26	34	53	57	40	31	29	32	65	45	41	24	4	6	5	4	3	3	65																	
Jul 24	6	8	22	53	28	3	5	27	16	11	13	16	16	13	13	25	9	36	7	30	28	33	71	22	3	71																	
Jul 25	30	28	25	79	18	29	15	13	14	27	21	18	12	21	19	17	33	37	37	43	7	9	5	9	5	79																	
Jul 26	10	6	8	55	33	11	26	35	31	15	19	18	13	17	19	14	14	16	11	16	9	6	52	49	6	55																	
Jul 27	55	64	53	30	64	48	17	17	19	16	32	36	45	45	24	28	24	19	7	8	12	13	7	9	7	64																	
Jul 28	4	24	14	15	17	19	36	27	32	25	24	21	17	19	19	13	15	13	13	20	15	15	39	24	4	39																	
Jul 29	33	20	42	47	49	42	19	27	11	7	12	12	13	12	13	11	10	9	6	5	13	10	11	48	5	49																	
Jul 30	10	60	33	27	14	28	31	53	23	28	30	21	26	11	14	13	11	13	11	11	24	7	10	11	7	60																	
Jul 31	22	25	19	29	15	13	10	26	37	48	47	24	26	22	13	15	9	23	30	29	58	55	21	11	9	58																	
Diurnal Minimum	4	3	5	5	4	3	5	8	8	7	8	7	10	11	9	8	6	5	6	4	4	5	4	3																			
Diurnal Maximum	67	75	70	79	76	48	63	53	37	53	57	68	59	63	59	68	45	41	37	68	72	71	71	69																			
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance																				
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance										P	Power Failure									
X	Invalid Data (Machine Malfunction /Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

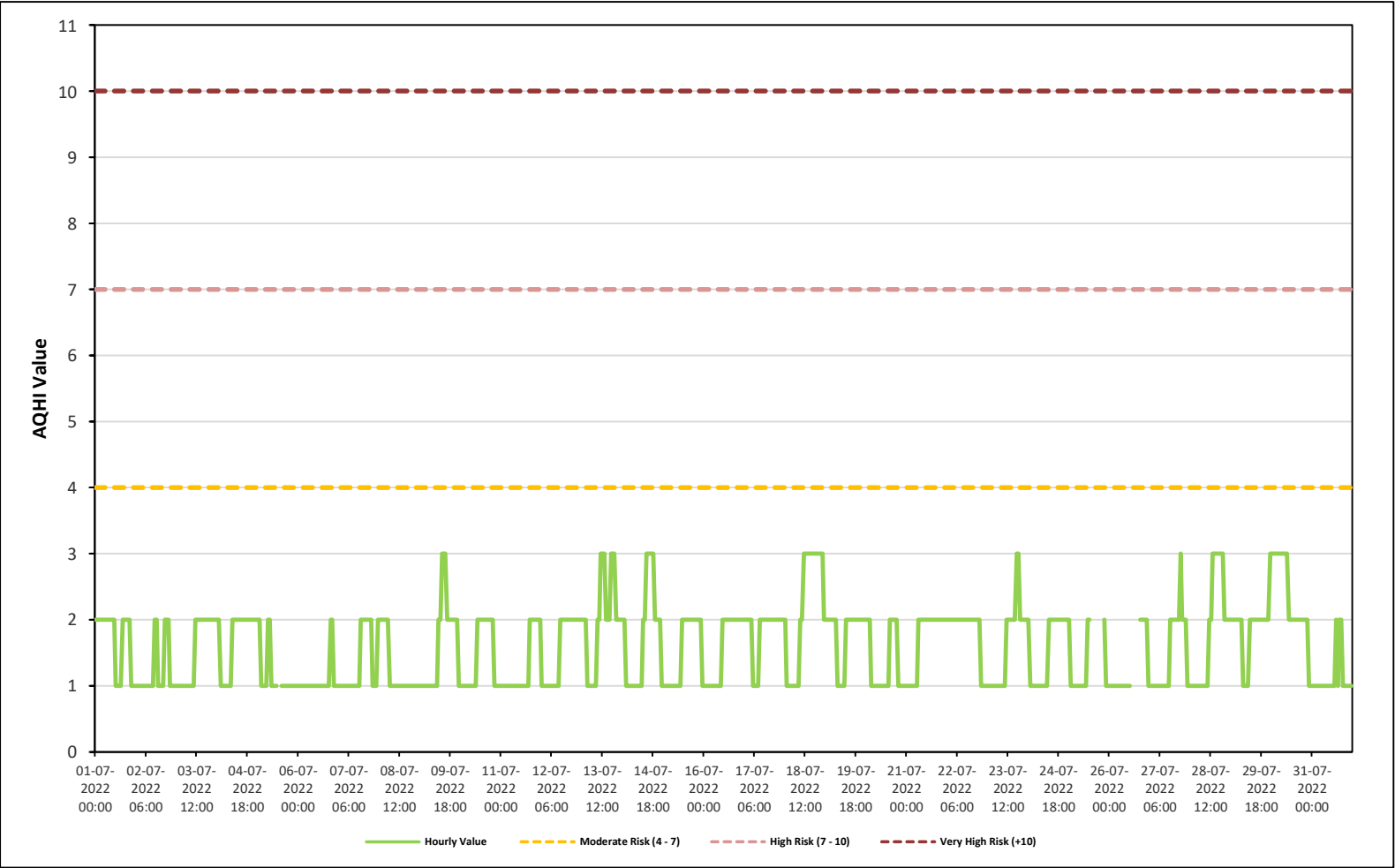
**Timeseries Chart of Hourly Average for STDWD - Cold Lake South Station**



**TAMARACK STATION**



**Timeseries Chart of Hourly Average for AQHI - Tamarack Site**





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

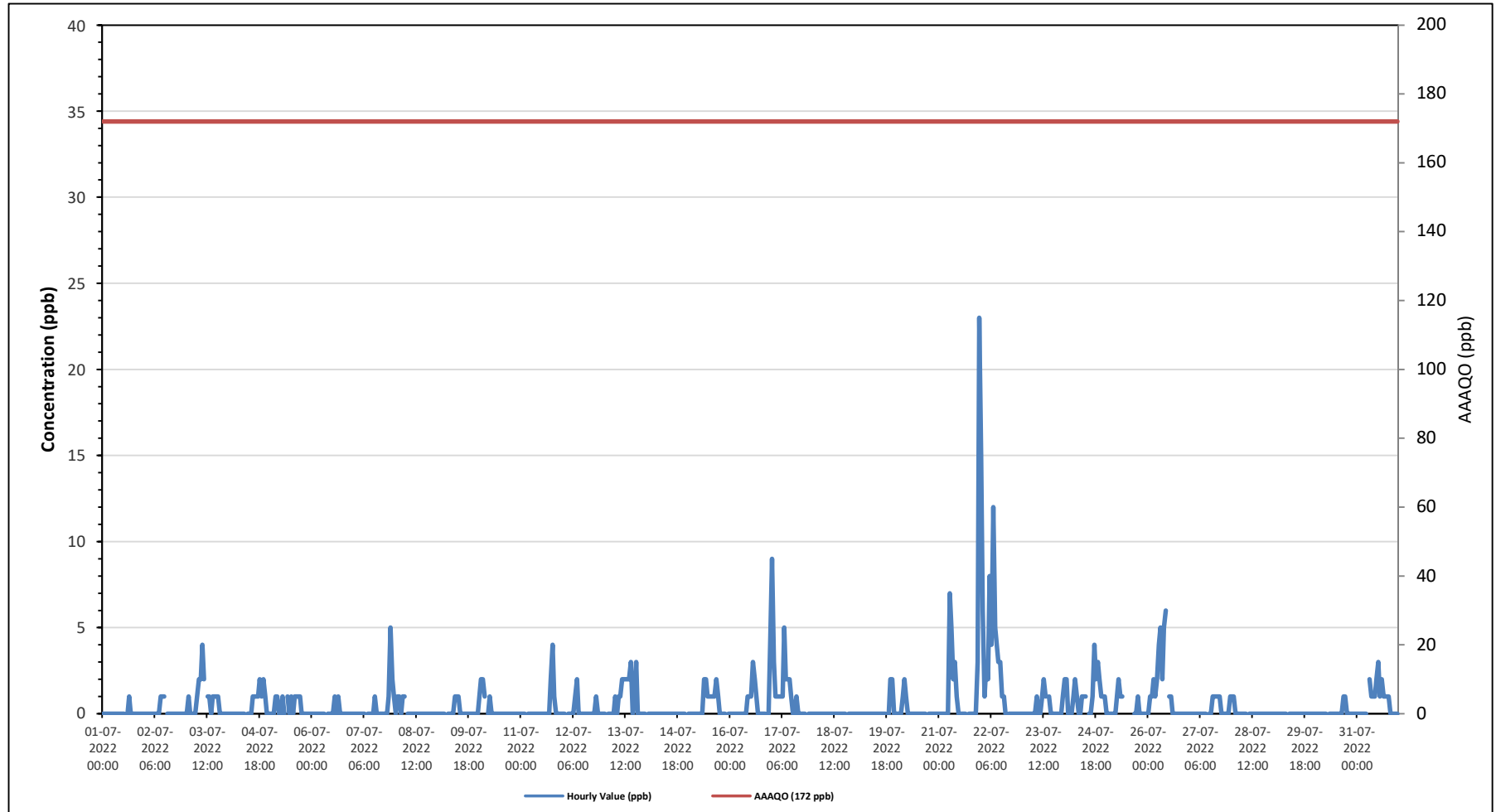
Tamarack Site - July 2022  
Summary of Hourly Averages

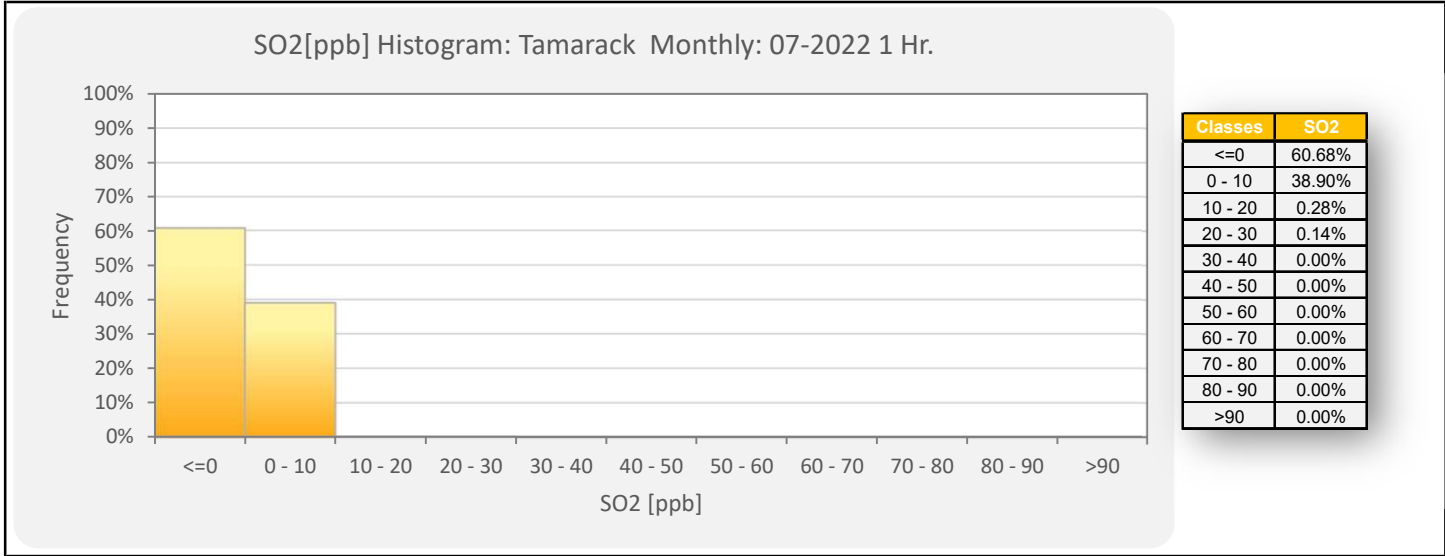
SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																																
Number of 1-Hour Exceedances:						0						Number of 24-Hour Exceedances:						0						30-Day Exceedence:						0																		
Maximum Hourly Value:												23 ppb on July 21 at hour 23												Hours in Service:						744																		
Maximum Daily Value:												3.0 ppb on July 22												Hours of Data:						707																		
Minimum Hourly Value:												0 ppb on July 1 at hour 0												Hours of Missing Data:						0																		
Minimum Daily Value:												0.0 ppb on July 14												Hours of Calibration:						37																		
Monthly Average:												0.5 ppb												Operational Uptime:						100.0																		
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23																								
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.0																			
Jul 2	0	0	0	0	0	0	0	0	0	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1																		
Jul 3	0	1	0	0	0	0	1	2	2	4	2	S	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	4	0.8																			
Jul 4	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	1	1	1	2	1	2	1	0	0	0	0	0	2	0.4																			
Jul 5	0	0	0	1	1	0	0	1	0	S	1	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0.4																			
Jul 6	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1																			
Jul 7	0	0	0	0	0	0	0	S	0	0	0	0	1	0	0	0	0	0	0	0	0	1	5	2	1	0	5	0.4																				
Jul 8	0	1	1	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2																				
Jul 9	0	0	0	0	0	S	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1																			
Jul 10	1	2	2	1	S	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3																			
Jul 11	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	0	0	0	0	0	0	0	4	0.3																			
Jul 12	0	0	S	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0.2																			
Jul 13	0	S	0	0	0	0	1	0	1	1	2	2	2	2	2	3	0	1	3	0	0	0	0	0	0	0	0	3	0.9																			
Jul 14	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																			
Jul 15	0	0	0	0	0	0	0	0	0	2	2	1	1	1	1	1	2	1	0	0	0	0	S	0	0	0	2	0.5																				
Jul 16	0	0	0	0	0	0	0	0	0	0	1	1	1	3	2	1	0	0	0	0	0	S	0	4	0	0	4	0.6																				
Jul 17	9	3	1	1	1	1	1	5	2	2	2	1	0	0	1	0	0	0	0	0	0	S	0	0	0	0	9	1.3																				
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0																				
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	2	2	0	0	0	2	0.2																			
Jul 20	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	2	0.2																			
Jul 21	0	0	0	0	0	0	7	5	2	3	1	0	0	0	0	0	S	0	0	0	0	0	0	3	23	0	23	1.9																				
Jul 22	15	6	1	3	2	8	4	12	5	4	3	3	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	15	3.0																			
Jul 23	0	0	0	0	0	0	0	0	1	0	0	1	2	1	S	1	0	0	0	0	0	0	0	0	1	0	2	0.3																				
Jul 24	2	2	0	0	0	1	2	1	0	0	1	1	1	S	0	0	1	4	2	3	2	1	1	1	0	4	1.1																					
Jul 25	0	0	0	0	0	0	1	2	1	1	C	C	C	C	C	C	0	0	1	0	0	0	0	0	0	0	2	0.3																				
Jul 26	0	1	1	2	1	2	4	5	2	5	6	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	6	1.3																				
Jul 27	0	0	0	0	0	0	0	0	0	0	S	0	0	1	1	1	1	1	1	0	0	0	0	1	0	1	1	0.3																				
Jul 28	1	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1																				
Jul 29	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																			
Jul 30	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0.1																				
Jul 31	0	0	0	0	0	0	S	2	1	1	1	2	3	1	2	1	1	1	1	0	0	0	0	0	0	0	0	3	0.7																			
Diurnal Maximum	15	6	2	3	2	8	7	12	5	5	6	3	3	3	2	3	2	4	4	3	2	5	3	23																								
Diurnal Average	0.9	0.6	0.2	0.3	0.3	0.5	0.8	1.2	0.7	0.8	0.9	0.5	0.6	0.5	0.4	0.4	0.3	0.5	0.5	0.2	0.2	0.3	0.2	1.0																								
C	Monthly Calibration												S						Daily Zero-Span Check						Q						Quality Assurance																	
K	Collection Error												N						No Data (Machine Not in Service)						Y						Routine Maintenance						P						Power Failure					
X	Invalid Data (Equipment Malfunction /Recovery)												NRM						UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																													

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

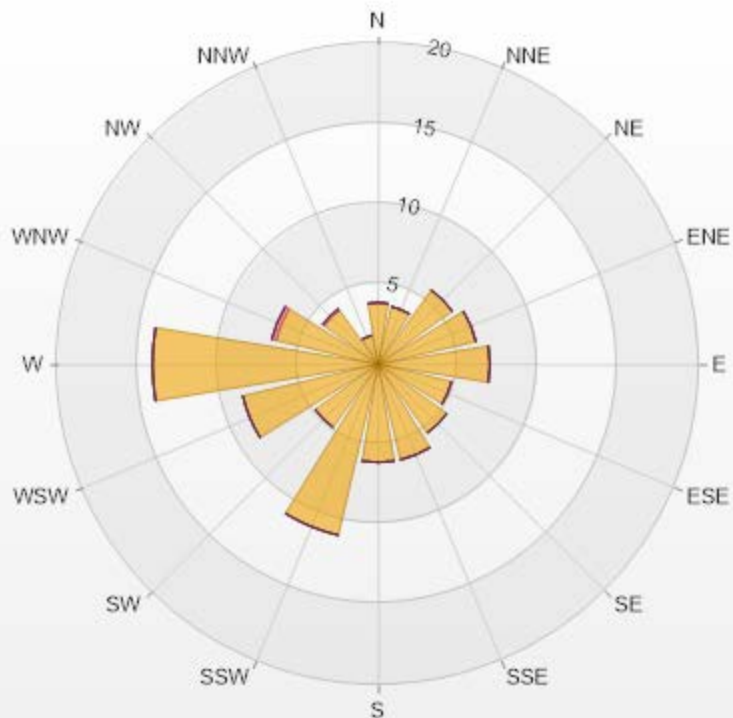
**Timeseries Chart of Hourly Average for SO<sub>2</sub> - Tamarack Site**





Wind: Tamarack Poll.: Tamarack-SO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.62% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	3.84	0	0	0	0	3.84
NNE	3.69	0	0	0	0	3.69
NE	5.68	0	0	0	0	5.68
ENE	6.25	0	0	0	0	6.25
E	6.96	0	0	0	0	6.96
ESE	4.69	0	0	0	0	4.69
SE	5.26	0	0	0	0	5.26
SSE	6.11	0	0	0	0	6.11
S	6.11	0	0	0	0	6.11
SSW	10.94	0	0	0	0	10.94
SW	4.83	0	0	0	0	4.83
WSW	8.66	0	0	0	0	8.66
W	14.06	0	0	0	0	14.06
WNW	6.53	0.28	0	0	0	6.81
NW	4.12	0.14	0	0	0	4.26
NNW	1.85	0	0	0	0	1.85
Summary	100	0.42	0	0	0	100



LICA-202207

% Icon Classes (ppb)

100 0-10

0 10-50

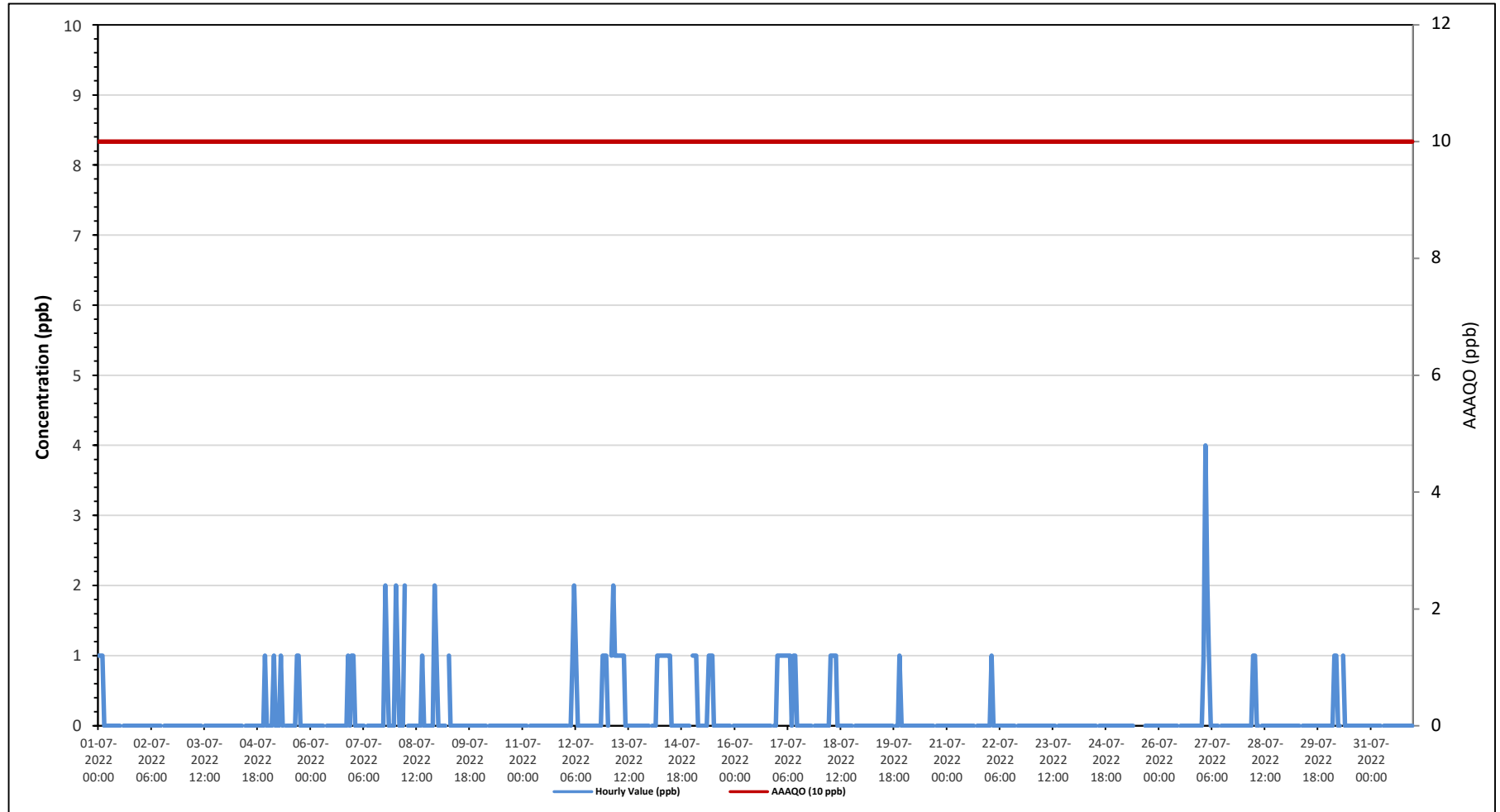
0 50-100

0 100-172

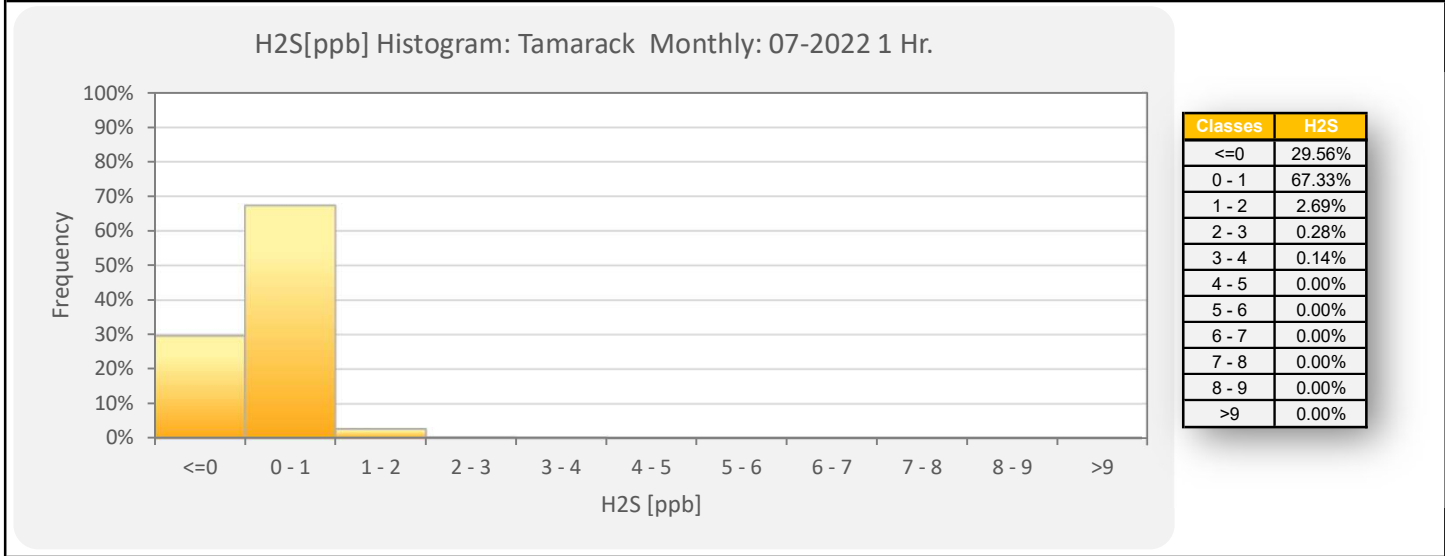
0 >172.0



**Timeseries Chart of Hourly Average for H2S - Tamarack Site**

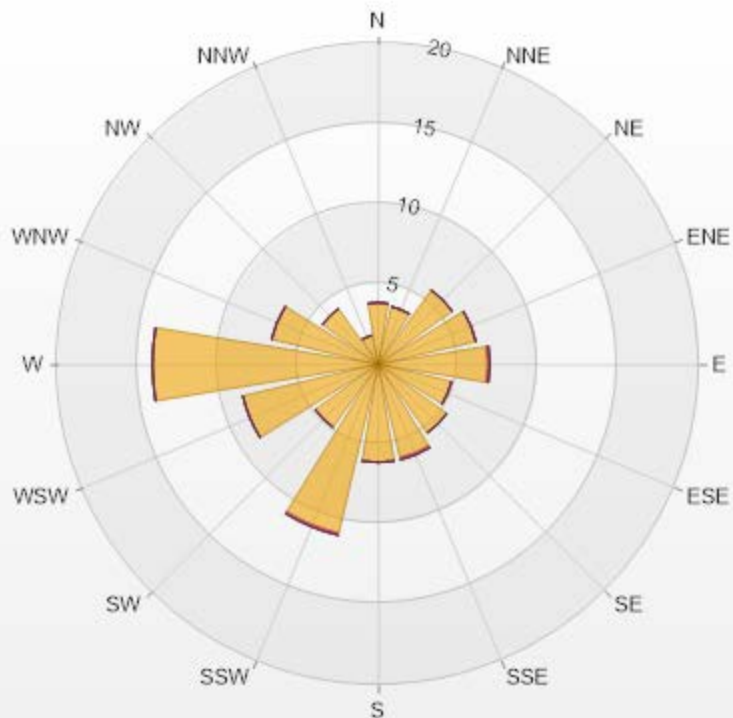






Wind: Tamarack Poll.: Tamarack-H2S[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.62% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	3.84	0	0	0	0	3.84
NNE	3.69	0	0	0	0	3.69
NE	5.68	0	0	0	0	5.68
ENE	6.25	0	0	0	0	6.25
E	6.82	0.14	0	0	0	6.96
ESE	4.69	0	0	0	0	4.69
SE	5.26	0	0	0	0	5.26
SSE	5.97	0.14	0	0	0	6.11
S	6.11	0	0	0	0	6.11
SSW	10.8	0.14	0	0	0	10.94
SW	4.83	0	0	0	0	4.83
WSW	8.66	0	0	0	0	8.66
W	14.06	0	0	0	0	14.06
WNW	6.82	0	0	0	0	6.82
NW	4.26	0	0	0	0	4.26
NNW	1.85	0	0	0	0	1.85
Summary	100	0.42	0	0	0	100



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% Icon Classes (ppb)

100 0-2

0 2-5

0 5-10

0 10-50

0 >50.0



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Tamarack Site - July 2022  
Summary of Hourly Averages

OXIDES OF NITROGEN (NOx) in ppb

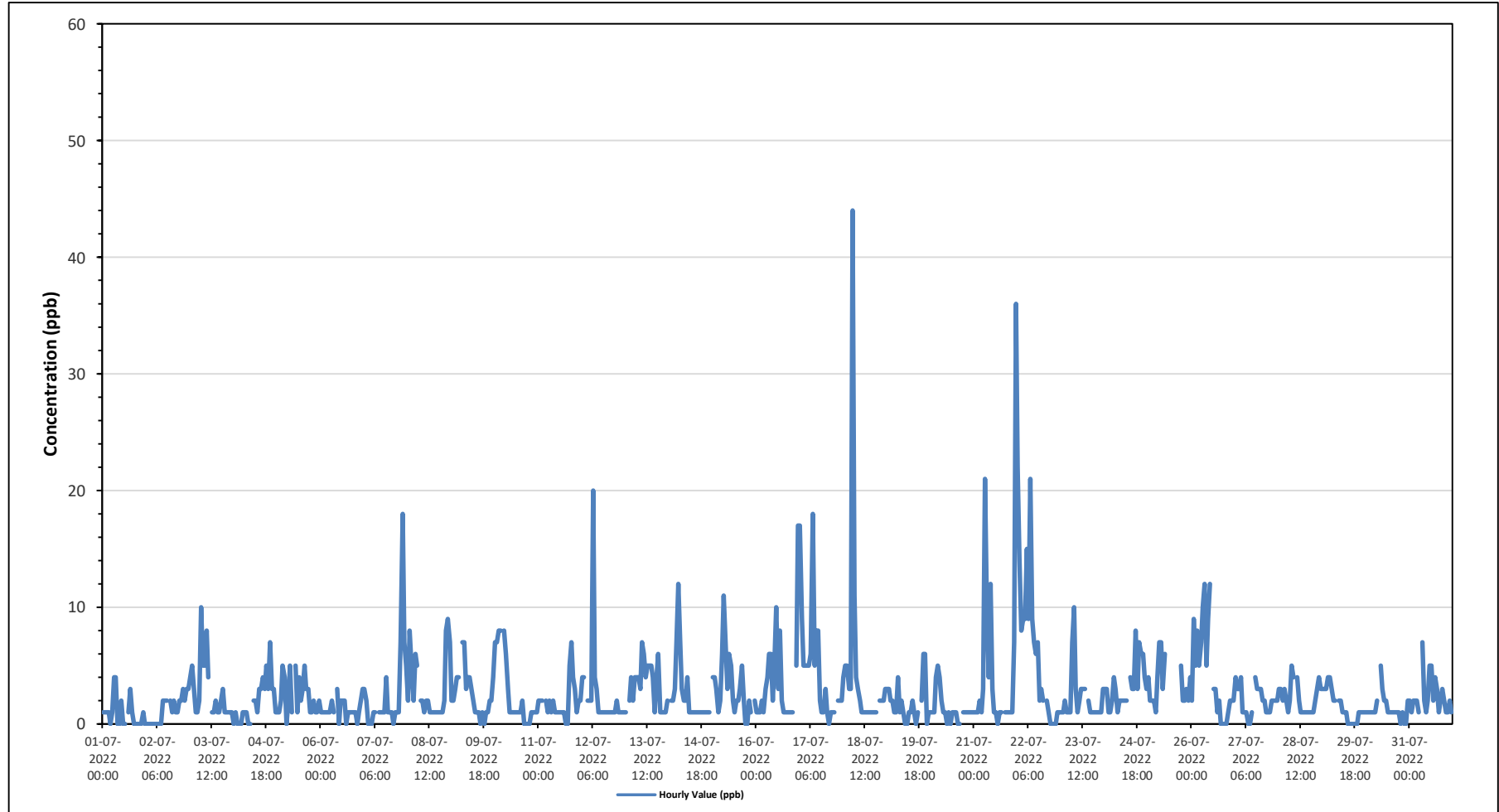
Maximum Hourly Value:	44 ppb on July 18 at hour 5	Hours in Service:	744
Maximum Daily Value:	6.4 ppb on July 22	Hours of Data:	705
Minimum Hourly Value:	0 ppb on July 1 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	0.9 ppb on July 1	Hours of Calibration:	39
Monthly Average:	2.7 ppb	Operational Uptime:	100.0

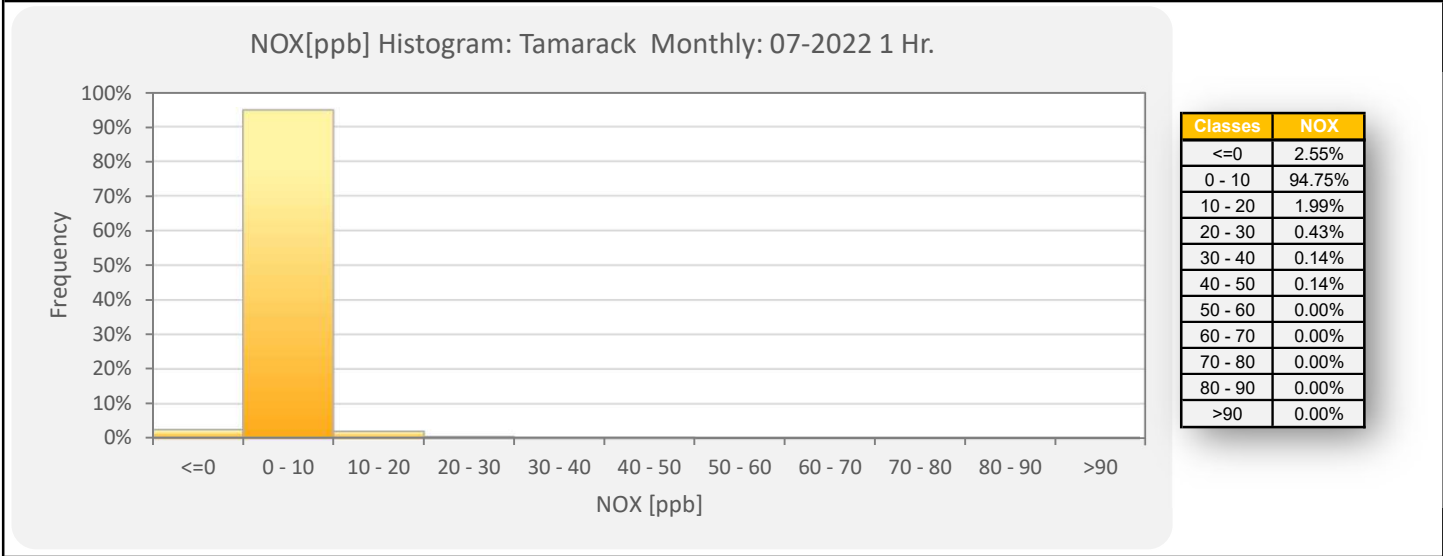
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	1	1	1	1	0	1	4	4	0	0	2	0	0	S	1	3	1	0	0	0	0	1	0	0	4	0.9	
Jul 2	0	0	0	0	0	0	0	0	0	2	2	2	S	2	1	2	1	1	2	2	3	2	3	3	0	3	1.2
Jul 3	4	5	3	1	1	2	10	5	5	8	4	S	1	1	2	1	1	2	3	1	1	1	1	1	1	10	2.8
Jul 4	0	1	0	0	0	1	1	1	0	0	S	2	2	1	3	3	4	3	5	3	7	3	3	1	0	7	1.9
Jul 5	1	1	2	5	4	0	2	5	1	S	5	1	4	2	3	5	3	3	1	1	2	1	1	2	0	5	2.4
Jul 6	1	1	1	1	1	1	2	1	S	3	0	2	2	2	0	1	1	1	1	1	0	1	2	3	0	3	1.3
Jul 7	3	2	0	0	0	1	1	S	1	1	1	1	4	1	1	0	1	1	1	1	7	18	7	5	0	18	2.5
Jul 8	2	8	5	2	6	5	S	2	2	1	2	2	1	1	1	1	1	1	1	1	2	8	9	7	1	9	3.1
Jul 9	2	2	3	4	4	S	7	7	3	4	4	3	2	1	1	0	1	0	1	1	2	2	4	4	0	7	2.6
Jul 10	7	7	8	8	S	8	6	3	1	1	1	1	1	1	1	2	0	0	0	0	1	1	1	1	0	8	2.6
Jul 11	2	2	2	S	2	1	2	1	2	1	1	1	1	1	1	0	5	7	4	3	1	2	2	2	0	7	1.9
Jul 12	4	4	S	2	2	2	20	4	3	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	20	2.5
Jul 13	1	S	2	4	2	4	4	4	3	7	6	4	5	5	5	4	1	4	6	1	1	1	1	2	1	7	3.3
Jul 14	S	2	2	3	7	12	7	3	2	2	4	1	1	1	1	1	1	1	1	1	1	1	1	S	1	12	2.5
Jul 15	4	4	3	1	2	6	11	7	3	6	5	2	1	2	2	3	5	2	0	0	2	1	S	2	0	11	3.2
Jul 16	1	1	1	2	1	3	4	6	6	2	5	10	3	8	2	1	1	1	1	1	1	S	5	17	1	17	3.6
Jul 17	17	9	5	5	5	5	6	18	5	8	8	2	1	1	3	1	0	1	1	1	S	2	2	2	0	18	4.7
Jul 18	4	5	5	3	3	44	11	4	3	2	1	1	1	1	1	1	1	1	1	S	2	2	3	1	44	4.4	
Jul 19	3	3	2	2	1	1	4	1	2	1	0	0	1	1	2	1	0	1	S	2	6	6	0	1	0	6	1.8
Jul 20	1	1	1	4	5	4	2	1	1	0	1	0	1	1	0	0	S	1	1	1	1	1	1	1	0	5	1.3
Jul 21	1	1	1	2	1	3	21	10	4	12	3	1	1	0	1	1	S	1	1	1	1	1	7	36	0	36	4.8
Jul 22	22	14	8	9	9	15	9	21	9	7	6	7	2	3	2	S	2	1	0	0	0	0	1	1	0	22	6.4
Jul 23	1	1	2	1	1	1	7	10	3	1	2	2	3	3	3	S	2	1	1	1	1	1	1	3	1	10	2.2
Jul 24	3	3	1	1	2	4	3	1	2	2	2	2	S	4	3	3	8	3	7	6	6	4	3	1	8	3.3	
Jul 25	4	2	2	2	1	4	7	7	3	6	C	C	C	C	C	C	C	C	5	2	2	3	2	4	1	7	-
Jul 26	2	9	5	8	5	7	10	12	5	9	12	S	3	3	1	2	0	0	0	0	1	2	2	2	0	12	4.3
Jul 27	4	3	3	4	1	1	1	0	0	1	S	4	3	3	3	2	2	1	1	1	2	2	2	2	0	4	2.0
Jul 28	3	3	2	3	2	1	2	5	4	S	4	2	1	1	1	1	1	1	1	1	2	3	4	3	1	5	2.2
Jul 29	3	3	3	4	4	3	2	2	S	2	2	1	1	1	0	0	0	0	0	0	1	1	1	1	0	4	1.5
Jul 30	1	1	1	1	1	1	2	S	5	3	2	2	1	1	1	1	1	1	1	1	0	1	0	2	0	5	1.3
Jul 31	2	1	2	2	2	1	S	7	2	1	2	5	5	2	4	3	1	2	3	2	1	2	1	1	1	7	2.3
Diurnal Maximum	22	14	8	9	9	44	21	21	9	12	12	10	5	8	5	5	5	8	7	7	7	18	9	36			
Diurnal Average	3.5	3.3	2.5	2.8	2.5	4.7	5.8	5.2	2.8	3.2	3.1	2.3	1.9	1.8	1.7	1.7	1.1	1.6	1.6	1.3	2.0	2.4	2.4	3.9			

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>N</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for NOx - Tamarack Site**

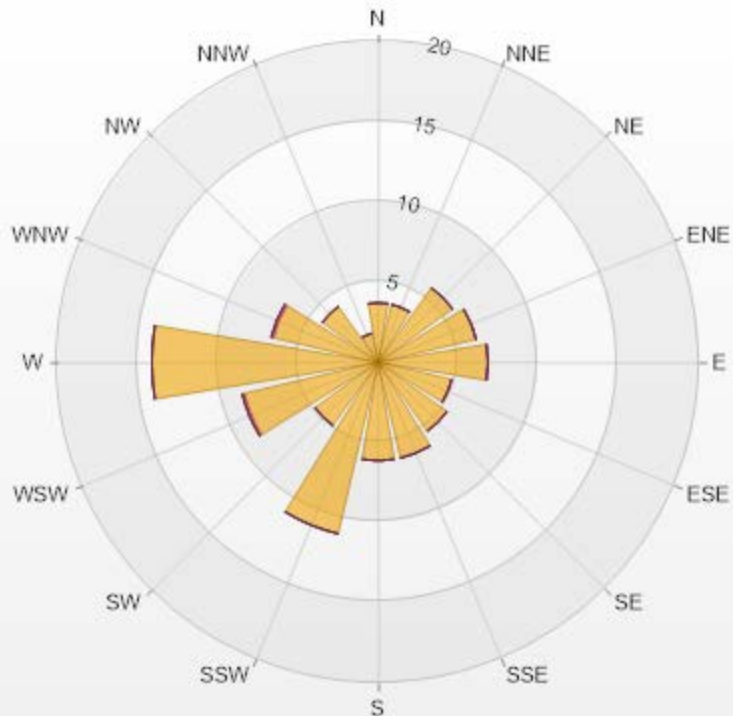




Wind: Tamarack Poll.: Tamarack-NOX[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.

Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.7	0	0	0	0	3.7
NNE	3.7	0	0	0	0	3.7
NE	5.7	0	0	0	0	5.7
ENE	6.27	0	0	0	0	6.27
E	6.84	0	0	0	0	6.84
ESE	4.7	0	0	0	0	4.7
SE	5.27	0	0	0	0	5.27
SSE	6.13	0	0	0	0	6.13
S	6.13	0	0	0	0	6.13
SSW	10.97	0	0	0	0	10.97
SW	4.84	0	0	0	0	4.84
WSW	8.55	0.14	0	0	0	8.69
W	14.1	0	0	0	0	14.1
WNW	6.7	0.14	0	0	0	6.84
NW	4.27	0	0	0	0	4.27
NNW	1.85	0	0	0	0	1.85
Summary	100	0.28	0	0	0	100



LICA-202207

% Icon Classes (ppb)	100	0-30	0	30-50	0	50-76	0	76-159	0	>159.0
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**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

Tamarack Site - July 2022

**Summary of Hourly Averages**

**NITRIC OXIDE (NO) in ppb**

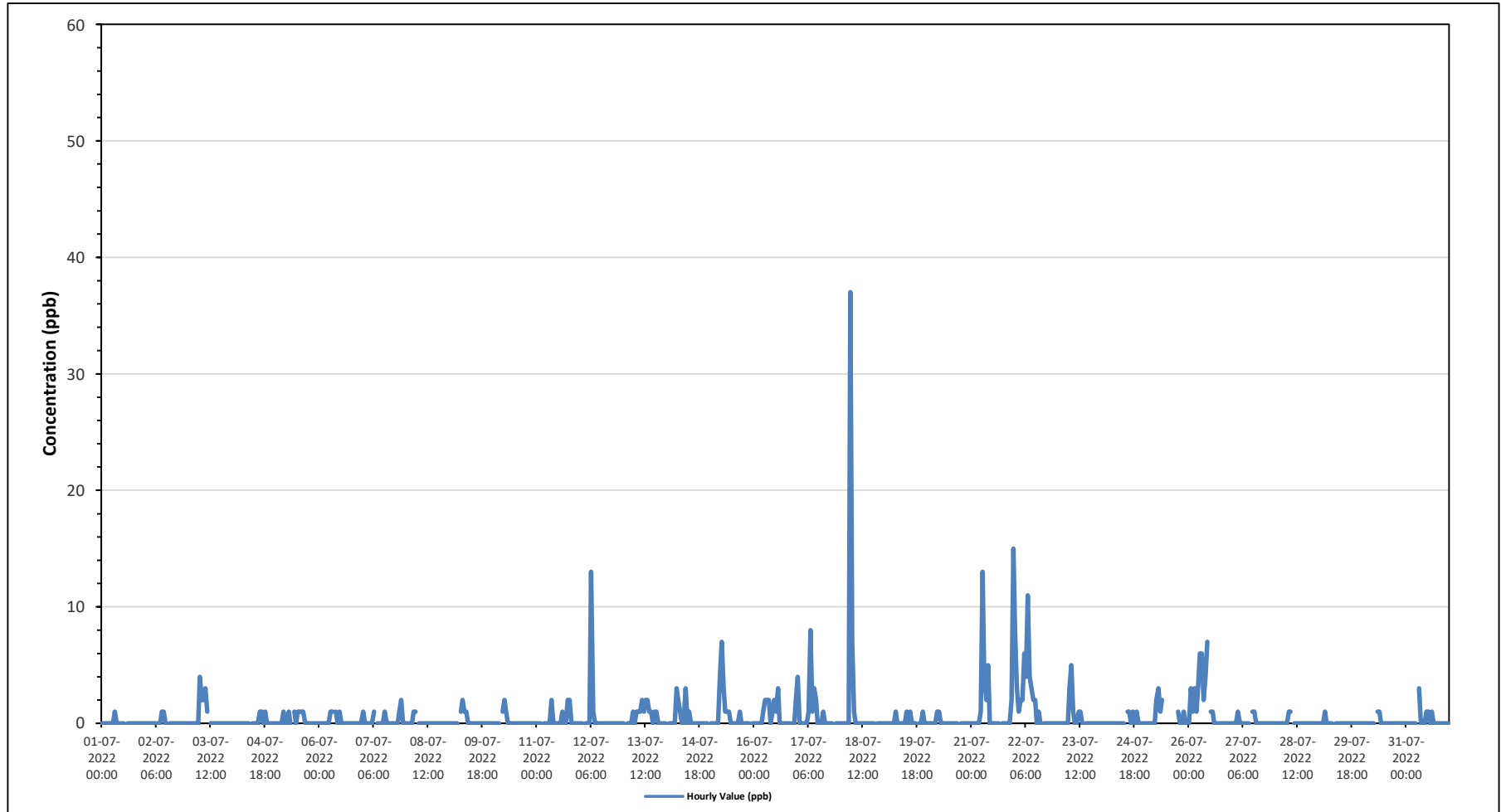
Maximum Hourly Value:	37 ppb on July 18 at hour 5	Hours in Service:	744
Maximum Daily Value:	2.1 ppb on July 22	Hours of Data:	705
Minimum Hourly Value:	0 ppb on July 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.0 ppb on July 1	Hours of Calibration:	39
Monthly Average:	0.5 ppb	Operational Uptime:	100.0

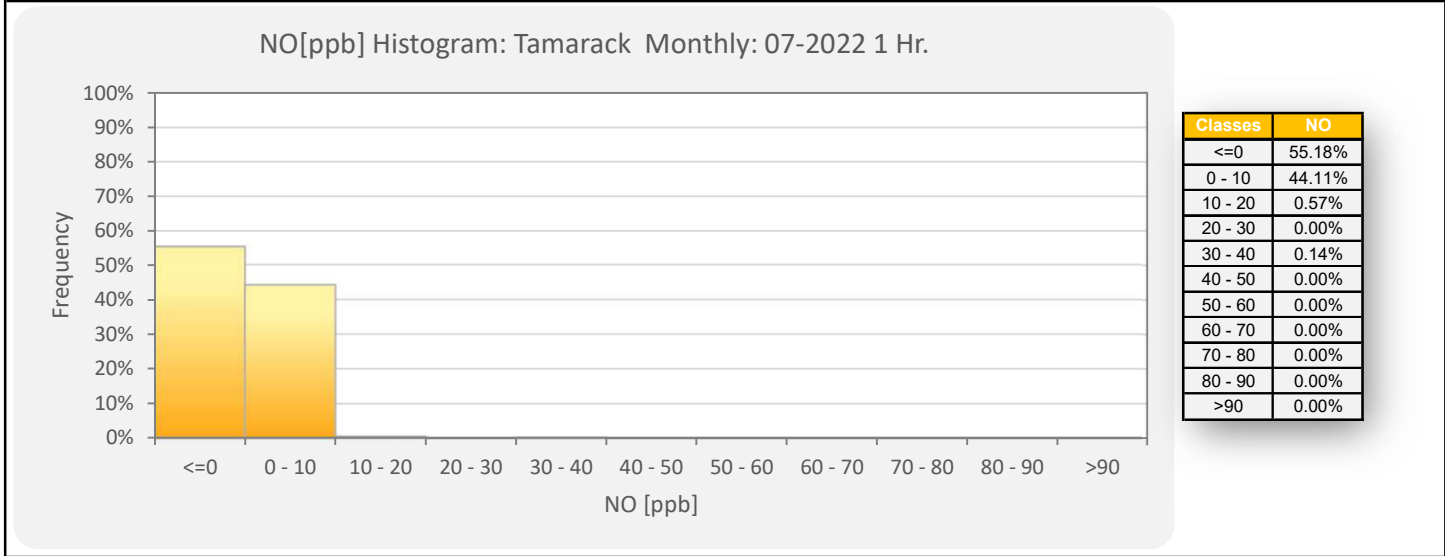
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
Jul 1	0	0	0	0	0	0	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Jul 2	0	0	0	0	0	0	0	0	0	1	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1
Jul 3	0	0	0	0	0	0	4	2	2	3	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	4	0.5	
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	1	0	1	0	0	0	1	0.1	
Jul 5	0	0	0	0	1	0	0	1	0	0	0	0	0	S	1	1	1	1	1	0	0	0	0	0	0	0	1	0.3	
Jul 6	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	
Jul 7	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	2	0.3	
Jul 8	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 9	0	0	0	0	0	0	0	S	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	
Jul 10	0	0	0	0	0	0	S	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.2	
Jul 11	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	2	2	0	0	0	0	0	2	0.3	
Jul 12	0	0	0	S	0	0	0	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0.6	
Jul 13	0	S	0	0	0	1	0	1	1	1	2	1	2	2	1	1	0	1	1	0	0	0	0	0	0	0	2	0.7	
Jul 14	S	0	0	0	0	3	2	1	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	3	0.5	
Jul 15	0	0	0	0	0	4	7	3	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	S	0	7	0.8	
Jul 16	0	0	0	0	0	1	2	2	2	0	1	2	1	3	0	0	0	0	0	0	0	0	0	0	0	S	0	3	0.7
Jul 17	4	0	0	0	0	0	1	8	1	3	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	S	8	0.9	
Jul 18	0	0	0	0	0	37	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	2.0	
Jul 19	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	S	0	0	1	0	0	0	1	0.2	
Jul 20	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1	
Jul 21	0	0	0	0	0	1	13	4	2	5	0	0	0	0	0	0	0	0	S	0	0	0	0	2	15	15	1.8		
Jul 22	8	3	1	2	2	6	4	11	4	3	2	2	0	1	0	0	S	0	0	0	0	0	0	0	0	0	11	2.1	
Jul 23	0	0	0	0	0	0	3	5	1	0	0	1	1	0	0	0	S	0	0	0	0	0	0	0	0	0	5	0.5	
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	S	1	1	0	1	0	1	0	0	0	0	0	1	0.2		
Jul 25	0	0	0	0	0	0	2	3	1	2	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	1	0	3	-
Jul 26	0	3	1	3	1	3	6	6	2	4	7	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7	1.7	
Jul 27	0	0	0	1	0	0	0	0	0	0	0	0	S	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 28	0	0	0	0	0	0	0	0	1	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 29	0	0	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0	
Jul 30	0	0	0	0	0	0	0	0	S	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	
Jul 31	0	0	0	0	0	0	0	S	3	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0.3	
Diurnal Maximum	8	3	1	3	2	37	13	11	4	5	7	2	2	3	1	1	1	2	2	1	1	2	2	15					
Diurnal Average	0.4	0.2	0.1	0.2	0.2	2.0	2.4	2.0	0.8	0.9	0.8	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.6					

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

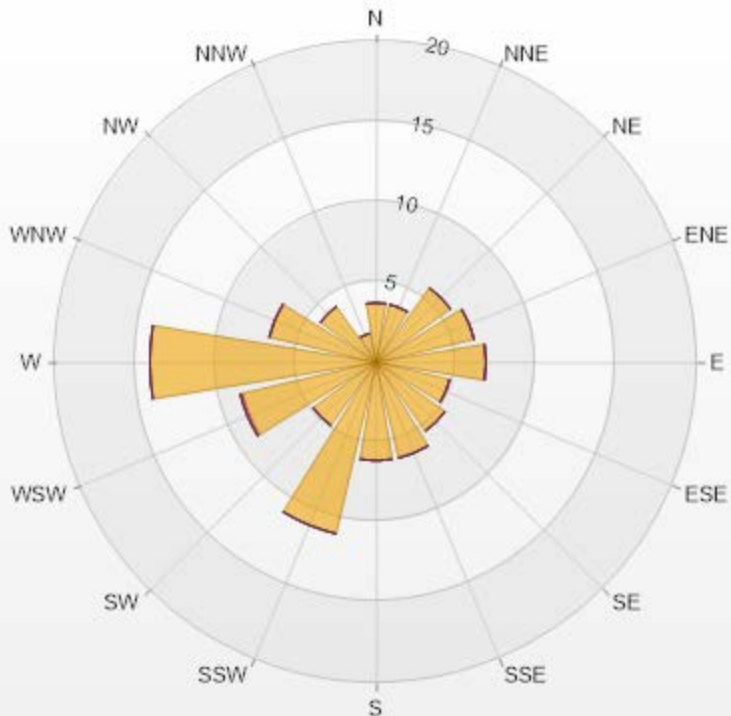
*Timeseries Chart of Hourly Average for NO - Tamarack Site*





Wind: Tamarack Poll.: Tamarack-NO[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.7	0	0	0	0	3.7
NNE	3.7	0	0	0	0	3.7
NE	5.7	0	0	0	0	5.7
ENE	6.27	0	0	0	0	6.27
E	6.84	0	0	0	0	6.84
ESE	4.7	0	0	0	0	4.7
SE	5.27	0	0	0	0	5.27
SSE	6.13	0	0	0	0	6.13
S	6.13	0	0	0	0	6.13
SSW	10.97	0	0	0	0	10.97
SW	4.84	0	0	0	0	4.84
WSW	8.55	0.14	0	0	0	8.69
W	14.1	0	0	0	0	14.1
WNW	6.84	0	0	0	0	6.84
NW	4.27	0	0	0	0	4.27
NNW	1.85	0	0	0	0	1.85
Summary	100	0.14	0	0	0	100



LICA-202207

% Icon Classes (ppb)	100	0-30	0	30-50	0	50-76	0	76-159	0	>159.0
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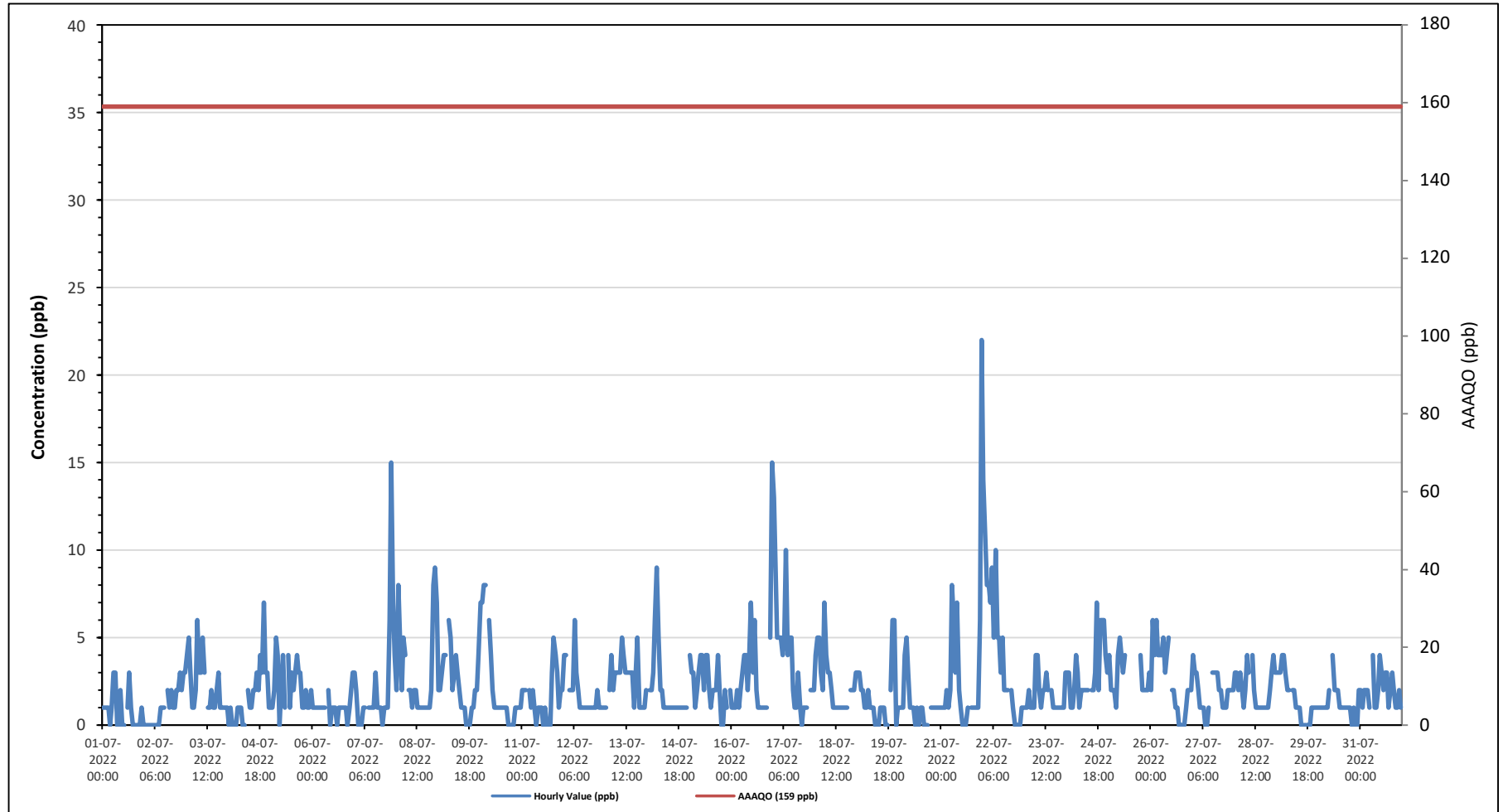
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

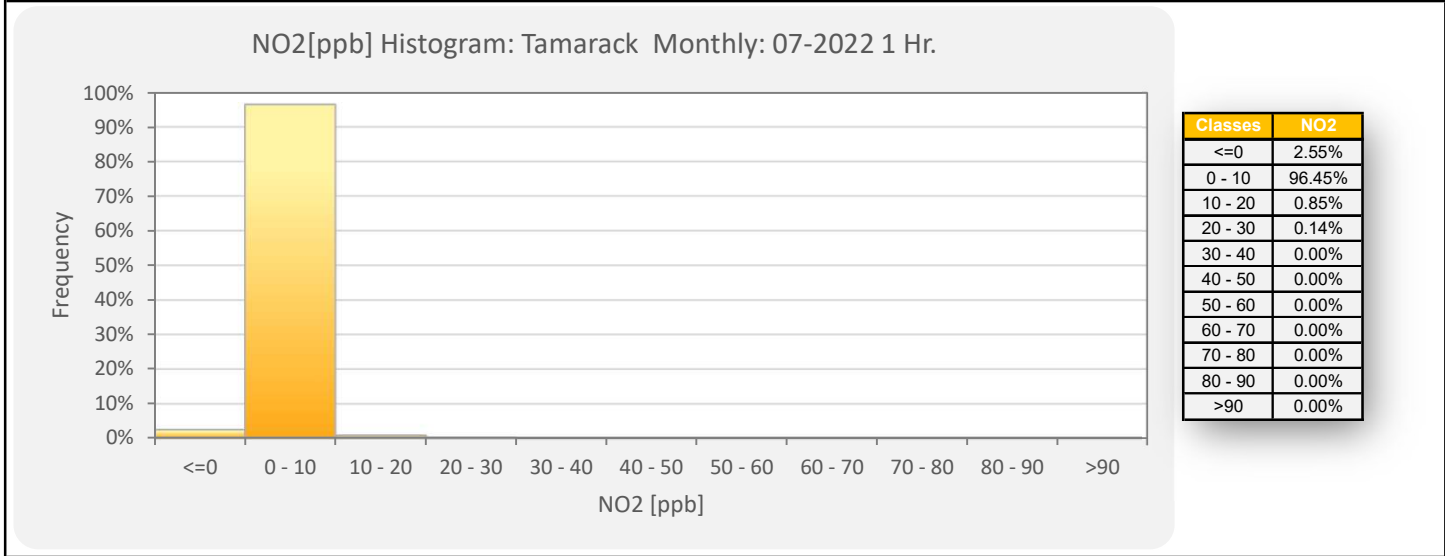
Tamarack Site - July 2022  
Summary of Hourly Averages

NITROGEN DIOXIDE (NO<sub>2</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb																																																			
Number of 1-Hour Exceedances: 0																																																			
Maximum Hourly Value: 22 ppb on July 21 at hour 23												Hours in Service: 744																																							
Maximum Daily Value: 4.4 ppb on July 22												Hours of Data: 705																																							
Minimum Hourly Value: 0 ppb on July 1 at hour 4												Hours of Missing Data: 0																																							
Minimum Daily Value: 0.8 ppb on July 1												Hours of Calibration: 39																																							
Monthly Average: 2.2 ppb												Operational Uptime: 100.0																																							
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																								
Jul 1	1	1	1	1	0	1	3	3	0	0	2	0	0	S	1	3	1	0	0	0	0	1	0	0	0	3	1.1																								
Jul 2	0	0	0	0	0	0	0	0	0	1	1	1	S	2	1	2	1	1	2	2	3	2	3	3	3	0	3	1.1																							
Jul 3	4	5	3	1	1	2	6	3	3	5	3	S	1	1	2	1	1	2	3	1	1	1	1	1	1	1	6	2.3																							
Jul 4	0	1	0	0	0	1	1	1	0	0	S	2	1	1	2	2	3	2	4	3	7	3	3	1	0	7	1.7																								
Jul 5	1	1	2	5	4	0	2	4	1	S	4	1	3	2	3	4	3	3	1	1	2	1	1	2	0	5	2.2																								
Jul 6	1	1	1	1	1	1	1	1	S	2	0	1	1	1	0	1	1	1	1	1	0	1	2	3	0	3	1.0																								
Jul 7	3	2	0	0	0	1	1	S	1	1	1	1	3	1	1	1	0	1	1	1	6	15	7	4	0	15	2.3																								
Jul 8	2	8	5	2	5	4	S	2	2	1	2	2	1	1	1	1	1	1	1	1	2	8	9	7	1	9	3.0																								
Jul 9	2	2	3	4	4	S	6	5	2	3	4	3	2	1	1	1	0	0	1	1	2	2	4	4	0	6	2.3																								
Jul 10	7	7	8	8	S	6	4	2	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	8	2.3																								
Jul 11	2	2	2	S	2	1	2	1	0	1	1	1	0	1	0	0	3	5	4	3	1	2	2	2	0	5	1.6																								
Jul 12	4	4	S	2	2	2	6	3	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	6	1.8																								
Jul 13	1	S	2	4	2	3	3	3	3	5	4	3	3	3	3	3	1	3	5	1	1	1	1	2	1	5	2.6																								
Jul 14	S	2	2	3	6	9	5	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	9	2.0																								
Jul 15	4	3	3	1	2	3	4	4	2	4	4	2	1	2	2	4	2	0	0	2	1	S	5	2	0	4	2.3																								
Jul 16	1	1	1	2	1	2	3	4	4	2	4	7	3	6	2	1	1	1	1	1	1	S	5	15	1	15	3.0																								
Jul 17	13	9	5	5	5	4	5	10	4	5	5	2	1	1	3	1	0	1	1	1	S	2	2	2	0	13	3.8																								
Jul 18	4	5	5	3	2	7	4	3	3	2	1	1	1	1	1	1	1	1	1	S	2	2	2	3	1	7	2.4																								
Jul 19	3	3	2	2	1	2	1	1	1	1	0	0	0	1	1	1	0	0	S	2	6	6	0	1	0	6	1.5																								
Jul 20	1	1	1	4	5	3	1	1	1	0	1	0	1	1	0	0	0	S	1	1	1	1	1	1	0	5	1.2																								
Jul 21	1	1	1	2	1	2	8	6	3	7	2	1	0	0	0	1	S	1	1	1	1	1	6	22	0	22	3.0																								
Jul 22	14	11	8	8	7	9	5	10	5	5	3	5	2	2	S	2	1	0	0	0	0	1	1	1	0	14	4.4																								
Jul 23	1	1	2	1	1	1	4	4	2	1	2	2	3	2	S	2	1	1	1	1	1	1	1	3	1	4	1.7																								
Jul 24	3	3	1	1	2	4	3	1	2	2	2	2	2	S	2	2	3	7	2	6	6	6	4	3	1	7	3.0																								
Jul 25	4	2	2	2	1	4	5	4	3	4	C	C	C	C	C	C	C	C	4	2	2	2	2	3	1	5	-																								
Jul 26	2	6	4	6	4	4	4	5	3	4	5	S	2	2	1	1	0	0	0	0	1	2	2	2	0	6	2.6																								
Jul 27	4	3	3	2	1	1	1	0	0	1	S	3	3	3	3	2	2	1	1	1	2	2	2	2	0	4	1.9																								
Jul 28	3	3	2	3	2	1	2	4	3	S	4	2	1	1	1	1	1	1	1	1	2	3	4	3	1	4	2.1																								
Jul 29	3	3	3	4	4	3	2	2	S	2	2	1	1	1	0	0	0	0	0	0	1	1	1	1	0	4	1.5																								
Jul 30	1	1	1	1	1	1	2	S	4	2	2	2	1	1	1	1	1	1	1	0	1	0	0	2	0	4	1.2																								
Jul 31	2	1	2	2	2	1	S	4	1	1	2	4	3	2	3	3	1	2	3	2	1	1	2	1	1	4	2.0																								
Diurnal Maximum	14	11	8	8	7	9	8	10	5	7	5	7	3	6	3	4	4	7	5	6	7	15	9	22																											
Diurnal Average	3.1	3.1	2.5	2.7	2.3	2.7	3.3	3.2	2.0	2.2	2.3	1.9	1.5	1.5	1.4	1.4	1.1	1.3	1.4	1.3	2.0	2.3	2.3	3.3																											
C	Monthly Calibration												S	Daily Zero-Span Check												Q	Quality Assurance																								
K	Collection Error												N	No Data (Machine Not in Service)												Y	Routine Maintenance												P	Power Failure											
X	Invalid Data (Equipment Malfunction /Recovery)												NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																					
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																																			
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																			

**Timeseries Chart of Hourly Average for NO2 - Tamarack Site**

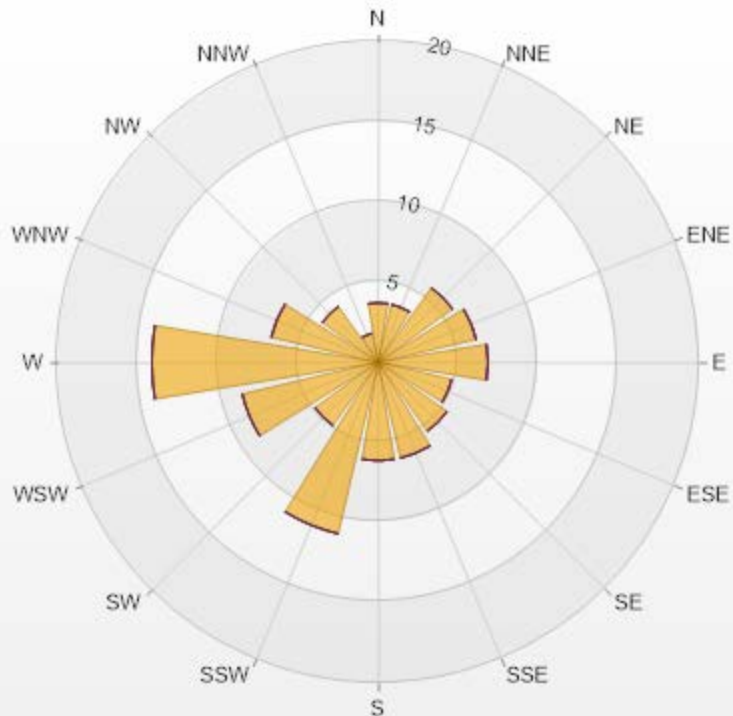






Wind: Tamarack Poll.: Tamarack-NO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.7	0	0	0	0	3.7
NNE	3.7	0	0	0	0	3.7
NE	5.7	0	0	0	0	5.7
ENE	6.27	0	0	0	0	6.27
E	6.84	0	0	0	0	6.84
ESE	4.7	0	0	0	0	4.7
SE	5.27	0	0	0	0	5.27
SSE	6.13	0	0	0	0	6.13
S	6.13	0	0	0	0	6.13
SSW	10.97	0	0	0	0	10.97
SW	4.84	0	0	0	0	4.84
WSW	8.69	0	0	0	0	8.69
W	14.1	0	0	0	0	14.1
WNW	6.84	0	0	0	0	6.84
NW	4.27	0	0	0	0	4.27
NNW	1.85	0	0	0	0	1.85
Summary	100	0	0	0	0	100



LICA-202207

% Icon Classes (ppb)	100	0-30	0	30-50	0	50-76	0	76-159	0	>159.0
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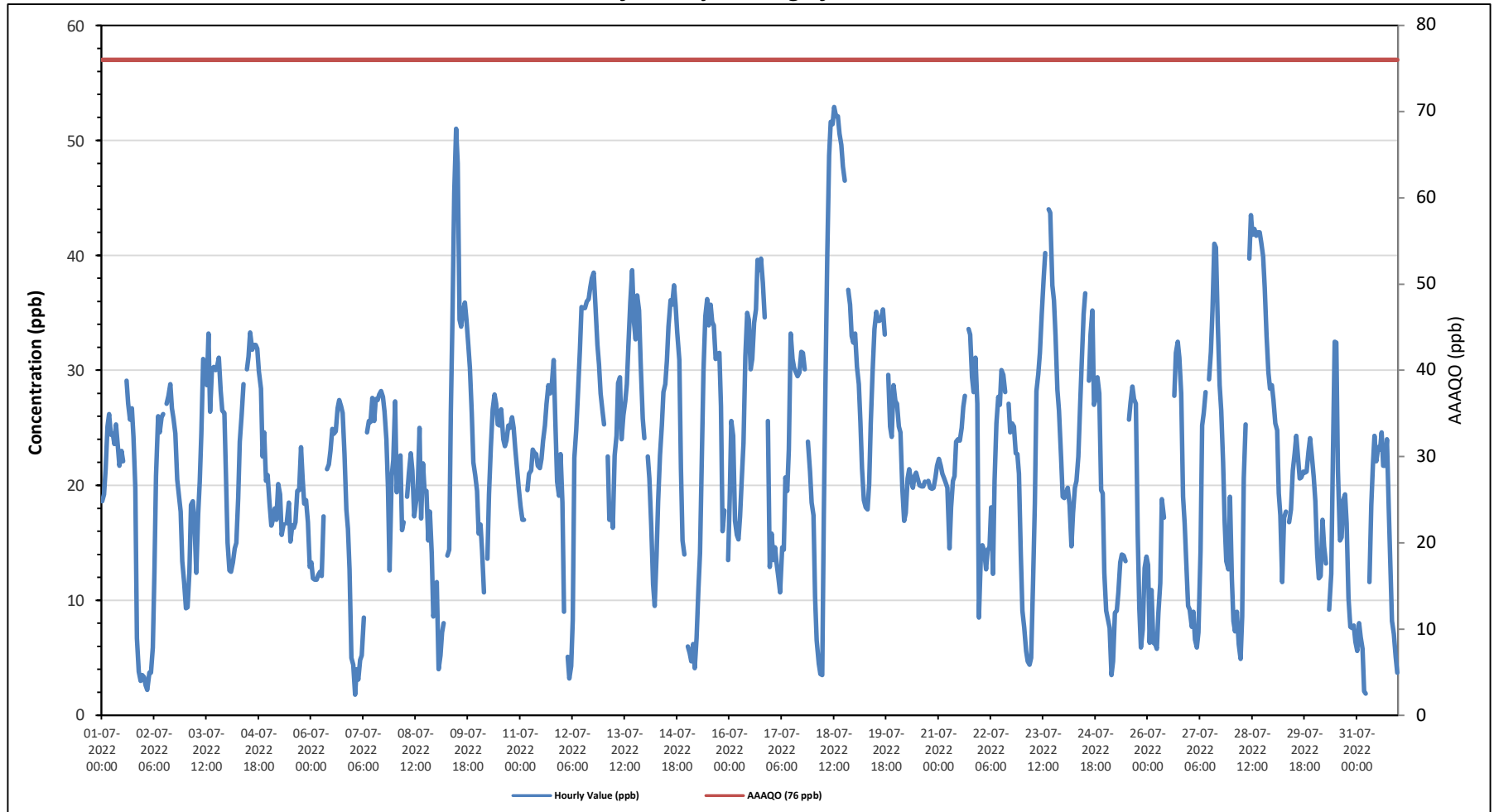
LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022  
Summary of Hourly Averages

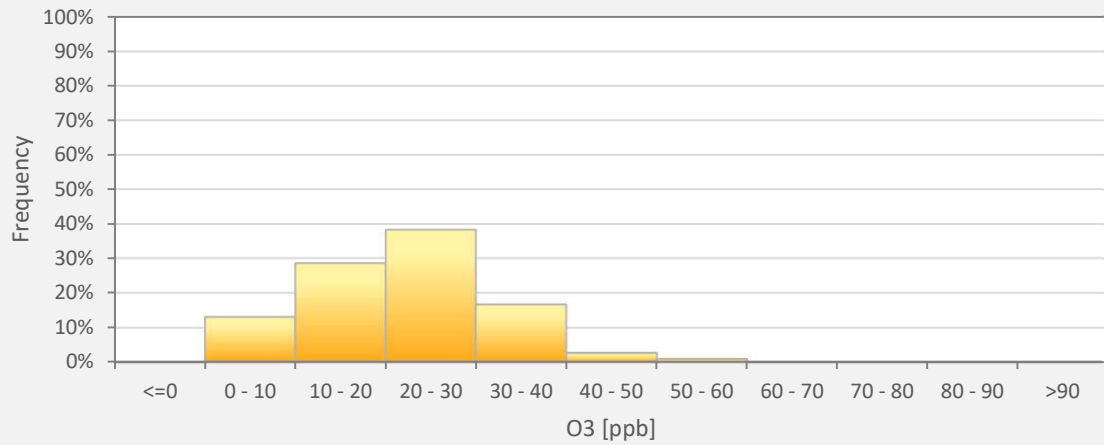
OZONE (O<sub>3</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb																																																																													
Number of 1-Hour Exceedances: 0																																																																													
Maximum Hourly Value: 52.9 ppb on July 18 at hour 12												Hours in Service: 744																																																																	
Maximum Daily Value: 33.6 ppb on July 18												Hours of Data: 708																																																																	
Minimum Hourly Value: 1.8 ppb on July 7 at hour 1												Hours of Missing Data: 0																																																																	
Minimum Daily Value: 13.8 ppb on July 25												Hours of Calibration: 36																																																																	
Monthly Average: 22.1 ppb												Operational Uptime: 100.0																																																																	
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																																																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																																																		
Jul 1	18.6	19.2	21.4	25.1	26.2	24.4	24.5	23.6	25.3	23.4	21.7	23	22.1	S	29.1	27.1	25.7	26.7	24.2	19.8	6.7	3.8	3	3.5	3.0	29.1	20.4																																																		
Jul 2	3.3	2.6	2.2	3.7	3.7	5.9	12.4	20.8	26	24.6	25.9	26.2	S	27.1	27.8	28.8	26.7	25.8	24.5	20.5	19.2	17.7	13.4	11.6	2.2	28.8	17.4																																																		
Jul 3	9.3	9.4	12.5	18.3	18.6	16.8	12.4	17.5	20.3	24.5	31	S	28.7	33.2	26.4	30.1	30.3	30	30.4	31.1	28.2	26.5	26.3	20.7	9.3	33.2	23.2																																																		
Jul 4	15	12.6	12.5	13.3	14.5	15	18.9	23.8	26.1	28.8	S	30.1	31.2	33.3	31.8	32.2	32.2	31.9	29.9	28.4	22.5	24.6	20.4	20.9	12.5	33.3	23.9																																																		
Jul 5	18.5	16.5	17	18	17	20.1	19.2	15.7	16.6	S	16.7	18.5	15.1	16.5	16.3	16.8	19.5	19.6	23.3	20.6	18.4	18.7	16.8	12.9	12.9	23.3	17.8																																																		
Jul 6	13.3	11.9	11.8	11.8	12.2	12.5	12.1	17.3	S	21.4	21.8	23	24.9	24.5	24.7	26.7	27.4	26.9	26.3	22.7	17.9	16.2	12.7	5	5.0	27.4	18.5																																																		
Jul 7	4.4	1.8	4	3.1	4.8	5.2	8.5	S	24.6	25.6	25.5	27.6	25.6	27.5	27.4	27.9	28.2	27.7	26.4	24	19.8	12.6	20.8	22.2	1.8	28.2	18.5																																																		
Jul 8	27.3	19.4	21.7	22.6	16.1	16.8	S	19	21.1	22.8	21.3	17.3	18.4	19.6	25	17.1	21.9	19.5	19.5	15.2	17.7	14.1	8.6	9.5	8.6	27.3	18.8																																																		
Jul 9	11.6	4	5.2	7.2	8	S	13.9	14.4	26.3	34.2	45.5	51	48	34.4	33.8	35.2	35.9	34.4	32.2	30.2	26.3	22	20.9	19.5	4.0	51.0	25.8																																																		
Jul 10	15.8	16.6	14.3	10.7	S	13.6	19.2	23.3	26.6	27.9	27.1	25.3	25.2	26.6	24	23.4	23.9	25.2	25	25.9	25	23.2	21.4	19.8	10.7	27.9	22.1																																																		
Jul 11	18.2	17	17	S	19.6	21	21.3	23.1	22.8	22.7	21.7	21.5	22.3	23.9	25.2	27.1	28.7	28	28.8	30.9	25.8	20.3	19.1	22.7	17.0	30.9	23.0																																																		
Jul 12	18.5	9	S	5.1	3.2	4.3	8.3	22.4	24.8	28.2	31.8	35.5	35.4	35.4	36	36.2	37.2	38	38.5	35.4	32.2	30.5	28	26.5	3.2	38.5	26.1																																																		
Jul 13	25.3	S	22.5	17	18.3	16.3	22.6	24.3	28.9	29.4	24	26.1	27.3	28.8	32.2	35.9	38.7	34.1	32.7	36.5	35.2	30.7	25.8	24.1	16.3	38.7	27.7																																																		
Jul 14	S	22.5	20.6	16.5	11.4	9.5	13.9	18.6	22.6	25.2	28.1	28.8	30.8	33.8	36.1	35.7	37.4	35.6	33.3	30.9	21.5	15.2	14	S	9.5	37.4	24.6																																																		
Jul 15	6	5.4	4.7	6.2	4.1	6.7	11	14.1	22.6	29.9	34.7	36.2	33.9	35.7	34.2	33.9	31	31.4	31.5	26.9	16	17.8	S	13.5	4.1	36.2	21.2																																																		
Jul 16	18.8	25.6	24.3	16.9	15.7	15.3	17.3	20.8	23.7	31.2	35	34.4	30.1	31	34.1	35.3	39.6	38.7	39.7	37.6	34.6	S	25.6	12.9	12.9	39.7	27.7																																																		
Jul 17	15.8	13.5	14.6	13.2	11.9	10.7	14.6	14.4	20.7	19.5	23.1	33.2	31	30.2	29.8	29.5	29.8	31.6	31.5	30.1	S	23.8	21.2	18.5	10.7	33.2	22.3																																																		
Jul 18	17.4	10.3	6.5	4.5	3.6	3.5	17.5	28.6	40	48.7	51.6	51.4	S	52.1	52.1	50.6	49.6	47.7	46.5	S	37	35.7	33	32.4	3.5	52.9	33.6																																																		
Jul 19	33.2	30.3	28.8	25.5	21.5	18.7	18.1	17.9	20.1	25.4	29.9	33.6	35.1	34.3	34.3	34.6	35.3	33.1	S	29.6	25.1	24.2	28.7	27.3	17.9	35.3	28.0																																																		
Jul 20	27.1	25.1	24.6	19.8	16.9	17.6	20.6	21.4	20.5	19.8	20.8	21.1	20.5	20	19.9	19.9	20.3	S	20.4	19.8	19.7	19.8	20.7	21.7	16.9	27.1	20.8																																																		
Jul 21	22.3	21.7	21	20.6	20.2	19.8	14.5	18.1	20.4	20.8	23.8	24	23.9	25	26.8	27.8	S	33.6	33.1	29.4	28.1	31.1	27.1	8.5	8.5	33.6	23.5																																																		
Jul 22	13.7	14.8	14.3	12.7	14.4	14.6	18.1	12.3	20.4	25.4	27.7	27	30	29.6	28.1	S	27.1	24.6	25.4	25.1	22.8	22.7	21	14	12.3	30.0	21.1																																																		
Jul 23	9.1	7.6	5.6	4.7	4.4	5	11.4	18.4	28.2	29.7	31.5	34.9	37.9	40.2	S	44	43.7	37.4	36.1	33	28.3	26.5	22.4	19	4.4	44.0	24.3																																																		
Jul 24	18.9	19.3	19.8	18.3	14.7	17.6	19.8	20.4	22.5	27.1	30.8	34.9	36.7	S	29.1	33.1	35.2	27	27.5	29.4	28	19.6	19.3	12.4	12.4	36.7	24.4																																																		
Jul 25	9.1	8.3	7.6	3.5	4.7	8.9	9.1	10.7	13.3	14	13.9	13.4	S	25.7	27.2	28.6	27.5	27.1	15.8	9.3	5.9	7.5	12.8	13.8	3.5	28.6	13.8																																																		
Jul 26	13.1	6.3	10.9	6.3	6.2	5.8	8.9	11.5	18.8	17.2	C	C	C	C	C	27.8	31.5	32.5	31.1	28	19	16.7	12.8	9.5	5.8	32.5	16.5																																																		
Jul 27	9.2	7.7	9	6.6	5.9	7.2	14.3	25.2	26.3	28.1	S	29.2	31.6	35.2	41	40.7	34	28.7	26.5	22	16.8	13.4	12.7	19	5.9	41.0	21.3																																																		
Jul 28	11.9	8.2	7.3	9	6.2	4.9	8.6	20.6	25.3	S	39.7	43.5	41.8	42.3	41.7	42	42	41.1	39.9	37.2	33	29.8	28.4	28.7	4.9	43.5	27.5																																																		
Jul 29	27.4	25.4	24.8	19.3	17.4	11.6	17.2	17.7	S	16.8	17.9	21.3	22.8	24.3	22.6	20.6	20.7	21.2	21.1	21.2	22.9	24.1	22.5	20.7	11.6	27.4	20.9																																																		
Jul 30	18.6	14	11.9	12.1	17	14.7	13.2	S	9.2	12.3	22.1	32.5	32.4	21.4	15.2	15.5	18.7	19.2	16.7	10.2	7.7	7.6	7.8	6.4	6.4	32.5	15.5																																																		
Jul 31	5.6	8	6.8	5.8	2.1	1.9	S	11.6	18.3	21.7	24.3	22.1	23.3	23.1	24.6	21.7	21.7	24	17.9	13	8.2	7.1	5.1	3.7	1.9	24.6	14.0																																																		
Diurnal Maximum	33	30	29	26	26	24	25	29	40	49	52	51	53	52	52	51	50	48	47	38	37	36	33	32																																																					
Diurnal Average	15.9	13.8	14.2	12.6	12.0	12.2	15.2	18.9	22.8	25.0	27.5	29.2	30.0	29.8	29.5	30.2	30.7	30.1	28.5	25.8	22.3	20.1	19.1	16.7																																																					
C	Monthly Calibration											S											Daily Zero-Span Check											Q											Quality Assurance																																
K	Collection Error											N											No Data (Machine Not in Service)											Y											Routine Maintenance											P											Power Failure										
X	Invalid Data (Equipment Malfunction /Recovery)											NRM											UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																																						
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																																																													
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																																													

Timeseries Chart of Hourly Average for O3 - Tamarack Site



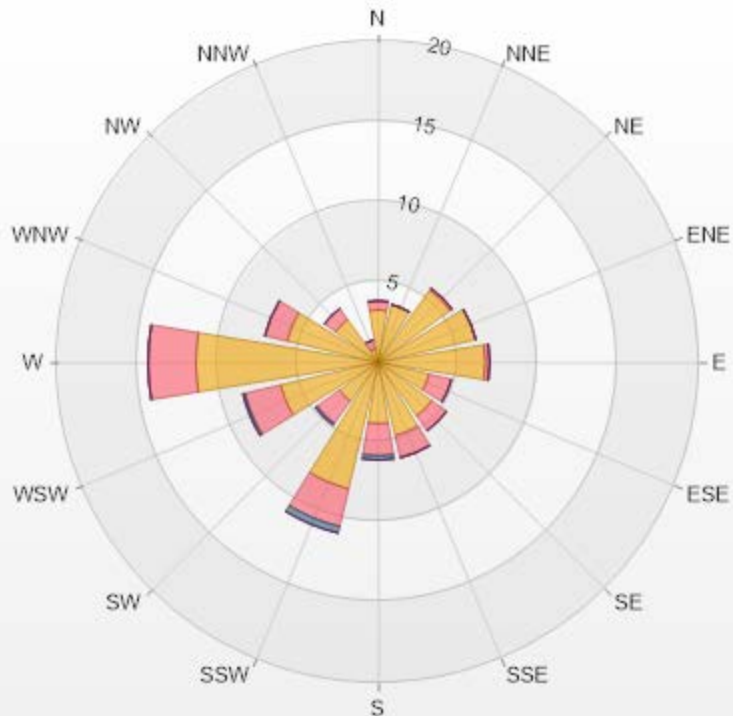
O3[ppb] Histogram: Tamarack Monthly: 07-2022 1 Hr.



Classes	O3
<=0	0.00%
0 - 10	12.99%
10 - 20	28.53%
20 - 30	38.14%
30 - 40	16.67%
40 - 50	2.68%
50 - 60	0.99%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Tamarack Poll.: Tamarack-O3[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	3.26	0.57	0	0	0	3.83
NNE	3.69	0	0	0	0	3.69
NE	5.53	0.14	0	0	0	5.67
ENE	6.24	0	0	0	0	6.24
E	6.67	0.28	0	0	0	6.95
ESE	3.26	1.42	0	0	0	4.68
SE	4.11	1.13	0	0	0	5.24
SSE	4.68	1.42	0	0	0	6.1
S	3.83	1.99	0.28	0	0	6.1
SSW	8.09	2.41	0.43	0	0	10.93
SW	2.98	1.7	0.14	0	0	4.82
WSW	6.24	2.27	0.14	0	0	8.65
W	11.35	2.98	0	0	0	14.33
WNW	5.82	1.42	0	0	0	7.24
NW	3.26	0.85	0	0	0	4.11
NNW	0.85	0.57	0	0	0	1.42
Summary	79.86	19.15	0.99	0	0	100



LICA-202207

% Icon Classes (ppb)

80 0-30

19 30-50

1 50-76

0 76-159

0 >159.0



# LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

## Tamarack Site - July 2022 Summary of Hourly Averages

### TOTAL HYDROCARBONS (THC) in ppm

Maximum Hourly Value:	2.70 ppm	on July 27 at hour 4	Hours in Service:	744
Maximum Daily Value:	2.10 ppm	on July 27	Hours of Data:	708
Minimum Hourly Value:	1.84 ppm	on July 13 at hour 13	Hours of Missing Data:	0
Minimum Daily Value:	1.87 ppm	on July 20	Hours of Calibration:	36
Monthly Average:	1.97 ppm		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2.01	2.05	2.00	1.95	1.90	1.89	1.88	1.88	1.87	1.87	1.89	1.87	1.87	S	1.86	1.88	1.87	1.87	1.87	1.87	1.89	1.94	1.99	2.14	1.86	2.14	1.92	
Jul 2	2.06	2.03	2.07	2.06	2.02	2.02	2.02	1.93	1.88	1.87	1.87	1.87	S	1.86	1.87	1.88	1.88	1.89	1.92	1.93	1.94	1.93	1.95	1.95	1.98	1.86	2.07	1.94
Jul 3	2.00	1.99	1.97	1.93	1.94	1.94	1.96	1.92	1.92	1.91	1.89	S	1.88	1.89	1.89	1.88	1.90	1.90	1.91	1.89	1.91	1.91	1.91	1.91	1.88	2.00	1.92	
Jul 4	1.97	2.08	2.08	2.03	2.06	2.06	1.97	1.93	1.91	1.90	S	1.89	1.88	1.88	1.88	1.88	1.88	1.90	1.89	1.92	1.90	1.98	1.98	1.97	1.88	2.08	1.94	
Jul 5	1.97	2.00	1.99	1.96	1.98	1.94	1.95	1.97	1.96	S	1.95	1.94	1.96	1.94	1.94	1.94	1.91	1.91	1.92	1.90	1.90	1.95	1.97	1.94	1.90	2.00	1.95	
Jul 6	1.93	1.95	1.95	1.95	1.97	1.96	1.95	1.92	S	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.92	1.93	1.94	2.01	1.90	2.01	1.93	
Jul 7	2.03	2.13	2.20	2.14	2.14	2.20	2.08	S	1.95	1.96	1.98	1.91	1.91	1.90	1.89	1.89	1.89	1.89	1.90	1.92	1.94	1.98	1.93	1.94	1.89	2.20	1.99	
Jul 8	1.92	1.94	1.94	1.93	1.95	1.96	S	1.96	1.96	1.96	1.97	1.98	1.98	1.98	1.97	1.97	1.95	1.95	1.95	1.96	1.96	1.93	1.97	1.99	1.92	1.99	1.96	
Jul 9	2.02	2.16	2.22	2.23	2.27	S	2.13	2.17	2.02	1.98	1.93	1.93	1.92	1.87	1.86	1.86	1.86	1.86	1.86	1.87	1.89	1.92	1.94	1.97	1.86	2.27	1.99	
Jul 10	2.10	2.16	2.18	2.30	S	2.22	2.02	1.91	1.87	1.87	1.86	1.86	1.86	1.87	1.87	1.88	1.87	1.87	1.87	1.87	1.87	1.89	1.90	1.91	1.86	2.30	1.95	
Jul 11	1.93	1.94	1.94	S	1.94	1.91	1.90	1.88	1.87	1.85	1.86	1.86	1.86	1.86	1.85	1.85	1.85	1.87	1.89	1.89	1.93	1.96	1.98	1.85	1.98	1.89		
Jul 12	2.01	2.10	S	2.26	2.29	2.38	2.22	1.96	2.01	1.98	1.91	1.90	1.87	1.87	1.86	1.87	1.86	1.86	1.86	1.87	1.89	1.91	1.91	1.90	1.86	2.38	1.98	
Jul 13	1.91	S	1.94	1.98	2.00	2.07	2.00	2.01	2.00	2.02	1.91	1.87	1.85	1.84	1.85	1.84	1.86	1.87	1.88	1.85	1.87	1.90	1.96	1.98	1.84	2.07	1.92	
Jul 14	S	1.99	2.01	2.04	2.15	2.27	2.14	2.04	1.99	1.93	1.90	1.87	1.86	1.87	1.88	1.88	1.87	1.87	1.88	1.89	1.92	2.01	2.06	S	1.86	2.27	1.97	
Jul 15	2.22	2.20	2.22	2.16	2.22	2.28	2.19	2.12	2.02	1.95	1.89	1.89	1.92	1.91	1.90	1.91	1.90	1.88	1.88	1.89	1.99	1.88	S	1.91	1.88	2.28	2.01	
Jul 16	1.89	1.86	1.86	1.88	1.89	1.93	1.93	1.90	1.87	1.88	1.88	1.90	1.91	1.89	1.88	1.88	1.86	1.86	1.85	1.86	1.88	S	2.00	2.22	1.85	2.22	1.90	
Jul 17	2.09	2.09	2.10	2.10	2.08	2.23	2.15	2.14	2.00	2.10	2.23	1.94	1.85	1.84	1.84	1.85	1.85	1.85	1.87	1.88	1.89	S	1.99	2.04	2.09	1.84	2.23	2.01
Jul 18	2.12	2.24	2.30	2.52	2.66	2.50	2.14	2.09	2.01	1.93	1.90	1.89	1.87	1.87	1.87	1.88	1.88	1.89	S	1.92	S	1.97	2.03	2.04	1.87	2.66	2.06	
Jul 19	2.00	2.03	2.04	2.06	1.99	1.91	1.87	1.86	1.86	1.85	1.84	1.85	1.85	1.86	1.85	1.85	1.86	S	1.86	1.89	1.89	1.89	1.86	1.86	1.84	2.06	1.90	
Jul 20	1.86	1.88	1.87	1.90	1.93	1.92	1.86	1.86	1.85	1.87	1.86	1.86	1.86	1.86	1.86	1.86	1.86	S	1.87	1.87	1.88	1.89	1.88	1.89	1.85	1.93	1.87	
Jul 21	1.89	1.90	1.92	1.95	1.95	1.95	2.00	1.92	1.90	1.91	1.88	1.87	1.86	1.86	1.87	1.87	S	1.87	1.87	1.90	1.92	1.89	1.91	1.93	1.86	2.00	1.90	
Jul 22	1.97	2.05	1.95	2.03	1.93	1.96	1.94	1.91	1.92	1.90	1.89	1.90	1.89	1.90	1.91	S	1.91	1.91	1.90	1.90	1.92	1.89	1.90	1.91	1.89	2.05	1.93	
Jul 23	1.98	2.07	2.10	2.12	2.16	2.11	2.08	2.03	1.89	1.89	1.88	1.89	1.88	1.86	S	1.88	1.88	1.88	1.89	1.90	1.92	1.93	1.97	1.98	1.86	2.16	1.96	
Jul 24	1.99	2.02	2.05	2.06	2.06	2.02	2.00	2.00	1.99	1.97	1.97	1.95	S	1.91	1.89	1.88	1.91	1.91	1.91	1.91	1.92	1.92	1.96	2.00	1.88	2.06	1.97	
Jul 25	2.07	2.07	2.11	2.21	2.30	2.22	2.12	2.06	2.00	1.95	1.94	1.93	S	1.86	1.88	1.87	1.87	1.87	1.90	1.95	1.96	2.00	2.00	2.00	1.86	2.30	2.01	
Jul 26	1.96	2.06	1.98	2.03	2.05	2.10	1.98	1.96	1.93	1.95	C	C	C	C	C	C	1.95	1.94	1.93	1.95	1.96	1.98	2.03	2.12	2.14	1.93	2.14	2.00
Jul 27	2.18	2.21	2.23	2.38	2.70	2.57	2.30	2.00	1.97	1.96	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	2.00	2.20	2.02	1.95	2.70	2.10
Jul 28	2.20	2.20	2.28	2.22	2.28	2.41	2.37	2.18	2.16	S	2.08	2.00	1.94	1.94	1.93	1.92	1.93	1.93	1.94	1.95	1.97	2.01	2.04	2.05	1.92	2.41	2.08	
Jul 29	2.07	2.10	2.12	2.17	2.18	2.28	2.26	1.97	S	1.96	1.94	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.95	1.95	1.92	2.28	2.01	
Jul 30	1.99	2.00	2.05	2.03	2.00	2.00	2.05	S	2.05	2.08	1.98	1.95	1.93	1.95	1.98	1.98	1.98	1.97	1.98	2.01	2.02	2.02	2.01	2.00	1.93	2.08	2.00	
Jul 31	2.06	2.03	2.08	2.06	2.09	2.16	S	2.03	1.97	1.94	1.94	1.95	1.95	1.94	1.94	1.94	1.96	1.97	1.97	2.00	2.04	2.05	2.08	2.13	1.94	2.16	2.01	
Diurnal Maximum	2.22	2.24	2.30	2.52	2.70	2.57	2.37	2.18	2.16	2.10	2.23	2.00	1.98	1.98	1.98	1.98	1.98	1.97	1.98	2.01	2.04	2.05	2.20	2.22				
Diurnal Average	2.01	2.05	2.06	2.09	2.10	2.11	2.05	1.98	1.95	1.93	1.93	1.91	1.90	1.89	1.89	1.89	1.89	1.89	1.90	1.91	1.93	1.94	1.98	1.99				

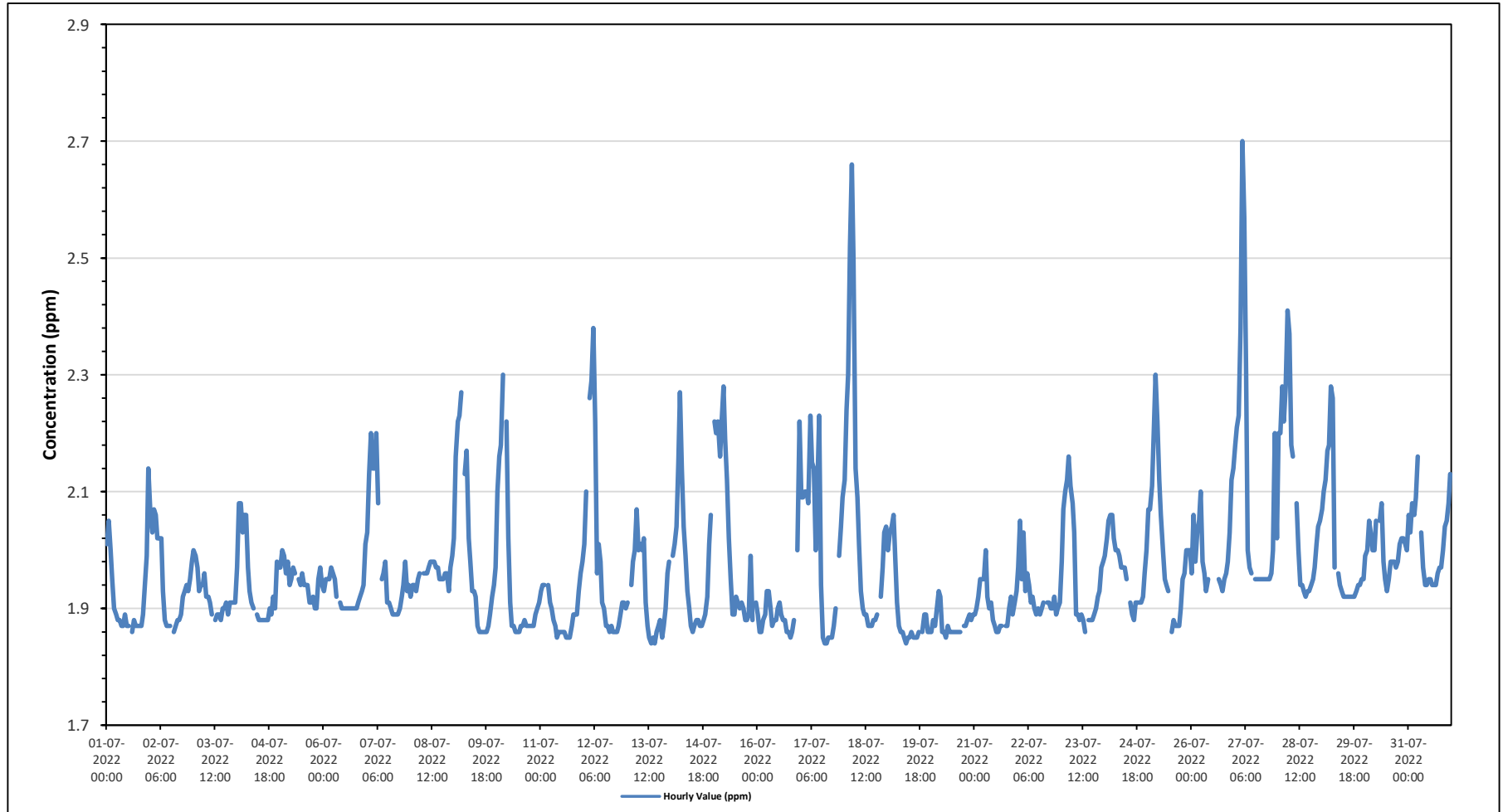
  

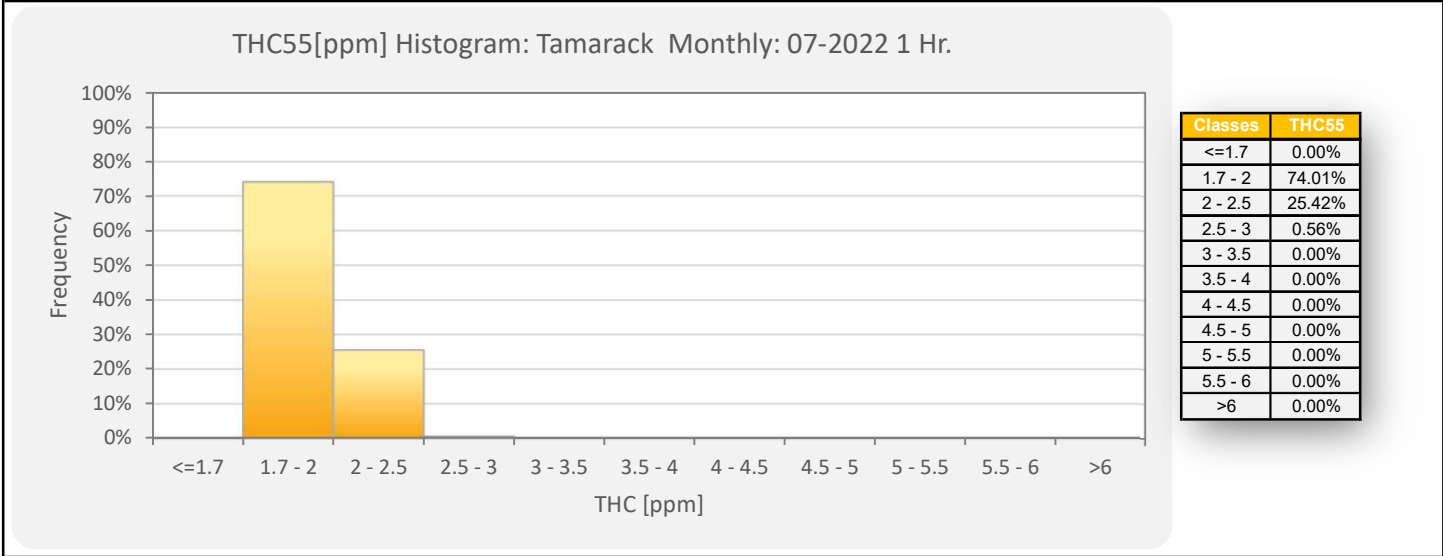
C	Monthly Calibration	S	Daily Zero-Span Check	Q	Quality Assurance
K	Collection Error	N	No Data (Machine Not in Service)	Y	Routine Maintenance
X	InValid Data (Equipment Malfunction /Recovery)	NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	P	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



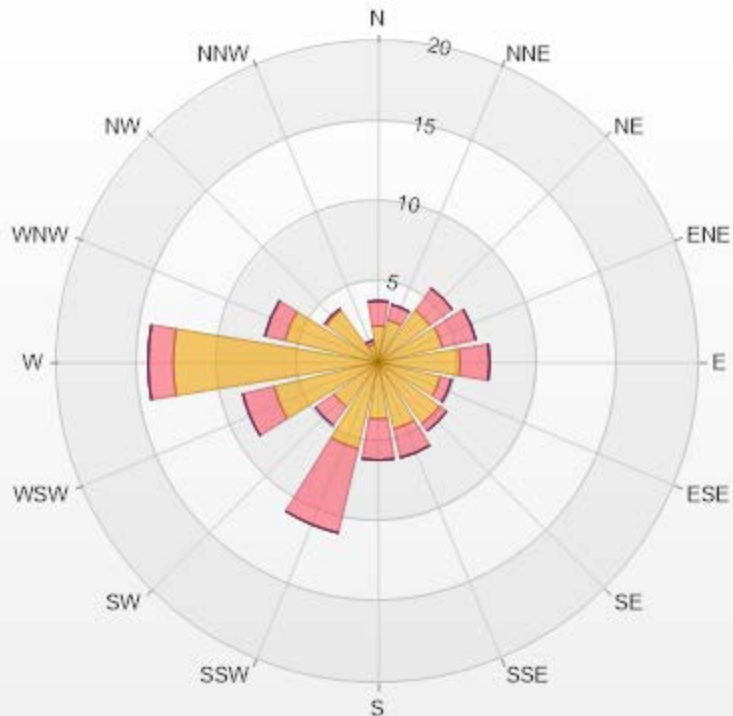
*Timeseries Chart of Hourly Average for THC - Tamarack Site*





Wind: Tamarack Poll.: Tamarack-THC55[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	2.27	1.56	0	0	0	3.83
NNE	2.7	0.99	0	0	0	3.69
NE	3.97	1.7	0	0	0	5.67
ENE	4.11	2.13	0	0	0	6.24
E	5.11	1.84	0	0	0	6.95
ESE	3.97	0.71	0	0	0	4.68
SE	4.68	0.57	0	0	0	5.25
SSE	4.26	1.84	0	0	0	6.1
S	3.55	2.55	0	0	0	6.1
SSW	5.53	5.39	0	0	0	10.92
SW	3.4	1.42	0	0	0	4.82
WSW	6.67	1.99	0	0	0	8.66
W	12.77	1.56	0	0	0	14.33
WNW	5.96	1.28	0	0	0	7.24
NW	3.97	0.14	0	0	0	4.11
NNW	1.13	0.28	0	0	0	1.41
Summary	74.05	25.95	0	0	0	100



LICA-202207

% Icon Classes (ppm)

74 0-2

26 2-5

0 5-10

0 10-40

0 >40.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Tamarack Site - July 2022**  
**Summary of Hourly Averages**

**METHANE (CH4) in ppm**

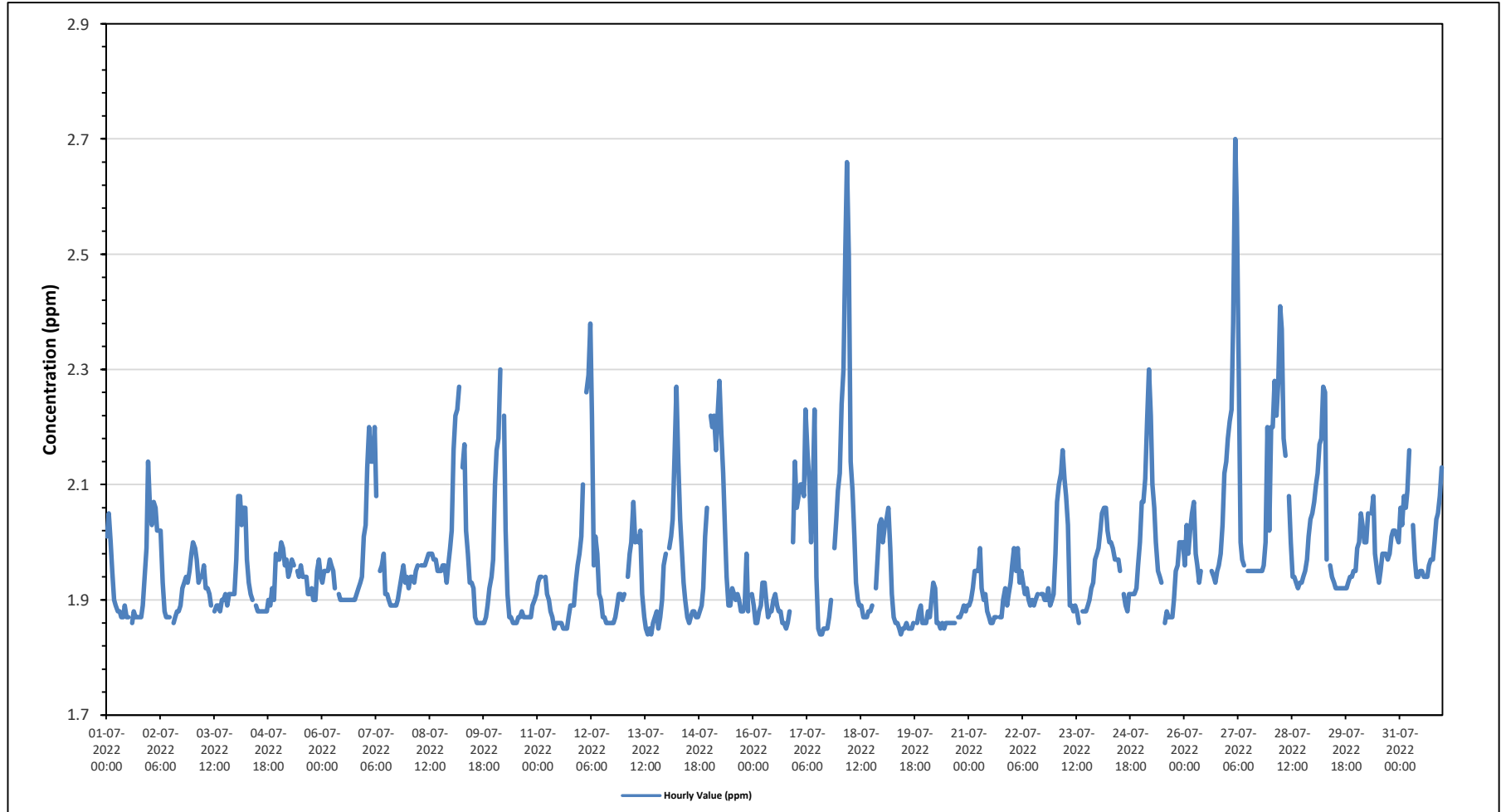
Maximum Hourly Value:	2.70 ppm on July 27 at hour 4	Hours in Service:	744
Maximum Daily Value:	2.10 ppm on July 27	Hours of Data:	708
Minimum Hourly Value:	1.84 ppm on July 13 at hour 13	Hours of Missing Data:	0
Minimum Daily Value:	1.87 ppm on July 20	Hours of Calibration:	36
Monthly Average:	1.97 ppm	Operational Uptime:	100.0

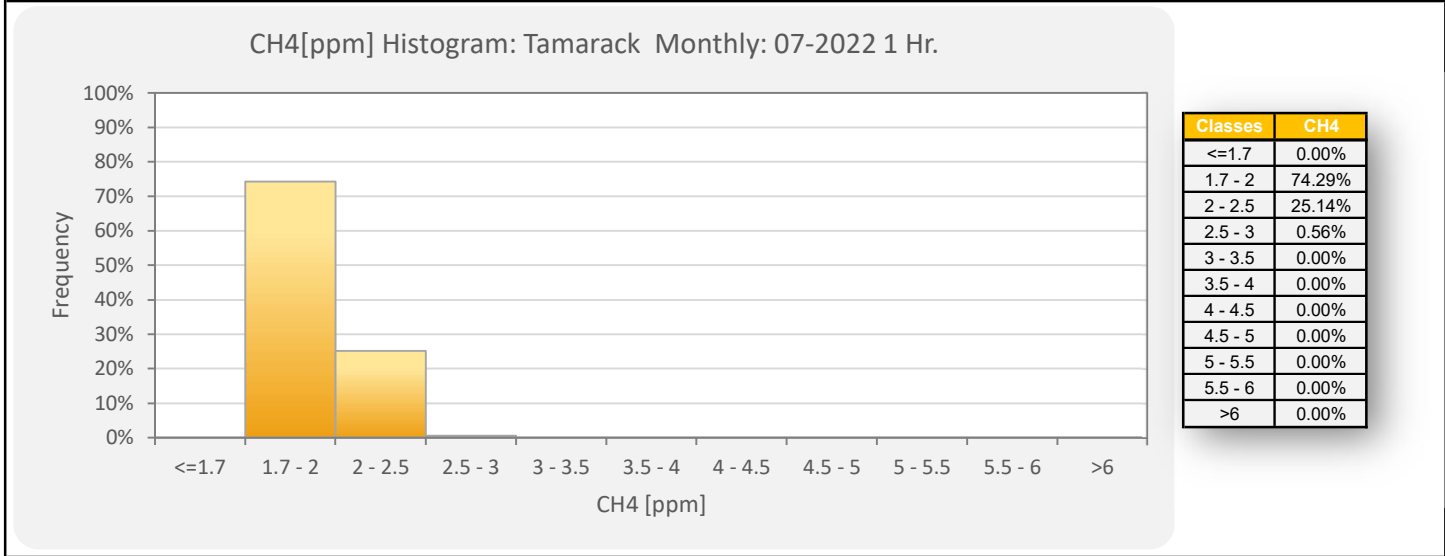
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																
Jul 1	2.01	2.05	2.00	1.95	1.90	1.89	1.88	1.88	1.87	1.87	1.89	1.87	1.87	S	1.86	1.88	1.87	1.87	1.87	1.87	1.89	1.94	1.99	2.14	1.86	2.14	1.92																
Jul 2	2.06	2.03	2.07	2.06	2.02	2.02	2.02	1.93	1.88	1.87	1.87	1.87	S	1.86	1.87	1.88	1.88	1.89	1.92	1.93	1.94	1.93	1.95	1.98	1.86	2.07	1.94																
Jul 3	2.00	1.99	1.97	1.93	1.94	1.94	1.96	1.92	1.92	1.91	1.90	S	1.89	1.88	1.88	1.88	1.88	1.90	1.91	1.89	1.91	1.91	1.91	1.91	1.88	2.00	1.92																
Jul 4	1.97	2.08	2.08	2.03	2.06	2.06	1.97	1.93	1.91	1.90	S	1.89	1.88	1.88	1.88	1.88	1.88	1.90	1.89	1.92	1.90	1.98	1.97	1.88	2.08	1.94																	
Jul 5	1.97	2.00	1.99	1.96	1.97	1.94	1.95	1.97	1.96	S	1.95	1.94	1.96	1.94	1.94	1.94	1.91	1.91	1.92	1.90	1.90	1.95	1.97	1.94	1.90	2.00	1.95																
Jul 6	1.93	1.95	1.95	1.95	1.97	1.96	1.95	1.92	S	1.91	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.91	1.92	1.93	1.94	2.01	1.90	2.01	1.93																
Jul 7	2.03	2.13	2.20	2.14	2.14	2.20	2.08	S	1.95	1.96	1.98	1.91	1.91	1.90	1.89	1.89	1.89	1.89	1.90	1.92	1.94	1.96	1.93	1.94	1.89	2.20	1.99																
Jul 8	1.92	1.94	1.94	1.93	1.95	1.96	S	1.96	1.96	1.96	1.97	1.98	1.98	1.98	1.97	1.97	1.95	1.95	1.95	1.96	1.96	1.93	1.96	1.99	1.92	1.99	1.96																
Jul 9	2.02	2.16	2.22	2.23	2.27	S	2.13	2.17	2.02	1.98	1.93	1.93	1.92	1.87	1.86	1.86	1.86	1.86	1.86	1.87	1.89	1.92	1.94	1.97	1.86	2.27	1.99																
Jul 10	2.10	2.16	2.18	2.30	S	2.22	2.02	1.91	1.87	1.87	1.86	1.86	1.86	1.87	1.87	1.88	1.87	1.87	1.87	1.87	1.87	1.89	1.90	1.91	1.86	2.30	1.95																
Jul 11	1.93	1.94	1.94	S	1.94	1.91	1.90	1.88	1.87	1.85	1.86	1.86	1.86	1.86	1.85	1.85	1.85	1.87	1.89	1.89	1.93	1.96	1.98	1.85	1.98	1.89																	
Jul 12	2.01	2.10	S	2.26	2.29	2.38	2.22	1.96	2.01	1.98	1.91	1.90	1.87	1.87	1.86	1.86	1.86	1.86	1.86	1.87	1.89	1.91	1.91	1.90	1.86	2.38	1.98																
Jul 13	1.91	S	1.94	1.98	2.00	2.07	2.00	2.01	2.00	2.02	1.91	1.87	1.85	1.84	1.85	1.84	1.86	1.87	1.88	1.85	1.87	1.90	1.96	1.98	1.84	2.07	1.92																
Jul 14	S	1.99	2.01	2.04	2.15	2.27	2.14	2.04	1.99	1.93	1.90	1.87	1.86	1.87	1.88	1.88	1.87	1.87	1.88	1.89	1.92	2.01	2.06	S	1.86	2.27	1.97																
Jul 15	2.22	2.20	2.22	2.16	2.22	2.28	2.19	2.12	2.02	1.94	1.89	1.89	1.92	1.91	1.90	1.91	1.90	1.88	1.88	1.89	1.98	1.88	S	1.91	1.88	2.28	2.01																
Jul 16	1.89	1.86	1.86	1.88	1.89	1.93	1.93	1.90	1.87	1.88	1.88	1.90	1.91	1.89	1.88	1.88	1.86	1.86	1.85	1.86	1.88	S	2.00	2.14	1.85	2.14	1.90																
Jul 17	2.06	2.08	2.10	2.10	2.08	2.23	2.15	2.10	2.00	2.10	2.23	1.94	1.85	1.84	1.84	1.85	1.85	1.85	1.87	1.88	1.89	S	1.99	2.04	2.09	1.84	2.23	2.01															
Jul 18	2.12	2.24	2.30	2.51	2.66	2.50	2.14	2.09	2.01	1.93	1.90	1.89	1.87	1.87	1.87	1.88	1.88	1.89	S	S	1.92	1.97	2.03	2.04	1.87	2.66	2.06																
Jul 19	2.00	2.03	2.04	2.06	1.99	1.91	1.87	1.86	1.86	1.85	1.84	1.85	1.85	1.86	1.85	1.85	1.86	S	S	1.86	1.88	1.89	1.86	1.86	1.84	2.06	1.90																
Jul 20	1.86	1.88	1.87	1.90	1.93	1.92	1.86	1.86	1.85	1.86	1.85	1.86	1.86	1.86	1.86	1.86	1.86	S	S	1.87	1.87	1.88	1.89	1.88	1.85	1.93	1.87																
Jul 21	1.89	1.90	1.92	1.95	1.95	1.95	1.99	1.92	1.90	1.91	1.88	1.87	1.86	1.86	1.87	1.87	S	S	1.87	1.87	1.90	1.92	1.89	1.91	1.93	1.86	1.99	1.90															
Jul 22	1.96	1.99	1.95	1.99	1.93	1.95	1.93	1.91	1.92	1.90	1.89	1.90	1.89	1.90	1.91	S	S	1.91	1.91	1.90	1.90	1.92	1.89	1.90	1.91	1.89	1.99	1.92															
Jul 23	1.98	2.07	2.10	2.12	2.16	2.11	2.08	2.03	1.89	1.89	1.88	1.89	1.88	1.86	S	S	1.88	1.88	1.88	1.89	1.90	1.92	1.93	1.97	1.98	1.86	2.16	1.96															
Jul 24	1.99	2.02	2.05	2.06	2.06	2.02	2.00	2.00	1.99	1.97	1.97	1.95	S	S	1.91	1.89	1.88	1.91	1.91	1.91	1.91	1.92	1.96	2.00	1.88	2.06	1.97																
Jul 25	2.07	2.07	2.11	2.21	2.30	2.22	2.10	2.06	2.00	1.95	1.94	1.93	S	S	1.86	1.88	1.87	1.87	1.87	1.90	1.95	1.96	2.00	2.00	1.86	2.30	2.01																
Jul 26	1.96	2.03	1.98	2.02	2.05	2.07	1.98	1.96	1.93	1.95	C	C	C	C	C	C	1.95	1.94	1.93	1.95	1.96	1.98	2.03	2.12	2.14	1.93	2.14	2.00															
Jul 27	2.18	2.21	2.23	2.38	2.70	2.57	2.30	2.00	1.97	1.96	S	S	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	2.00	2.20	2.02	1.95	2.70	2.10															
Jul 28	2.20	2.20	2.28	2.22	2.28	2.41	2.37	2.18	2.15	S	2.08	2.00	1.94	1.94	1.93	1.92	1.93	1.93	1.94	1.95	1.97	2.01	2.04	2.05	1.92	2.41	2.08																
Jul 29	2.07	2.10	2.12	2.17	2.18	2.27	2.26	1.97	S	1.96	1.94	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.93	1.94	1.94	1.95	1.95	1.92	2.27	2.01															
Jul 30	1.99	2.00	2.05	2.03	2.00	2.00	2.05	S	2.05	2.08	1.98	1.95	1.93	1.95	1.98	1.98	1.98	1.97	1.98	2.01	2.02	2.02	2.01	2.00	1.93	2.08	2.00																
Jul 31	2.06	2.03	2.08	2.06	2.09	2.16	S	2.03	1.97	1.94	1.94	1.95	1.95	1.94	1.94	1.96	1.97	1.97	2.00	2.04	2.05	2.08	2.13	1.94	2.16	2.01	2.01																
Diurnal Maximum	2.22	2.24	2.30	2.51	2.70	2.57	2.37	2.18	2.15	2.10	2.23	2.00	1.98	1.98	1.98	1.98	1.98	1.97	1.98	2.01	2.04	2.05	2.20	2.14																			
Diurnal Average	2.01	2.05	2.06	2.09	2.10	2.11	2.05	1.98	1.95	1.93	1.93	1.91	1.90	1.89	1.89	1.89	1.89	1.89	1.90	1.91	1.93	1.94	1.98	1.99																			
<b>C</b>	Monthly Calibration										<b>S</b>	Daily Zero-Span Check										<b>Q</b>	Quality Assurance																				
<b>K</b>	Collection Error										<b>N</b>	No Data (Machine Not in Service)										<b>Y</b>	Routine Maintenance										<b>P</b>	Power Failure									
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)										<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for CH4 - Tamarack Site**

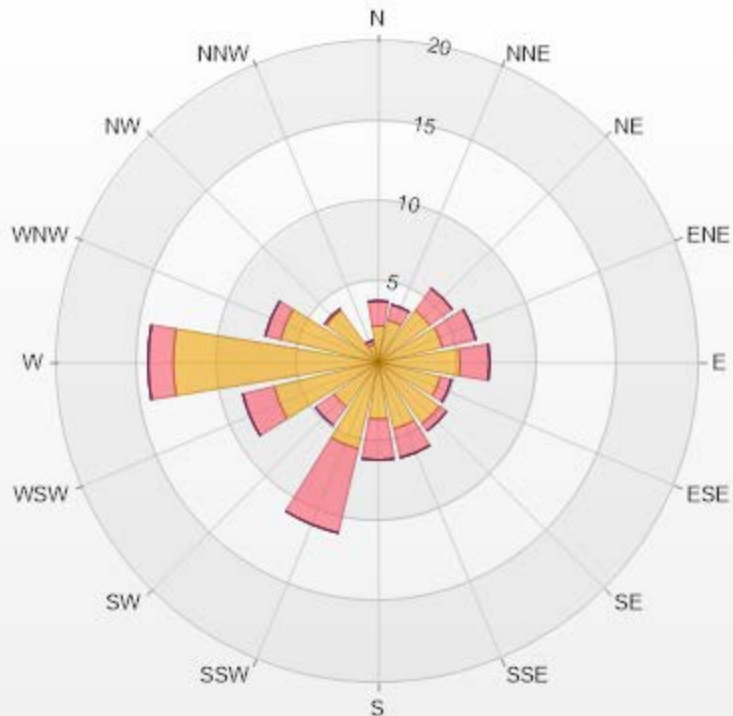




Wind: Tamarack Poll.: Tamarack-CH4[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	2.27	1.56	0	0	0	3.83
NNE	2.7	0.99	0	0	0	3.69
NE	3.97	1.7	0	0	0	5.67
ENE	4.11	2.13	0	0	0	6.24
E	5.11	1.84	0	0	0	6.95
ESE	3.97	0.71	0	0	0	4.68
SE	4.68	0.57	0	0	0	5.25
SSE	4.26	1.84	0	0	0	6.1
S	3.55	2.55	0	0	0	6.1
SSW	5.53	5.39	0	0	0	10.92
SW	3.4	1.42	0	0	0	4.82
WSW	6.67	1.99	0	0	0	8.66
W	12.77	1.56	0	0	0	14.33
WNW	6.24	0.99	0	0	0	7.23
NW	3.97	0.14	0	0	0	4.11
NNW	1.13	0.28	0	0	0	1.41
Summary	74.33	25.66	0	0	0	100





LICA-202207

% Icon Classes (ppm)

74 0-2

26 2-5

0 5-10

0 10-20

0 >20.0



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

Summary of Hourly Averages

NON-METHANE HYDROCARBONS (NMHC) in ppm

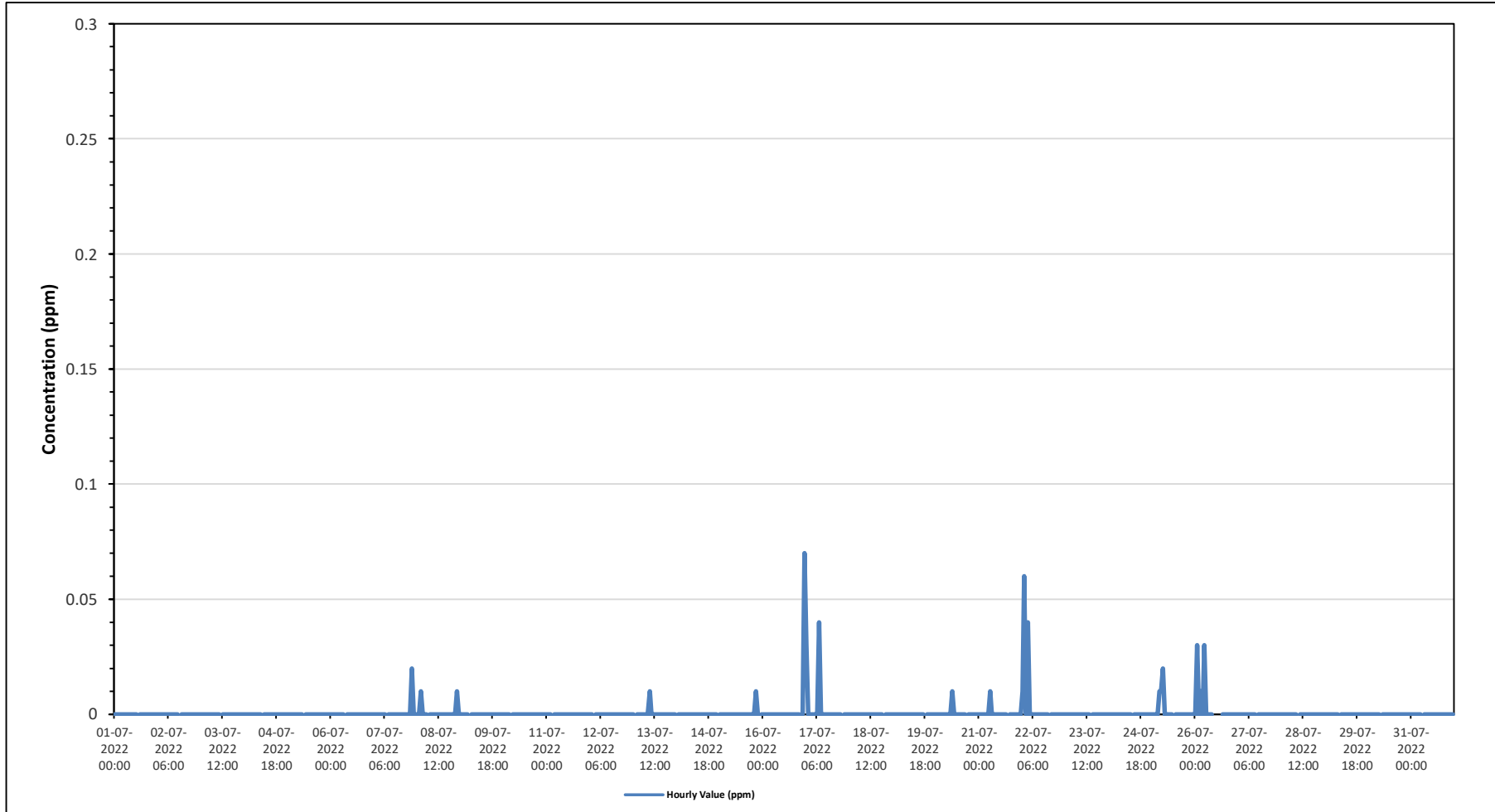
Maximum Hourly Value:	0.07 ppm on July 16 at hour 23	Hours in Service:	744
Maximum Daily Value:	0.00 ppm on July 22	Hours of Data:	708
Minimum Hourly Value:	0.00 ppm on July 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.00 ppm on July 1	Hours of Calibration:	36
Monthly Average:	0.00 ppm	Operational Uptime:	100.0

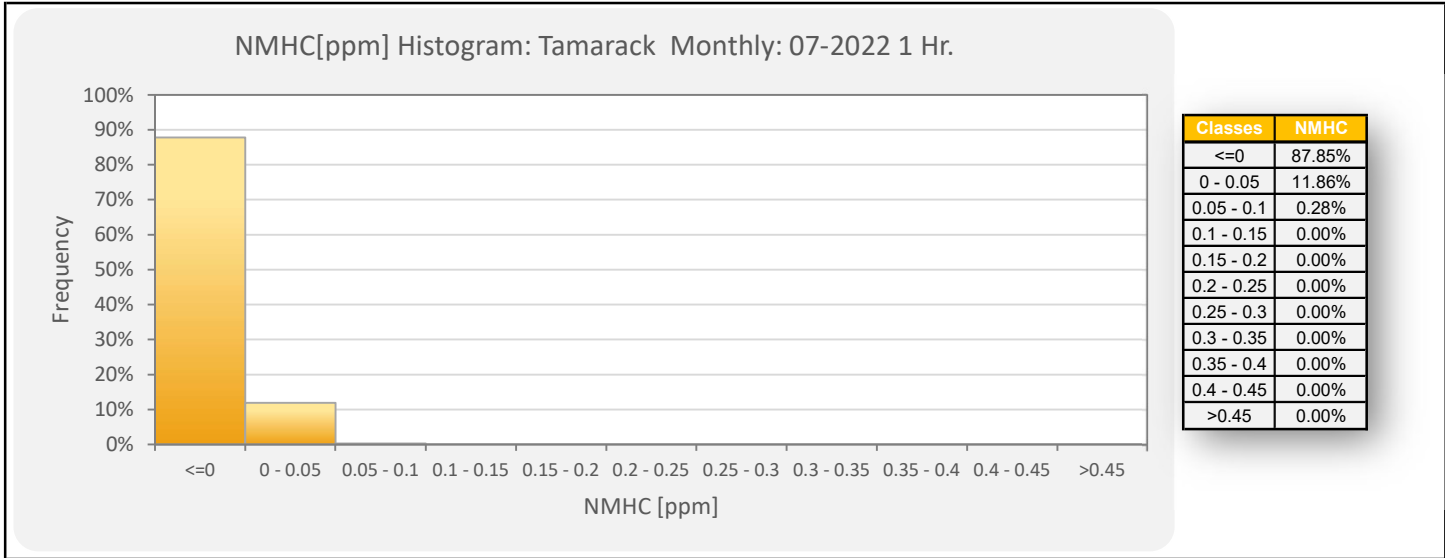
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23								
Jul 1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 2	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	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	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 3	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	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	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Jul 7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00			
Jul 8	0.00	0.00	0.01	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00			
Jul 9	0.00	0.00	0.00	0.00	0.00	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	0.00	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		
Jul 10	0.00	0.00	0.00	0.00	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	0.00	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		
Jul 11	0.00	0.00	0.00	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	0.00	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		
Jul 12	0.00	0.00	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	0.00	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		
Jul 13	0.00	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	0.00	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	0.00		
Jul 14	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	0.00	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	S	0.00	0.00		
Jul 15	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	S	0.00	0.00	0.00	0.00		
Jul 16	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	S	0.00	0.07	0.00	0.07	0.00		
Jul 17	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.04	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	S	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
Jul 18	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	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 19	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	0.00	0.00	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	0.00	0.00
Jul 20	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	0.00	0.00	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	0.00	0.00
Jul 21	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00
Jul 22	0.01	0.06	0.00	0.04	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	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	0.00	0.00	0.00	0.00
Jul 23	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	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	0.00	0.00	0.00	0.00
Jul 24	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 25	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 26	0.00	0.03	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	C	C	C	C	C	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	0.00
Jul 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul 30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	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
Jul 31	0.00	0.00	0.00	0.00	0.00	0.00	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	0.00	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
Diurnal Maximum	0.03	0.06	0.01	0.04	0.01	0.03	0.02	0.04	0.00	0.01	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	0.00	0.00	0.00	0.00	0.00	0.00	
Diurnal Average	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	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	

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

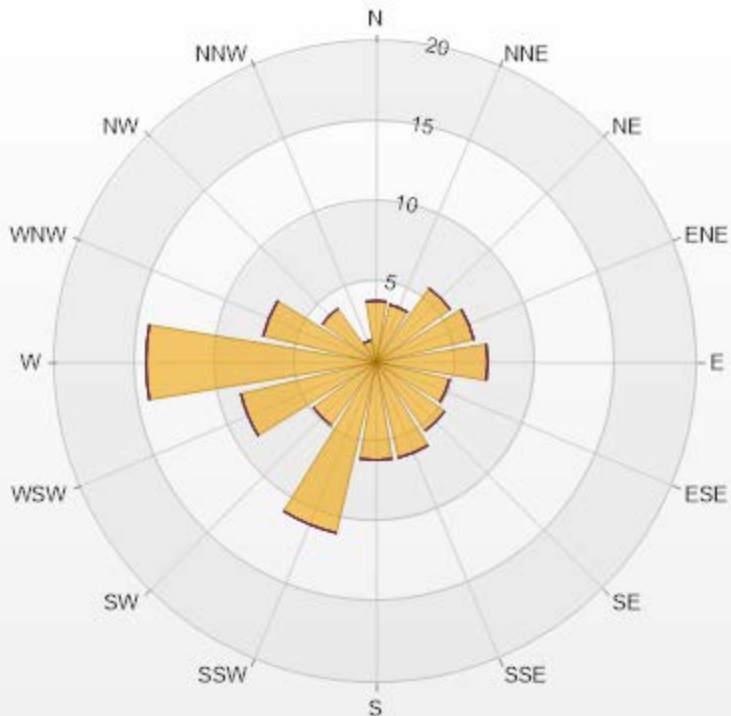
**Timeseries Chart of Hourly Average for NMHC - Tamarack Site**





Wind: Tamarack Poll.: Tamarack-NMHC[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	3.83	0	0	0	0	3.83
NNE	3.69	0	0	0	0	3.69
NE	5.67	0	0	0	0	5.67
ENE	6.24	0	0	0	0	6.24
E	6.95	0	0	0	0	6.95
ESE	4.68	0	0	0	0	4.68
SE	5.25	0	0	0	0	5.25
SSE	6.1	0	0	0	0	6.1
S	6.1	0	0	0	0	6.1
SSW	10.92	0	0	0	0	10.92
SW	4.82	0	0	0	0	4.82
WSW	8.65	0	0	0	0	8.65
W	14.33	0	0	0	0	14.33
WNW	7.23	0	0	0	0	7.23
NW	4.11	0	0	0	0	4.11
NNW	1.42	0	0	0	0	1.42
Summary	100	0	0	0	0	100



LICA-202207

% Icon Classes (ppm)

100 0-0.1

0 0.1-0.3

0 0.3-1

0 1-2

0 >2.0



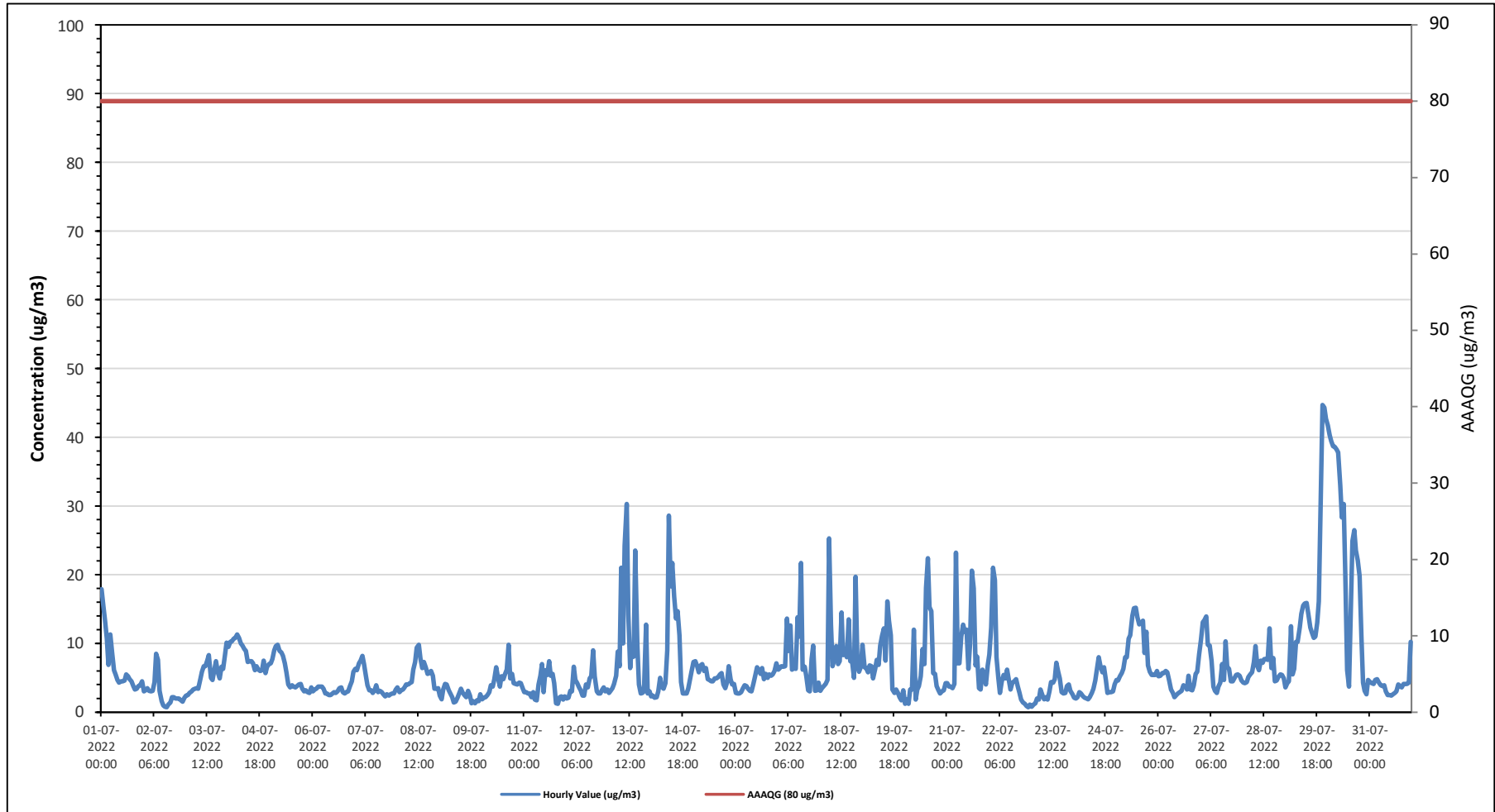
## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022  
Summary of Hourly Averages

### PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>) in µg/m<sup>3</sup>

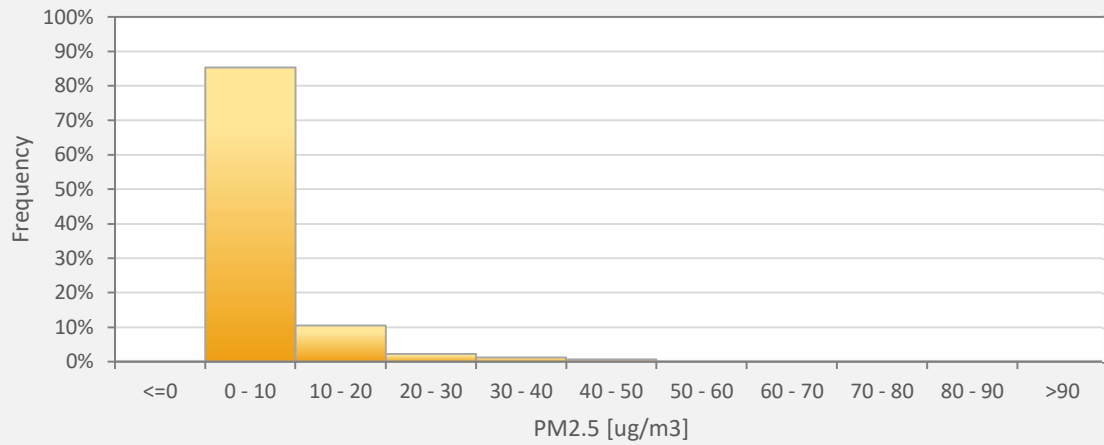
Alberta Ambient Air Quality Guideline (AAQG): 1-Hour 80 µg/m <sup>3</sup> , Alberta Ambient Air Quality Objective (AAQO): 24-Hour 29 µg/m <sup>3</sup>																																											
Number of 1-Hour Exceedances: 0													Number of 24-Hour Exceedances: 0																														
Maximum Hourly Value: 45 µg/m <sup>3</sup> on July 29 at hour 21													Hours in Service: 744																														
Maximum Daily Value: 23.1 µg/m <sup>3</sup> on July 30													Hours of Data: 743																														
Minimum Hourly Value: 1 µg/m <sup>3</sup> on July 2 at hour 13													Hours of Missing Data: 0																														
Minimum Daily Value: 2 µg/m <sup>3</sup> on July 9													Hours of Calibration: 1																														
Monthly Average: 6.5 µg/m <sup>3</sup>													Operational Uptime: 100.0																														
Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily																	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average																
Jul 1	18	15	13	11	7	11	9	6	6	5	4	5	5	5	6	5	5	5	4	3	3	4	4	5	3	18	6.7																
Jul 2	3	3	4	3	3	3	4	9	8	3	2	1	1	1	1	2	2	2	2	2	2	2	2	2	1	9	2.7																
Jul 3	2	3	3	3	3	3	4	3	5	6	7	7	8	8	5	6	7	6	5	7	6	8	10	2	10	5.4																	
Jul 4	10	10	10	11	11	11	11	10	10	9	9	7	7	7	7	6	7	6	6	6	8	6	7	7	6	11	8.3																
Jul 5	7	8	9	10	10	9	9	8	7	6	4	4	4	4	4	4	4	3	3	3	3	3	3	4	3	10	5.5																
Jul 6	3	3	3	4	4	4	3	3	3	3	3	3	3	3	3	4	4	3	3	3	3	4	5	6	3	6	3.3																
Jul 7	6	6	7	8	8	7	5	4	3	3	3	3	4	3	3	3	3	2	3	2	3	3	3	3	2	8	4.1																
Jul 8	4	3	3	3	4	4	4	4	4	6	7	9	10	8	6	7	7	6	6	5	3	3	4	3	10	5.3																	
Jul 9	2	2	3	4	4	3	3	2	1	2	2	3	3	3	2	3	2	1	2	1	2	2	3	1	4	2.4																	
Jul 10	2	2	2	3	3	4	4	5	7	5	4	5	5	6	6	10	5	6	4	4	4	4	4	4	2	10	4.4																
Jul 11	3	3	3	3	2	3	2	2	4	5	7	3	6	5	7	5	6	4	1	1	2	2	2	2	1	7	3.5																
Jul 12	2	2	3	3	7	5	4	4	3	2	2	4	4	5	5	9	5	3	3	3	4	3	3	2	9	3.8																	
Jul 13	3	3	4	4	5	9	7	21	10	24	30	14	6	10	8	24	10	4	3	3	3	13	3	3	30	9.3																	
Jul 14	2	2	2	2	3	5	4	3	4	9	29	18	22	17	14	15	11	4	3	3	3	3	5	6	2	29	7.9																
Jul 15	7	7	7	6	7	7	6	6	5	5	5	5	5	5	6	6	6	4	4	4	7	5	4	4	4	7	5.4																
Jul 16	3	3	3	3	3	4	4	3	3	3	4	5	7	6	6	6	5	6	5	6	5	6	6	7	3	7	4.6																
Jul 17	6	6	7	7	7	14	9	13	6	6	6	14	11	22	6	7	5	3	3	8	10	3	3	4	3	22	7.7																
Jul 18	3	4	4	4	5	25	13	7	8	10	7	7	15	8	9	8	14	7	8	5	20	7	6	7	3	25	8.7																
Jul 19	10	7	6	6	7	5	6	8	7	10	11	12	8	16	13	11	3	3	3	3	2	2	3	2	16	7.0																	
Jul 20	1	2	1	3	3	12	2	3	4	5	9	7	18	22	15	15	6	6	4	3	3	3	3	4	1	22	6.5																
Jul 21	4	4	4	4	4	23	7	7	11	13	12	12	6	10	21	18	7	8	4	3	6	5	4	7	3	23	8.4																
Jul 22	8	12	21	19	8	5	3	5	5	5	6	5	3	4	5	5	4	3	2	1	1	1	1	1	1	21	5.5																
Jul 23	1	1	1	2	2	3	2	2	2	2	3	4	4	5	7	6	5	3	3	3	4	4	3	3	1	7	3.1																
Jul 24	2	2	2	3	3	2	2	2	2	2	3	3	5	6	8	7	6	7	5	3	3	3	3	4	2	8	3.6																
Jul 25	5	5	5	6	6	8	8	11	11	14	15	15	14	13	13	13	9	12	7	6	5	5	5	6	5	15	9.0																
Jul 26	5	5	6	6	6	6	5	3	3	2	3	3	3	3	4	C	3	5	3	3	4	6	6	8	2	8	4.4																
Jul 27	11	13	13	14	10	10	8	4	3	3	4	4	7	5	10	7	6	5	5	5	5	6	5	5	3	14	6.9																
Jul 28	4	4	4	5	6	6	7	10	7	6	8	7	8	8	8	12	6	8	5	5	5	6	5	5	4	12	6.4																
Jul 29	4	4	5	13	6	6	10	12	14	16	16	16	14	12	12	11	11	13	16	33	45	44	43	4	45	16.0																	
Jul 30	42	40	39	39	39	38	38	33	28	30	20	6	4	15	25	27	24	22	20	11	4	3	3	5	3	42	23.1																
Jul 31	4	4	4	5	5	4	4	4	4	3	3	3	2	3	3	3	4	4	4	4	4	4	10	2	10	4.0																	
Diurnal Maximum	42	40	39	39	38	38	33	28	30	30	18	22	22	25	27	24	22	20	16	33	45	44	43																				
Diurnal Average	6.0	6.1	6.5	6.9	6.4	8.4	6.6	6.8	6.3	7.0	7.9	6.9	7.3	7.7	8.1	8.8	6.7	5.6	4.5	4.3	5.5	5.5	5.2	6.0																			
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance																				
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance										P	Power Failure									
X	Invalid Data (Equipment Malfunction/Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																											

Timeseries Chart of Hourly Average for PM2.5 - Tamarack Site





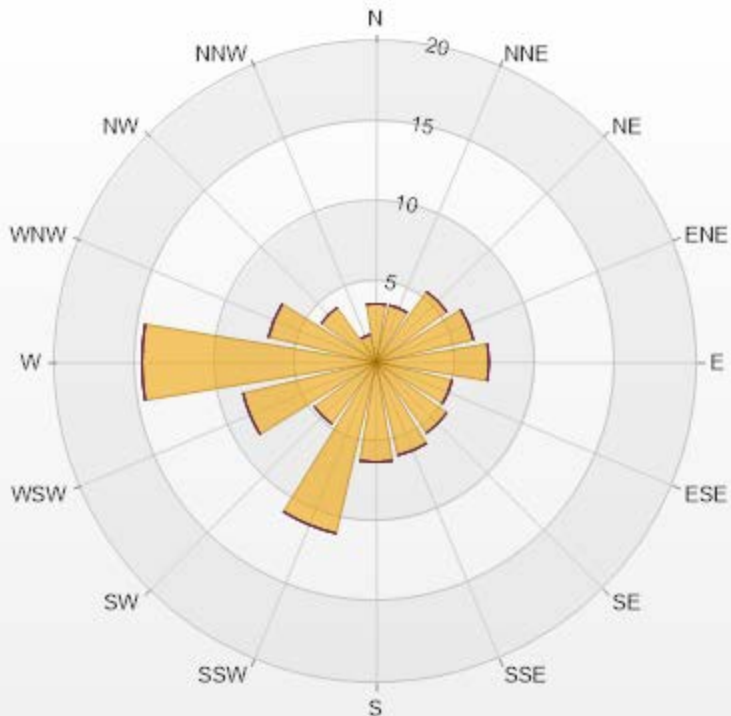
PM2.5[ug/m3(L)] Histogram: Tamarack Monthly: 07-2022 1 Hr.



Classes	PM2.5
<=0	0.00%
0 - 10	85.33%
10 - 20	10.50%
20 - 30	2.29%
30 - 40	1.21%
40 - 50	0.67%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Tamarack Poll.: Tamarack-PM2.5[ug/m3(L)] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 99.46% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	3.65	0	0	0	0	3.65
NNE	3.65	0	0	0	0	3.65
NE	5.41	0	0	0	0	5.41
ENE	6.22	0	0	0	0	6.22
E	7.03	0	0	0	0	7.03
ESE	4.86	0	0	0	0	4.86
SE	5.41	0	0	0	0	5.41
SSE	5.95	0	0	0	0	5.95
S	6.22	0	0	0	0	6.22
SSW	10.95	0	0	0	0	10.95
SW	4.73	0	0	0	0	4.73
WSW	8.51	0	0	0	0	8.51
W	14.59	0	0	0	0	14.59
WNW	6.89	0	0	0	0	6.89
NW	4.19	0	0	0	0	4.19
NNW	1.76	0	0	0	0	1.76
Summary	100	0	0	0	0	100




LICA-202207

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% Icon Classes (ug/m3(L))

100  0-50

0  50-80

0  80-120

0  120-240

0  >240.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

### Summary of Hourly Averages

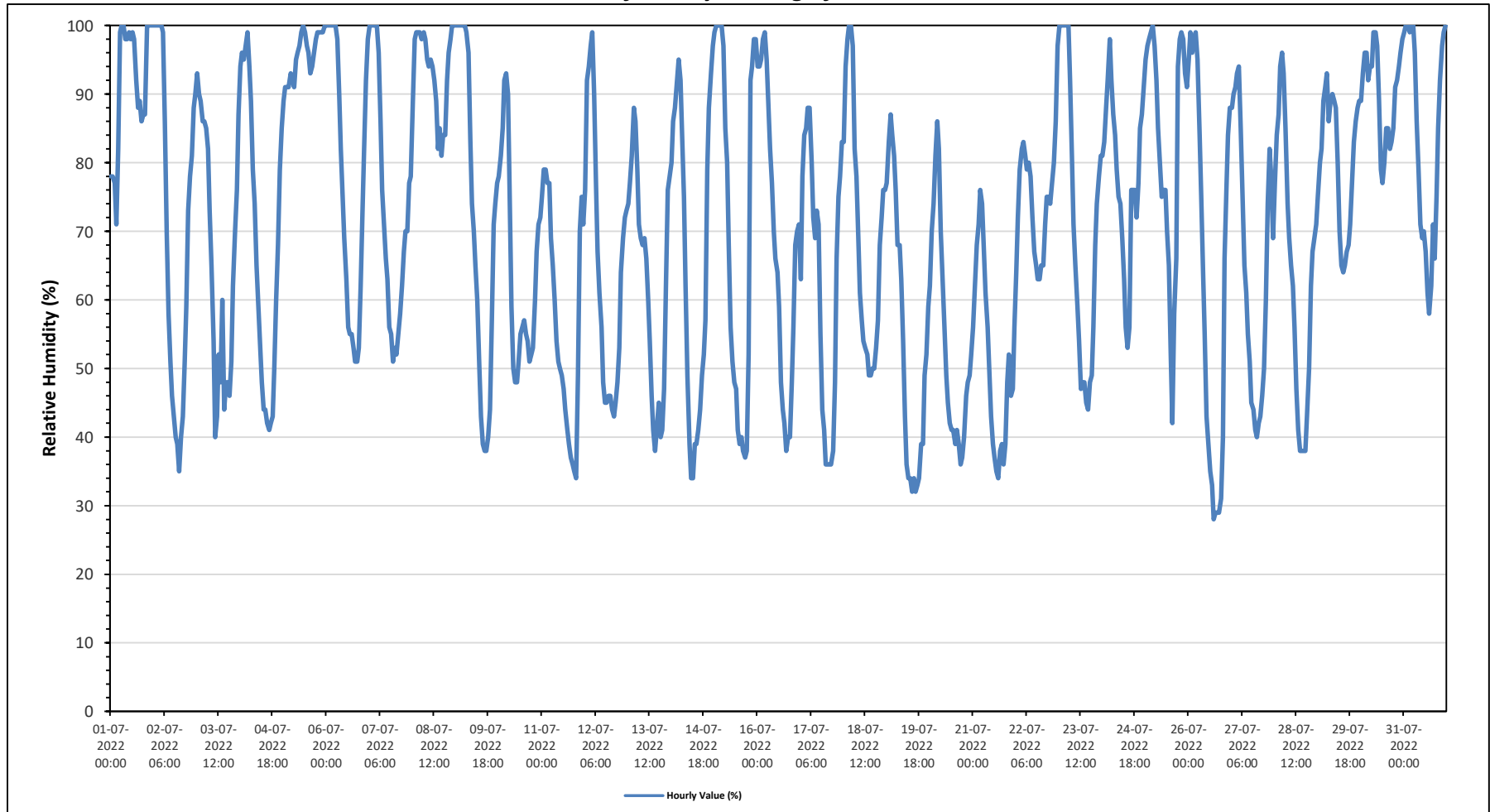
#### RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100 %	on July 1 at hour 6	Hours in Service:	744
Maximum Daily Value:	95.6 %	on July 5	Hours of Data:	744
Minimum Hourly Value:	28 %	on July 26 at hour 14	Hours of Missing Data:	0
Minimum Daily Value:	51.2 %	on July 21	Hours of Calibration:	0
Monthly Average:	71.2 %		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																																																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23																																																																				
Jul 1	78	78	77	71	82	99	100	100	98	98	99	98	99	98	92	88	89	86	87	87	100	100	100	100	71	100	91.8																																																																				
Jul 2	100	100	100	100	100	99	86	70	58	51	46	43	40	39	35	40	43	51	59	73	78	81	88	90	35	100	69.6																																																																				
Jul 3	93	90	89	86	86	85	82	73	65	54	40	43	52	48	60	44	48	48	46	51	62	70	76	87	40	93	65.8																																																																				
Jul 4	94	96	95	97	99	94	89	79	74	65	59	53	48	44	44	42	41	42	43	50	60	68	79	85	41	99	68.3																																																																				
Jul 5	89	91	91	91	93	92	91	95	96	97	99	100	99	97	96	93	94	96	98	99	99	99	99	100	89	100	95.6																																																																				
Jul 6	100	100	100	100	100	100	98	90	82	75	69	63	56	55	55	53	51	51	53	62	73	82	92	98	51	100	77.4																																																																				
Jul 7	100	100	100	100	100	96	86	76	71	66	63	56	55	51	53	52	55	58	62	67	70	77	78	51	100	73.4																																																																					
Jul 8	89	98	99	99	99	98	99	98	95	94	95	94	92	89	82	85	81	84	84	92	96	98	100	100	81	100	93.3																																																																				
Jul 9	100	100	100	100	100	100	99	96	83	74	70	65	60	50	43	39	38	38	40	44	57	71	74	77	38	100	71.6																																																																				
Jul 10	78	81	85	92	93	90	76	59	50	48	48	51	55	56	57	55	54	51	52	53	60	67	71	72	48	93	64.8																																																																				
Jul 11	75	79	79	77	77	69	65	60	54	51	50	49	47	44	41	39	37	36	35	34	49	70	75	71	34	79	56.8																																																																				
Jul 12	76	92	94	97	99	90	77	67	61	56	48	45	45	46	46	44	43	45	48	53	64	69	72	73	43	99	64.6																																																																				
Jul 13	74	77	81	88	86	79	71	69	68	69	66	60	54	46	41	38	42	45	40	41	47	62	76	78	38	88	62.4																																																																				
Jul 14	80	86	88	91	95	92	84	75	62	49	39	34	34	39	39	41	44	49	52	57	79	88	93	97	34	97	66.1																																																																				
Jul 15	99	100	100	100	100	97	85	80	68	56	51	48	47	41	39	40	38	37	38	52	92	94	98	98	37	100	70.8																																																																				
Jul 16	94	94	95	98	99	95	88	82	77	70	66	64	59	48	44	42	38	40	40	48	56	68	70	71	38	99	68.6																																																																				
Jul 17	63	78	84	85	88	88	80	72	69	73	71	55	44	41	36	36	36	36	38	48	66	75	78	83	36	88	63.5																																																																				
Jul 18	83	94	98	100	100	97	82	78	69	61	57	54	53	52	49	49	50	50	53	57	68	72	76	76	49	100	69.9																																																																				
Jul 19	77	83	87	84	81	76	68	68	63	54	43	36	34	34	32	34	32	33	34	39	39	49	52	59	32	87	53.8																																																																				
Jul 20	62	70	74	81	86	82	70	63	56	49	45	42	41	41	39	41	39	36	37	40	46	48	49	52	36	86	53.7																																																																				
Jul 21	56	62	68	71	76	74	67	61	56	49	43	39	37	35	34	38	39	36	39	48	52	46	47	56	34	76	51.2																																																																				
Jul 22	64	72	79	82	83	81	79	80	78	72	67	65	63	63	65	65	71	75	75	74	77	80	86	97	63	97	74.7																																																																				
Jul 23	100	100	100	100	100	100	92	81	71	65	59	54	47	48	48	45	44	48	49	56	68	74	78	81	44	100	71.2																																																																				
Jul 24	81	83	88	92	98	92	87	84	79	75	74	69	63	56	53	56	76	76	76	72	77	85	87	91	53	98	77.9																																																																				
Jul 25	95	97	98	99	100	97	92	85	80	75	76	76	70	65	52	42	58	66	94	98	99	98	93	91	42	100	83.2																																																																				
Jul 26	95	99	96	98	99	95	84	75	64	55	43	39	35	33	28	29	29	29	31	40	66	76	84	88	28	99	62.9																																																																				
Jul 27	88	90	91	93	94	85	75	65	61	55	51	45	44	41	40	42	43	46	50	60	74	82	78	69	40	94	65.1																																																																				
Jul 28	77	84	87	94	96	93	85	74	69	65	62	56	47	41	38	38	38	38	43	50	62	67	69	71	38	96	64.3																																																																				
Jul 29	75	80	82	89	91	93	86	89	90	89	88	80	70	65	64	65	67	68	71	77	83	86	88	89	64	93	80.2																																																																				
Jul 30	89	93	96	96	92	94	94	99	99	97	89	79	77	80	85	85	82	83	85	91	92	94	96	98	77	99	90.2																																																																				
Jul 31	99	100	100	99	100	100	96	86	79	71	69	70	67	61	58	62	71	66	75	85	92	97	99	100	58	100	83.4																																																																				
Diurnal Maximum	100	100	100	100	100	100	100	100	99	98	99	100	99	98	96	93	94	96	98	99	100	100	100	100	100																																																																						
Diurnal Average	84.6	88.6	90.4	91.9	93.3	91.0	84.3	78.4	72.4	67.0	62.7	58.9	55.9	53.1	51.2	50.4	52.0	53.0	55.7	61.2	71.1	77.0	80.6	83.1																																																																							
<b>C</b>	Monthly Calibration																							<b>S</b>	Daily Zero-Span Check																							<b>Q</b>	Quality Assurance																																														
<b>K</b>	Collection Error																							<b>N</b>	No Data (Machine Not in Service)																							<b>Y</b>	Routine Maintenance																							<b>P</b>	Power Failure																						
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)																							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																																																						
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																																																																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																																																															

*Timeseries Chart of Hourly Average for RH - Tamarack Site*





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

Summary of Hourly Averages

BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	944 mb	on July 2 at hour 7	Hours in Service:	744
Maximum Daily Value:	942 mb	on July 6	Hours of Data:	744
Minimum Hourly Value:	929 mb	on July 13 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	932 mb	on July 19	Hours of Calibration:	0
Monthly Average:	938 mb		Operational Uptime:	100.0

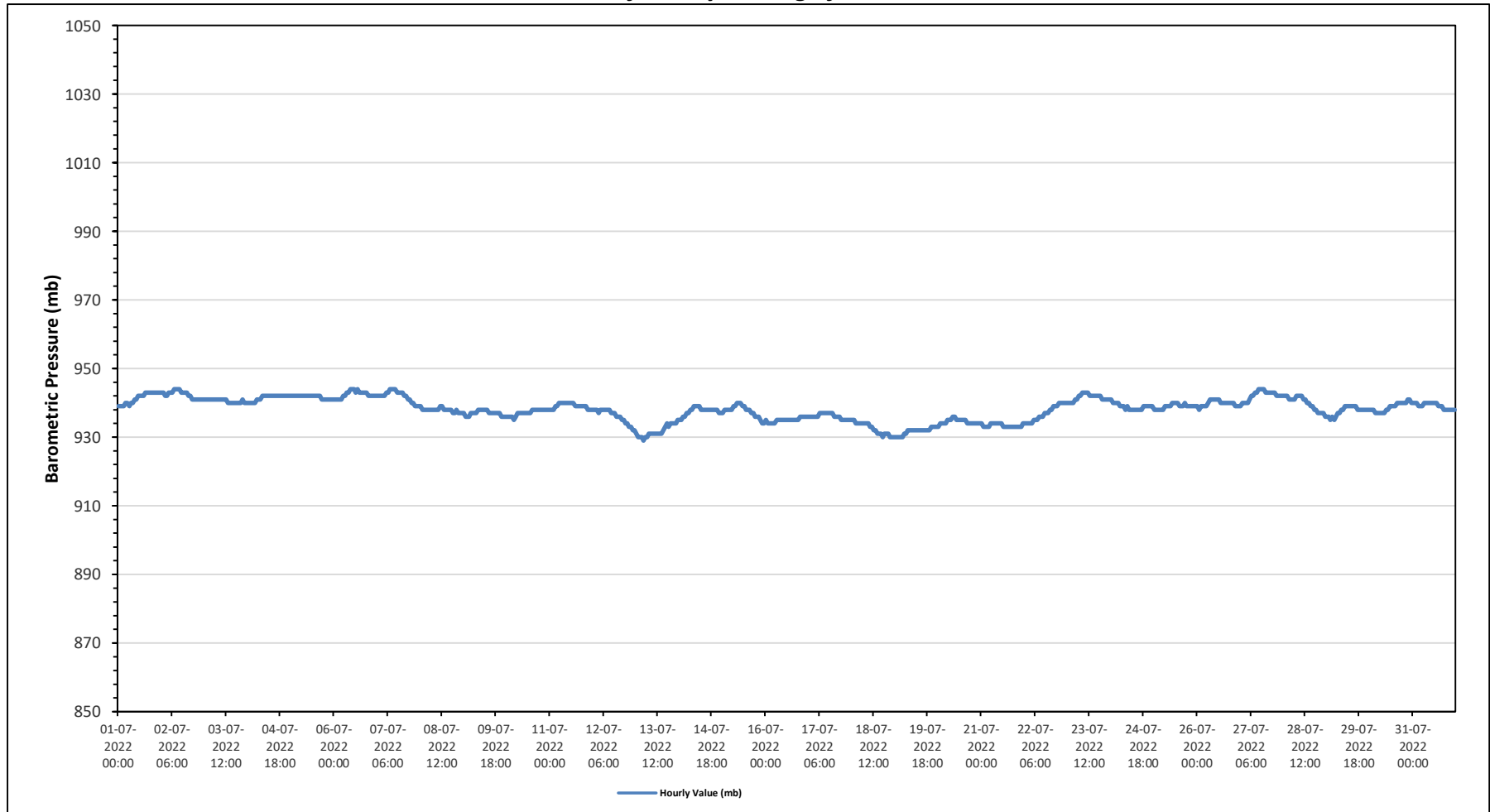
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	939	939	939	939	940	940	939	940	940	941	941	942	942	942	942	943	943	943	943	943	943	943	943	943	939	943	941	
Jul 2	943	943	942	942	943	943	943	944	944	944	944	943	943	943	943	942	942	941	941	941	941	941	941	941	941	941	942	942
Jul 3	941	941	941	941	941	941	941	941	941	941	941	941	941	940	940	940	940	940	940	940	940	941	940	940	940	940	941	941
Jul 4	940	940	940	940	940	941	941	941	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	940	942	941	
Jul 5	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	941	941	941	941	941	941	941	941	941	942	942
Jul 6	941	941	941	941	941	942	942	943	943	944	944	944	943	944	943	943	943	943	943	943	942	942	942	942	941	944	942	942
Jul 7	942	942	942	942	942	943	943	944	944	944	944	943	943	943	943	942	942	941	941	940	940	939	939	939	939	944	942	942
Jul 8	939	938	938	938	938	938	938	938	938	938	938	939	939	938	938	938	938	938	937	937	937	937	937	937	937	939	938	938
Jul 9	937	936	936	936	937	937	937	937	938	938	938	938	938	938	937	937	937	937	937	937	937	937	936	936	936	936	938	937
Jul 10	936	936	936	936	935	936	937	937	937	937	937	937	937	937	937	937	938	938	938	938	938	938	938	938	935	938	937	937
Jul 11	938	938	938	939	939	940	940	940	940	940	940	940	940	940	939	939	939	939	939	939	939	938	938	938	938	940	939	939
Jul 12	938	938	938	937	938	938	938	938	938	938	937	937	937	936	936	936	935	935	934	934	933	933	932	932	932	938	936	936
Jul 13	931	930	930	930	929	930	930	931	931	931	931	931	931	931	931	932	933	934	933	934	934	934	934	935	929	935	932	932
Jul 14	935	935	936	936	937	937	938	938	939	939	939	939	938	938	938	938	938	938	938	938	938	938	938	937	937	939	938	938
Jul 15	937	938	938	938	938	938	939	939	940	940	939	939	938	938	938	937	937	936	936	936	935	934	934	934	934	940	938	938
Jul 16	935	934	934	934	934	934	935	935	935	935	935	935	935	935	935	935	935	935	935	935	936	936	936	936	934	936	935	935
Jul 17	936	936	936	936	936	936	937	937	937	937	937	937	937	937	936	936	936	936	935	935	935	935	935	935	935	937	936	936
Jul 18	935	935	934	934	934	934	934	934	934	934	933	933	932	932	932	931	931	931	931	931	931	930	930	930	930	935	935	932
Jul 19	930	930	930	930	930	931	931	932	932	932	932	932	932	932	932	932	932	932	932	932	932	933	933	933	933	933	933	932
Jul 20	933	934	934	934	934	935	935	935	936	936	936	935	935	935	935	935	935	934	934	934	934	934	934	934	933	936	935	935
Jul 21	934	933	933	933	933	934	934	934	934	934	934	934	933	933	933	933	933	933	933	933	933	933	933	934	933	934	933	933
Jul 22	934	934	934	934	934	935	935	935	936	936	936	936	937	937	937	938	938	939	939	939	940	940	940	940	940	940	940	937
Jul 23	940	940	940	940	941	941	942	942	943	943	943	943	943	942	942	942	942	942	942	941	941	941	941	941	940	943	941	942
Jul 24	941	940	940	940	940	939	939	939	938	938	938	938	938	938	938	938	938	938	938	939	939	939	939	939	938	941	939	939
Jul 25	938	938	938	938	938	938	939	939	939	939	940	940	940	940	939	939	939	940	939	939	939	939	939	939	938	940	939	939
Jul 26	939	938	939	939	939	939	940	941	941	941	941	941	941	940	940	940	940	940	940	940	940	939	939	939	938	941	940	940
Jul 27	939	940	940	940	940	941	942	942	943	943	944	944	944	944	943	943	943	943	943	943	942	942	942	942	939	944	942	942
Jul 28	942	942	942	941	941	941	941	942	942	942	942	942	941	941	940	940	939	939	938	938	937	937	937	936	936	942	940	940
Jul 29	936	936	935	936	935	936	937	937	938	938	939	939	939	939	939	939	939	938	938	938	938	938	938	938	935	939	938	938
Jul 30	938	938	938	937	937	937	937	937	937	938	938	939	939	939	940	940	940	940	940	940	940	941	941	940	937	941	939	939
Jul 31	940	940	940	939	939	939	940	940	940	940	940	940	940	940	939	939	939	938	938	938	938	938	938	938	938	940	939	939
Diurnal Maximum	943	943	942	942	943	943	943	944	944	944	944	944	944	944	943	943	943	943	943	943	943	943	943	943	943	943	943	943
Diurnal Average	938	938	938	937	938	938	938	939	939	939	939	939	939	939	938	938	938	938	938	938	938	938	938	938	938	938	938	938

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for BP - Tamarack Site**





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Tamarack Site - July 2022**  
**Summary of Hourly Averages**

**AMBIENT TEMPERATURE (AT) in Degree Celsius**

Maximum Hourly Value:	29.1 °C	on July 28 at hour 16	Hours in Service:	744
Maximum Daily Value:	22.3 °C	on July 28	Hours of Data:	744
Minimum Hourly Value:	4.9 °C	on July 2 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	10.6 °C	on July 1	Hours of Calibration:	0
Monthly Average:	17.6 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	Daily	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum	Average
Jul 1	11.4	11.3	11.5	12	10.8	9	8.7	9.1	9.4	9.6	9.6	9.9	10.2	10.7	11.6	11.9	12	12.4	12.6	12.2	10.1	9	9.4	9.3	8.7	12.6	10.6
Jul 2	7.8	6.4	5.3	5	4.9	6.8	9.7	12.8	14.6	15.8	16.7	17.4	17.5	18.4	19.1	18.1	17.5	16.8	16.1	14.8	14.1	13.7	12.8	12.5	4.9	19.1	13.1
Jul 3	12.3	12.5	11.9	11.6	11.1	11.6	12.6	14.4	16.8	19.2	20.5	20	19.8	20.2	18.8	21.1	20.4	20.7	20.9	19	17.4	16.1	15.1	13.5	11.1	21.1	16.6
Jul 4	12	11.8	11.8	10.8	10.4	12.1	13.6	15.4	16.5	18.1	19.3	20.1	20.8	21.1	21.1	21.3	21	20.8	20.2	18.9	17.4	16.1	14.1	13.4	10.4	21.3	16.6
Jul 5	13	12.7	12.7	13.5	13.4	13.6	14.2	13.8	13.7	13.7	13.1	13.3	13.6	14.4	14.7	14.9	13.8	12.9	11.9	11.7	11.5	11.2	11.2	11.1	11.1	14.9	13.1
Jul 6	11	11	11	10.9	11.3	11.8	13	14.4	15.8	16.8	17.9	18.8	19.8	19.7	19.7	20.3	20.8	20.7	20.4	19.1	17.1	15.2	12.8	11.2	10.9	20.8	15.9
Jul 7	10.4	9.6	9.3	8.8	9.1	10.9	14.6	17.2	18.3	19	19.7	19.9	20.5	21.4	20.9	21.3	21	20.4	19.7	19	18.2	18	17.2	16.9	8.8	21.4	16.7
Jul 8	15.6	14.7	14.4	14.3	14.6	15.3	15.8	16.5	17.3	18	18	18.4	19.1	19.8	21	21	21.7	21.2	21.3	19.6	17.8	15.3	14.2	13.6	13.6	21.7	17.4
Jul 9	13.2	11.7	11.4	12	12.7	13	13.5	14.8	18.1	19.9	21	21.8	22.3	22.9	23.3	23.5	23.5	23.2	22.6	21.8	19.6	16.4	15.4	14.9	11.4	23.5	18.0
Jul 10	14.9	14.4	13.8	12.6	12.3	12.8	15.4	18.1	19.2	19.9	19.7	19.6	19.1	19.2	19.2	19.8	20.2	20.3	20.2	19.8	18.3	17	16.1	16	12.3	20.3	17.4
Jul 11	15.3	14.4	14	13.9	13.7	15.1	16.4	17.4	18.6	19.3	20.2	20.6	21.6	22.3	23	23.3	23.7	23.8	23.8	23	19.5	15.6	14.5	15.7	13.7	23.8	18.7
Jul 12	14.7	11.5	10.7	9.5	9.3	12	16.8	20.3	22.1	23.5	24.8	25.5	26.1	26.7	27	27.4	27.5	27.4	26.9	25.7	23.3	22	21.3	20.6	9.3	27.5	20.9
Jul 13	20	19.1	17.9	16	16	17.9	19.6	20.3	21.4	22.3	22.5	23.5	24.5	25.1	25.3	25.5	22.3	21.1	20.3	19.8	17.8	15.2	12.9	12.6	12.6	25.5	20.0
Jul 14	12.3	11.6	11.4	10.6	10.4	11.4	13.3	15.5	17.8	19.4	21.2	22.3	23.2	23.5	24.2	24.4	24.1	23	23	22.5	18.7	16.2	14.8	13.5	10.4	24.4	17.8
Jul 15	12.6	12.1	11.6	11.3	10.9	12.7	16.2	18.1	20.6	23.2	24.4	24.9	26	26.8	26.7	27.4	27.6	27.5	27.1	24.8	19	17.8	17.2	16.9	10.9	27.6	20.1
Jul 16	17.4	16.9	16.6	15.9	15	15.6	17.5	19.2	20.8	23	24.3	25.8	26.4	27.3	27.3	27.1	26.7	26.6	26	24.7	22.7	20.5	19.5	18.4	15.0	27.3	21.7
Jul 17	18.4	15.2	13.7	13.7	13.3	13.7	15.8	18	19.6	20.1	21.3	23.3	24	24.6	25.3	25.7	25.9	25.6	25.2	23.7	20.3	18.3	17.5	16.3	13.3	25.9	19.9
Jul 18	15.7	13.5	12.1	11.4	11	12.6	17.3	18.7	21.1	22.6	23.4	24.3	25	25.2	25.8	26.1	26.4	26.2	25.9	24.7	22.3	21.1	19.7	19.7	11.0	26.4	20.5
Jul 19	19.5	18.2	17.2	17.2	17.5	18.4	19.6	19.5	20.7	22.1	23	23.5	23.8	23.5	23.7	23.4	23.7	23.1	22.3	20.8	19.9	18	16.5	15.3	15.3	23.8	20.4
Jul 20	14.8	13.6	13	11.8	11.1	12.3	14.9	16.4	17.9	19.5	20.5	21.3	21.6	22.3	23	22.2	22.9	23.1	22.7	21.7	19.8	18.8	18.1	17.7	11.1	23.1	18.4
Jul 21	17	15.9	15	14.5	13.9	14.7	17	17.9	19.3	21.3	22.8	23.5	24.4	24.7	25.2	24.5	24	23.5	22.6	21.6	20.7	20.1	19.5	18.7	13.9	25.2	20.1
Jul 22	17.2	15.8	14.6	13.6	12.6	12.9	13.2	13.5	13.7	14.8	15.8	16.3	16.6	16.5	16.7	16.9	16	15	14.5	14.4	13.7	12.8	11.6	9	9.0	17.2	14.5
Jul 23	7.6	7	6.6	5.8	5.5	6.5	10.7	12.9	14	14.8	16.2	17	18.5	18.7	19.2	19.9	20.1	19.6	19.3	18.1	15.5	14.1	14.5	14.5	5.5	20.1	14.0
Jul 24	14.4	13.9	12.8	12.2	12.1	12.8	13.9	15.2	16.8	18.5	19.7	21.5	23	23.5	24.3	21.7	17.4	18.3	18.7	17.9	16.4	15.2	15.2	14.6	12.1	24.3	17.1
Jul 25	14	13.4	13.4	12.7	13.1	14.5	15.3	15.8	16.2	16.7	16.2	16.5	17.2	17.5	19.9	21.3	18.5	17.9	14.9	14.9	13.6	13.3	13.8	13.7	12.7	21.3	15.6
Jul 26	13.1	12.2	12.6	11.7	11	11.9	13.8	15.4	17.3	18.5	19.6	20.5	21.3	21.9	22.8	22.7	22.9	22.7	22.7	20.8	15.6	13.4	12.1	11.1	11.0	22.9	17.0
Jul 27	11.2	11.2	10.6	10.5	10.2	11.9	14.4	16.9	18.6	19.6	20.7	21.7	22.7	23.5	24.5	24.4	24.7	24.2	23.2	21.1	18.1	16	16.7	19.1	10.2	24.7	18.2
Jul 28	17.1	15.9	15.4	14.2	13.3	13.9	16.7	19.6	21.2	23.1	24.8	26.5	27.6	28.3	28.7	29	29.1	28.7	28	26.1	23	22	21.4	21.4	13.3	29.1	22.3
Jul 29	20.7	19.9	19.5	18.4	18	17.5	19.3	19	18.9	19.3	19.3	20.4	22.5	23.5	23.8	23.9	23	22.5	21.6	19.9	18.5	17.4	16.9	16.5	16.5	23.9	20.0
Jul 30	16.2	16	15.5	15.4	16.2	16.5	16.8	15.7	16.5	17.3	18.8	20.3	20.5	20	19	18.7	18.9	18.6	18.2	17.2	16.6	16.1	15.5	15	15.0	20.5	17.3
Jul 31	14	13.8	14.1	13.8	12.5	12.2	14.6	16.4	17.5	18.9	19.4	19.4	19.9	20.2	20.9	20.6	19.8	20.8	19.3	17.6	16.2	14.6	13.4	12.6	12.2	20.9	16.8
Diurnal Maximum	20.7	19.9	19.5	18.4	18.0	18.4	19.6	20.3	22.1	23.5	24.8	26.5	27.6	28.3	28.7	29.0	29.1	28.7	28.0	26.1	23.3	22.0	21.4	21.4			
Diurnal Average	14.3	13.5	12.9	12.4	12.2	13.0	15.0	16.4	17.8	19.0	19.8	20.6	21.3	21.7	22.1	22.2	21.8	21.6	21.0	19.9	17.8	16.3	15.5	15.0			

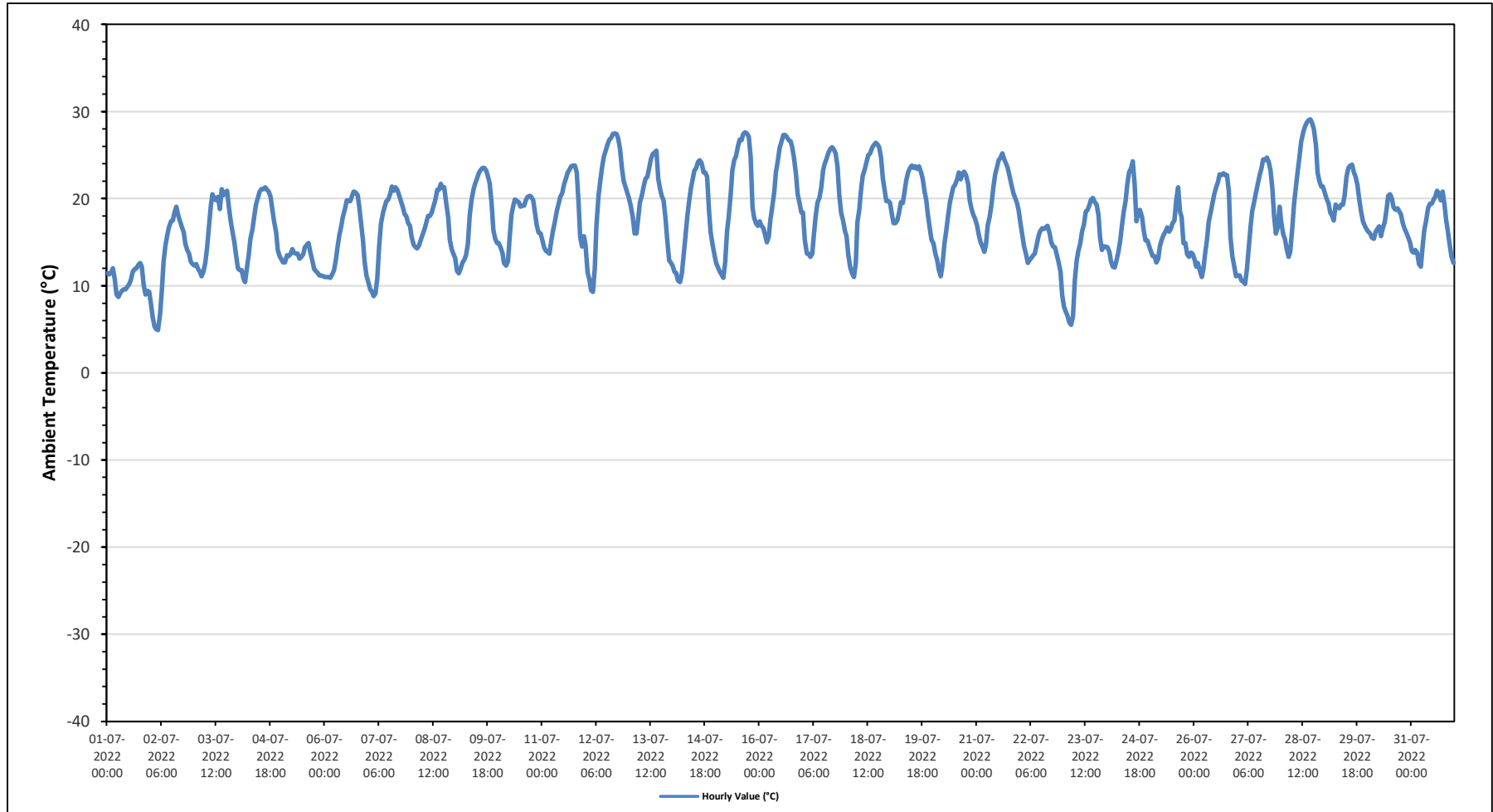
  

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Timeseries Chart of Hourly Average for AT - Tamarack Site**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

Summary of Hourly Averages

### STATION TEMPERATURE (ST) in Degree Celsius

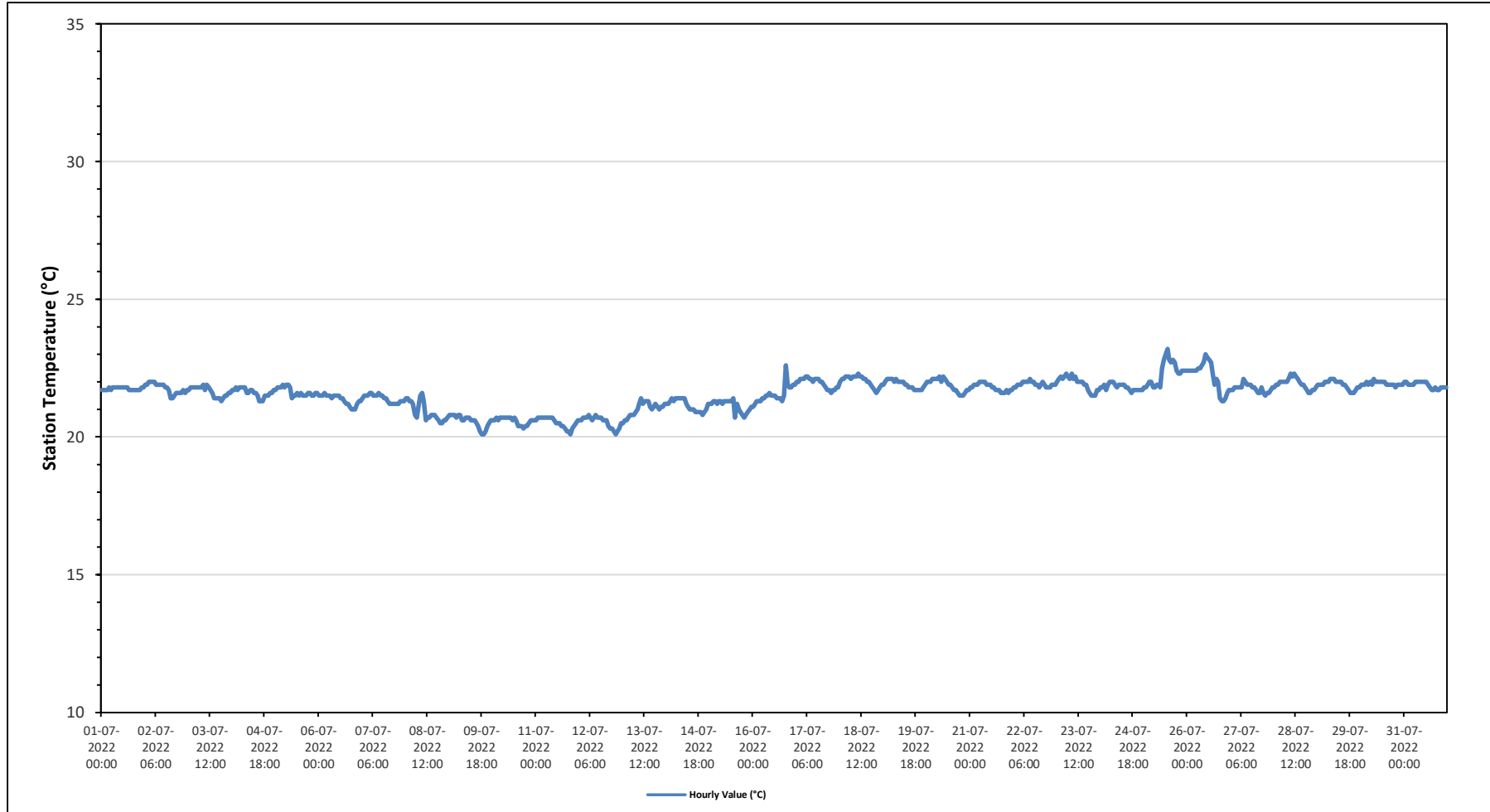
Maximum Hourly Value:	23.2 °C	on July 25 at hour 13	Hours in Service:	744
Maximum Daily Value:	22.3 °C	on July 25	Hours of Data:	744
Minimum Hourly Value:	20.1 °C	on July 9 at hour 18	Hours of Missing Data:	0
Minimum Daily Value:	20.5 °C	on July 11	Hours of Calibration:	0
Monthly Average:	21.6 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23								
Jul 1	21.7	21.7	21.7	21.7	21.8	21.7	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.8	21.7	21.7	21.7	21.7	21.8	21.8	21.7	21.7	21.8	21.8	21.7	21.8	21.8
Jul 2	21.9	21.9	22.0	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.7	21.4	21.4	21.5	21.6	21.6	21.6	21.6	21.7	21.6	21.7	21.6	21.7	21.4	22.0	21.8	21.4	22.0	21.8		
Jul 3	21.7	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.9	21.7	21.9	21.8	21.7	21.6	21.4	21.4	21.4	21.4	21.3	21.4	21.5	21.5	21.6	21.6	21.3	21.9	21.6	21.3	21.9	21.6	21.3	21.9	21.6		
Jul 4	21.7	21.7	21.8	21.7	21.8	21.8	21.8	21.8	21.6	21.6	21.7	21.7	21.6	21.6	21.5	21.3	21.3	21.3	21.5	21.5	21.6	21.6	21.5	21.6	21.3	21.8	21.6	21.3	21.8	21.6	21.3	21.8	21.6		
Jul 5	21.7	21.8	21.8	21.8	21.9	21.8	21.9	21.9	21.8	21.4	21.5	21.5	21.6	21.5	21.6	21.5	21.5	21.5	21.6	21.6	21.5	21.5	21.6	21.6	21.3	21.9	21.6	21.4	21.9	21.6	21.4	21.9	21.6		
Jul 6	21.5	21.5	21.5	21.6	21.5	21.5	21.5	21.5	21.4	21.5	21.5	21.5	21.5	21.4	21.4	21.3	21.2	21.2	21.1	21.0	21.0	21.0	21.2	21.3	21.3	21.0	21.6	21.0	21.6	21.4	21.0	21.6	21.4		
Jul 7	21.4	21.5	21.5	21.5	21.6	21.6	21.5	21.5	21.5	21.6	21.5	21.5	21.4	21.4	21.3	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.3	21.3	21.3	21.2	21.6	21.2	21.6	21.4	21.0	21.6	21.4	
Jul 8	21.4	21.4	21.3	21.3	21.2	20.8	20.7	21.1	21.5	21.6	21.3	20.6	20.7	20.7	20.8	20.8	20.7	20.7	20.8	20.8	20.7	20.6	20.5	20.6	20.6	20.7	20.5	21.6	20.5	21.6	20.9	20.5	21.6	20.9	
Jul 9	20.8	20.8	20.8	20.8	20.7	20.8	20.8	20.6	20.6	20.7	20.7	20.6	20.7	20.6	20.6	20.5	20.4	20.2	20.1	20.1	20.2	20.5	20.4	20.5	20.6	20.1	20.8	20.1	20.8	20.6	20.1	20.8	20.6	20.6	
Jul 10	20.6	20.6	20.7	20.6	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.6	20.7	20.6	20.4	20.4	20.4	20.3	20.4	20.4	20.5	20.6	20.6	20.6	20.3	20.7	20.6	20.3	20.7	20.6	20.3	20.7	20.6	20.6	
Jul 11	20.6	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.6	20.5	20.5	20.5	20.4	20.4	20.3	20.2	20.2	20.1	20.3	20.4	20.5	20.6	20.1	20.7	20.5	20.1	20.7	20.5	20.1	20.7	20.5		
Jul 12	20.6	20.6	20.7	20.7	20.7	20.8	20.7	20.6	20.7	20.8	20.7	20.7	20.7	20.6	20.6	20.6	20.4	20.3	20.2	20.1	20.3	20.2	20.1	20.3	20.2	20.1	20.8	20.1	20.8	20.5	20.1	20.8	20.5	20.5	
Jul 13	20.5	20.6	20.6	20.7	20.8	20.8	20.8	20.9	21.0	21.2	21.4	21.2	21.3	21.3	21.3	21.1	21.0	21.1	21.2	21.1	21.0	21.1	21.1	21.2	20.5	21.4	20.5	20.5	21.4	21.0	20.5	21.4	21.0	21.0	
Jul 14	21.2	21.2	21.3	21.4	21.3	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.2	21.1	21.0	21.0	20.9	20.9	20.9	20.9	20.9	20.8	20.9	20.8	20.8	20.9	21.0	21.2	20.8	21.4	21.2	20.8	21.4	21.2	
Jul 15	21.2	21.2	21.3	21.3	21.2	21.3	21.3	21.2	21.3	21.3	21.3	21.3	21.3	21.3	21.4	20.7	21.2	21.0	20.9	20.8	20.7	20.8	20.9	21.0	21.1	20.7	21.4	21.1	20.7	21.4	21.1	20.7	21.4	21.1	
Jul 16	21.1	21.2	21.3	21.3	21.3	21.4	21.4	21.5	21.5	21.6	21.5	21.5	21.5	21.4	21.4	21.4	21.3	21.5	22.6	21.9	21.8	21.8	21.9	21.9	21.1	22.6	21.1	21.1	22.6	21.5	21.1	22.6	21.5		
Jul 17	22.0	22.0	22.1	22.1	22.1	22.2	22.2	22.2	22.1	22.1	22.0	22.1	22.1	22.0	22.0	21.9	21.8	21.7	21.7	21.6	21.7	21.7	21.8	21.8	21.6	22.2	21.6	21.6	22.2	22.0	21.6	22.2	22.0		
Jul 18	22.0	22.1	22.1	22.2	22.2	22.2	22.1	22.2	22.2	22.2	22.2	22.3	22.2	22.2	22.1	22.1	22.0	21.9	21.8	21.8	21.7	21.7	21.8	21.9	21.6	22.3	21.6	21.6	22.3	22.0	21.6	22.3	22.0		
Jul 19	21.9	22.0	22.1	22.1	22.1	22.1	22.0	22.1	22.0	22.0	22.0	22.0	22.0	21.9	21.8	21.8	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.9	21.7	21.7	21.7	21.7	21.7	21.8	21.9	21.7	22.1	21.9	
Jul 20	22.0	22.0	22.0	22.1	22.1	22.1	22.1	22.2	22.0	22.2	22.1	22.0	22.2	22.1	22.0	21.9	21.9	21.8	21.7	21.7	21.7	21.6	21.5	21.5	21.6	21.7	21.7	21.5	22.2	21.9	21.5	22.2	21.9		
Jul 21	21.8	21.8	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.8	21.8	21.7	21.7	21.7	21.6	21.6	21.6	21.6	21.6	21.6	21.7	21.6	21.6	21.6	21.6	21.6	21.7	21.7	21.6	22.0	21.8	
Jul 22	21.8	21.8	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.1	22.0	22.0	21.9	21.9	21.8	21.9	21.8	21.8	21.8	21.7	21.7	21.7	21.8	21.9	21.8	21.8	21.8	21.8	21.8	21.9	21.9	21.8	22.1	21.9	
Jul 23	22.0	22.1	22.2	22.1	22.2	22.3	22.2	22.1	22.3	22.1	22.2	22.0	22.0	22.0	22.0	21.9	21.9	21.7	21.6	21.5	21.5	21.5	21.7	21.7	21.5	22.3	21.5	21.5	22.3	22.0	21.5	22.3	22.0		
Jul 24	21.8	21.8	21.9	21.7	21.9	22.0	22.0	22.0	22.0	21.9	21.8	21.9	21.8	21.9	21.8	21.8	21.7	21.6	21.7	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6	21.7	21.7	21.7	21.6	22.0	21.8	
Jul 25	21.8	21.8	21.9	22.0	22.0	21.8	21.8	21.9	21.9	21.8	22.5	22.8	23.0	23.2	22.8	22.7	22.8	22.7	22.4	22.3	22.3	22.3	22.4	22.4	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	
Jul 26	22.4	22.4	22.4	22.4	22.4	22.4	22.5	22.5	22.6	22.7	23.0	22.9	22.8	22.7	22.3	21.9	22.1	22.0	21.4	21.3	21.3	21.4	21.6	21.7	21.3	23.0	21.3	21.3	23.0	22.2	21.3	23.0	22.2		
Jul 27	21.7	21.7	21.8	21.8	21.8	21.8	21.8	22.1	22.0	21.9	21.9	21.9	21.8	21.8	21.7	21.6	21.6	21.8	21.6	21.5	21.6	21.6	21.7	21.8	21.5	22.1	21.5	21.5	22.1	21.8	21.5	22.1	21.8		
Jul 28	21.8	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.1	22.3	22.2	22.3	22.2	22.1	22.0	21.9	21.8	21.7	21.6	21.6	21.7	21.7	21.8	21.6	21.6	21.6	21.6	21.6	21.6	21.7	21.7	21.8	21.6	22.3	21.9
Jul 29	21.9	21.9	21.9	21.9	22.0	22.0	22.0	22.1	22.1	22.1	22.0	22.0	22.0	22.0	21.9	21.9	21.8	21.7	21.6	21.6	21.6	21.6	21.7	21.8	21.6	21.6	21.6	21.6	21.6	21.7	21.8	21.8	21.6	22.1	21.9
Jul 30	21.9	21.9	21.9	22.0	21.9	22.0	21.9	22.1	22.0	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.8	21.9	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	
Jul 31	22.0	22.0	21.9	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.9	21.8	21.7	21.7	21.8	21.7	21.7	21.7	21.8	21.8	21.8	21.7	21.7	21.7	21.7	21.7	21.8	21.8	21.8	21.8	21.8	
Diurnal Maximum	22.4	22.4	22.4	22.4	22.4	22.4	22.5	22.5	22.6	22.7	23.0	22.9	23.0	23.2	22.8	22.7	22.8	22.7	22.6	22.3	22.3	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4		
Diurnal Average	21.6	21.6	21.6	21.6	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.6	21.5	21.5	21.4	21.4	21.4	21.4	21.4	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5		
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance																		
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure										
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																										

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for ST - Tamarack Site**





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022  
Summary of Hourly Averages

PRECIPITATION in mm

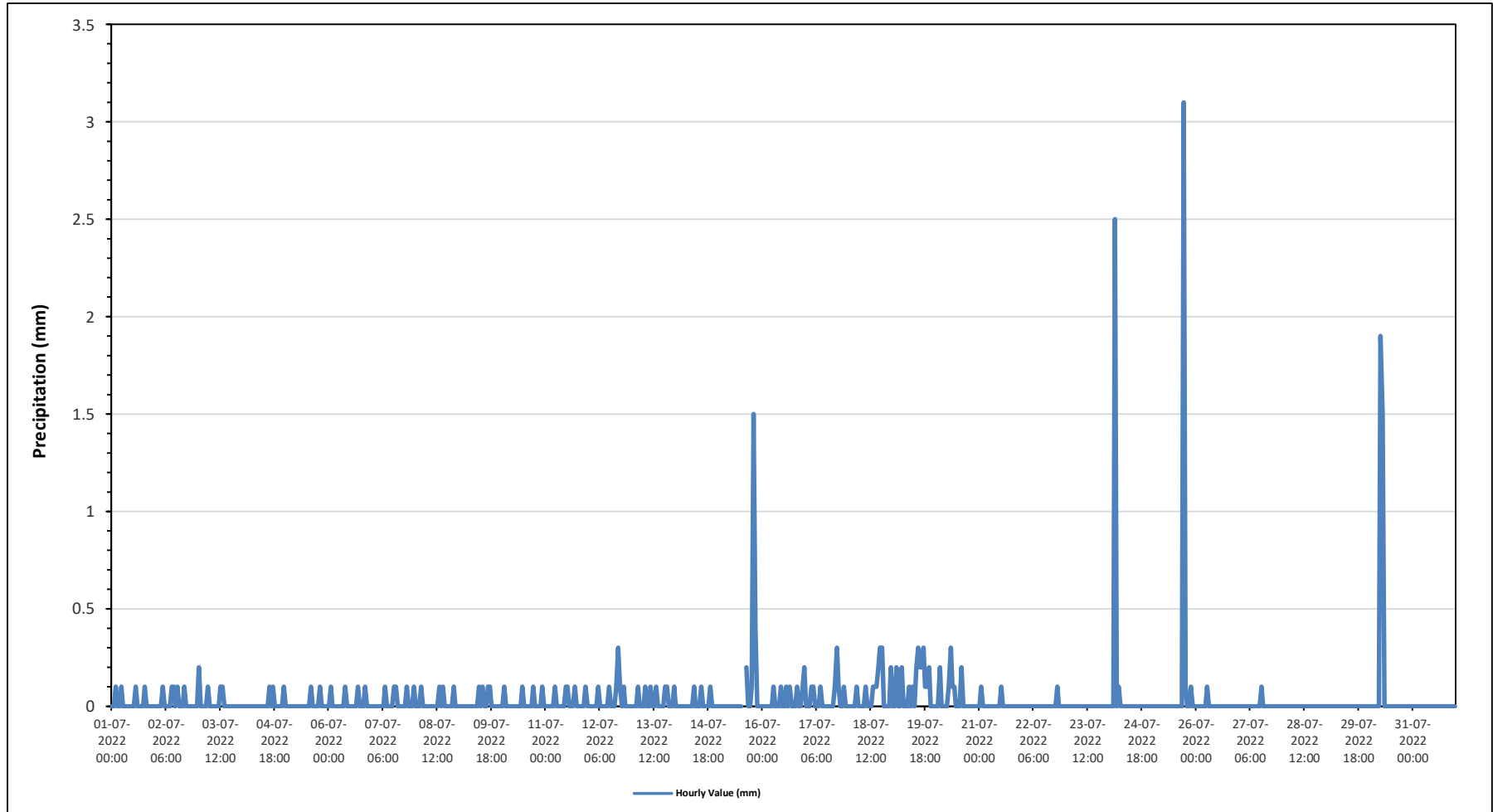
Maximum Hourly Value:	3.1 mm on July 25 at hour 17	Hours in Service:	744
Maximum Daily Value:	3.4 mm on July 30	Hours of Data:	742
Minimum Hourly Value:	0.0 mm on July 1 at hour 0	Hours of Missing Data:	2
Minimum Daily Value:	0.0 mm on July 23	Hours of Calibration:	0
Monthly Total:	24.7 mm	Operational Uptime:	99.7

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0.0	0.1	0.4	
Jul 2	0	0	0	0	0.1	0	0	0	0	0.1	0.1	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0.0	0.1	0.5
Jul 3	0.2	0	0	0	0	0.1	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.5
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0	0.1	0.0	0.1	0.3
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0.0	0.1	0.2
Jul 6	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0.0	0.1	0.4
Jul 7	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0	0	0.1	0	0	0	0	0.1	0.0	0.1	0.5
Jul 8	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0	0	0	0.1	0	0	0.0	0.1	0.4
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0.1	0.1	0	0	0.1	0	0	0	0	0.0	0.1	0.4
Jul 10	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0	0.0	0.1	0.4
Jul 11	0	0	0	0	0	0.1	0	0	0	0	0	0.1	0.1	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0.0	0.1	0.5
Jul 12	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0.1	0.3	0.1	0	0.1	0	0	0	0	0.0	0.1	0.5
Jul 13	0	0	0	0.1	0	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0.1	0	0.0	0.1	0.7
Jul 14	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0.0	0.1	0.3
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y	Y	0.2	0	0	0.1	1.5	0.4	0	0	0.0	1.5	2.2
Jul 16	0	0	0	0	0	0	0.1	0	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0	0.1	0	0	0.1	0.2	0.0	0.2	0.8
Jul 17	0	0	0	0.1	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.3	0.1	0	0	0.1	0	0	0.0	0.3	0.9
Jul 18	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.1	0	0	0	0.2	0.0	0.3	1.5
Jul 19	0	0	0.2	0	0	0.2	0	0	0	0.1	0	0.1	0	0.2	0.3	0.2	0.2	0.3	0.3	0.1	0.1	0.2	0	0	0	0.0	0.3	2.2
Jul 20	0	0	0.2	0	0	0	0	0.1	0.3	0.1	0.1	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0.0	0.3	1.0
Jul 21	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.2
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.0	0.1	0.1
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 24	0	0	0	2.5	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	2.5	2.6
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	3.1	3.3
Jul 26	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Jul 30	0	0	0	0	0	0	1.9	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	1.9	3.4
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0
Diurnal Maximum	0.2	0.1	0.2	2.5	0.1	0.2	1.9	1.5	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.3	0.1	0.1	0.2	0	0	0	0.2			
Diurnal Average	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for Precipitation - Tamarack Site**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

### Summary of Hourly Averages

#### VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	17.6 kph on July 13 at hour 16	Hours in Service:	744
Maximum Daily Value:	10.8 kph on July 20	Hours of Data:	743
Minimum Hourly Value:	0.0 kph on July 1 at hour 23	Hours of Missing Data:	0
Minimum Daily Value:	1.0 kph on July 2	Hours of Calibration:	1
Monthly Average:	1.7 kph	Operational Uptime:	100.0

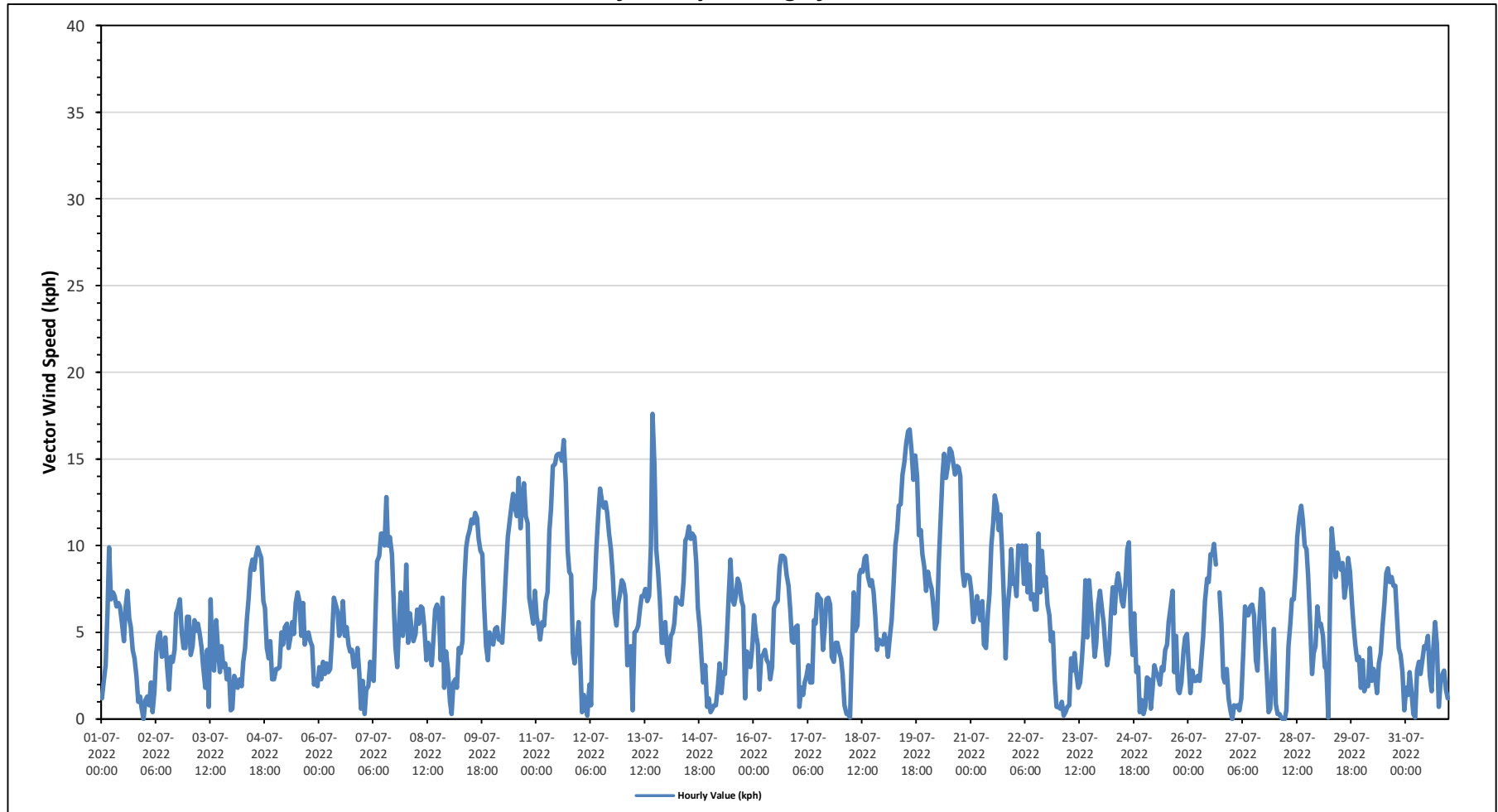
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1.2	2.2	3.1	6.2	9.9	6.9	7.3	7.1	6.5	6.7	6.5	5.6	4.5	6.4	7.4	5.8	5.3	4.0	3.5	2.5	1.0	1.3	0.6	0.0	0.0	9.9	4.3	
Jul 2	1.1	1.3	0.8	2.1	0.4	1.6	3.8	4.8	5.0	3.6	3.7	4.7	3.0	1.7	3.6	3.3	4.0	6.1	6.4	6.9	5.0	4.1	4.1	5.9	0.4	6.9	1.0	
Jul 3	5.9	3.7	4.2	5.7	5.1	5.5	4.9	4.1	3.0	1.8	4.0	0.7	6.9	3.1	2.8	5.7	4.0	2.7	4.2	3.0	3.2	2.3	2.9	0.5	0.5	6.9	2.0	
Jul 4	0.6	2.5	2.2	1.8	2.3	1.9	3.3	4.1	5.8	6.9	8.6	9.2	8.6	9.4	9.9	9.6	9.3	6.8	6.4	4.1	3.5	4.5	2.3	2.3	0.6	9.9	4.9	
Jul 5	2.9	2.9	3.0	5.0	4.3	5.3	5.5	4.1	4.7	5.6	4.9	6.7	7.3	6.8	4.8	6.7	4.3	4.9	5.0	4.5	4.2	2.0	2.3	1.9	1.9	7.3	4.2	
Jul 6	3.0	2.3	3.3	2.6	3.2	2.7	2.9	4.7	7.0	6.6	6.2	4.8	5.2	6.8	4.8	5.3	4.3	3.9	4.0	3.0	3.1	4.1	2.6	0.6	0.6	7.0	2.7	
Jul 7	2.2	0.3	1.7	1.9	3.3	2.6	2.2	6.1	9.1	9.4	10.7	10.7	10.0	12.8	10.0	10.5	9.5	6.6	4.2	3.0	5.5	7.3	4.8	5.7	0.3	12.8	5.8	
Jul 8	8.9	4.4	6.1	5.2	4.5	4.9	6.3	5.5	6.5	6.4	5.3	3.4	4.4	4.1	3.1	4.5	6.3	6.6	6.2	3.4	7.0	1.8	3.9	2.9	1.8	8.9	3.9	
Jul 9	1.0	0.3	2.1	2.3	1.8	4.1	3.8	4.5	7.9	9.9	10.5	10.9	11.5	11.3	11.9	11.6	10.4	9.7	9.5	6.5	4.2	3.4	5.0	4.7	0.3	11.9	6.4	
Jul 10	4.3	5.2	5.3	4.6	4.6	4.4	6.3	8.2	10.5	11.4	12.3	13.0	12.2	11.7	13.9	11.0	12.5	13.6	11.7	11.3	7.0	6.2	5.5	7.4	4.3	13.9	8.4	
Jul 11	5.9	5.3	4.6	5.6	5.4	6.8	7.3	10.9	12.1	14.6	14.7	15.2	15.3	15.3	14.9	16.1	13.6	9.7	8.5	8.3	3.8	3.2	4.2	5.6	3.2	16.1	9.0	
Jul 12	3.6	0.4	1.4	0.8	0.2	2.0	0.8	7.8	6.8	7.5	9.8	11.7	13.3	12.6	12.2	12.5	11.9	10.7	9.8	8.3	6.1	5.4	6.6	7.2	8.0	0.2	13.3	6.6
Jul 13	7.8	7.1	3.1	3.4	4.2	0.5	5.0	5.1	5.4	6.4	7.1	7.1	7.5	6.8	7.1	10.0	17.6	14.7	9.8	8.5	6.8	4.4	4.4	5.6	0.5	17.6	3.8	
Jul 14	3.7	3.3	4.8	5.0	5.5	7.0	6.8	6.7	6.6	7.9	10.3	10.5	11.1	10.4	10.7	10.5	9.0	6.4	5.3	3.5	2.1	3.1	0.7	1.2	0.7	11.1	6.0	
Jul 15	0.4	0.6	0.8	0.8	2.0	3.2	1.5	2.7	2.6	4.6	7.3	9.2	6.9	6.6	7.1	8.1	7.8	6.8	6.5	1.2	3.9	3.5	3.0	4.3	0.4	9.2	3.4	
Jul 16	6.0	4.9	4.3	1.7	3.6	3.7	4.0	3.4	3.2	2.3	3.0	6.4	6.7	6.8	8.7	9.4	9.4	9.3	8.3	7.7	6.2	4.5	4.4	5.3	1.7	9.4	3.4	
Jul 17	5.4	0.7	1.8	1.4	2.1	2.5	3.1	2.1	2.1	5.7	5.5	7.2	7.0	6.9	4.0	5.3	6.9	7.0	6.6	3.6	3.3	4.4	4.4	3.9	0.7	7.2	3.9	
Jul 18	3.5	2.6	0.8	0.3	0.3	0.1	3.8	7.3	5.1	5.4	8.3	8.6	8.5	9.3	9.4	8.2	7.7	8.0	7.3	5.8	4.0	4.6	4.4	4.3	0.1	9.4	5.2	
Jul 19	4.9	4.5	3.6	4.7	5.7	7.7	10.0	10.9	12.3	12.4	14.1	14.8	15.9	16.6	16.7	15.5	13.8	15.2	14.0	10.6	10.9	9.5	8.8	7.4	3.6	16.7	10.7	
Jul 20	8.5	7.9	7.5	6.6	5.2	5.6	9.1	11.6	14.1	15.3	13.9	14.6	15.6	15.4	14.7	14.1	14.6	14.5	14.0	8.6	7.7	8.3	8.3	8.2	5.2	15.6	10.8	
Jul 21	7.3	5.6	6.1	7.1	6.3	5.7	6.8	4.3	4.1	6.1	7.2	10.0	11.3	12.9	12.3	10.9	11.8	9.6	6.7	3.5	6.3	7.7	9.8	7.8	3.5	12.9	7.6	
Jul 22	7.9	7.1	10.0	9.7	10.0	7.8	10.0	7.3	8.9	6.9	7.2	6.3	6.3	10.7	7.3	9.7	7.7	8.2	6.6	6.0	4.5	5.0	2.3	0.7	0.7	10.7	5.7	
Jul 23	0.7	0.6	1.0	0.2	0.4	0.7	0.8	3.5	2.8	3.8	2.6	1.8	2.1	3.5	5.0	8.0	4.7	8.0	6.5	5.2	3.6	4.4	6.6	7.4	0.2	8.0	2.4	
Jul 24	6.4	5.5	4.0	3.1	3.8	6.0	7.6	6.1	7.8	8.4	7.7	6.8	6.5	7.8	9.8	10.2	5.5	3.7	6.1	2.7	3.0	0.4	1.1	0.3	0.3	10.2	2.9	
Jul 25	0.7	2.4	2.3	0.6	1.7	3.1	2.7	2.5	2.0	3.0	2.8	4.0	4.3	5.6	6.4	7.4	2.7	4.8	1.7	1.5	2.1	3.9	4.7	4.9	0.6	7.4	2.3	
Jul 26	3.0	1.5	2.8	2.2	2.2	2.5	2.2	3.6	4.7	6.8	8.1	7.9	9.5	9.5	10.1	8.9	C	7.3	5.5	2.4	2.1	2.9	1.2	0.5	0.5	10.1	3.7	
Jul 27	0.0	0.8	0.7	0.8	0.5	1.2	3.7	6.5	6.0	6.0	6.5	6.6	6.0	3.4	2.8	5.6	7.5	7.3	4.6	2.6	0.4	0.6	2.5	5.2	0.0	7.5	2.7	
Jul 28	0.9	0.3	0.3	0.1	0.0	0.0	0.5	4.2	5.5	6.9	6.9	8.5	10.5	11.7	12.3	11.5	10.0	9.8	8.3	5.8	2.6	3.8	4.2	6.5	0.0	12.3	5.4	
Jul 29	5.4	5.5	4.8	3.0	2.9	0.1	7.0	11.0	9.8	8.2	9.6	9.0	8.6	9.0	7.0	7.9	9.3	8.5	6.8	5.5	4.3	3.4	3.6	1.8	0.1	11.0	4.0	
Jul 30	3.4	1.6	2.1	1.9	4.1	2.2	2.9	2.3	1.5	3.2	3.8	5.4	6.7	8.4	8.7	7.9	8.2	7.7	7.7	5.7	4.1	3.7	2.7	0.5	0.5	8.7	3.4	
Jul 31	1.8	1.4	2.7	1.6	0.3	0.1	2.8	3.3	2.6	3.4	4.2	4.1	4.8	2.5	1.6	4.0	5.6	4.3	0.7	2.2	2.6	2.8	1.7	1.2	0.1	5.6	1.6	
Diurnal Maximum	9	8	10	10	10	8	10	12	14	15	15	15	16	17	17	16	18	15	14	11	11	10	10	8				
Diurnal Average	3.8	3.1	3.3	3.2	3.4	3.5	4.7	5.7	6.2	6.9	7.6	8.0	8.3	8.6	8.4	8.9	8.5	7.9	6.8	5.0	4.3	4.1	4.0	4.0				

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>N</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

*Timeseries Chart of Hourly Average for VWS - Tamarack Site*

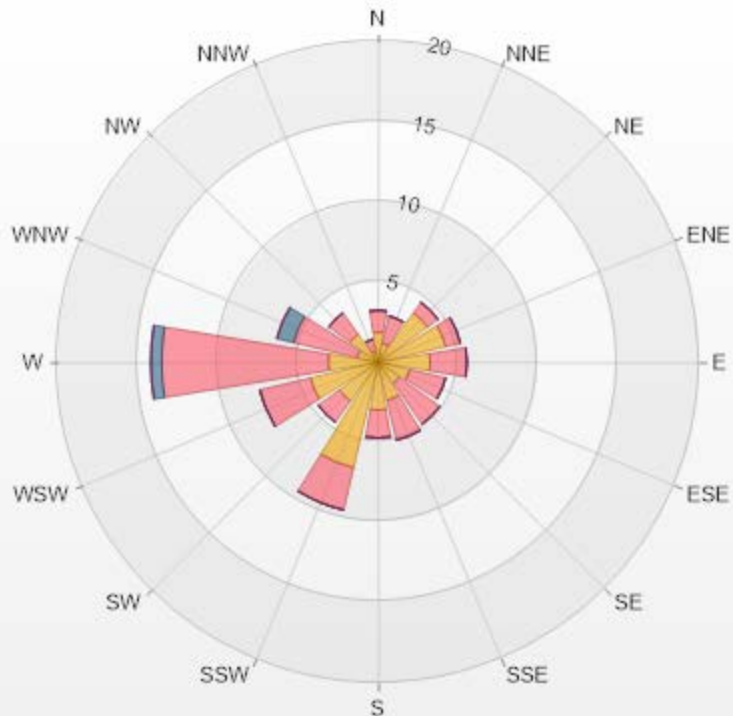


Wind: Tamarack Monitor: WDS [kph] Monthly: 07-2022 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.

Calm: 12.15% Valid Data: 99.60%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.89	1.35	0	0	0	3.24
NNE	1.21	1.75	0	0	0	2.96
NE	3.78	0.81	0	0	0	4.59
ENE	4.32	0.94	0	0	0	5.26
E	3.24	2.29	0	0	0	5.53
ESE	2.02	2.29	0	0	0	4.31
SE	1.62	3.1	0	0	0	4.72
SSE	2.43	2.56	0	0	0	4.99
S	2.97	1.75	0	0	0	4.72
SSW	6.75	2.7	0	0	0	9.45
SW	2.97	1.62	0	0	0	4.59
WSW	4.32	3.24	0	0	0	7.56
W	3.1	10.39	0.67	0	0	14.16
WNW	1.35	4.05	1.08	0	0	6.48
NW	2.16	1.62	0	0	0	3.78
NNW	0.67	0.81	0	0	0	1.48
Summary	44.8	41.27	1.75	0	0	87.82





LICA-202207

% Icon Classes (kph)	45	41	2	0	0
	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

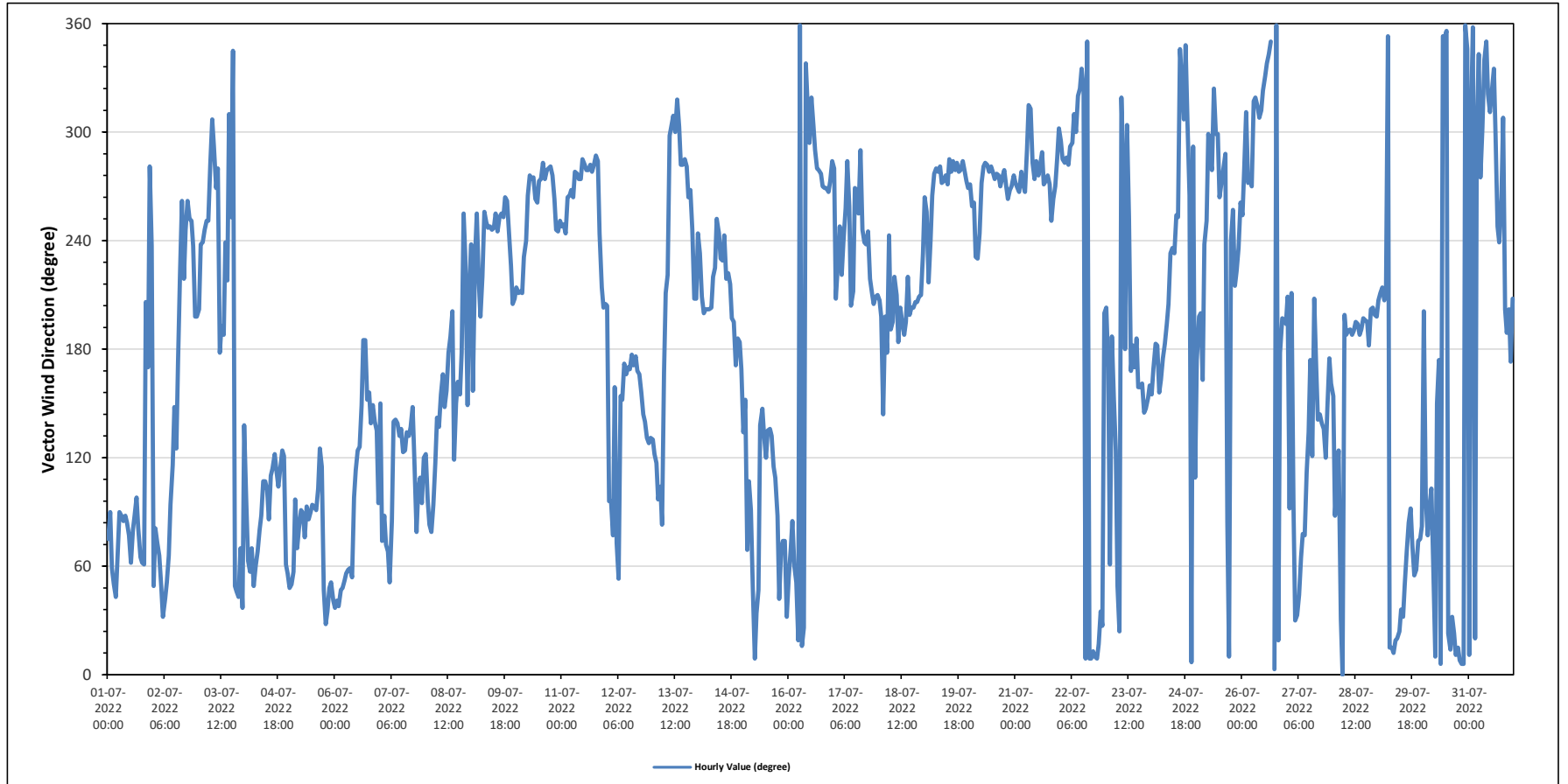
Tamarack Site - July 2022

Summary of Hourly Averages

### WIND DIRECTION (VWD) in sector

Monthly Average:		245 (WSW) degree														Hours in Service:		744																	
																Hours of Data:		743																	
																Hours of Missing Data:		0																	
																Hours of Calibration:		1																	
																Operational Uptime:		100.0																	
Day	Hourly Period Starting at (MST)																							Daily Average											
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant									
Jul 1	ENE	E	ENE	NE	NE	ENE	E	E	E	E	E	ENE	ENE	E	E	E	ENE	ENE	ENE	SSW	SSE	W	SW	76	ENE										
Jul 2	NE	E	ENE	ENE	NE	NNE	NE	NE	ENE	E	ESE	SE	SE	S	SW	W	SW	WSW	W	WSW	WSW	SW	SSW	SSW	201	SSW									
Jul 3	SSW	SW	WSW	WSW	WSW	WSW	W	NW	WNW	W	W	S	S	S	WSW	SW	NW	WSW	NNW	NE	NE	NE	ENE	NE	254	WSW									
Jul 4	SE	E	ENE	ENE	ENE	NE	ENE	ENE	E	E	ESE	ESE	E	E	ESE	ESE	ESE	ESE	ESE	ESE	ESE	ENE	NE	NE	99	E									
Jul 5	NE	NE	ENE	E	ENE	E	E	E	ENE	E	E	E	E	E	E	ESE	SE	ESE	NE	NNE	NE	NE	NE	NE	81	E									
Jul 6	NE	NE	NE	NE	NE	NE	NE	ENE	ENE	NE	E	ESE	ESE	SE	SSE	S	S	SSE	SSE	SE	SSE	SE	SE	E	104	ESE									
Jul 7	SSE	ENE	E	ENE	ENE	NE	E	SE	SE	SE	SE	ESE	ESE	SE	SE	SE	SE	ESE	ENE	E	ESE	E	ESE	124	ESE										
Jul 8	ESE	E	E	ENE	E	ESE	SE	SE	SSE	SSE	SE	SSE	S	S	SSW	ESE	SSE	SSE	S	WSW	SW	SSE	SSW	147	SE										
Jul 9	SW	SSE	SW	WSW	SW	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	WSW	SW	SSW	SSW	246	WSW									
Jul 10	SSW	SSW	SSW	SSW	SW	WSW	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	WSW	WSW	WSW	265	W									
Jul 11	WSW	WSW	WSW	W	W	W	W	W	W	W	W	W	WNW	W	W	W	W	W	WNW	WNW	WSW	SSW	SSW	SSW	272	W									
Jul 12	SSW	E	E	ENE	SSE	ENE	NE	SSE	SSE	S	SSE	SSE	SSE	S	S	S	SSE	SSE	SSE	SE	SE	SE	SE	SE	160	SSE									
Jul 13	SE	ESE	ESE	E	ESE	E	SSE	SSW	SW	WNW	WNW	NW	WNW	NW	WNW	W	W	WNW	W	W	WSW	SSW	SSW	SSW	269	W									
Jul 14	WSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SW	SW	WSW	WSW	SW	SW	WSW	SW	SW	SSW	SSW	S	S	S	SSE	220	SW										
Jul 15	SE	SSE	ENE	ESE	E	NE	N	NE	NE	SE	SE	ESE	SE	SE	ESE	ESE	E	NE	ENE	ENE	ENE	NNE	108	ESE											
Jul 16	NE	ENE	E	ENE	NE	NNE	N	NNE	NNE	NNW	NW	WNW	NW	WNW	W	W	W	W	W	W	W	W	W	W	304	WNW									
Jul 17	W	SSW	SW	WSW	SW	WSW	WSW	WNW	WSW	SSW	SSW	W	W	WSW	WNW	WSW	WSW	SW	WSW	SW	SSW	SSW	SSW	SSW	241	WSW									
Jul 18	SSW	SSW	SE	SSW	S	WSW	S	SSW	SW	SSW	S	SSW	SSW	S	SSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	202	SSW									
Jul 19	W	WSW	SW	WSW	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	276	W									
Jul 20	W	WSW	W	SW	SW	WSW	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	272	W									
Jul 21	W	W	W	W	W	W	WNW	NW	NW	W	W	WNW	W	W	WNW	W	W	W	W	WSW	W	W	WNW	WNW	279	W									
Jul 22	WNW	WNW	W	WNW	W	WNW	WNW	NW	WNW	NW	NW	NW	NNW	NW	N	N	N	NNE	N	NNE	NE	NNE	SSW	327	NW										
Jul 23	SSW	SSE	ENE	S	SSE	ESE	NE	NNE	NW	W	S	WNW	WSW	SSE	S	SSE	S	SSE	SSE	SSE	SE	SE	SSE	SSE	167	SSE									
Jul 24	SSE	SSE	S	S	SSE	SSE	S	S	SSW	SSW	SW	SW	WSW	WSW	NNW	NW	NW	NNW	WNW	W	N	WNW	ESE	224	SW										
Jul 25	S	SSW	SSW	SSE	SW	WSW	WNW	WNW	W	NW	WNW	WNW	W	W	WNW	E	N	WSW	WSW	SSW	SSW	SW	SW	W	270	W									
Jul 26	WSW	W	NW	W	W	W	NW	NW	NW	NW	NW	NNW	NNW	NNW	N	C	N	N	NNE	S	SSW	SSW	SSW	SSW	324	NW									
Jul 27	SSW	E	SSW	E	NNE	NNE	NE	ENE	ENE	ESE	SE	S	ESE	SSW	SSE	SE	SE	SE	SE	SE	ESE	SE	SSE	127	SE										
Jul 28	SSE	E	ESE	NNE	N	SSW	S	S	S	S	SSW	SSW	S	S	SSW	SSW	S	SSW	SSW	S	SSW	SSW	SSW	SSW	192	S									
Jul 29	SSW	SSW	SSW	SSW	SSW	N	NNE	NNE	NNE	NNE	NNE	NNE	NE	ENE	E	E	ENE	NE	ENE	ENE	ENE	ENE	E	47	NE										
Jul 30	SSW	E	ENE	E	ESE	ENE	N	SSE	S	N	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	NNW	20	NNE										
Jul 31	NNE	NW	N	NNE	WNW	NNW	W	WNW	NNW	N	NW	NW	NNW	WNW	WSW	WSW	W	NW	SSW	S	SSW	S	SSW	291	WNW										
C	Monthly Calibration														S	Daily Zero-Span Check														Q	Quality Assurance				
K	Collection Error														N	No Data (Machine Not in Service)														Y	Routine Maintenance		P	Power Failure	
X	Invalid Data (Machine Malfunction /Recovery)														NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																			
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																			
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																			

**Timeseries Chart of Hourly Average for VWD - Tamarack Site**





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED																											
Maximum Hourly Value: 17.6 kph on July 13 at hour 16													Hours in Service: 744														
Maximum Daily Value: 10.8 kph on July 20													Hours of Data: 743														
Minimum Hourly Value: 0.0 kph on July 1 at hour 23													Hours of Missing Data: 0														
Minimum Daily Value: 1.0 kph on July 2													Hours of Calibration: 1														
Monthly Average: 1.7 kph													Operational Uptime: 100														
WIND DIRECTION																											
Monthly Average: 245 (WSW, degree)																											
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	1.2	2.2	3.1	6.2	9.9	6.9	7.3	7.1	6.5	6.7	6.5	5.6	4.5	6.4	7.4	5.8	5.3	4.0	3.5	2.5	1.0	1.3	0.6	0.0	0.0	9.9	4.3
Jul 2	1.1	1.3	0.8	2.1	0.4	1.6	3.8	4.8	5.0	3.6	3.7	4.7	3.0	1.7	3.6	3.3	4.0	6.1	6.4	6.9	5.0	4.1	4.1	5.9	0.4	6.9	1.0
Jul 3	5.9	3.7	4.2	5.7	5.1	5.5	4.9	4.1	3.0	1.8	4.0	0.7	6.9	3.1	2.8	5.7	4.0	2.7	4.2	3.0	3.2	2.3	2.9	0.5	0.5	6.9	2.0
Jul 4	0.6	2.5	2.2	1.8	2.3	1.9	3.3	4.1	5.8	6.9	8.6	9.2	8.6	9.4	9.9	9.6	9.3	6.8	6.4	4.1	3.5	4.5	2.3	2.3	0.6	9.9	4.9
Jul 5	2.9	2.9	3.0	5.0	4.3	5.3	5.5	4.1	4.7	5.6	4.9	6.7	7.3	6.8	4.8	6.7	4.3	4.9	5.0	4.5	4.2	2.0	2.3	1.9	1.9	7.3	4.2
Jul 6	3.0	2.3	3.3	2.6	3.2	2.7	2.9	4.7	7.0	6.6	6.2	4.8	5.2	6.8	4.8	5.3	4.3	3.9	4.0	3.0	3.1	4.1	2.6	0.6	0.6	7.0	2.7
Jul 7	2.2	0.3	1.7	1.9	3.3	2.6	2.2	6.1	9.1	9.4	10.7	10.7	10.0	12.8	10.0	10.5	9.5	6.6	4.2	3.0	5.5	7.3	4.8	5.7	0.3	12.8	5.8
Jul 8	8.9	4.4	6.1	5.2	4.5	4.9	6.3	5.5	6.5	6.4	5.3	3.4	4.4	4.1	3.1	4.5	6.3	6.6	6.2	3.4	7.0	1.8	3.9	2.9	1.8	8.9	3.9
Jul 9	1.0	0.3	2.1	2.3	1.8	4.1	3.8	4.5	7.9	9.9	10.5	10.9	11.5	11.3	11.9	11.6	10.4	9.7	9.5	6.5	4.2	3.4	5.0	4.7	0.3	11.9	6.4
Jul 10	4.3	5.2	5.3	4.6	4.6	4.4	6.3	8.2	10.5	11.4	12.3	13.0	12.2	11.7	13.9	11.0	12.5	13.6	11.7	11.3	7.0	6.2	5.5	7.4	4.3	13.9	8.4
Jul 11	5.9	5.3	4.6	5.6	5.4	6.8	7.3	10.9	12.1	14.6	14.7	15.2	15.3	15.3	14.9	16.1	13.6	9.7	8.5	8.3	3.8	3.2	4.2	5.6	3.2	16.1	9.0
Jul 12	3.6	0.4	1.4	0.8	0.2	2.0	0.8	6.8	7.5	9.8	11.7	13.3	12.6	12.2	12.5	11.9	10.7	9.8	8.3	6.1	5.4	6.6	7.2	8.0	0.2	13.3	6.6
Jul 13	7.8	7.1	3.1	3.4	4.2	0.5	5.0	5.1	5.4	6.4	7.1	7.1	7.5	6.8	7.1	10.0	17.6	14.7	9.8	8.5	6.8	4.4	4.4	5.6	0.5	17.6	3.8
Jul 14	3.7	3.3	4.8	5.0	5.5	7.0	6.8	6.7	6.6	7.9	10.3	10.5	11.1	10.4	10.7	10.5	9.0	6.4	5.3	3.5	2.1	3.1	0.7	1.2	0.7	11.1	6.0
Jul 15	0.4	0.6	0.8	0.8	2.0	3.2	1.5	2.7	2.6	4.6	7.3	9.2	6.9	6.6	7.1	8.1	7.8	6.8	6.5	1.2	3.9	3.5	3.0	4.3	0.4	9.2	3.4
Jul 16	6.0	4.9	4.3	1.7	3.6	3.7	4.0	3.4	3.2	2.3	3.0	6.4	6.7	6.8	8.7	9.4	9.4	9.3	8.3	7.7	6.2	4.5	4.4	5.3	1.7	9.4	3.4
Jul 17	5.4	0.7	1.8	1.4	2.1	2.5	3.1	2.1	2.1	5.7	5.5	7.2	7.0	6.9	4.0	5.3	6.9	7.0	6.6	3.6	3.3	4.4	4.4	3.9	0.7	7.2	3.9
Jul 18	3.5	2.6	0.8	0.3	0.3	0.1	3.8	7.3	5.1	5.4	8.3	8.6	8.5	9.3	9.4	8.2	7.7	8.0	7.3	5.8	4.0	4.6	4.4	4.3	0.1	9.4	5.2
Jul 19	4.9	4.5	3.6	4.7	5.7	7.7	10.0	10.9	12.3	12.4	14.1	14.8	15.9	16.6	16.7	15.5	13.8	15.2	14.0	10.6	10.9	9.5	8.8	7.4	3.6	16.7	10.7
Jul 20	8.5	7.9	7.5	6.6	5.2	5.6	9.1	11.6	14.1	15.3	13.9	14.6	15.6	15.4	14.7	14.1	14.6	14.5	14.0	8.6	7.7	8.3	8.3	8.2	5.2	15.6	10.8



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Tamarack Site - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED		Maximum Hourly Value: 17.6 kph on July 13 at hour 16		Hours in Service: 744																							
		Maximum Daily Value: 10.8 kph on July 20		Hours of Data: 743																							
		Minimum Hourly Value: 0.0 kph on July 1 at hour 23		Hours of Missing Data: 0																							
		Minimum Daily Value: 1.0 kph on July 2		Hours of Calibration: 1																							
		Monthly Average: 1.7 kph		Operational Uptime: 100																							
WIND DIRECTION		Monthly Average: 245 (WSW degree)																									
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
Jul 21	7.3	5.6	6.1	7.1	6.3	5.7	6.8	4.3	4.1	6.1	7.2	10.0	11.3	12.9	12.3	10.9	11.8	9.6	6.7	3.5	6.3	7.7	9.8	7.8	3.5	12.9	7.6
	W	W	W	W	W	W	WNW	NW	NW	W	W	WNW	W	W	WNW	W	W	W	W	WSW	W	W	WNW	WNW			
Jul 22	7.9	7.1	10.0	9.7	10.0	7.8	10.0	7.3	8.9	6.9	7.2	6.3	6.3	10.7	7.3	9.7	7.7	8.2	6.6	6.0	4.5	5.0	2.3	0.7	0.7	10.7	5.7
	WNW	WNW	W	WNW	W	WNW	WNW	NW	WNW	NW	NW	NNW	NW	N	N	N	N	NNE	N	N	NNE	NE	NNE	SSW			
Jul 23	0.7	0.6	1.0	0.2	0.4	0.7	0.8	3.5	2.8	3.8	2.6	1.8	2.1	3.5	5.0	8.0	4.7	8.0	6.5	5.2	3.6	4.4	6.6	7.4	0.2	8.0	2.4
	SSW	SSE	ENE	S	SSE	ESE	NE	NNE	NW	W	S	WNW	WSW	SSE	S	SSE	S	SSE	SSE	SSE	SE	SE	SSE	SSE			
Jul 24	6.4	5.5	4.0	3.1	3.8	6.0	7.6	6.1	7.8	8.4	7.7	6.8	6.5	7.8	9.8	10.2	5.5	3.7	6.1	2.7	3.0	0.4	1.1	0.3	0.3	10.2	2.9
	SSE	SSE	S	S	SSE	SSE	S	S	SSW	SSW	SW	SW	SW	WSW	WSW	NNW	NW	NW	NNW	WNW	W	N	WNW	ESE			
Jul 25	0.7	2.4	2.3	0.6	1.7	3.1	2.7	2.5	2.0	3.0	2.8	4.0	4.3	5.6	6.4	7.4	2.7	4.8	1.7	1.5	2.1	3.9	4.7	4.9	0.6	7.4	2.3
	S	SSW	SSW	SSE	SW	WSW	WNW	WNW	W	NW	WNW	WNW	W	W	W	WNW	E	N	WSW	WSW	SSW	SW	SW	W			
Jul 26	3.0	1.5	2.8	2.2	2.2	2.5	2.2	3.6	4.7	6.8	8.1	7.9	9.5	9.5	10.1	8.9	C	7.3	5.5	2.4	2.1	2.9	1.2	0.5	0.5	10.1	3.7
	WSW	W	NW	W	W	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	N	C	N	N	NNE	S	SSW	SSW	SSW	SSW			
Jul 27	0.0	0.8	0.7	0.8	0.5	1.2	3.7	6.5	6.0	6.0	6.5	6.6	6.0	3.4	2.8	5.6	7.5	7.3	4.6	2.6	0.4	0.6	2.5	5.2	0.0	7.5	2.7
	SSW	E	SSW	E	NNE	NNE	NE	ENE	ENE	ENE	ESE	SE	S	ESE	SSW	SSE	SE	SE	SE	SE	ESE	SE	S	SSE			
Jul 28	0.9	0.3	0.3	0.1	0.0	0.0	0.5	4.2	5.5	6.9	6.9	8.5	10.5	11.7	12.3	11.5	10.0	9.8	8.3	5.8	2.6	3.8	4.2	6.5	0.0	12.3	5.4
	SSE	E	ESE	ESE	NNE	N	SSW	S	S	S	S	S	SSW	SSW	S	S	SSW	SSW	SSW	S	SSW	SSW	SSW	SSW			
Jul 29	5.4	5.5	4.8	3.0	2.9	0.1	7.0	11.0	9.8	8.2	9.6	9.0	7.0	7.9	9.3	8.5	6.8	5.5	4.3	3.4	3.6	1.8			0.1	11.0	4.0
	SSW	SSW	SSW	SSW	SSW	N	NNE	NNE	NNE	NNE	NNE	NE	NNE	NE	ENE	E	E	ENE	NE	ENE	ENE	ENE	ENE	E			
Jul 30	3.4	1.6	2.1	1.9	4.1	2.2	2.9	2.3	1.5	3.2	3.8	5.4	6.7	8.4	8.7	7.9	8.2	7.7	7.7	5.7	4.1	3.7	2.7	0.5	0.5	8.7	3.4
	SSW	E	ENE	E	ESE	ENE	N	SSE	S	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	N	N	NNW	NNW			
Jul 31	1.8	1.4	2.7	1.6	0.3	0.1	2.8	3.3	2.6	3.4	4.2	4.1	4.8	2.5	1.6	4.0	5.6	4.3	0.7	2.2	2.6	2.8	1.7	1.2	0.1	5.6	1.6
	NNE	NW	N	NNE	WNW	NNW	W	WNW	NNW	N	NW	NW	NW	NNW	NNW	WSW	WSW	W	NW	SSW	S	SSW	S	SSW			
C	Monthly Calibration							S	Daily Zero-Span Check							Q	Quality Assurance										
K	Collection Error							N	No Data (Machine Not in Service)							Y	Routine Maintenance							P	Power Failure		
X	Invalid Data (Equipment Malfunction/Recovery)							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																		

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

*Tamarack Site - July 2022*

### Summary of Hour Standard Deviations

#### STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

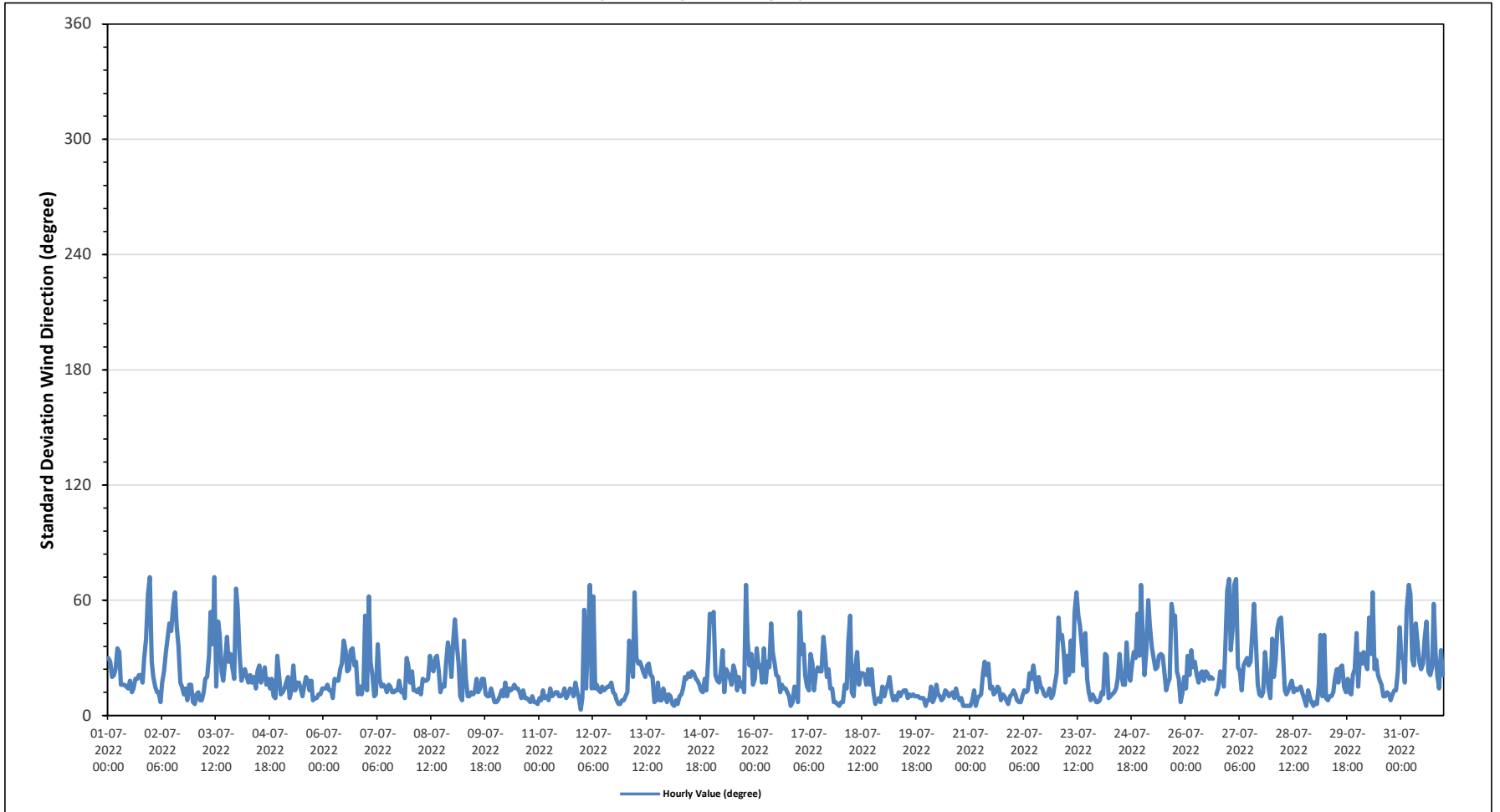
Maximum Hourly Value: 72 degree on July 1 at hour 23	Hours in Service: 744
Minimum Hourly Value: 3 degree on July 11 at hour 23	Hours of Data: 743
	Hours of Missing Data: 0
	Hours of Calibration: 1
	Operational Uptime: 100.0

Day	Hourly Period Starting at (MST)																							Daily	Daily	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Minimum	Maximum
Jul 1	30	28	20	21	24	35	33	16	16	15	14	18	12	14	19	19	21	21	17	30	40	63	72	12	72	
Jul 2	28	20	15	12	12	7	17	23	33	40	48	44	57	64	47	36	17	15	11	14	8	16	16	7	7	64
Jul 3	6	11	12	8	8	12	19	20	31	54	37	72	15	49	42	23	18	28	41	28	32	25	19	66	6	72
Jul 4	56	32	18	21	24	20	17	21	17	20	14	23	26	17	21	25	16	19	14	19	10	9	31	20	9	56
Jul 5	11	12	14	17	20	9	13	26	13	17	17	14	10	15	20	18	13	18	8	9	9	11	11	14	8	26
Jul 6	14	14	16	13	13	9	19	18	18	24	27	39	34	23	24	34	35	26	28	11	15	11	17	52	9	52
Jul 7	13	62	28	21	10	11	37	19	15	16	15	12	16	15	12	13	13	18	12	13	9	30	26	9	62	
Jul 8	17	23	13	13	12	14	11	19	18	18	19	31	25	23	30	31	23	12	16	15	27	38	33	20	11	38
Jul 9	39	50	37	27	10	8	39	19	10	10	12	11	12	19	12	14	19	19	11	10	10	14	11	7	7	50
Jul 10	7	8	10	13	10	17	10	14	13	14	16	14	14	12	9	13	9	9	8	7	10	7	7	6	6	17
Jul 11	9	8	13	9	10	8	14	10	11	12	10	10	11	14	9	11	14	13	10	17	12	9	3	3	3	17
Jul 12	9	55	14	37	68	14	62	14	16	13	12	15	13	14	15	17	12	11	8	6	6	8	8	6	6	68
Jul 13	10	12	39	28	20	64	30	27	28	25	22	20	26	27	21	20	7	8	17	8	8	14	10	7	7	64
Jul 14	11	10	6	5	8	6	10	11	14	20	19	22	20	23	22	19	18	16	13	12	19	13	30	53	5	53
Jul 15	49	54	21	18	17	23	34	12	24	22	20	16	26	23	13	20	15	17	12	68	39	26	32	16	12	68
Jul 16	19	35	25	26	17	35	17	28	25	48	33	27	21	20	12	16	14	14	12	10	5	7	15	13	5	48
Jul 17	7	54	32	37	21	15	13	32	27	13	22	25	23	23	41	33	20	24	14	14	7	7	6	5	5	54
Jul 18	7	7	16	14	38	52	12	10	26	33	16	22	22	21	16	24	16	24	12	6	8	9	7	15	6	52
Jul 19	10	14	16	20	12	8	10	8	12	10	12	13	13	9	11	10	11	10	10	10	9	9	9	5	5	20
Jul 20	8	8	15	7	9	16	11	10	8	9	13	12	10	11	12	9	14	10	8	9	5	5	5	5	5	16
Jul 21	5	8	13	5	9	10	11	22	28	21	27	14	15	11	12	15	14	8	11	10	8	6	10	11	5	28
Jul 22	13	11	8	7	7	10	13	12	13	22	19	26	18	12	20	15	14	11	10	11	14	9	11	16	7	26
Jul 23	22	51	40	42	32	17	31	21	39	23	54	64	52	47	36	26	43	19	12	8	11	9	7	7	7	64
Jul 24	8	12	11	32	31	9	10	11	12	14	19	32	22	16	16	38	22	18	26	33	30	53	31	68	8	68
Jul 25	39	21	34	60	47	36	30	24	25	31	32	31	23	13	17	19	58	52	52	23	19	7	12	20	7	60
Jul 26	14	31	21	34	25	28	21	17	22	23	18	23	22	19	20	19	C	11	14	23	22	15	36	65	11	65
Jul 27	71	34	45	68	71	25	23	13	26	28	30	26	28	44	58	38	16	11	10	12	33	22	14	9	9	71
Jul 28	40	20	29	45	50	51	33	13	11	13	16	18	12	14	13	14	15	11	8	5	13	9	7	5	5	51
Jul 29	7	6	16	42	10	42	9	8	10	10	12	19	24	17	25	26	15	12	19	12	11	21	24	43	6	43
Jul 30	15	32	27	33	27	24	51	32	64	24	29	21	18	16	10	10	12	11	8	11	13	13	23	46	8	64
Jul 31	30	30	17	55	68	63	29	26	48	37	28	24	27	40	49	23	21	25	58	32	20	14	34	21	14	68
Diurnal Minimum	5	6	6	5	7	6	9	8	8	9	12	10	10	9	9	9	7	8	8	5	5	5	5	3		
Diurnal Maximum	71	62	45	68	71	64	62	32	64	54	54	72	57	64	58	38	58	52	58	68	39	53	63	72		

<b>C</b> Monthly Calibration	<b>S</b> Daily Zero-Span Check	<b>Q</b> Quality Assurance
<b>K</b> Collection Error	<b>N</b> No Data (Machine Not in Service)	<b>Y</b> Routine Maintenance
<b>X</b> InValid Data (Machine Malfunction /Recovery)	<b>NRM</b> UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b> Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

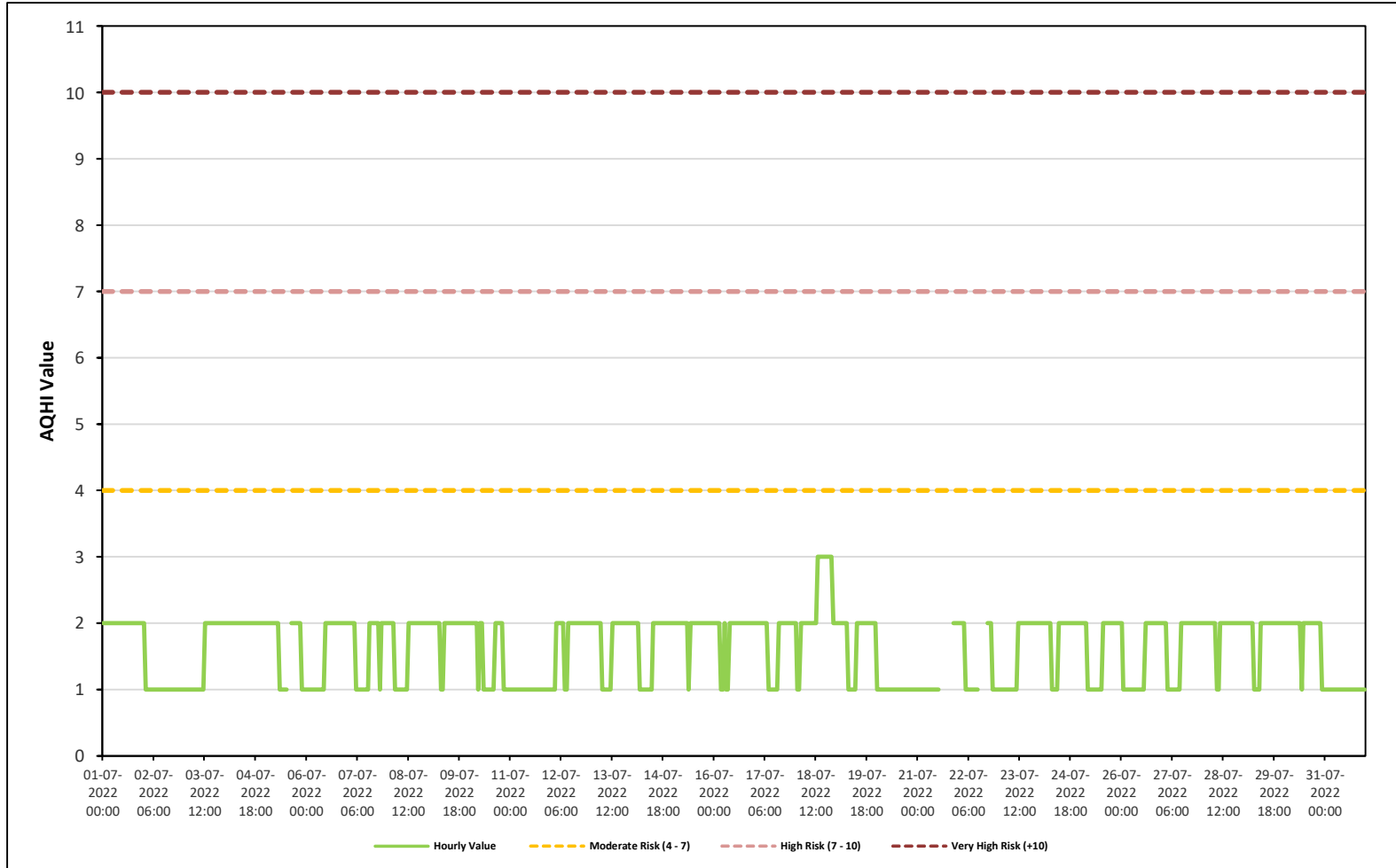
**Timeseries Chart of Hourly Average for STDWD - Tamarack Site**



**ST. LINA STATION**



**Timeseries Chart of Hourly Average for AQHI - St. Lina Site**





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

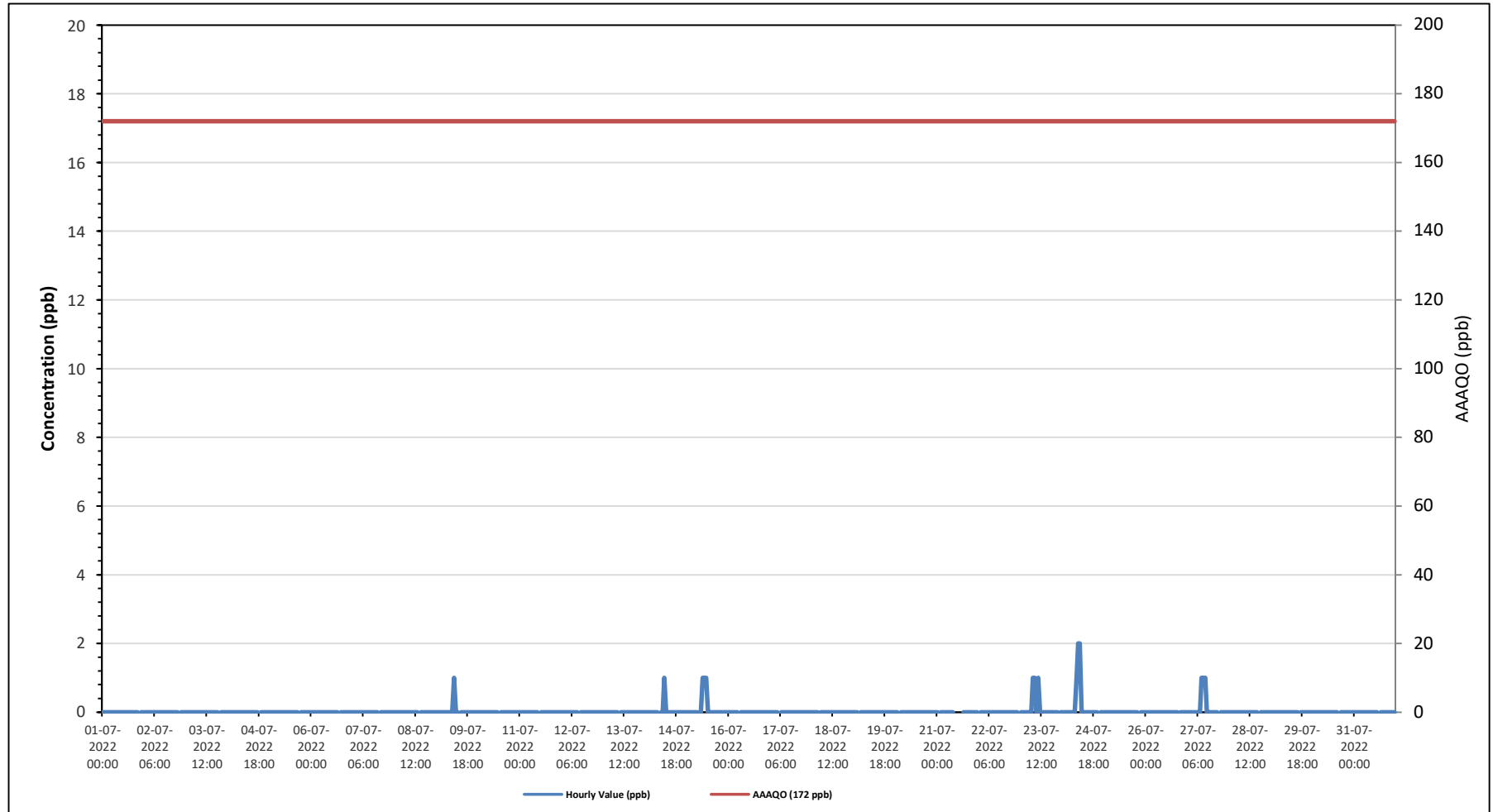
**St. Lina Site - July 2022**

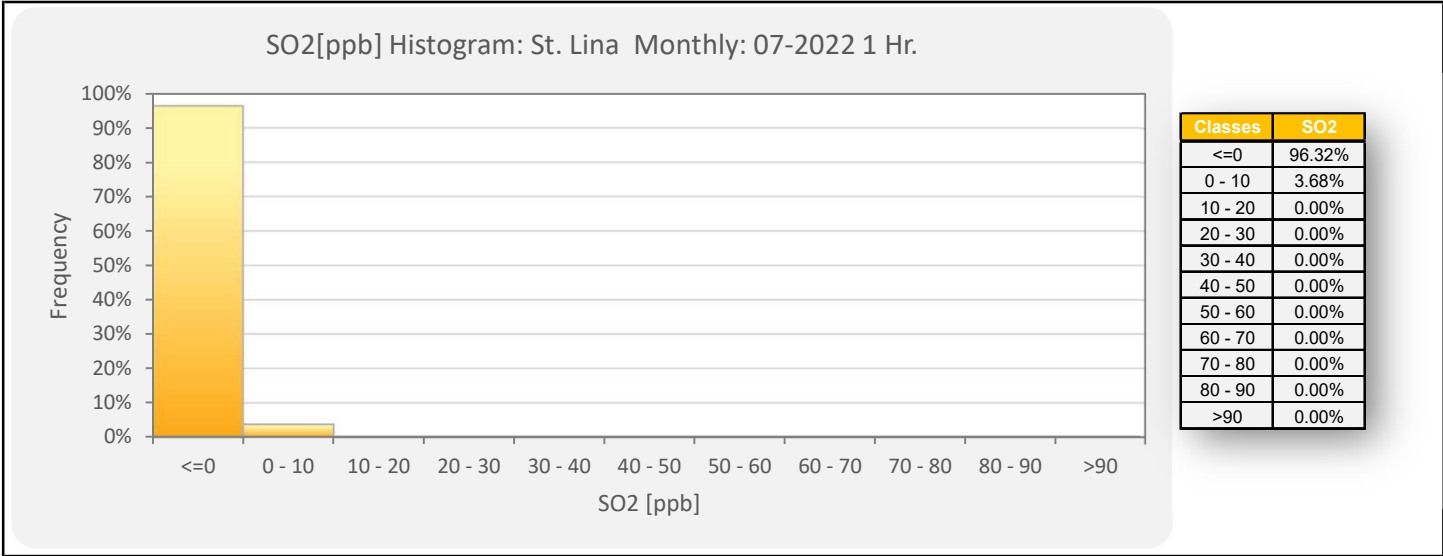
**Summary of Hourly Averages**

**SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb**

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																	
Number of 1-Hour Exceedances: 0						Number of 24-Hour Exceedances: 0						30-Day Exceedence: 0																					
Maximum Hourly Value: 2 ppb on July 24 at hour 9												Hours in Service: 744																					
Maximum Daily Value: 0.2 ppb on July 24												Hours of Data: 707																					
Minimum Hourly Value: 0 ppb on July 1 at hour 0												Hours of Missing Data: 0																					
Minimum Daily Value: 0.0 ppb on July 1												Hours of Calibration: 37																					
Monthly Average: 0.0 ppb												Operational Uptime: 100.0																					
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23									
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0					
Jul 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0					
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0					
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0					
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 9	0	0	0	0	0	0	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0					
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 11	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 12	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 13	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 14	0	0	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0					
Jul 15	0	0	0	0	0	0	S	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1					
Jul 16	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 17	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 18	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 19	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 20	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 21	0	S	0	0	0	0	0	0	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Jul 22	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0.0					
Jul 23	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	1	0.1					
Jul 24	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	S	0	0	2	0.2						
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0					
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0					
Jul 27	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.1					
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0					
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0					
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0					
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0					
Diurnal Maximum	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
C	Monthly Calibration												S	Daily Zero-Span Check						Q	Quality Assurance												
K	Collection Error												N	No Data (Machine Not in Service)						Y	Routine Maintenance						P	Power Failure					
X	InValid Data (Equipment Malfunction /Recovery)												NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																			
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																	
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																	

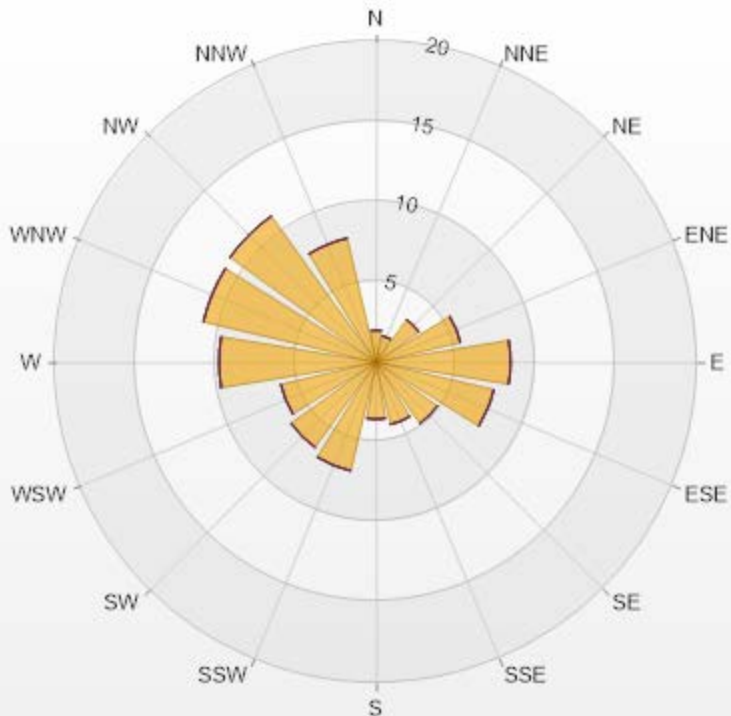
**Timeseries Chart of Hourly Average for SO2 - St. Lina Site**





Wind: St. Lina Poll.: St. Lina-SO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	1.99	0	0	0	0	1.99
NNE	1.7	0	0	0	0	1.7
NE	3.26	0	0	0	0	3.26
ENE	5.39	0	0	0	0	5.39
E	8.37	0	0	0	0	8.37
ESE	7.52	0	0	0	0	7.52
SE	4.68	0	0	0	0	4.68
SSE	3.97	0	0	0	0	3.97
S	3.55	0	0	0	0	3.55
SSW	6.95	0	0	0	0	6.95
SW	6.52	0	0	0	0	6.52
WSW	6.1	0	0	0	0	6.1
W	9.79	0	0	0	0	9.79
WNW	11.06	0	0	0	0	11.06
NW	11.21	0	0	0	0	11.21
NNW	7.94	0	0	0	0	7.94
Summary	100	0	0	0	0	100



LICA-202207

% Icon Classes (ppb)

100 0-10

0 10-50

0 50-100

0 100-172

0 >172.0



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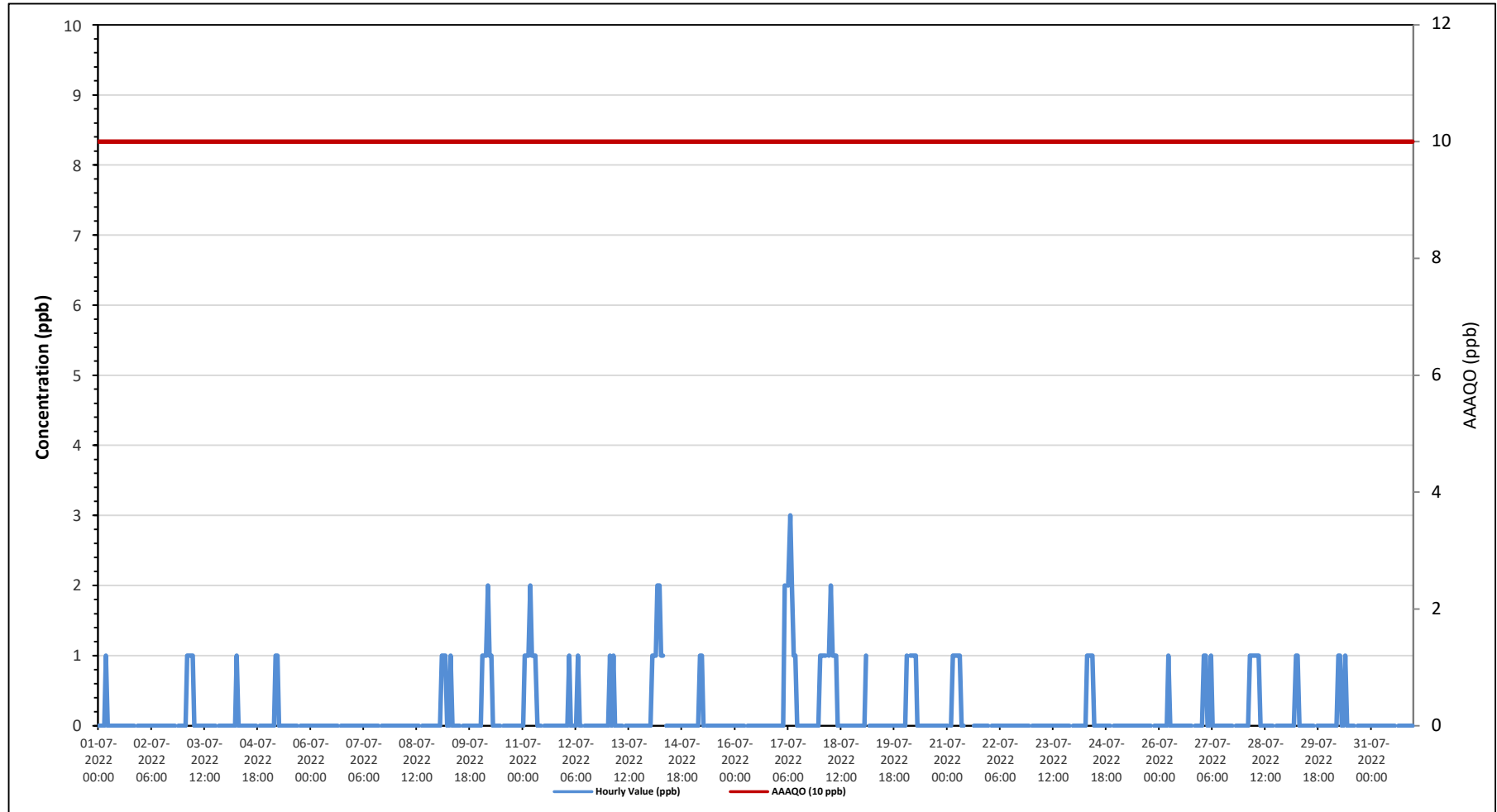
St. Lina Site - July 2022

Summary of Hourly Averages

HYDROGEN SULPHIDE (H<sub>2</sub>S) in ppb

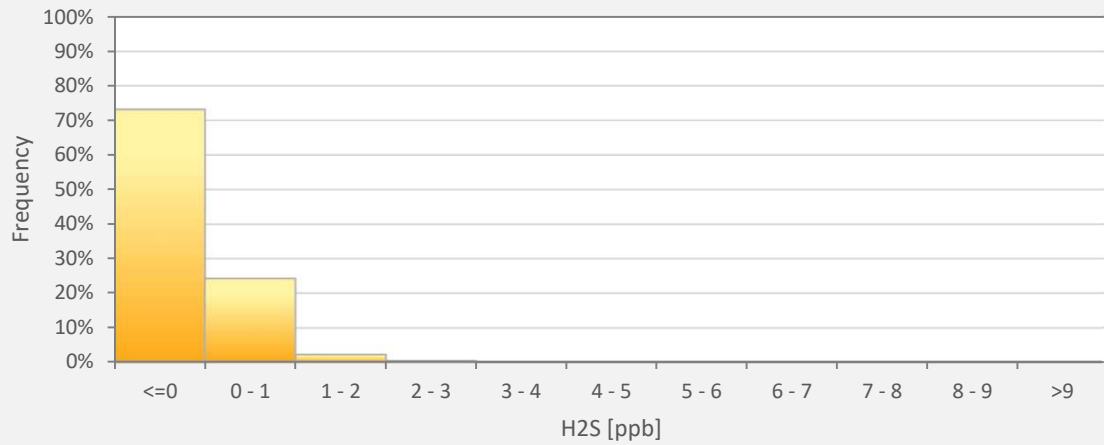
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 10 ppb, 24-Hour 3 ppb																															
Number of 1-Hour Exceedances: 0												Number of 24-Hour Exceedances: 0																			
Maximum Hourly Value: 3 ppb on July 17 at hour 7												Hours in Service: 744																			
Maximum Daily Value: 0.5 ppb on July 17												Hours of Data: 707																			
Minimum Hourly Value: 0 ppb on July 1 at hour 0												Hours of Missing Data: 0																			
Minimum Daily Value: 0.0 ppb on July 2												Hours of Calibration: 37																			
Monthly Average: 0.1 ppb												Operational Uptime: 100.0																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	1	0.0				
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0				
Jul 3	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	1	0.2				
Jul 4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0				
Jul 5	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1				
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0				
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0				
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
Jul 9	0	0	1	1	1	0	0	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2				
Jul 10	0	1	1	1	2	1	1	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3				
Jul 11	0	1	1	1	2	1	1	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3				
Jul 12	0	0	1	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1				
Jul 13	0	1	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1				
Jul 14	0	1	1	1	2	2	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4				
Jul 15	0	0	0	0	1	1	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1				
Jul 16	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
Jul 17	0	0	0	0	2	S	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.5				
Jul 18	1	1	1	1	S	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.4				
Jul 19	0	0	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0				
Jul 20	0	1	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2				
Jul 21	0	S	0	0	1	1	1	1	0	0	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0	1	0.3				
Jul 22	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
Jul 24	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2				
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0				
Jul 26	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	1	0.0				
Jul 27	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.1				
Jul 28	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	1	0.3				
Jul 29	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	1	0.1				
Jul 30	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	1	0.1				
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0				
Diurnal Maximum	1	1	1	1	2	2	2	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Diurnal Average	0.0	0.2	0.3	0.3	0.5	0.5	0.4	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
C	Monthly Calibration							S	Daily Zero-Span Check							Q	Quality Assurance														
K	Collection Error							N	No Data (Machine Not in Service)							Y	Routine Maintenance							P	Power Failure						
X	Invalid Data (Equipment Malfunction /Recovery)							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																						
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																															

Timeseries Chart of Hourly Average for H2S - St. Lina Site





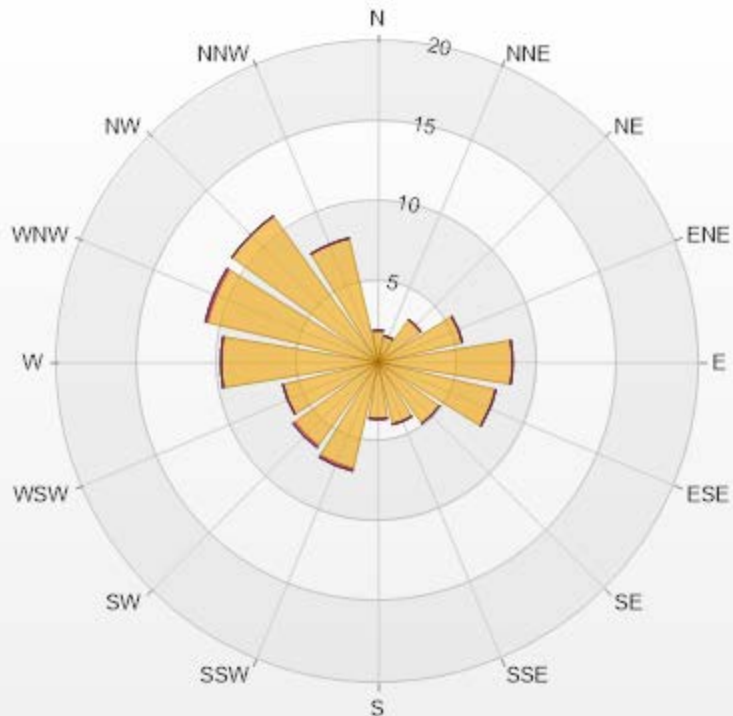
H2S[ppb] Histogram: St. Lina Monthly: 07-2022 1 Hr.



Classes	H2S
<=0	73.13%
0 - 1	24.19%
1 - 2	2.26%
2 - 3	0.42%
3 - 4	0.00%
4 - 5	0.00%
5 - 6	0.00%
6 - 7	0.00%
7 - 8	0.00%
8 - 9	0.00%
>9	0.00%

Wind: St. Lina Poll.: St. Lina-H2S[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	1.99	0	0	0	0	1.99
NNE	1.7	0	0	0	0	1.7
NE	3.26	0	0	0	0	3.26
ENE	5.39	0	0	0	0	5.39
E	8.37	0	0	0	0	8.37
ESE	7.52	0	0	0	0	7.52
SE	4.68	0	0	0	0	4.68
SSE	3.97	0	0	0	0	3.97
S	3.55	0	0	0	0	3.55
SSW	6.81	0.14	0	0	0	6.95
SW	6.38	0.14	0	0	0	6.52
WSW	6.1	0	0	0	0	6.1
W	9.79	0	0	0	0	9.79
WNW	10.92	0.14	0	0	0	11.06
NW	11.21	0	0	0	0	11.21
NNW	7.94	0	0	0	0	7.94
Summary	100	0.42	0	0	0	100



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% Icon Classes (ppb)

100 0-2

0 2-5

0 5-10

0 10-50

0 >50.0



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**St. Lina Site - July 2022**

**Summary of Hourly Averages**

**OXIDES OF NITROGEN (NOx) in ppb**

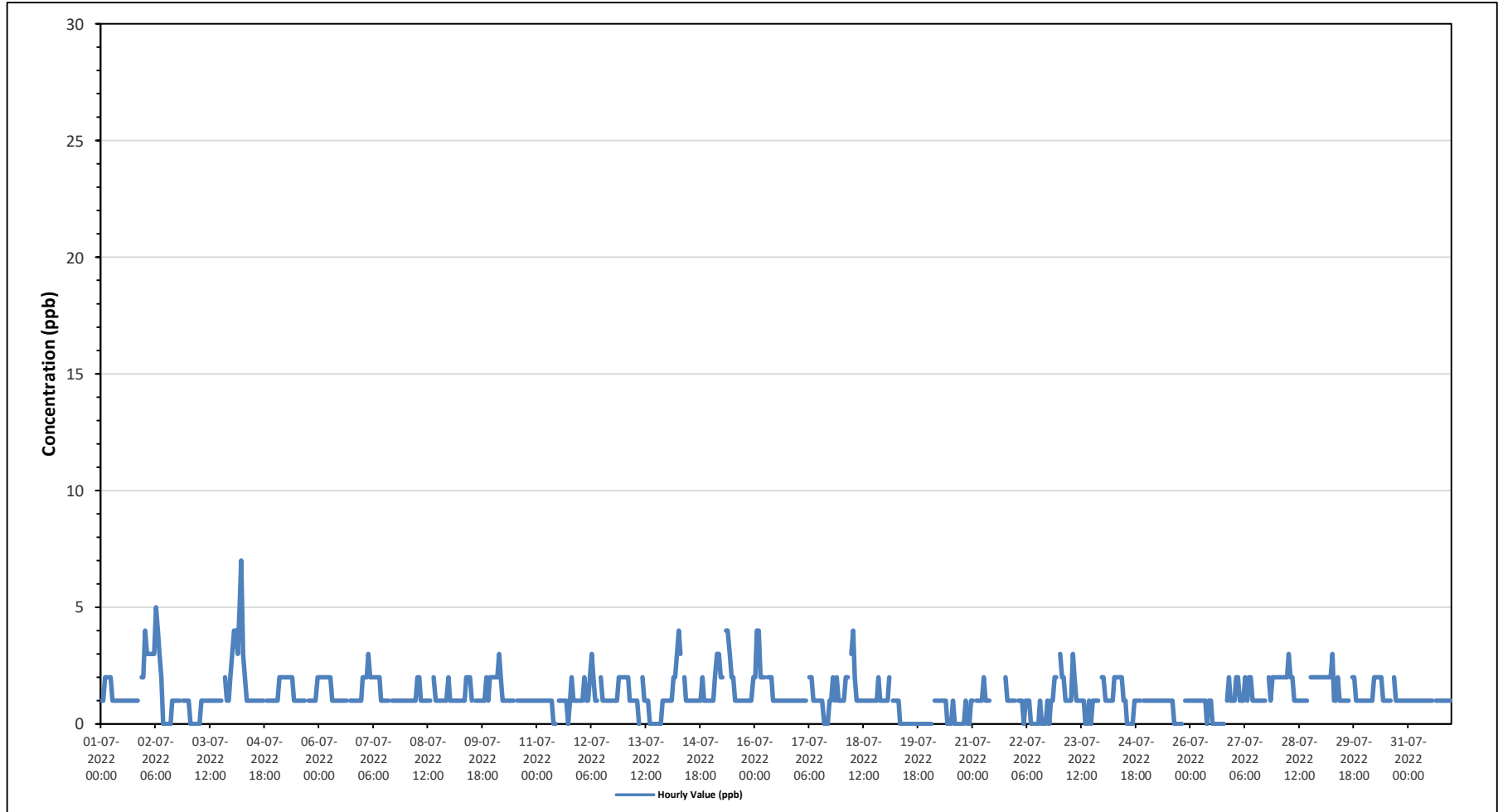
Maximum Hourly Value:	7 ppb on July 4 at hour 5	Hours in Service:	744
Maximum Daily Value:	2.0 ppb on July 4	Hours of Data:	704
Minimum Hourly Value:	0 ppb on July 2 at hour 10	Hours of Missing Data:	0
Minimum Daily Value:	0.3 ppb on July 19	Hours of Calibration:	40
Monthly Average:	1.2 ppb	Operational Uptime:	100.0

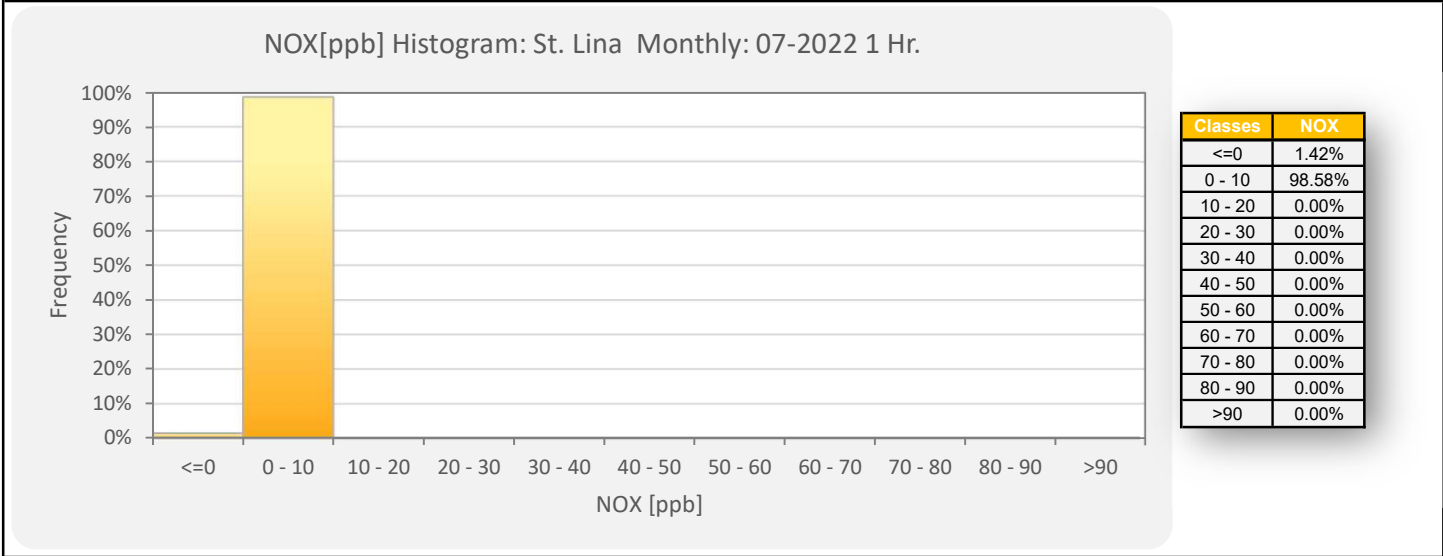
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	2	1.3	
Jul 2	4	3	3	3	3	3	5	4	3	2	0	0	0	0	0	1	1	1	1	1	1	S	1	1	1	0	5	1.8
Jul 3	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1	1	2	0	2	0.8
Jul 4	3	4	4	3	5	7	3	2	1	1	1	1	1	1	1	1	1	1	S	S	1	1	1	1	1	1	7	2.0
Jul 5	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	S	S	1	1	1	1	1	2	1	2	1.4
Jul 6	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	S	S	1	1	1	1	1	1	1	1	2	1.3
Jul 7	2	2	2	3	2	2	2	2	2	2	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	3	1.5
Jul 8	1	1	1	1	1	1	2	2	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	2	1	2	1.2	
Jul 9	1	1	1	1	1	1	1	1	1	2	2	2	1	S	1	1	1	1	1	1	1	2	1	2	2	1	2	1.3
Jul 10	2	2	2	3	2	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	3	1.3
Jul 11	1	1	1	1	1	1	1	1	1	0	0	S	1	1	1	1	1	0	1	2	1	1	1	1	0	2	0.9	
Jul 12	1	1	2	1	1	2	3	2	1	1	S	2	1	1	1	1	1	1	1	1	1	2	2	2	2	1	3	1.4
Jul 13	2	2	2	1	1	1	1	1	0	S	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	0.8
Jul 14	1	1	1	2	2	3	4	3	S	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	4	1.5
Jul 15	1	1	2	3	3	2	2	S	4	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	4	1.8
Jul 16	2	4	4	2	2	2	S	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.6
Jul 17	1	1	1	1	1	S	2	2	1	1	1	1	1	1	0	0	0	1	1	2	1	2	1	1	1	0	2	1.0
Jul 18	1	1	2	2	S	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	4	1.4
Jul 19	1	1	2	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3
Jul 20	0	0	S	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	1	0.4
Jul 21	1	S	1	1	1	1	2	1	1	1	C	C	C	C	C	C	C	C	2	1	1	1	1	1	1	1	2	-
Jul 22	S	1	1	1	1	0	1	1	1	0	0	0	0	1	0	0	0	1	0	1	1	1	2	2	S	0	2	0.6
Jul 23	3	2	2	1	1	1	1	3	2	1	1	1	1	1	0	0	1	0	1	1	1	1	1	S	2	0	3	1.2
Jul 24	2	1	1	1	1	1	2	2	2	2	2	1	1	0	0	0	1	1	1	0	1	1	S	1	1	0	2	1.1
Jul 25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	S	1	1	1	1	0	1	0.8
Jul 26	1	1	1	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	S	1	2	1	1	1	0	2	0.7
Jul 27	1	2	2	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	S	S	2	1	2	2	2	1	2	1.4
Jul 28	2	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	S	2	2	2	2	2	2	2	1	3	1.7
Jul 29	2	2	2	2	2	3	1	1	2	1	1	1	1	1	1	1	S	2	2	1	1	1	1	1	1	1	3	1.5
Jul 30	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	2	1.3
Jul 31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	1.0
Diurnal Maximum	4	4	4	3	5	7	5	4	4	4	3	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
Diurnal Average	1.5	1.5	1.7	1.6	1.5	1.7	1.9	1.6	1.3	1.3	1.0	1.0	0.9	0.9	0.7	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.3		

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

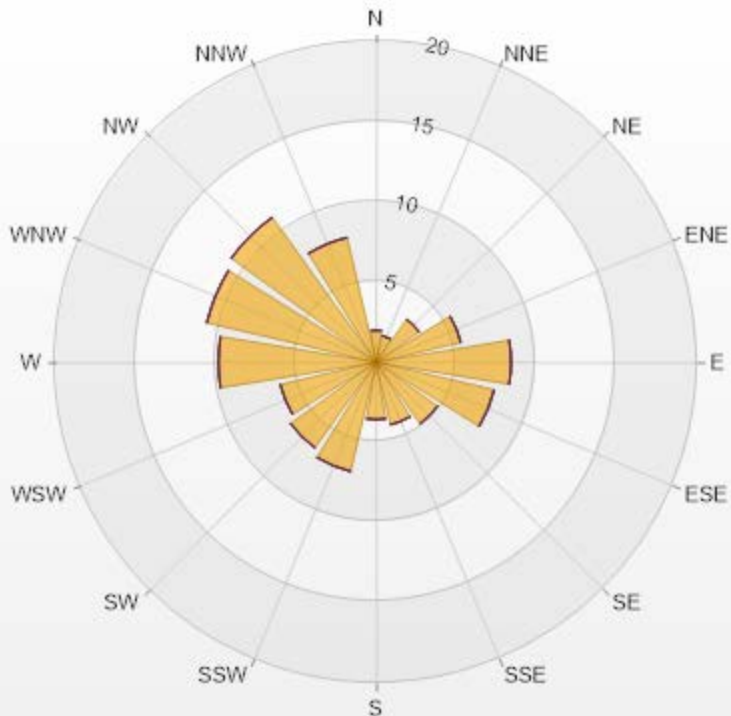
**Timeseries Chart of Hourly Average for NOx - St. Lina Site**





Wind: St. Lina Poll.: St. Lina-NOX[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.99	0	0	0	0	1.99
NNE	1.71	0	0	0	0	1.71
NE	3.28	0	0	0	0	3.28
ENE	5.41	0	0	0	0	5.41
E	8.4	0	0	0	0	8.4
ESE	7.55	0	0	0	0	7.55
SE	4.7	0	0	0	0	4.7
SSE	3.99	0	0	0	0	3.99
S	3.56	0	0	0	0	3.56
SSW	6.98	0	0	0	0	6.98
SW	6.55	0	0	0	0	6.55
WSW	6.13	0	0	0	0	6.13
W	9.83	0	0	0	0	9.83
WNW	10.83	0	0	0	0	10.83
NW	11.11	0	0	0	0	11.11
NNW	7.98	0	0	0	0	7.98
Summary	100	0	0	0	0	100




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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

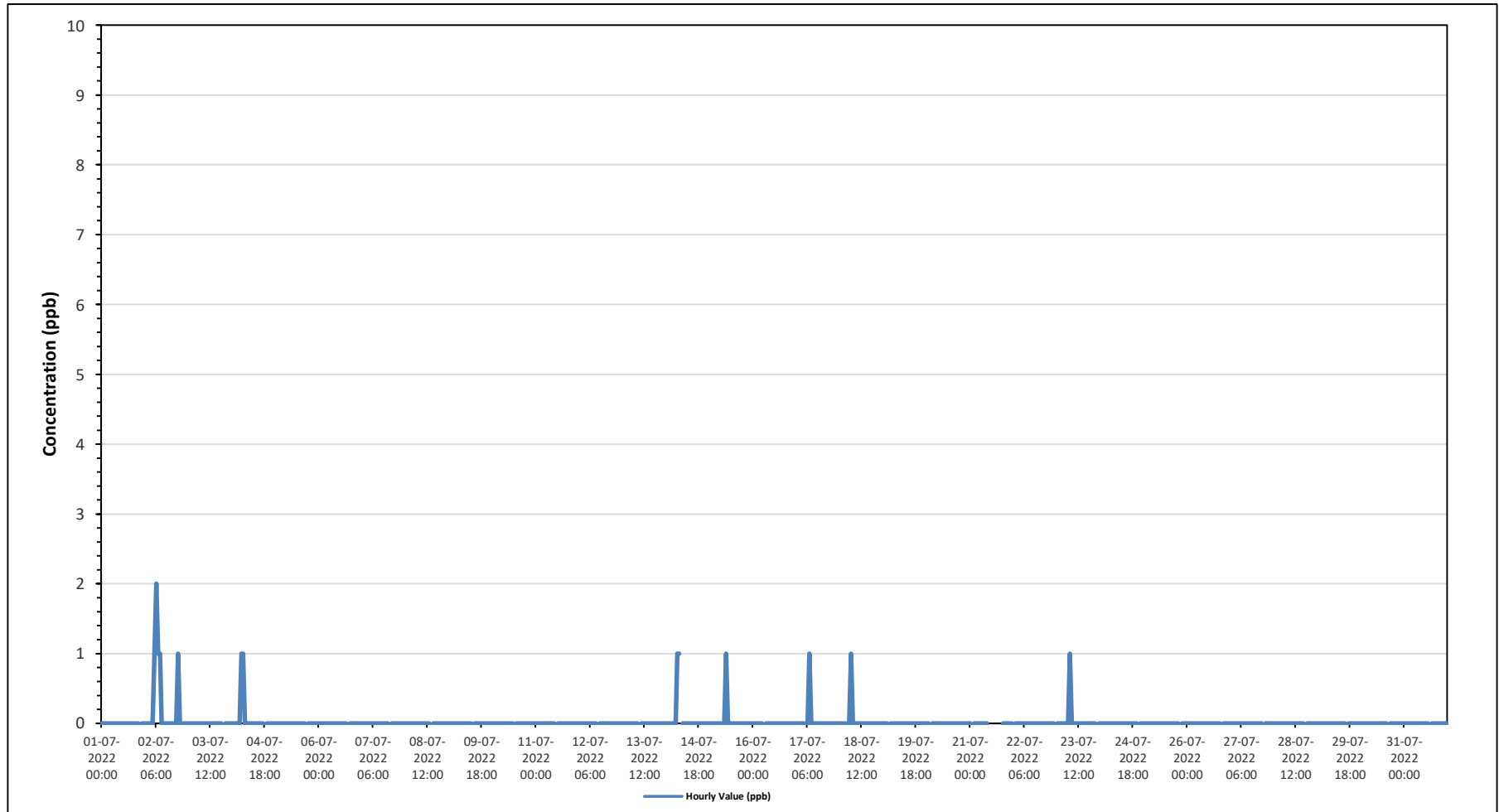
0  76-159

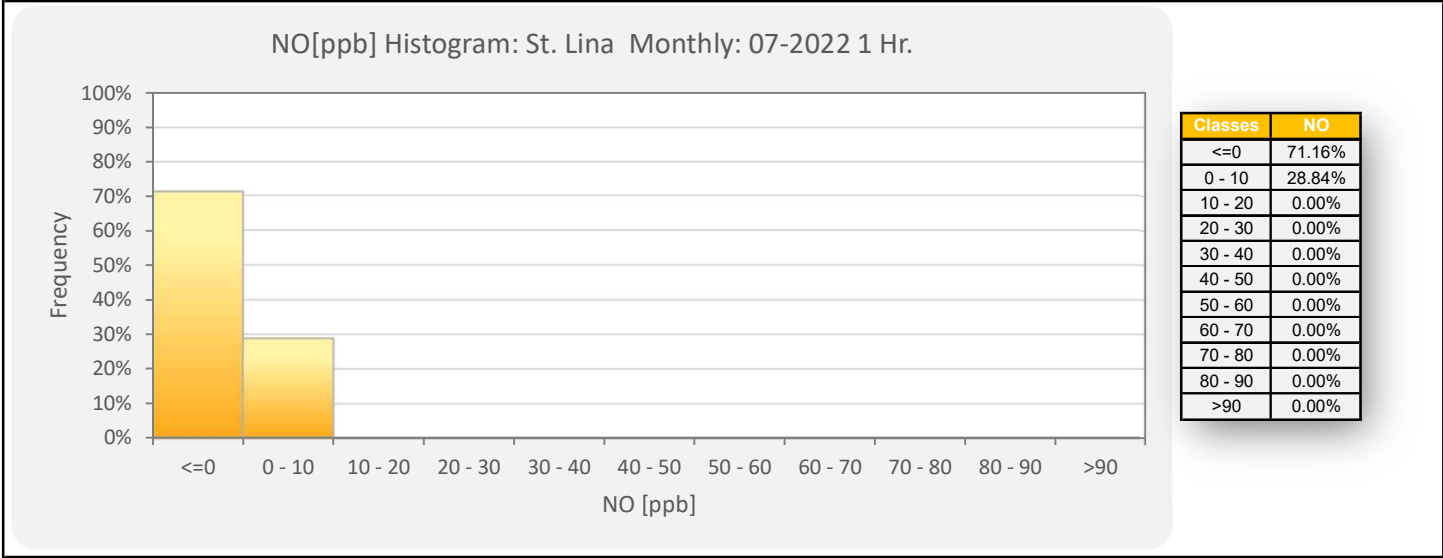
0  >159.0





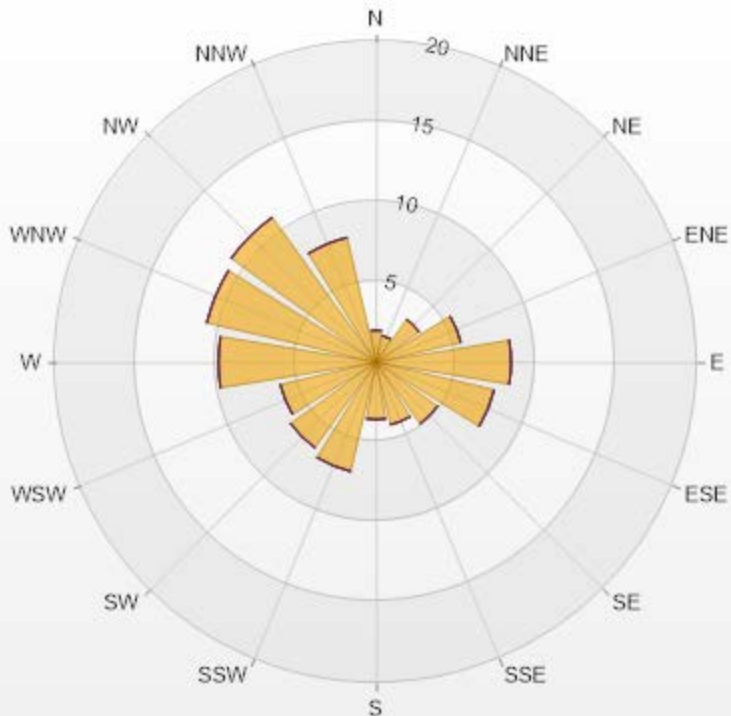
Timeseries Chart of Hourly Average for NO - St. Lina Site





Wind: St. Lina Poll.: St. Lina-NO[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.99	0	0	0	0	1.99
NNE	1.71	0	0	0	0	1.71
NE	3.28	0	0	0	0	3.28
ENE	5.41	0	0	0	0	5.41
E	8.4	0	0	0	0	8.4
ESE	7.55	0	0	0	0	7.55
SE	4.7	0	0	0	0	4.7
SSE	3.99	0	0	0	0	3.99
S	3.56	0	0	0	0	3.56
SSW	6.98	0	0	0	0	6.98
SW	6.55	0	0	0	0	6.55
WSW	6.13	0	0	0	0	6.13
W	9.83	0	0	0	0	9.83
WNW	10.83	0	0	0	0	10.83
NW	11.11	0	0	0	0	11.11
NNW	7.98	0	0	0	0	7.98
Summary	100	0	0	0	0	100




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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

0  76-159

0  >159.0



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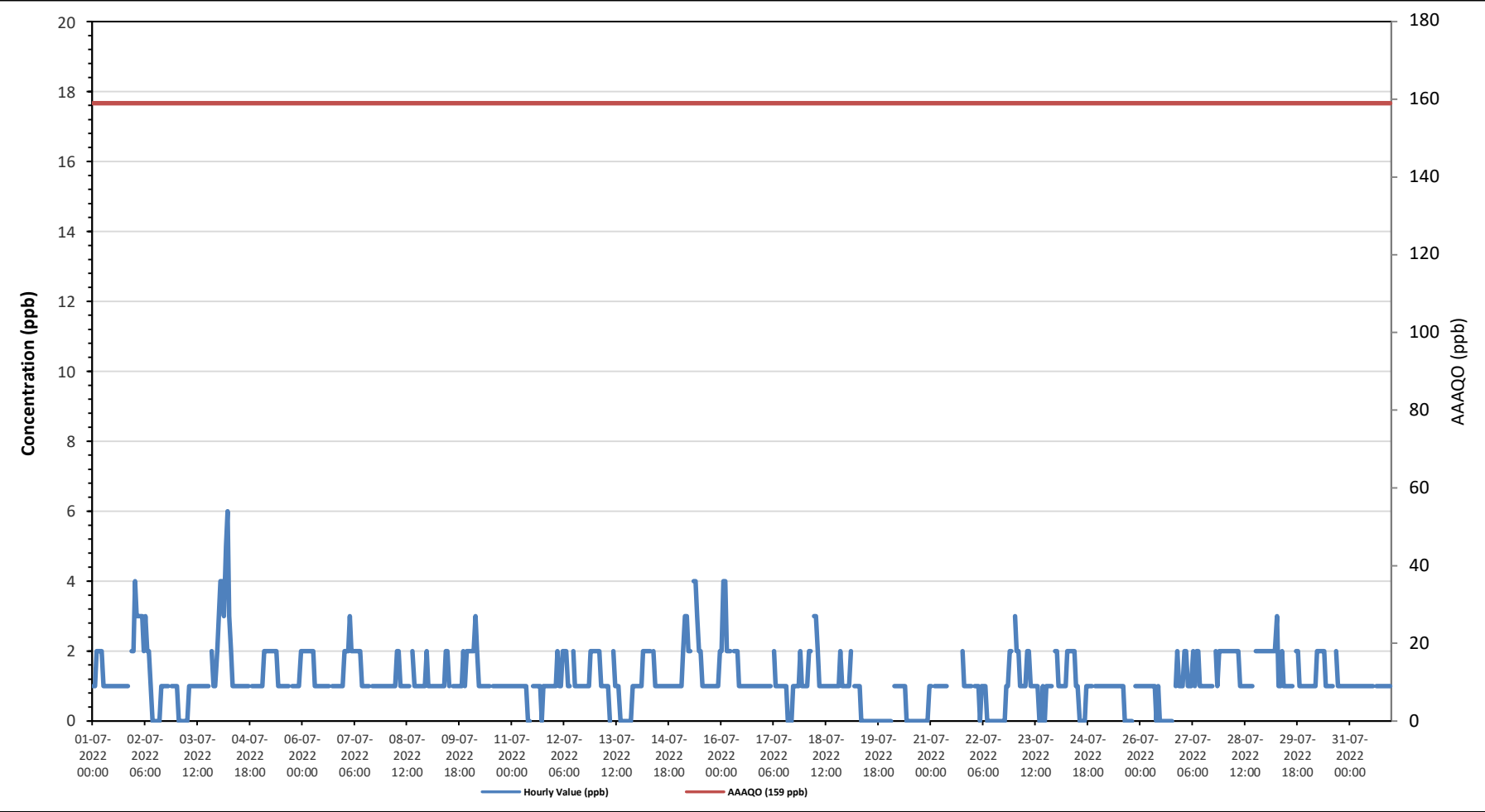
St. Lina Site - July 2022

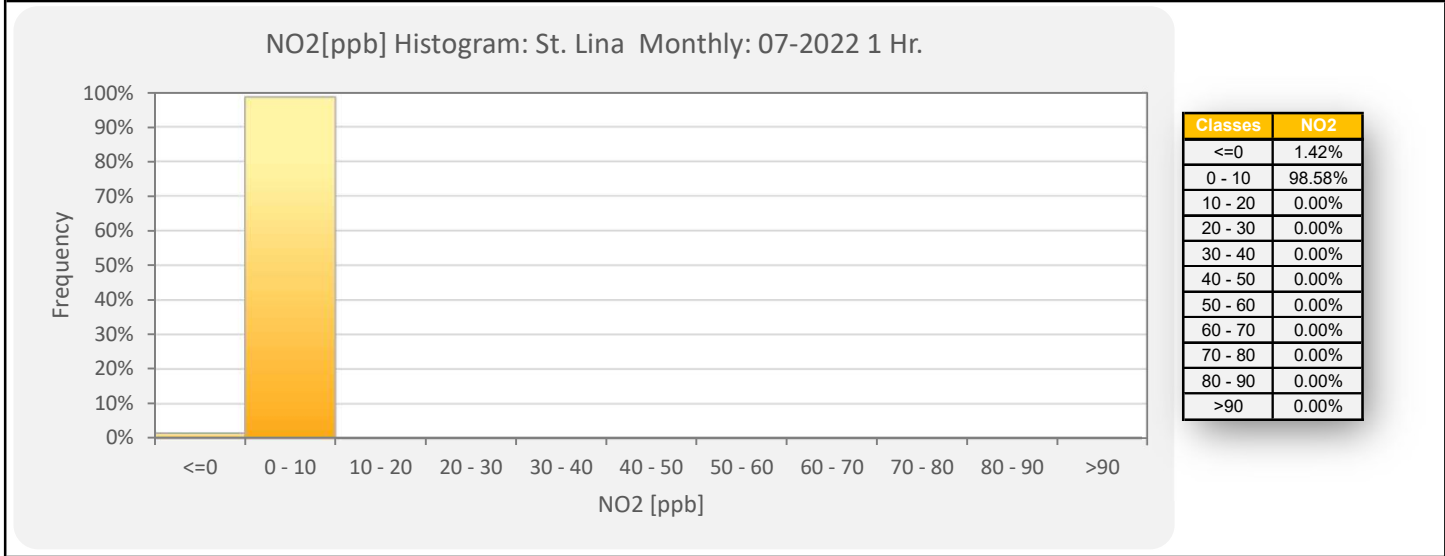
Summary of Hourly Averages

NITROGEN DIOXIDE (NO<sub>2</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb																															
Number of 1-Hour Exceedances: 0																															
Maximum Hourly Value: 6 ppb on July 4 at hour 5												Hours in Service: 744																			
Maximum Daily Value: 2.0 ppb on July 4												Hours of Data: 704																			
Minimum Hourly Value: 0 ppb on July 2 at hour 10												Hours of Missing Data: 0																			
Minimum Daily Value: 0.3 ppb on July 19												Hours of Calibration: 40																			
Monthly Average: 1.2 ppb												Operational Uptime: 100.0																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
Jul 1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	2	1	2	1.3				
Jul 2	4	3	3	3	2	3	2	3	2	1	0	0	0	0	0	1	1	1	1	1	1	S	1	1	1	0	1.5				
Jul 3	1	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	S	2	1	1	2	0	0.8					
Jul 4	3	4	4	3	5	6	3	2	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	6	2.0				
Jul 5	1	1	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	S	1	1	1	1	1	2	1	1.4					
Jul 6	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	2	1.3				
Jul 7	2	2	2	3	2	2	2	2	2	2	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	3	1.5				
Jul 8	1	1	1	1	1	1	2	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	2	1	1.2					
Jul 9	1	1	1	1	1	1	1	1	1	1	2	2	1	S	1	1	1	1	1	1	2	1	2	2	1	2	1.2				
Jul 10	2	2	2	3	2	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1	3	1.3				
Jul 11	1	1	1	1	1	1	1	1	1	0	0	S	1	1	1	1	1	0	1	1	1	1	1	1	0	1	0.9				
Jul 12	1	1	2	1	1	2	2	2	1	1	S	2	1	1	1	1	1	1	1	1	1	2	2	2	1	2	1.3				
Jul 13	2	2	2	1	1	1	1	1	0	S	2	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0.8				
Jul 14	1	1	1	2	2	2	2	2	S	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.3				
Jul 15	1	1	2	3	3	2	2	S	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	4	1.8				
Jul 16	2	4	4	2	2	2	S	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1.6				
Jul 17	1	1	1	1	1	S	2	1	1	1	1	1	1	1	0	0	0	1	1	1	1	2	1	1	0	2	1.0				
Jul 18	1	1	2	2	S	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	3	1.3				
Jul 19	1	1	2	S	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.3				
Jul 20	0	0	S	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.3				
Jul 21	1	S	1	1	1	1	1	1	1	1	C	C	C	C	C	C	C	C	2	1	1	1	1	1	1	2	-				
Jul 22	S	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	S	0	0.5				
Jul 23	3	2	2	1	1	1	1	2	2	1	1	1	1	1	0	0	1	0	1	1	1	1	S	2	0	3	1.2				
Jul 24	2	1	1	1	1	1	2	2	2	2	2	1	1	0	0	0	1	1	1	1	1	S	1	1	0	2	1.1				
Jul 25	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	S	1	1	1	0	1	0.8				
Jul 26	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	S	1	2	1	1	0	2	0.7				
Jul 27	1	2	2	1	1	1	2	1	2	2	1	1	1	1	1	1	1	1	S	2	1	2	2	2	1	2	1.4				
Jul 28	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	S	2	2	2	2	2	1	2	1.7				
Jul 29	2	2	2	2	2	3	1	1	2	1	1	1	1	1	1	1	S	2	2	1	1	1	1	1	1	3	1.5				
Jul 30	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	2	1.3				
Jul 31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	1	1	1	1.0				
Diurnal Maximum	4	4	4	3	5	6	3	2	4	4	3	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2				
Diurnal Average	1.5	1.5	1.7	1.6	1.5	1.6	1.6	1.4	1.3	1.2	1.0	0.9	0.9	0.8	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.3							
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance								
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance				P	Power Failure			
X	Invalid Data (Equipment Malfunction /Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																			
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																															

Timeseries Chart of Hourly Average for NO2 - St. Lina Site

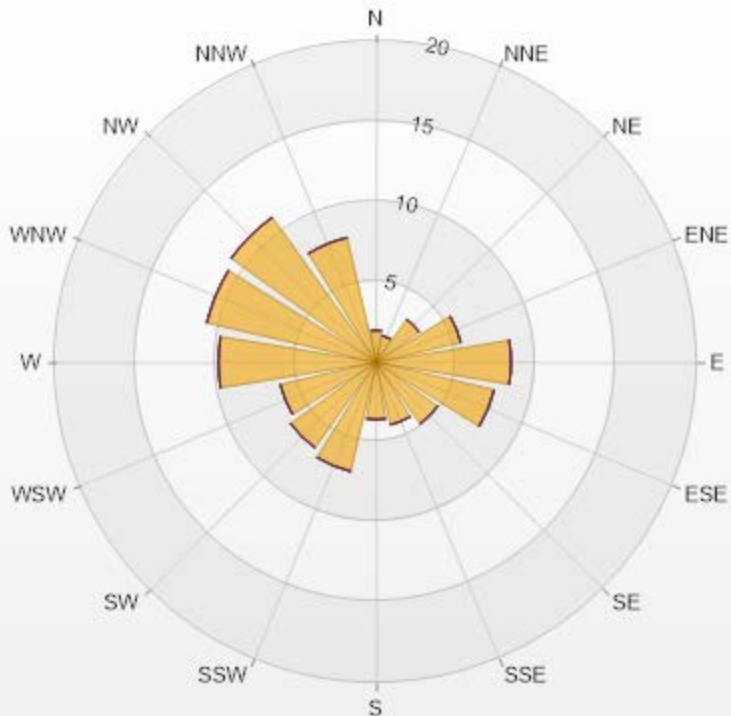






Wind: St. Lina Poll.: St. Lina-NO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.35% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.99	0	0	0	0	1.99
NNE	1.71	0	0	0	0	1.71
NE	3.28	0	0	0	0	3.28
ENE	5.41	0	0	0	0	5.41
E	8.4	0	0	0	0	8.4
ESE	7.55	0	0	0	0	7.55
SE	4.7	0	0	0	0	4.7
SSE	3.99	0	0	0	0	3.99
S	3.56	0	0	0	0	3.56
SSW	6.98	0	0	0	0	6.98
SW	6.55	0	0	0	0	6.55
WSW	6.13	0	0	0	0	6.13
W	9.83	0	0	0	0	9.83
WNW	10.83	0	0	0	0	10.83
NW	11.11	0	0	0	0	11.11
NNW	7.98	0	0	0	0	7.98
Summary	100	0	0	0	0	100



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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

0  76-159

0  >159.0



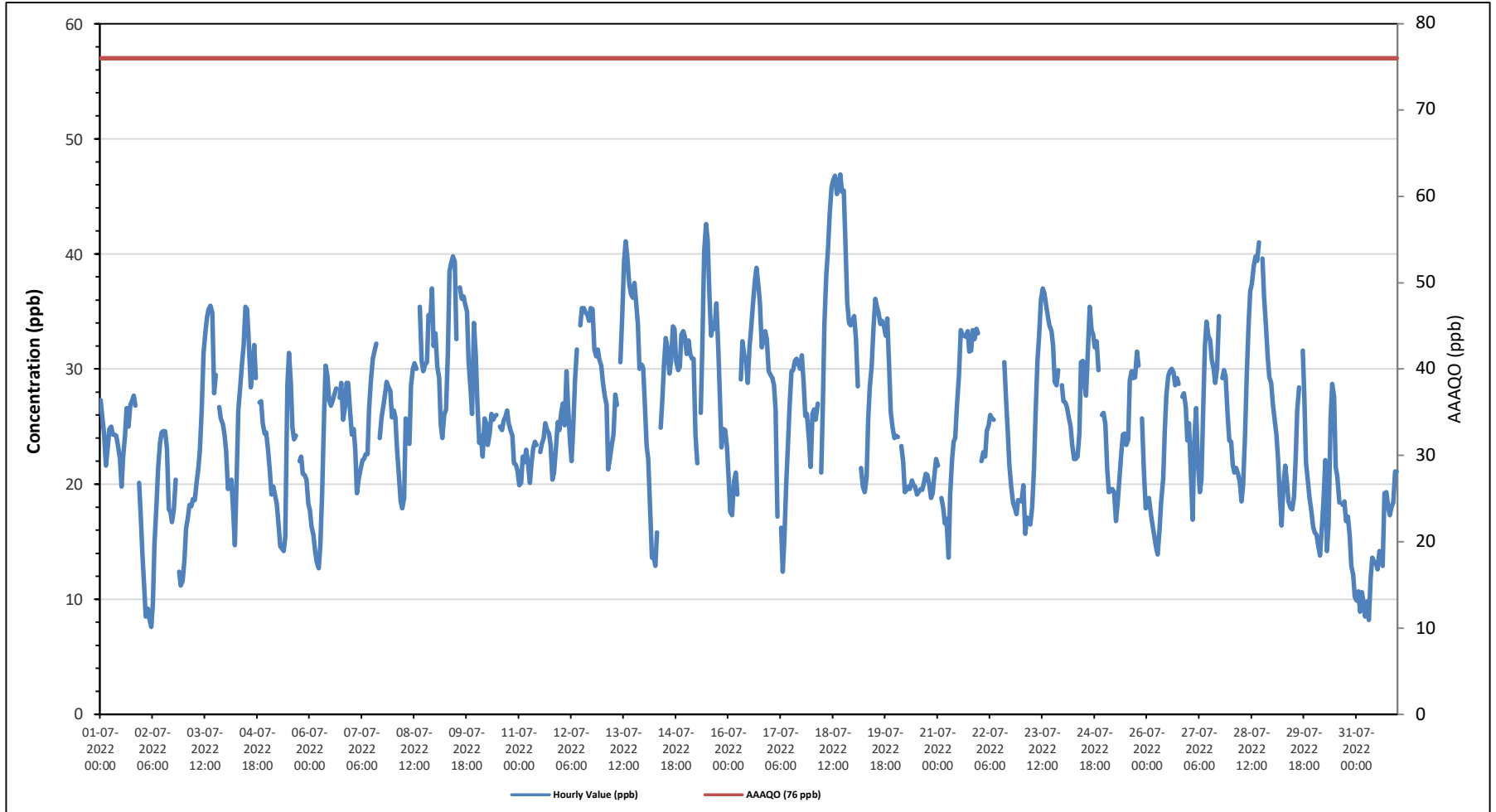
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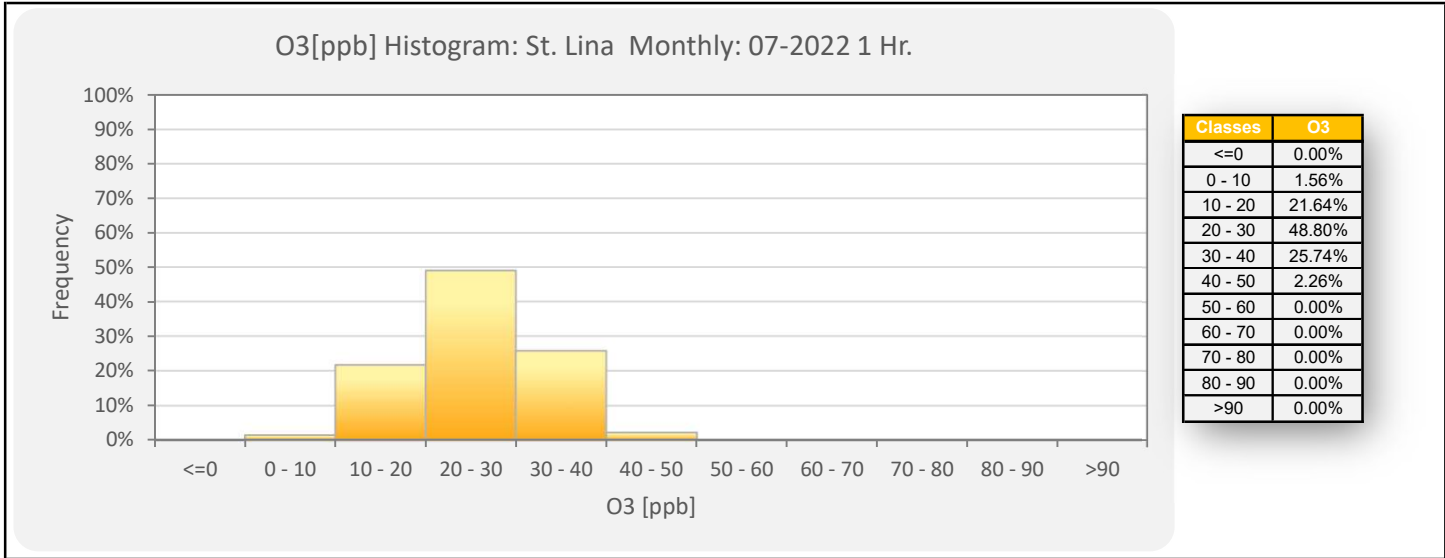
St. Lina Site - July 2022  
Summary of Hourly Averages

OZONE (O<sub>3</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb																															
Number of 1-Hour Exceedances: 0																															
Maximum Hourly Value: 46.9 ppb on July 18 at hour 16												Hours in Service: 744																			
Maximum Daily Value: 37.2 ppb on July 18												Hours of Data: 707																			
Minimum Hourly Value: 7.6 ppb on July 2 at hour 5												Hours of Missing Data: 0																			
Minimum Daily Value: 13.9 ppb on July 31												Hours of Calibration: 37																			
Monthly Average: 25.6 ppb												Operational Uptime: 100.0																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23							
Jul 1	27.3	25.7	24.4	21.6	23	24.8	25	24.3	24.3	24.2	23.4	22.2	19.8	22.4	24.2	26.6	25	26.9	27.2	27.7	26.8	S	20.1	17.4	17.4	27.7	24.1				
Jul 2	13.7	11.2	8.5	9.2	8.3	7.6	9.6	14.8	18.4	21.5	23.6	24.5	24.6	24.6	23.1	17.8	17.6	16.7	17.8	20.4	S	12.4	11.2	11.6	7.6	24.6	16.0				
Jul 3	13.4	16.1	17.1	18.2	18.1	18.7	18.6	20.2	21.3	22.9	26.4	31.4	33.2	34.5	35.2	35.5	34.9	27.9	29.5	S	26.7	25.7	25.2	24.3	13.4	35.5	25.0				
Jul 4	22.9	19.6	20	20.4	17.5	14.7	20.8	26.4	28.4	30.5	32	35.4	35.2	32.6	28.4	29.7	32.1	29.2	S	27.1	27.2	25.3	24.4	24.5	14.7	35.4	26.3				
Jul 5	23	21.1	19.1	19.8	19.1	18.3	16.4	14.6	14.4	14.2	15.4	28.6	31.4	28.8	24.9	23.9	24.2	S	22	22.4	20.9	20.8	20.4	18.3	14.2	31.4	21.0				
Jul 6	17.7	16.3	15.6	14.1	13.2	12.7	14.6	19.2	25.7	30.3	29.4	27.3	26.8	27.2	27.8	28.3	S	27.5	28.8	25.6	26.7	28.8	28.8	26.4	12.7	30.3	23.4				
Jul 7	24.3	24.8	22.9	19.2	20.5	21.2	22.1	22.2	22.6	22.6	26.6	29.1	30.9	31.5	32.2	S	24	25.8	26.7	27.8	28.9	28.5	28.1	25.8	19.2	32.2	25.6				
Jul 8	26.4	25.8	23.1	20.5	18.5	17.9	18.8	25.7	23.7	23.5	28.6	30	30.5	30	S	35.4	30.7	29.8	30.4	30.6	34.7	34.3	37	32	17.9	37.0	27.7				
Jul 9	33.1	30.2	29.2	25.2	24	26	26.5	31.5	38.5	39.2	39.8	39.3	32.6	S	37.1	36.1	36.3	35.6	35	30.6	28.4	26.1	34	31.2	24.0	39.8	32.4				
Jul 10	27.1	23.6	24.2	22.4	25.7	25.3	23.4	24.3	26.1	25.6	25.9	26	S	25	24.7	25.5	25.8	26.4	25.3	24.6	24.2	21.8	21.7	21.2	21.2	27.1	24.6				
Jul 11	19.9	20.1	22.4	21.9	23	22	20.1	21.8	23.2	23.7	23.4	S	22.8	23.5	24	25.3	24.7	24.4	23.4	20.4	21	23.1	25.4	24.7	19.9	25.4	22.8				
Jul 12	26.2	27	25.1	29.8	26.7	23.8	22	24.8	29	31.7	S	33.8	35.3	35.3	34.9	34.7	34.2	35.3	35.2	31.7	31.1	31.7	30.8	30.3	22.0	35.3	30.5				
Jul 13	28.9	27.7	26.9	21.3	22.3	23.3	24.3	27.8	26.9	S	30.6	34.6	39.4	41.1	39.8	37.5	36.5	36.2	37.5	35.9	33.9	30	30.4	30.1	21.3	41.1	31.4				
Jul 14	27.1	23.3	22.2	17.9	13.6	13.7	12.9	15.8	S	24.9	27.3	30.6	32.7	31.9	29.6	30.7	33.7	33.5	30.7	29.9	30.2	33	33.3	32.8	12.9	33.7	26.6				
Jul 15	31.3	32.5	31.3	30.9	30.9	24.3	21.8	S	26.2	32.1	40.3	42.6	41.2	36.2	32.9	33.8	33.5	35.7	31.8	27.7	23.2	24.8	24.7	23.2	21.8	42.6	31.0				
Jul 16	20.5	17.6	17.3	20.2	21	19.1	S	29.1	32.4	31.2	30.7	28.8	32	33.6	35.7	37.7	38.8	37.3	35.7	31.9	32.6	33.3	32.6	29.8	17.3	38.8	29.5				
Jul 17	29.5	29.2	28.6	26.5	17.2	S	16.2	12.4	15.2	20	23.1	26.9	29.8	29.9	30.7	30.9	30.4	30	31.2	28.7	25.9	26.1	23.8	21.5	12.4	31.2	25.4				
Jul 18	26.1	26.5	25.6	27	S	21	26.7	33.9	38.1	40.6	43.5	45.8	46.4	46.8	45.2	45.7	46.9	45.4	45.5	40.4	35.8	34	33.8	34.1	21.0	46.9	37.2				
Jul 19	34.6	32.6	28.5	S	21.4	19.8	19.3	20.6	25.6	28.4	30.2	33.6	36.1	35.4	34.9	33.9	34.2	33.8	32.9	34.4	30.2	26.3	24.9	24	19.3	36.1	29.4				
Jul 20	24.2	24.1	S	23.3	21.9	19.3	19.5	19.8	19.6	20.3	19.9	19.8	19.1	19.3	19.6	19.5	20.1	20.9	20.8	20	18.8	19.2	20.9	22.2	18.8	24.2	20.5				
Jul 21	21.6	S	18.8	17.9	16.6	17	13.6	19.1	22.1	23.7	24	27	29.4	33.4	33	32.9	32.8	33.3	31.5	31.6	33.4	32.6	33.5	33.1	13.6	33.5	26.6				
Jul 22	S	22	22.8	22.4	24.6	25.1	26	25.7	25.6	C	C	C	C	C	30.6	27.2	24.6	21.7	19.8	18.4	17.9	17.4	18.6	S	17.4	30.6	-				
Jul 23	18.5	19.9	15.7	17.1	16.9	16.5	18	21.4	26.2	30.7	32.8	36	37	36.6	35.5	34.6	33.8	33.3	32	28.9	28.6	29.9	S	28.6	15.7	37.0	27.3				
Jul 24	27.2	27.1	26.7	25.8	25	23.4	22.2	22.4	24.4	30.6	30.7	28.7	27.7	32.1	35.4	33.4	33	31.9	32.4	29.9	S	26	26.2	22.2	35.4	28.0					
Jul 25	25.2	21.3	19.3	19.4	19.6	19.3	16.8	18.3	20.5	22.4	24.3	24.4	23.4	23.9	29	29.8	29.2	29.3	31.5	30.3	S	25.7	21.2	17.9	16.8	31.5	23.6				
Jul 26	18.3	18.8	17.5	16.4	15.4	14.5	13.9	16	18.4	20.5	24.7	27.8	29.4	29.8	30	29.7	28.6	29.2	28.7	S	27.6	27.9	26.7	23.8	13.9	30.0	23.2				
Jul 27	25.3	20.5	16.9	23.7	26.6	22.2	19.3	20.4	25.9	31.9	34.1	32.9	32.5	30.8	30	28.8	30.1	34.6	S	29.2	29.9	29.4	25.9	23.8	16.9	34.6	27.2				
Jul 28	23.7	21.7	21	21.4	20.9	20.1	18.5	19.9	24	29.6	34	36.8	37.4	38.9	39.8	39.4	41	S	39.6	36.3	33.8	31	29.3	28.8	18.5	41.0	29.9				
Jul 29	27	25.6	24.2	22.1	19	16.4	19.9	21.6	20.2	18.5	18	17.8	18.9	22.1	26.4	28.4	S	31.6	27.5	21.9	20.3	18.9	17.7	16.3	16.3	31.6	21.8				
Jul 30	15.8	15.6	14.7	13.8	16.2	18.5	22.1	14.2	16.4	25.8	28.7	27.6	21.5	20.7	18.4	S	18.2	18.5	16.8	17.2	15.5	12.9	12.1	10.2	10.2	28.7	17.9				
Jul 31	9.9	10.7	8.9	10.6	9.6	8.5	9.8	8.2	11.9	13.6	13.3	13.2	12.6	14.2	S	12.9	19.2	19.3	18	17.3	18	18.4	21.1	21.1	8.2	21.1	13.9				
Diurnal Maximum	35	33	31	31	31	26	27	34	39	41	44	46	46	47	45	46	47	45	46	40	36	34	37	34							
Diurnal Average	23.7	22.6	21.3	20.7	19.9	19.2	19.3	21.2	23.8	25.8	27.7	29.8	30.0	29.9	30.7	30.6	30.2	29.7	29.1	27.6	27.0	25.8	25.5	24.5							
C	Monthly Calibration							S	Daily Zero-Span Check							Q	Quality Assurance														
K	Collection Error							N	No Data (Machine Not in Service)							Y	Routine Maintenance							P	Power Failure						
X	Invalid Data (Equipment Malfunction /Recovery)							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																						
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																															

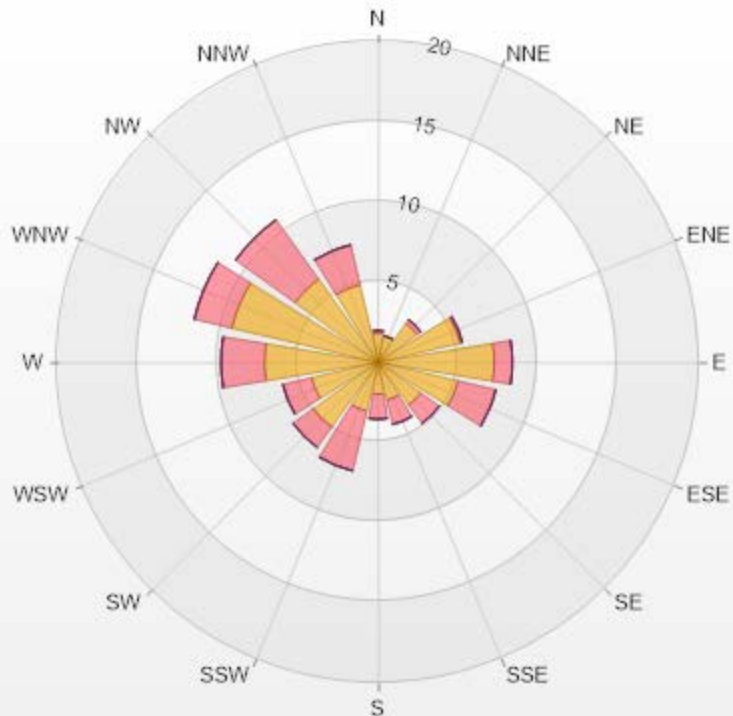
**Timeseries Chart of Hourly Average for O3 - St. Lina Site**





Wind: St. Lina Poll.: St. Lina-O3[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.84	0.14	0	0	0	1.98
NNE	1.7	0	0	0	0	1.7
NE	2.98	0.28	0	0	0	3.26
ENE	5.25	0.14	0	0	0	5.39
E	7.23	1.13	0	0	0	8.36
ESE	5.11	2.41	0	0	0	7.52
SE	3.26	1.42	0	0	0	4.68
SSE	2.41	1.56	0	0	0	3.97
S	1.99	1.56	0	0	0	3.55
SSW	3.12	3.83	0	0	0	6.95
SW	4.96	1.56	0	0	0	6.52
WSW	4.26	1.84	0	0	0	6.1
W	7.09	2.7	0	0	0	9.79
WNW	9.36	2.41	0	0	0	11.77
NW	6.38	4.54	0	0	0	10.92
NNW	4.96	2.55	0	0	0	7.51
Summary	71.9	28.07	0	0	0	100



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% Icon Classes (ppb)

72 0-30

28 30-50

0 50-76

0 76-159

0 >159.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

*St. Lina Site - July 2022*

**Summary of Hourly Averages**

**TOTAL HYDROCARBONS (THC) in ppm**

Maximum Hourly Value:	- ppm	Hours in Service:	744
Maximum Daily Value:	- ppm	Hours of Data:	0
Minimum Hourly Value:	- ppm	Hours of Missing Data:	744
Minimum Daily Value:	- ppm	Hours of Calibration:	0
Monthly Average:	- ppm	Operational Uptime:	0.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23			
Jul 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-				
Jul 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Jul 31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
Diurnal Maximum	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diurnal Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance													
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure					
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																					
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																														
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																														





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

Summary of Hourly Averages

METHANE (CH4) in ppm

Maximum Hourly Value:	- ppm	Hours in Service:	744
Maximum Daily Value:	- ppm	Hours of Data:	0
Minimum Hourly Value:	- ppm	Hours of Missing Data:	744
Minimum Daily Value:	- ppm	Hours of Calibration:	0
Monthly Average:	- ppm	Operational Uptime:	0.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-					
Jul 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-		
Jul 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Jul 31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	
Diurnal Maximum	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Diurnal Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance														
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure						
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																						
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																															



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

*St. Lina Site - July 2022*

**Summary of Hourly Averages**

**NON-METHANE HYDROCARBONS (NMHC) in ppm**

Maximum Hourly Value:	- ppm	Hours in Service:	744
Maximum Daily Value:	- ppm	Hours of Data:	0
Minimum Hourly Value:	- ppm	Hours of Missing Data:	744
Minimum Daily Value:	- ppm	Hours of Calibration:	0
Monthly Average:	- ppm	Operational Uptime:	0.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-					
Jul 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Jul 31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Diurnal Maximum	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
Diurnal Average	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!				
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance														
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure						
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																						

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

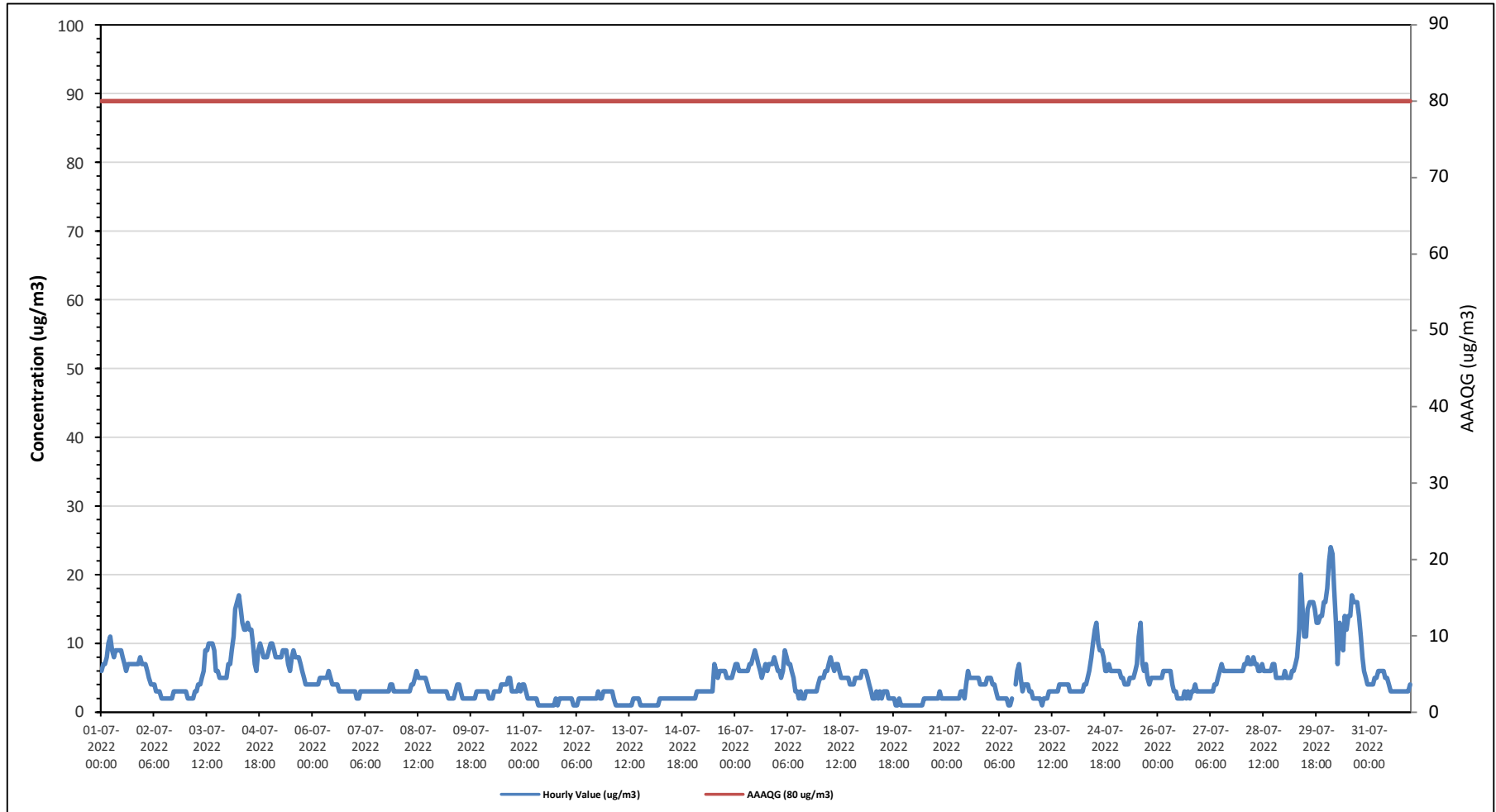
**St. Lina Site - July 2022**

**Summary of Hourly Averages**

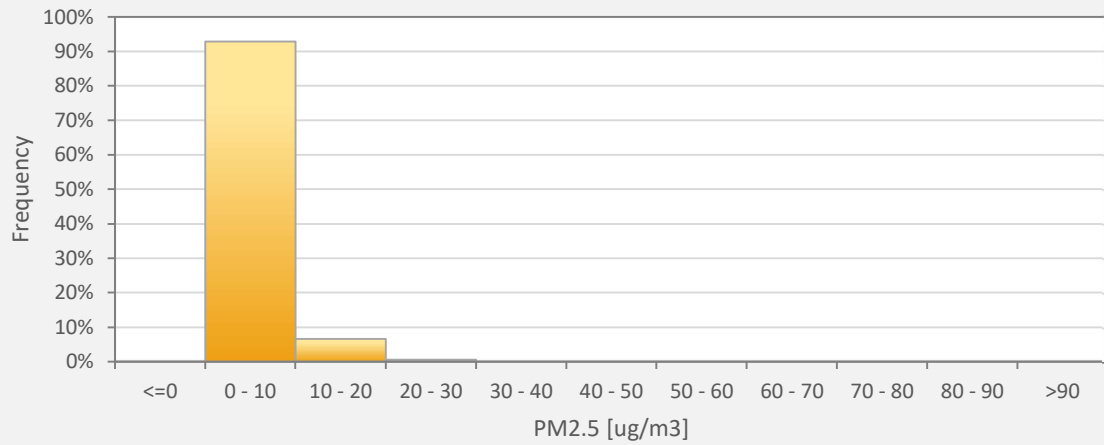
**PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>) in µg/m<sup>3</sup>**

Alberta Ambient Air Quality Guideline (AAQG): 1-Hour 80 µg/m <sup>3</sup> , Alberta Ambient Air Quality Objective (AAQO): 24-Hour 29 µg/m <sup>3</sup>																															
Number of 1-Hour Exceedances: 0					Number of 24-Hour Exceedances: 0																										
Maximum Hourly Value: 24 µg/m <sup>3</sup> on July 30 at hour 2					Hours in Service: 744																										
Maximum Daily Value: 13.6 µg/m <sup>3</sup> on July 30					Hours of Data: 743																										
Minimum Hourly Value: 1 µg/m <sup>3</sup> on July 11 at hour 8					Hours of Missing Data: 0																										
Minimum Daily Value: 1 µg/m <sup>3</sup> on July 13					Hours of Calibration: 1																										
Monthly Average: 4.8 µg/m <sup>3</sup>					Operational Uptime: 100.0																										
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	6	7	7	8	10	11	9	8	9	9	9	9	8	7	6	7	7	7	7	7	7	8	7	6	11	7.8					
Jul 2	7	7	6	5	4	4	4	3	3	3	2	2	2	2	2	2	3	3	3	3	3	3	3	2	7	3.4					
Jul 3	3	2	2	2	2	3	3	4	4	5	6	9	9	10	10	10	9	6	5	5	5	5	5	2	10	5.4					
Jul 4	7	7	9	11	15	16	17	15	13	12	12	13	12	12	10	7	6	9	10	9	8	8	8	6	17	10.6					
Jul 5	10	10	9	8	8	8	8	9	9	9	7	6	8	9	8	8	7	6	5	4	4	4	4	4	10	7.3					
Jul 6	4	4	4	4	5	5	5	5	5	6	5	4	4	4	4	3	3	3	3	3	3	3	3	3	6	4.0					
Jul 7	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3	4	3.0					
Jul 8	3	3	3	3	3	3	3	3	4	4	5	6	5	5	5	5	4	3	3	3	3	3	3	3	6	3.8					
Jul 9	3	3	3	3	3	2	2	2	2	3	4	4	3	2	2	2	2	2	2	2	2	3	3	2	4	2.6					
Jul 10	3	3	3	3	2	2	2	3	3	3	3	4	4	4	4	5	5	3	3	3	3	4	3	4	5	3.3					
Jul 11	4	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	2	1	2	2	2	2	1	4	1.7					
Jul 12	2	2	2	2	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	3	2	3	3	3	3	2.0					
Jul 13	3	3	3	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	3	1.5					
Jul 14	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.8					
Jul 15	2	2	3	3	3	3	3	3	3	3	3	3	7	6	5	6	6	6	6	5	5	5	5	6	7	4.3					
Jul 16	7	7	6	6	6	6	6	6	7	7	8	9	8	7	6	5	6	7	6	7	7	7	8	7	9	6.8					
Jul 17	6	6	5	6	9	8	7	7	6	5	3	3	2	3	2	2	3	3	3	3	3	3	3	4	9	4.4					
Jul 18	5	5	5	6	6	7	8	7	6	7	7	6	5	5	5	5	4	4	4	5	5	5	5	5	8	5.5					
Jul 19	6	6	6	5	4	3	2	2	3	2	3	2	3	3	2	2	2	2	1	1	2	1	1	2	6	2.8					
Jul 20	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	2	2	2	3	1.6					
Jul 21	2	2	2	2	2	2	2	2	3	3	2	4	6	5	5	5	5	5	4	4	4	4	4	5	6	3.5					
Jul 22	5	5	4	4	3	2	2	2	2	2	2	1	1	2	C	4	6	7	5	3	4	4	4	3	7	3.3					
Jul 23	3	2	2	2	2	2	1	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	3	3	4	2.8					
Jul 24	3	3	3	3	3	3	4	4	4	5	6	8	10	12	13	10	9	9	8	6	6	7	6	6	13	6.4					
Jul 25	6	6	6	5	5	4	4	4	5	5	5	6	7	11	13	7	6	7	5	4	5	5	5	4	13	5.9					
Jul 26	5	5	5	6	6	6	6	6	4	3	3	2	2	2	2	3	2	3	2	3	3	4	3	3	6	3.7					
Jul 27	3	3	3	3	3	3	3	3	4	4	5	6	7	6	6	6	6	6	6	6	6	6	6	6	7	4.8					
Jul 28	6	7	7	8	7	7	8	7	7	6	6	7	6	6	6	6	6	7	7	5	5	5	5	5	8	6.3					
Jul 29	6	5	5	5	6	6	7	8	12	20	15	11	11	15	16	16	16	15	13	13	14	14	16	16	20	11.7					
Jul 30	18	22	24	23	18	13	7	13	12	9	14	12	14	14	17	16	16	16	14	11	8	6	5	4	24	13.6					
Jul 31	4	4	4	5	5	6	6	6	6	5	5	4	3	3	3	3	3	3	3	3	3	3	3	3	4	4.0					
Diurnal Maximum	18	22	24	23	18	16	17	15	13	20	15	13	14	15	17	16	16	16	14	13	14	14	16	16	16	16					
Diurnal Average	4.7	4.8	4.7	4.8	4.8	4.7	4.5	4.7	4.8	4.9	5.0	5.1	5.3	5.5	5.5	5.1	5.2	5.1	4.7	4.3	4.4	4.4	4.4	4.4	4.4						
C	Monthly Calibration							S	Daily Zero-Span Check							Q	Quality Assurance														
K	Collection Error							N	No Data (Machine Not in Service)							Y	Routine Maintenance							P	Power Failure						
X	InValid Data (Equipment Malfunction /Recovery)							NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																						
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																															

**Timeseries Chart of Hourly Average for PM2.5 - St. Lina Site**



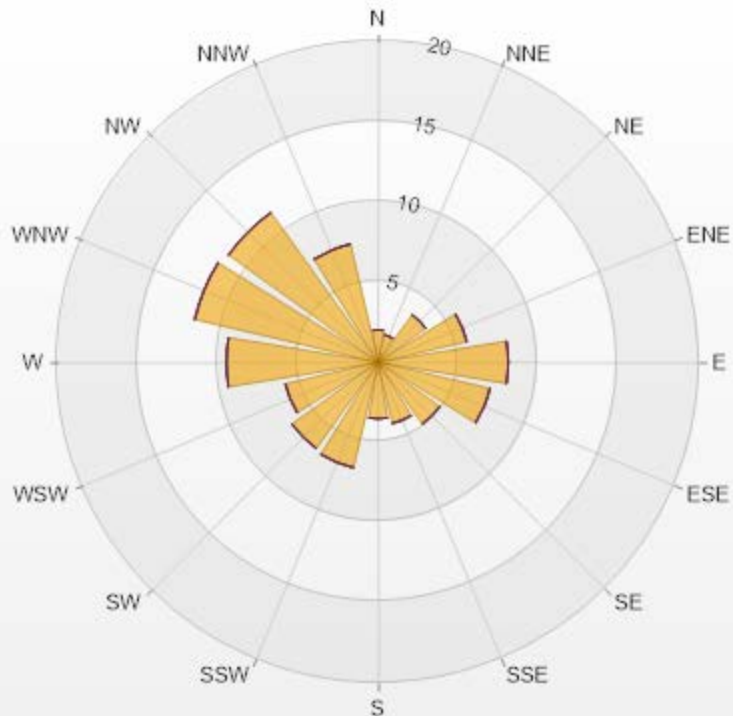
PM2.5[ug/m3(L)] Histogram: St. Lina Monthly: 07-2022 1 Hr.



Classes	PM2.5
<=0	0.00%
0 - 10	92.87%
10 - 20	6.59%
20 - 30	0.54%
30 - 40	0.00%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: St. Lina Poll.: St. Lina-PM2.5[ug/m3(L)] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 99.60% Calm Avg: 0.00 [ug/m3(L)]

Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	2.02	0	0	0	0	2.02
NNE	1.75	0	0	0	0	1.75
NE	3.64	0	0	0	0	3.64
ENE	5.67	0	0	0	0	5.67
E	8.1	0	0	0	0	8.1
ESE	7.15	0	0	0	0	7.15
SE	4.72	0	0	0	0	4.72
SSE	3.91	0	0	0	0	3.91
S	3.51	0	0	0	0	3.51
SSW	6.75	0	0	0	0	6.75
SW	6.61	0	0	0	0	6.61
WSW	5.94	0	0	0	0	5.94
W	9.45	0	0	0	0	9.45
WNW	11.74	0	0	0	0	11.74
NW	11.47	0	0	0	0	11.47
NNW	7.56	0	0	0	0	7.56
Summary	100	0	0	0	0	100




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% Icon Classes ( $\mu\text{g}/\text{m}^3$ (L))

100  0-50

0  50-80

0  80-120

0  120-240

0  >240.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**St. Lina Site - July 2022**

**Summary of Hourly Averages**

**RELATIVE HUMIDITY (RH) in %**

Maximum Hourly Value:	100 %	on July 1 at hour 12	Hours in Service:	744
Maximum Daily Value:	99.7 %	on July 5	Hours of Data:	744
Minimum Hourly Value:	34 %	on July 26 at hour 13	Hours of Missing Data:	0
Minimum Daily Value:	55.6 %	on July 21	Hours of Calibration:	0
Monthly Average:	75.3 %		Operational Uptime:	100.0

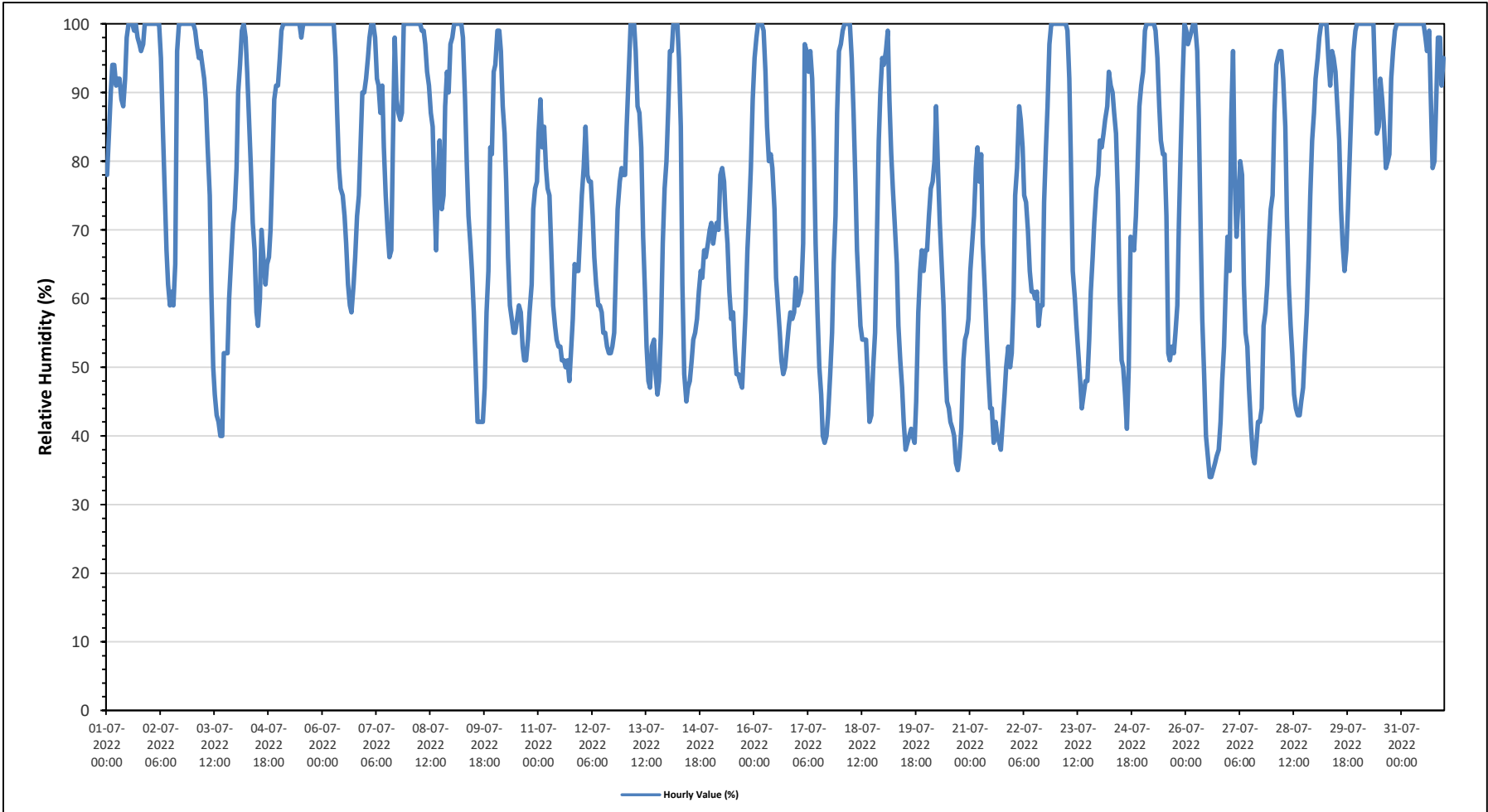
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	78	83	90	94	94	91	92	92	89	88	92	98	100	100	100	99	100	98	97	96	97	100	100	100	78	100	94.5	
Jul 2	100	100	100	100	100	100	95	85	76	67	62	59	61	59	65	96	100	100	100	100	100	100	100	100	59	100	88.5	
Jul 3	100	99	97	95	96	94	92	89	82	75	61	50	46	43	42	40	40	52	52	52	60	66	71	73	40	100	69.5	
Jul 4	79	90	94	99	100	98	93	86	79	71	67	58	56	60	70	66	62	65	66	70	79	89	91	91	56	100	78.3	
Jul 5	95	99	100	100	100	100	100	100	100	100	100	100	98	100	100	100	100	100	100	100	100	100	100	100	95	100	99.7	
Jul 6	100	100	100	100	100	100	100	95	87	79	76	75	72	68	62	59	58	62	66	72	75	82	90	90	58	100	82.0	
Jul 7	92	95	98	100	100	98	92	91	87	91	82	75	70	66	67	82	98	89	87	86	87	100	100	100	66	100	88.9	
Jul 8	100	100	100	100	100	100	100	99	99	97	93	91	87	85	74	67	78	83	73	75	88	93	90	97	67	100	90.4	
Jul 9	98	100	100	100	100	100	98	89	79	72	68	64	58	49	42	42	42	42	47	58	64	82	81	93	42	100	73.7	
Jul 10	94	99	99	96	88	84	77	66	59	57	55	55	57	59	58	53	51	51	54	58	62	73	76	77	51	99	69.1	
Jul 11	84	89	82	85	79	76	75	67	59	56	54	53	53	51	51	50	51	48	52	57	65	64	64	69	48	89	63.9	
Jul 12	75	79	85	78	77	77	72	66	62	59	59	58	55	55	53	52	52	53	55	65	73	77	79	78	52	85	66.4	
Jul 13	78	85	92	100	100	100	96	88	87	82	69	61	53	48	47	53	54	49	46	48	55	68	76	80	46	100	71.5	
Jul 14	88	96	96	100	100	100	95	85	62	49	45	47	48	51	54	55	57	61	64	63	67	66	68	70	45	100	70.3	
Jul 15	71	68	70	71	70	78	79	77	72	68	61	57	58	53	49	49	48	47	52	58	67	72	79	89	47	89	65.1	
Jul 16	95	98	100	100	100	99	93	85	80	81	79	73	63	59	55	51	49	50	53	56	58	57	58	63	49	100	73.1	
Jul 17	59	60	61	68	97	96	93	96	92	83	68	58	50	46	40	39	40	43	49	55	65	72	87	96	39	97	67.2	
Jul 18	97	99	100	100	100	100	95	87	77	67	61	56	54	54	48	42	43	50	55	69	83	90	95	42	100	74.0		
Jul 19	94	96	99	89	81	76	71	65	56	51	47	42	38	39	40	41	40	39	45	58	64	67	64	67	38	99	61.2	
Jul 20	67	72	76	77	80	88	79	71	65	59	51	45	44	42	41	40	36	35	37	41	51	54	55	57	35	88	56.8	
Jul 21	64	68	72	79	82	77	81	68	61	54	49	44	44	39	42	40	39	38	42	46	50	53	50	52	38	82	55.6	
Jul 22	60	75	79	88	86	82	75	74	70	64	61	61	60	61	56	59	59	74	82	88	97	100	100	100	56	100	75.5	
Jul 23	100	100	100	100	100	100	99	92	80	64	60	56	52	48	44	46	48	48	54	61	66	71	76	78	44	100	72.6	
Jul 24	83	82	84	86	88	93	91	90	87	84	75	60	51	50	46	41	50	69	68	67	72	79	88	91	41	93	74.0	
Jul 25	93	99	100	100	100	100	100	99	95	88	83	81	81	72	52	51	53	52	55	59	71	82	92	100	51	100	81.6	
Jul 26	99	97	98	99	100	100	96	86	70	57	49	40	37	34	34	35	36	37	38	42	48	53	61	69	34	100	63.1	
Jul 27	64	86	96	78	69	74	80	78	62	55	53	47	41	37	36	39	42	42	44	56	58	62	68	73	36	96	60.0	
Jul 28	75	87	94	95	96	96	92	85	72	62	56	52	46	44	43	43	45	47	52	58	66	75	83	87	43	96	68.8	
Jul 29	92	95	98	100	100	100	100	95	91	96	95	93	88	83	73	68	64	67	73	81	89	96	99	100	64	100	89.0	
Jul 30	100	100	100	100	100	100	100	100	100	100	92	84	85	92	89	85	79	80	81	92	96	99	100	100	100	79	100	93.9
Jul 31	100	100	100	100	100	100	100	100	100	100	100	100	98	96	99	88	79	80	88	98	98	91	95	79	100	96.3		
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Diurnal Average	86.3	90.2	92.3	92.8	93.0	92.8	90.4	85.4	78.6	73.2	68.2	64.3	61.7	59.4	57.1	57.5	58.1	59.5	62.1	66.6	72.9	78.5	81.5	84.8				

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Timeseries Chart of Hourly Average for RH - St. Lina Site**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

### Summary of Hourly Averages

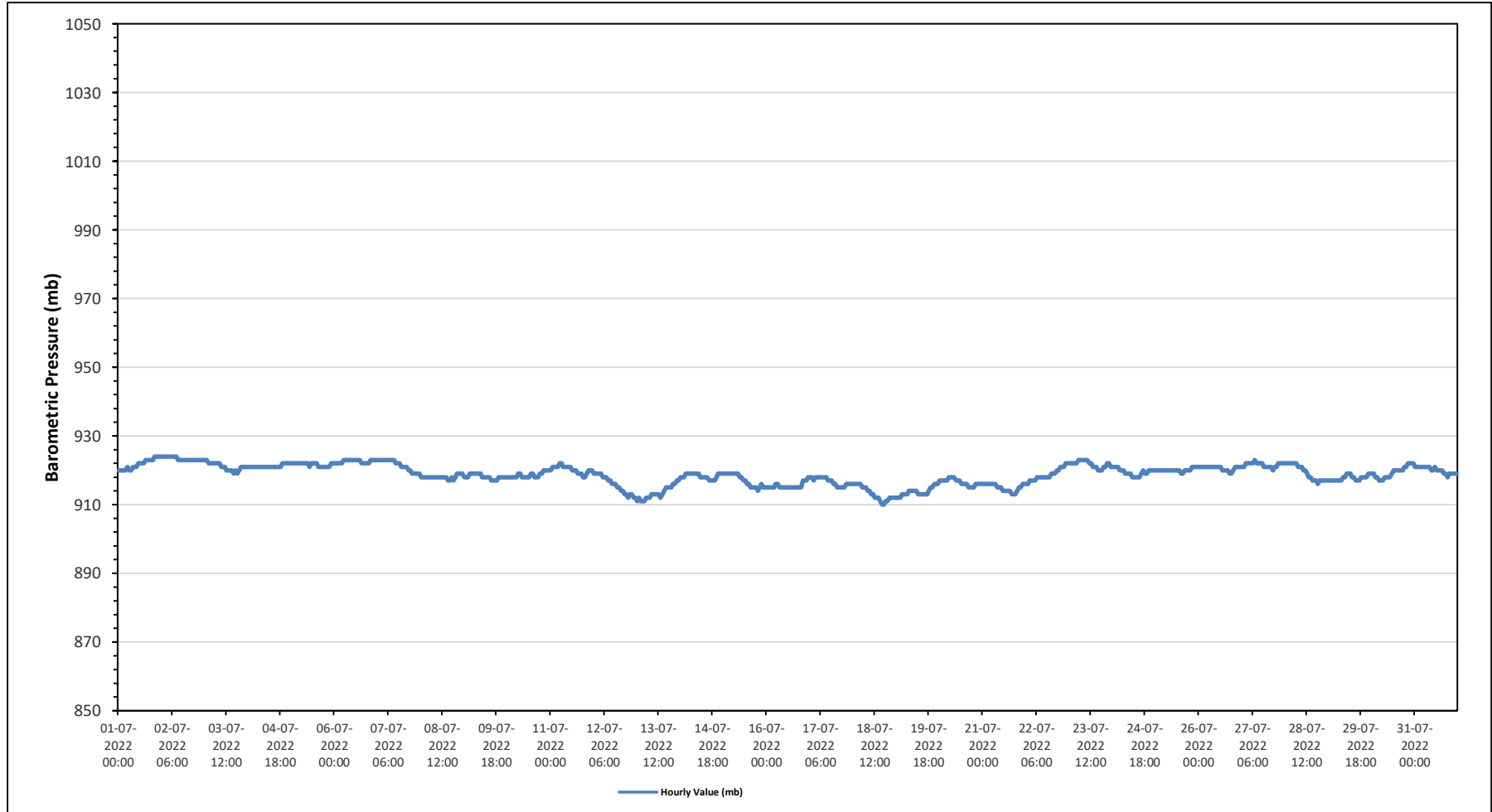
#### BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	924	mb	on July 1 at hour 20	Hours in Service:	744
Maximum Daily Value:	923	mb	on July 2	Hours of Data:	744
Minimum Hourly Value:	910	mb	on July 18 at hour 16	Hours of Missing Data:	0
Minimum Daily Value:	913	mb	on July 18	Hours of Calibration:	0
Monthly Average:	919	mb		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	920	920	920	920	920	921	920	920	921	921	921	922	922	922	922	923	923	923	923	923	923	924	924	924	924	920	924	922
Jul 2	924	924	924	924	924	924	924	924	924	924	923	923	923	923	923	923	923	923	923	923	923	923	923	923	923	923	923	923
Jul 3	923	923	922	922	922	922	922	922	922	921	921	921	920	920	920	920	919	920	919	920	921	921	921	921	921	919	923	921
Jul 4	921	921	921	921	921	921	921	921	921	921	921	921	921	921	921	921	921	921	921	922	922	922	922	922	922	921	922	921
Jul 5	922	922	922	922	922	922	922	922	922	922	921	922	922	922	922	922	921	921	921	921	921	921	921	921	921	921	921	922
Jul 6	922	922	922	922	922	923	923	923	923	923	923	923	923	923	923	922	922	922	922	922	922	923	923	923	923	922	923	923
Jul 7	923	923	923	923	923	923	923	923	923	923	922	922	922	921	921	921	921	920	920	919	919	919	919	919	919	919	919	921
Jul 8	918	918	918	918	918	918	918	918	918	918	918	918	918	918	918	917	917	918	917	918	919	919	919	919	919	917	919	918
Jul 9	918	918	918	919	919	919	919	919	919	919	919	918	918	918	918	918	917	917	917	917	918	918	918	918	918	917	919	918
Jul 10	918	918	918	918	918	918	919	919	918	918	918	918	918	919	919	918	918	918	919	919	920	920	920	920	918	920	919	
Jul 11	920	921	921	921	921	922	922	921	921	921	921	921	920	920	920	919	919	919	918	918	918	919	920	920	918	922	920	
Jul 12	919	919	919	919	919	918	918	918	917	917	916	916	916	915	915	914	914	913	913	912	913	913	912	912	912	912	919	916
Jul 13	911	912	911	911	911	912	912	912	913	913	913	913	913	912	913	914	915	915	915	915	915	916	916	917	917	911	917	913
Jul 14	918	918	918	919	919	919	919	919	919	919	919	919	918	918	918	918	918	917	917	917	917	918	919	919	919	917	919	918
Jul 15	919	919	919	919	919	919	919	919	919	919	918	918	917	917	916	916	915	915	915	915	914	915	916	915	915	914	919	917
Jul 16	915	915	915	915	915	916	916	916	915	915	915	915	915	915	915	915	915	915	915	915	915	917	917	917	918	915	918	915
Jul 17	918	918	917	918	918	918	918	918	918	918	917	917	917	916	916	915	915	915	915	915	915	916	916	916	916	915	918	917
Jul 18	916	916	916	916	916	915	915	915	914	914	914	913	913	912	912	912	911	910	910	911	911	912	912	912	912	910	916	913
Jul 19	912	912	912	913	913	913	913	914	914	914	914	914	913	913	913	913	913	913	913	914	915	915	916	916	916	912	916	914
Jul 20	917	917	917	917	917	918	918	918	918	917	917	917	916	916	916	916	915	915	915	915	915	916	916	916	916	915	918	917
Jul 21	916	916	916	916	916	916	916	916	915	915	915	914	914	914	914	914	913	913	913	914	915	915	916	916	913	916	915	
Jul 22	916	916	917	917	917	917	918	918	918	918	918	918	918	918	919	919	919	920	920	921	921	921	922	922	916	922	919	
Jul 23	922	922	922	922	922	923	923	923	923	923	923	922	922	922	921	921	921	920	920	920	921	921	922	922	920	923	922	
Jul 24	921	921	921	921	920	920	920	920	919	919	919	919	918	918	918	918	918	918	919	920	919	919	920	920	918	921	919	
Jul 25	920	920	920	920	920	920	920	920	920	920	920	920	920	920	920	919	919	920	920	920	920	921	921	921	919	921	920	
Jul 26	921	921	921	921	921	921	921	921	921	921	921	921	921	920	920	920	920	920	919	919	920	921	921	921	919	921	921	
Jul 27	921	921	922	922	922	922	922	923	922	922	922	922	921	921	921	921	921	921	920	921	921	922	922	922	920	923	922	
Jul 28	922	922	922	922	922	922	922	921	921	921	920	920	919	918	918	917	917	917	916	917	917	917	917	917	916	922	919	
Jul 29	917	917	917	917	917	917	917	917	918	918	919	919	919	918	918	917	917	917	917	918	918	918	918	919	917	919	918	
Jul 30	919	919	918	918	917	917	917	918	918	918	918	919	920	920	920	920	920	920	921	921	922	922	922	922	917	922	919	
Jul 31	921	921	921	921	921	921	921	921	921	920	920	920	920	920	920	919	919	919	918	919	919	919	919	918	921	921	920	
Diurnal Maximum	924	924	924	924	924	924	924	924	924	923	923	923	923	923	923	923	923	923	923	923	924	924	924	924				
Diurnal Average	919	919	919	919	919	919	919	919	919	919	919	919	919	919	918	918	918	918	918	918	919	919	919	919				
<b>C</b>	Monthly Calibration		<b>S</b>	Daily Zero-Span Check		<b>Q</b>	Quality Assurance																					
<b>K</b>	Collection Error		<b>N</b>	No Data (Machine Not in Service)		<b>Y</b>	Routine Maintenance																					
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)		<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)		<b>P</b>	Power Failure																					
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																												
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																												

*Timeseries Chart of Hourly Average for BP - St. Lina Site*





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

### Summary of Hourly Averages

#### AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	29.5 °C	on July 28 at hour 15	Hours in Service:	744
Maximum Daily Value:	23.0 °C	on July 28	Hours of Data:	744
Minimum Hourly Value:	8.4 °C	on July 23 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	11.7 °C	on July 1	Hours of Calibration:	0
Monthly Average:	17.9 °C		Operational Uptime:	100.0

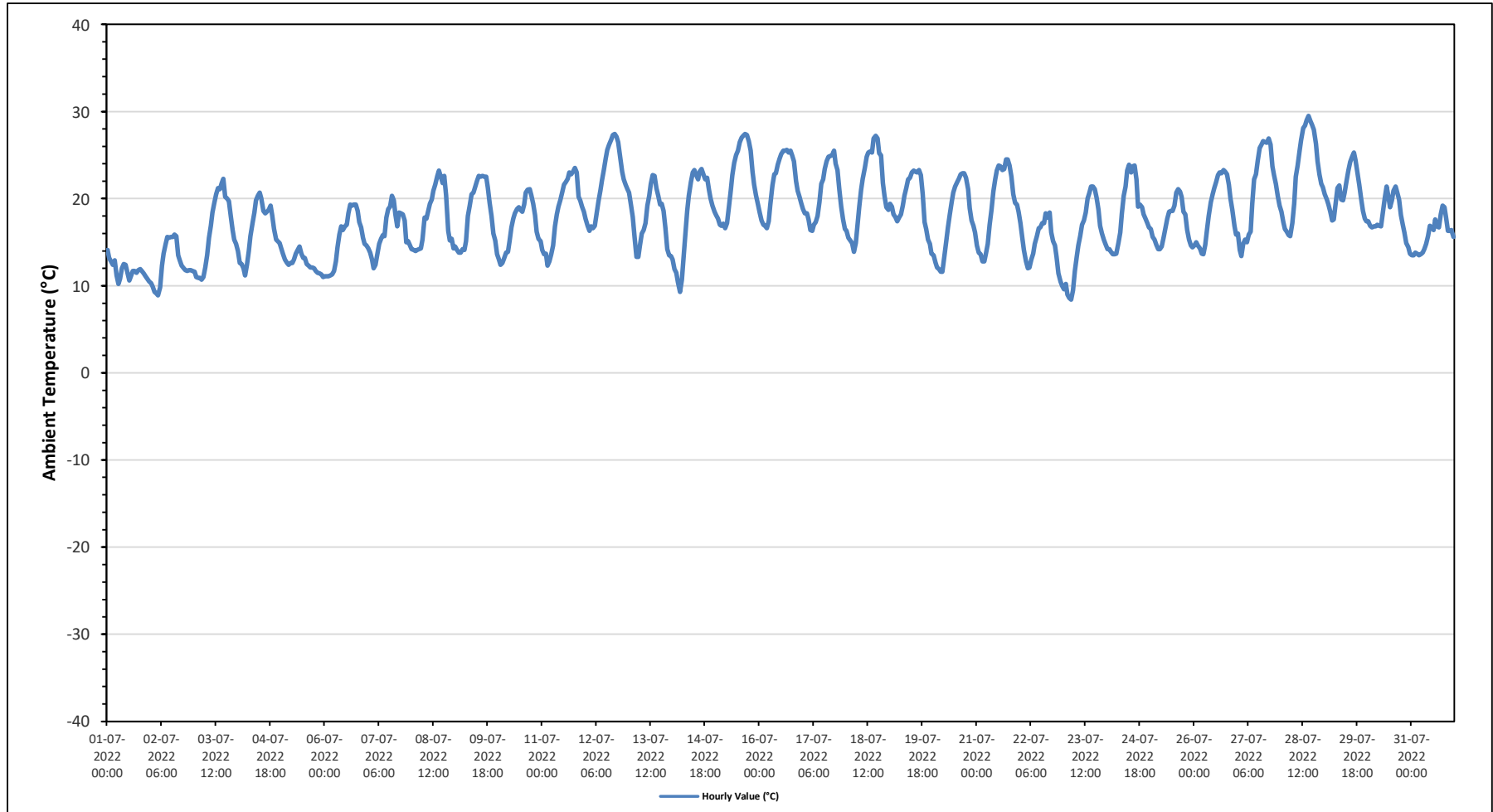
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	14.1	13.2	12.8	12.4	12.9	11.2	10.2	10.8	12	12.5	12.4	11.5	10.6	11.1	11.7	11.7	11.5	11.8	11.9	11.7	11.4	11.1	10.8	10.5	10.2	14.1	11.7
Jul 2	10.3	9.9	9.3	9.1	8.9	9.8	12.3	13.7	14.7	15.6	15.5	15.6	15.6	15.9	15.7	13.5	12.9	12.3	12	11.8	11.7	11.8	11.8	11.7	8.9	15.9	12.6
Jul 3	11.6	11	10.9	10.9	10.7	11	12.1	13.5	15.5	16.9	18.4	19.5	20.5	21.2	21.1	21.8	22.3	20.2	20	19.7	18	16.4	15.3	14.8	10.7	22.3	16.4
Jul 4	14	12.6	12.5	12	11.2	12.4	14	15.7	17.2	18.4	19.8	20.3	20.7	20	18.6	18.3	18.5	18.7	19.2	18.1	16.5	15.3	15.1	14.9	11.2	20.7	16.4
Jul 5	14.2	13.6	13	12.6	12.4	12.6	12.6	13	13.7	14.1	14.5	13.7	13.2	13.2	12.5	12.3	12.1	12.1	12	11.7	11.5	11.4	11.3	11	11.0	14.5	12.7
Jul 6	11.1	11.1	11.1	11.2	11.3	11.7	12.8	14.4	15.9	16.8	16.4	16.8	17	18.3	19.3	19.2	19.3	19.3	18.6	17.3	16.7	15.5	14.8	14.6	11.1	19.3	15.4
Jul 7	14.3	13.8	13	12	12.4	13.6	14.8	15.4	15.8	15.7	17.8	18.8	19.1	20.3	19.8	18.2	16.8	18.4	18.3	18.2	17.5	15	15.1	14.6	12.0	20.3	16.2
Jul 8	14.2	14.1	14	14.1	14.2	14.3	15.3	17.8	17.7	18.5	19.4	19.9	20.9	21.6	22.6	23.2	22.5	21.8	22.6	20.4	16.3	15.2	15.4	14.3	14.0	23.2	17.9
Jul 9	14.5	14.1	13.8	13.8	14.2	14.1	15.1	18	19.2	20.5	20.7	21.4	22	22.6	22.5	22.6	22.5	22.5	21.3	19.5	18	16	15.2	13.6	13.6	22.6	18.2
Jul 10	13.1	12.4	12.6	13.1	13.8	13.9	15.1	16.7	17.7	18.3	18.8	19	18.7	18.5	19.3	20.7	21	21.1	20.4	19.4	18.1	16.2	15.4	15.1	12.4	21.1	17.0
Jul 11	14.1	13.6	13.7	12.3	12.8	13.6	14.6	16.8	18.2	19.1	19.8	20.7	21.6	21.9	22.3	23	22.8	23.1	23.5	23	20.2	19.8	19.1	18.5	12.3	23.5	18.7
Jul 12	17.7	16.9	16.3	16.8	16.6	16.9	18.1	19.7	20.9	22.1	23.3	24.6	25.6	26.2	26.8	27.3	27.4	27.1	26.5	24.9	23.1	22.2	21.6	21.1	16.3	27.4	22.1
Jul 13	20.7	19.3	17.9	15.5	13.3	13.3	14.6	16	16.4	17.2	19.2	20.3	21.7	22.7	22.6	21.2	20.3	19.3	19.4	18.6	16.6	14.2	13.5	13.4	13.3	22.7	17.8
Jul 14	13	11.9	11.5	10.4	9.3	10.7	13.1	15.9	18.6	20.3	21.9	23	23.3	22.7	22.2	23.1	23.4	22.7	22.2	22.4	21	20	19.2	18.5	9.3	23.4	18.3
Jul 15	18.1	17.7	17	16.9	17.1	16.6	17.2	19	20.9	22.7	24.1	25	25.5	26.5	27	27.2	27.4	27.3	26.6	25.5	23.1	21.6	20.4	19.4	16.6	27.4	22.1
Jul 16	18.4	17.5	17	16.9	16.6	17.4	19.3	21.5	22.8	22.9	23.9	24.6	25.1	25.5	25.5	25.6	25.3	25.5	25	24.3	22	20.9	20.2	19.4	16.6	25.6	21.8
Jul 17	18.8	18.3	18.3	17.6	16.4	16.3	17	17.3	18	19.6	21.7	22.2	23.4	24.3	24.8	24.9	25	25.5	24	23.3	21	19.1	17.6	16.5	16.3	25.5	20.5
Jul 18	16.3	15.5	15.2	14.9	13.9	14.9	16.8	19.1	21	22.3	23.5	24.8	25.3	25.4	25.3	26.9	27.2	26.9	25.2	25	21.8	20.3	19	18.7	13.9	27.2	21.1
Jul 19	19.4	19.1	18.2	17.9	17.4	17.8	18.2	19.2	20.3	21.2	22.2	22.4	23	23.2	23.1	23	23.3	22.7	20.5	17.3	16.5	15.3	14.8	13.7	13.7	23.3	19.6
Jul 20	13.5	12.7	12.1	11.9	11.6	11.6	13.5	15.2	16.7	18.2	19.6	20.7	21.4	21.9	22.3	22.8	22.9	22.9	22.4	21.1	18.9	17.5	16.9	16.1	11.6	22.9	17.7
Jul 21	14.6	13.8	13.6	12.8	12.8	13.7	14.8	17	18.7	20.8	22.2	23.2	23.8	23.7	23.3	23.4	24.5	24.5	23.8	22.5	20.5	19.3	18.5	12.8	24.5	19.4	19.4
Jul 22	17.2	15.5	14.1	12.8	12	12.1	13	13.7	14.8	15.7	16.6	16.7	17.2	17.2	18.3	17.8	18.4	16.1	15.1	14.6	13.3	11.4	10.5	10	10.0	18.4	14.8
Jul 23	9.6	10.2	9	8.6	8.4	9.5	11.7	13.3	14.6	15.7	17	17.5	18.4	20	20.6	21.4	21.4	21.1	20.1	18.7	16.9	16	15.3	14.8	8.4	21.4	15.4
Jul 24	14.2	14.2	13.9	13.6	13.6	13.7	14.9	16.1	18.3	20.3	21.4	23.2	23.9	23	23.7	23.8	22.2	19.1	19.3	19	18.2	17.7	17.2	16.7	13.6	23.9	18.4
Jul 25	16.5	15.6	15.3	14.7	14.2	14.2	14.5	15.5	16.6	17.7	18.5	18.6	18.6	19.2	20.7	21.1	20.8	20.2	18.5	18.2	16.4	15.3	14.6	14.4	14.2	21.1	17.1
Jul 26	14.6	15	14.6	14.3	13.7	13.6	14.7	16.5	18	19.6	20.5	21.2	21.9	22.7	23	22.9	23.3	23.1	22.8	21.6	20	18.7	16.9	15.9	13.6	23.3	18.7
Jul 27	16	14.1	13.4	14.8	15.3	15	15.9	16.2	19.4	22.2	22.8	24.4	25.8	26.2	26.6	26.5	26.4	26.9	26.2	23.7	22.7	21.7	20.3	19.2	13.4	26.9	20.9
Jul 28	18.5	17.3	16.5	16.2	15.8	15.7	17.2	19.4	22.5	23.8	25.4	26.7	28.1	28.4	29	29.5	28.9	28.5	27.9	26.3	24.3	22.8	21.7	21.3	15.7	29.5	23.0
Jul 29	20.5	19.9	19.3	18.5	17.5	17.6	19.4	21.2	21.5	19.9	19.8	20.7	22	23.2	24.2	24.8	25.3	24.4	23	21.6	20	18.6	17.7	17.4	17.4	25.3	20.8
Jul 30	17.4	16.9	16.7	16.8	16.8	17	16.9	16.8	18.2	20	21.4	20.4	19	19.8	20.9	21.4	20.6	19.9	18.1	17	16.1	14.9	14.4	13.7	13.7	21.4	18.0
Jul 31	13.5	13.5	13.8	13.7	13.5	13.6	13.8	14.2	14.8	15.7	16.9	16.7	16.4	17.6	16.8	16.7	18.2	19.2	19	17.8	16.3	16.3	16.4	15.6	13.5	19.2	15.8
Diurnal Maximum	20.7	19.9	19.3	18.5	17.5	17.8	19.4	21.5	22.8	23.8	25.4	26.7	28.1	28.4	29.0	29.5	28.9	28.5	27.9	26.3	24.3	22.8	21.7	21.3			
Diurnal Average	15.3	14.7	14.2	13.8	13.6	13.9	15.0	16.4	17.8	18.8	19.9	20.5	20.9	21.4	21.7	21.8	21.8	21.4	20.8	19.8	18.2	17.0	16.3	15.7			

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for AT - St. Lina Site**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

### Summary of Hourly Averages

#### STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	25.1 °C	on July 21 at hour 16	Hours in Service:	744
Maximum Daily Value:	23.7 °C	on July 2	Hours of Data:	744
Minimum Hourly Value:	21.5 °C	on July 17 at hour 23	Hours of Missing Data:	0
Minimum Daily Value:	21.8 °C	on July 29	Hours of Calibration:	0
Monthly Average:	22.5 °C		Operational Uptime:	100.0

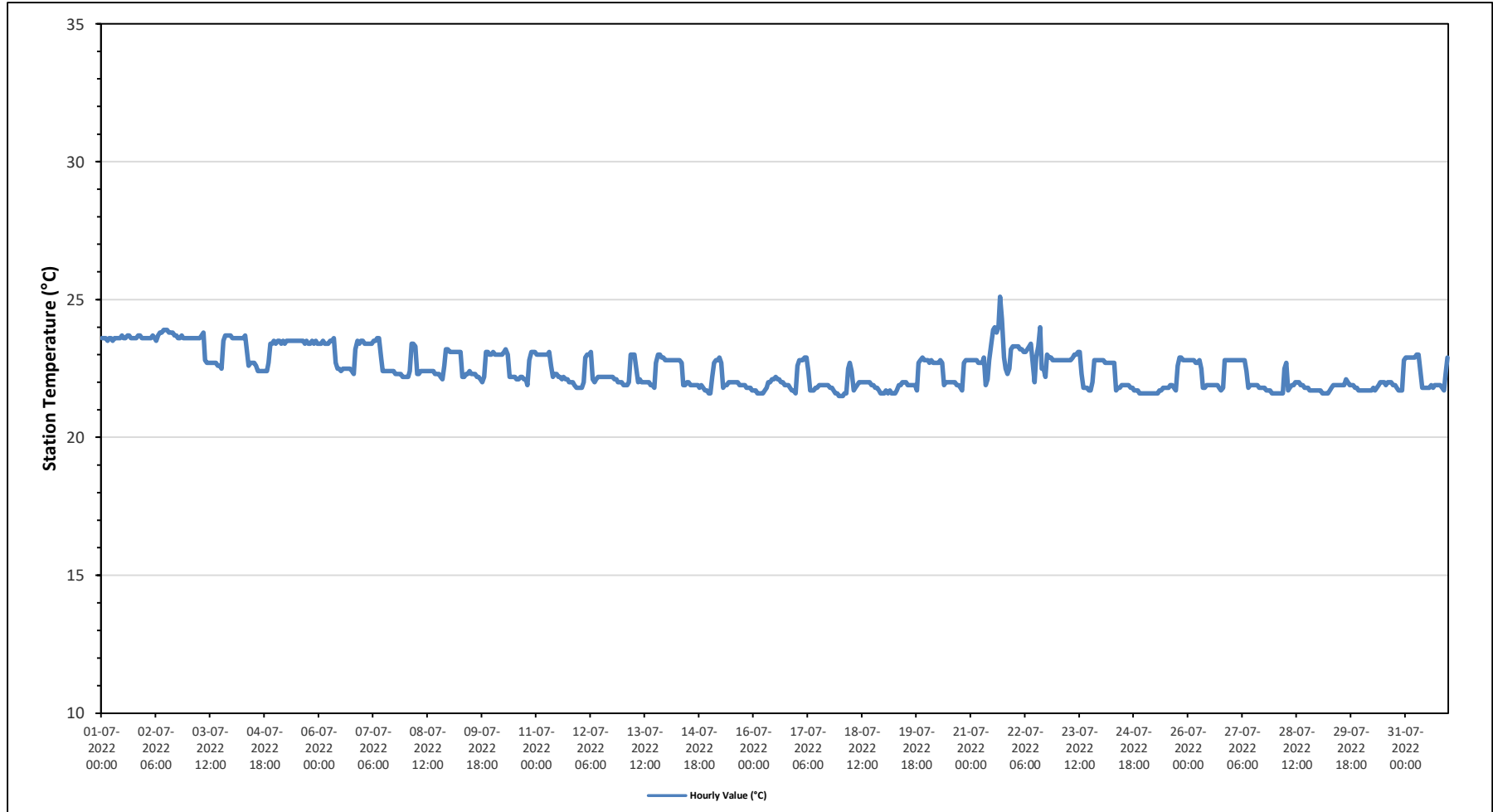
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	23.6	23.6	23.6	23.5	23.6	23.6	23.5	23.6	23.6	23.6	23.6	23.7	23.6	23.7	23.7	23.6	23.7	23.6	23.6	23.6	23.7	23.7	23.6	23.6	23.5	23.7	23.6
Jul 2	23.6	23.6	23.6	23.6	23.7	23.6	23.5	23.7	23.8	23.8	23.9	23.9	23.9	23.8	23.8	23.8	23.7	23.7	23.6	23.6	23.7	23.6	23.6	23.6	23.5	23.9	23.7
Jul 3	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.7	23.8	22.8	22.7	22.7	22.7	22.7	22.7	22.6	22.6	22.5	23.5	23.7	23.7	23.7	23.7	22.5	23.8	23.2
Jul 4	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.7	23.1	22.6	22.7	22.7	22.7	22.6	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	23.7	23.0
Jul 5	23.4	23.5	23.5	23.4	23.5	23.4	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.4	23.5	23.4	23.4	23.5	23.4	23.5	23.4	23.4	23.5	23.5
Jul 6	23.4	23.4	23.5	23.4	23.4	23.4	23.5	23.5	23.6	22.7	22.5	22.5	22.4	22.5	22.5	22.5	22.5	22.5	22.4	22.3	23.2	23.5	23.4	23.5	22.3	23.6	23.0
Jul 7	23.5	23.4	23.4	23.4	23.4	23.4	23.5	23.5	23.6	23.6	22.9	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.3	22.3	22.3	22.3	22.3	22.2	22.2	23.6	22.8
Jul 8	22.2	22.2	22.4	23.4	23.4	23.3	22.3	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.3	22.3	22.3	22.3	22.2	22.1	22.6	23.2	23.2	22.1	23.4	22.5
Jul 9	23.1	23.1	23.1	23.1	23.1	23.1	23.1	22.2	22.2	22.3	22.3	22.4	22.3	22.3	22.3	22.2	22.2	22.2	22.1	22.0	22.2	23.1	23.0	23.0	22.0	23.1	22.6
Jul 10	23.1	23.0	23.0	23.0	23.0	23.0	23.1	23.2	23.0	22.2	22.2	22.2	22.2	22.1	22.1	22.2	22.2	22.1	22.1	21.9	22.8	23.1	23.1	23.1	21.9	23.2	22.6
Jul 11	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	22.6	22.2	22.3	22.3	22.2	22.2	22.1	22.2	22.1	22.1	22.0	22.0	21.9	21.8	21.8	21.8	21.8	23.1	22.4
Jul 12	21.8	21.8	22.0	22.9	23.0	23.0	23.1	22.1	22.0	22.1	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.1	22.1	22.0	21.9	21.8	21.8	23.1	22.2
Jul 13	21.9	21.9	21.9	22.0	23.0	23.0	23.0	22.5	22.0	22.1	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.8	22.7	23.0	23.0	22.9	22.9	22.8	21.8	23.0	22.3
Jul 14	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.7	21.9	21.9	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.8	21.9	21.8	21.7	21.7	21.6	21.6	22.8	22.2
Jul 15	21.6	22.2	22.7	22.8	22.8	22.9	22.7	21.8	21.9	21.9	22.0	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.9	21.8	21.8	21.8	21.8	21.7	21.6	22.9	22.1
Jul 16	21.7	21.7	21.6	21.6	21.6	21.6	21.7	21.8	22.0	22.0	22.1	22.1	22.2	22.1	22.1	22.0	22.0	21.9	21.9	21.9	21.8	21.7	21.7	21.6	21.6	22.2	21.9
Jul 17	22.6	22.8	22.8	22.8	22.9	22.9	22.4	21.7	21.7	21.7	21.8	21.8	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.7	21.6	21.6	21.5	21.5	22.9	22.1	
Jul 18	21.5	21.5	21.6	21.6	22.5	22.7	22.4	21.7	21.8	21.9	22.0	22.0	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.8	21.7	21.6	21.6	21.6	21.5	22.7	21.9
Jul 19	21.6	21.7	21.6	21.7	21.6	21.6	21.6	21.7	21.9	21.9	22.0	22.0	22.0	21.9	21.9	21.9	21.9	21.9	21.7	22.7	22.8	22.9	22.8	22.8	21.6	22.9	22.0
Jul 20	22.8	22.7	22.8	22.7	22.7	22.7	22.7	22.8	22.7	21.9	22.0	22.0	22.0	22.0	22.0	22.0	21.9	21.9	21.8	21.7	22.7	22.8	22.8	22.8	21.7	22.8	22.4
Jul 21	22.8	22.8	22.8	22.8	22.7	22.7	22.7	22.9	21.9	22.1	22.8	23.4	23.9	24.0	23.8	24.0	25.1	24.3	22.9	22.5	22.3	22.5	23.2	23.3	21.9	25.1	23.1
Jul 22	23.3	23.3	23.3	23.2	23.2	23.1	23.1	23.2	23.3	23.4	22.7	22.0	22.9	23.3	24.0	22.5	22.5	22.2	23.0	22.9	22.9	22.8	22.8	22.8	22.0	24.0	23.0
Jul 23	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.9	23.0	23.0	23.1	23.1	22.3	21.8	21.8	21.8	21.7	21.7	22.0	22.8	22.8	22.8	22.8	21.7	23.1	22.6
Jul 24	22.8	22.8	22.7	22.7	22.7	22.7	22.7	21.7	21.8	21.8	21.8	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.7	21.7	21.7	21.6	21.6	21.6	21.6	22.8	22.1
Jul 25	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.7	21.7	21.8	21.8	21.8	21.8	21.9	21.9	21.8	21.7	22.6	22.9	22.9	22.8	22.8	22.8	21.6	22.9	22.0
Jul 26	22.8	22.8	22.8	22.8	22.7	22.7	22.8	22.5	21.8	21.8	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.8	21.7	21.8	22.8	22.8	22.8	22.8	21.7	22.8	22.3
Jul 27	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.4	21.8	21.9	21.9	21.9	21.9	21.9	21.8	21.8	21.8	21.8	21.7	21.7	21.7	21.6	21.6	21.6	22.8	22.2
Jul 28	21.6	21.6	21.6	21.6	21.6	22.5	22.7	21.7	21.8	21.9	22.0	22.0	22.0	21.9	21.9	21.8	21.8	21.8	21.7	21.7	21.7	21.7	21.7	21.7	21.6	22.7	21.8
Jul 29	21.7	21.7	21.6	21.6	21.6	21.6	21.7	21.8	21.9	21.9	21.9	21.9	21.9	21.9	21.9	22.1	22.0	21.9	21.9	21.9	21.8	21.8	21.7	21.7	21.6	22.1	21.8
Jul 30	21.7	21.7	21.7	21.7	21.7	21.7	21.8	21.7	21.8	21.9	22.0	22.0	22.0	21.9	22.0	22.0	22.0	21.9	21.9	21.8	21.7	21.7	21.7	22.8	21.7	22.8	21.9
Jul 31	22.9	22.9	22.9	22.9	22.9	23.0	23.0	22.4	21.8	21.8	21.8	21.8	21.8	21.9	21.8	21.9	21.9	21.9	21.9	21.8	21.7	22.3	22.9	21.7	23.0	22.3	22.3
Diurnal Maximum	23.6	23.6	23.6	23.6	23.7	23.6	23.6	23.7	23.8	23.8	23.9	23.9	23.9	24.0	24.0	24.0	25.1	24.3	23.6	23.6	23.7	23.7	23.7	23.7	23.7	23.7	23.7
Diurnal Average	22.6	22.6	22.7	22.7	22.8	22.8	22.8	22.6	22.5	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.2	22.2	22.3	22.5	22.5	22.5	22.6	22.6	22.6	22.6

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for ST - St. Lina Site**





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**St. Lina Site - July 2022**

**Summary of Hourly Averages**

**PRECIPITATION in mm**

Maximum Hourly Value:	6.2 mm on July 7 at hour 21	Hours in Service:	744
Maximum Daily Value:	9.6 mm on July 5	Hours of Data:	743
Minimum Hourly Value:	0.0 mm on July 1 at hour 0	Hours of Missing Data:	0
Minimum Daily Value:	0.0 mm on July 3	Hours of Calibration:	1
Monthly Total:	30.7 mm	Operational Uptime:	100.0

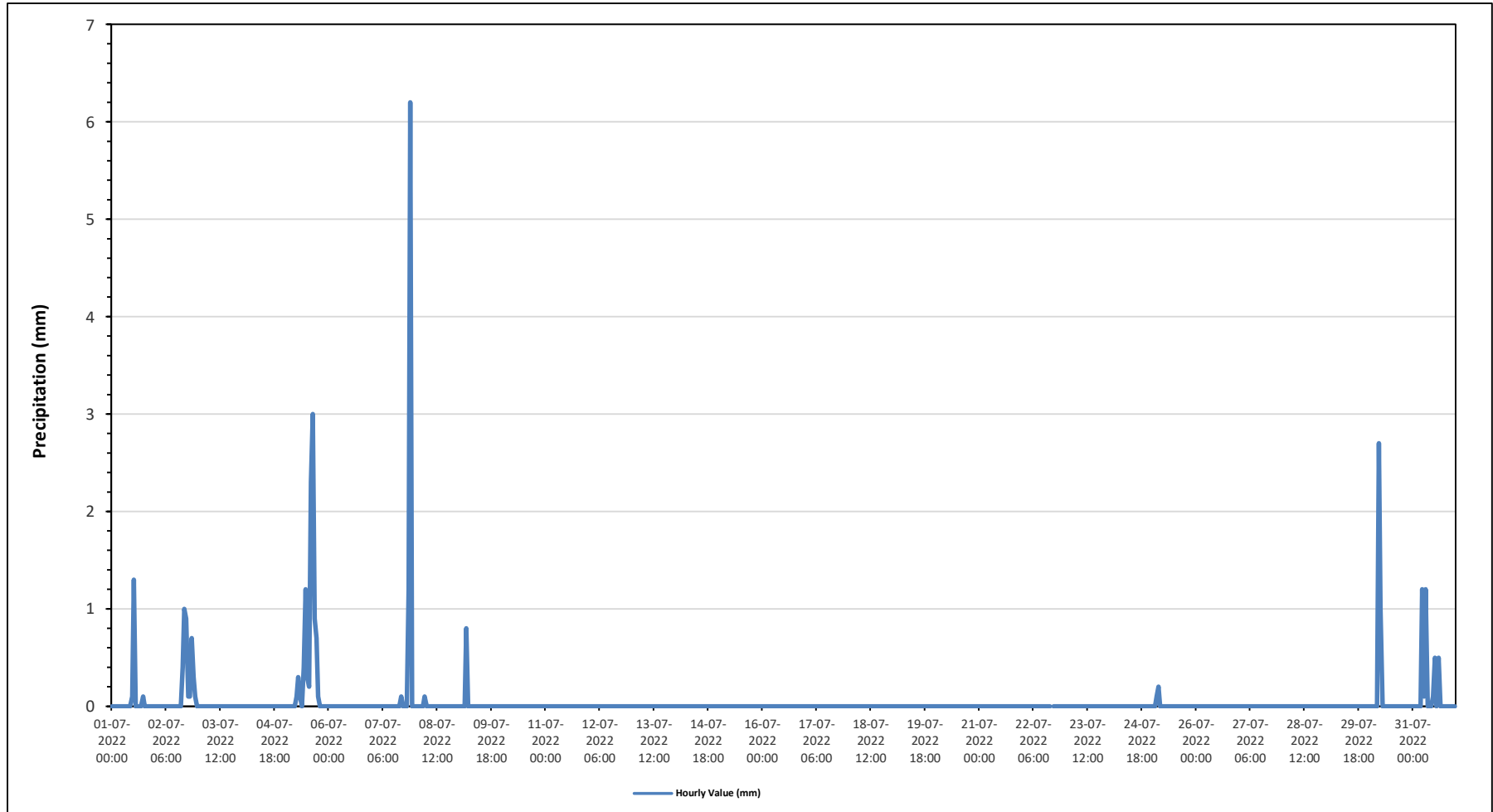
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Total					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23				
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0.1	1.3	0	0	0	0	0.1	0	0	0	0	0	0	0.0	1.3	1.5				
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	1	0.9	0.1	0.1	0.7	0.3	0.1	0	0.0	1.0	3.6				
Jul 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 5	0	0	0	0	0	0	0.1	0.3	0.1	0	0.4	1.2	0.3	0.2	2.3	3	0.9	0.7	0.1	0	0	0	0	0	0.0	3.0	9.6				
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	1.2	6.2	0	0	0.0	6.2	7.5				
Jul 8	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	0.1				
Jul 9	0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.8	0.8				
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 25	0	0	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	0.3				
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0.0				
Jul 30	0	0	0	0	0	2.7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	2.7	3.7				
Jul 31	0	0	0	0	0	1.2	0.1	1.2	0	0	0	0.1	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0.0	1.2	3.6				
Diurnal Maximum	0.0	0.0	0.1	0.2	0.8	2.7	1.0	1.2	0.1	0.0	0.4	1.2	1.3	0.2	2.3	3.0	1.0	0.9	0.1	0.1	1.2	6.2	0.1	0.0							
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.0							
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance														
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure						
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																						

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Timeseries Chart of Hourly Average for Precipitation - St. Lina Site**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

### Summary of Hourly Averages

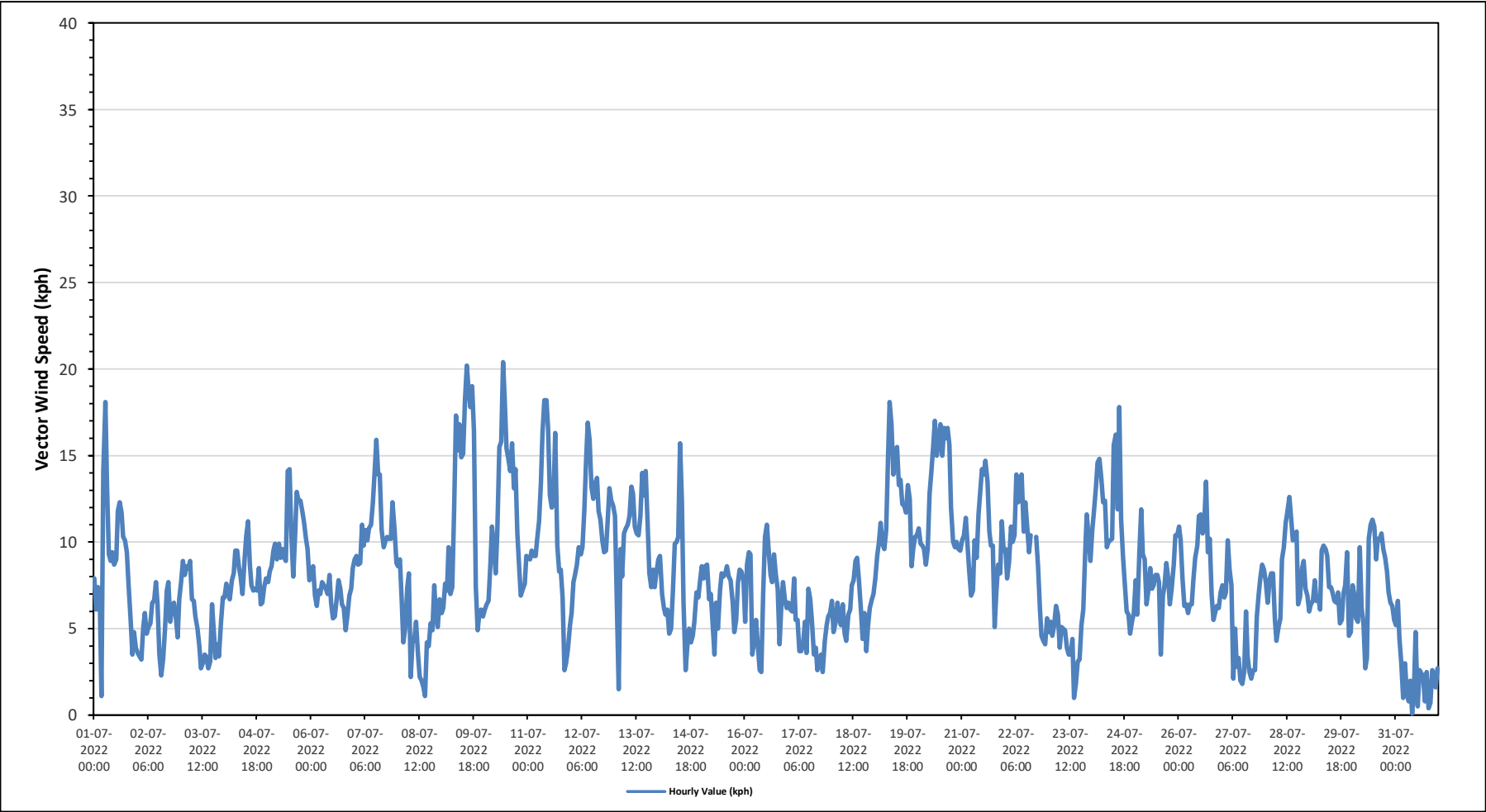
#### VECTOR WIND SPEED (VWS) in km/hr

Maximum Hourly Value:	20.4 kph on July 10 at hour 10	Hours in Service:	744
Maximum Daily Value:	12.6 kph on July 20	Hours of Data:	742
Minimum Hourly Value:	0.1 kph on July 31 at hour 9	Hours of Missing Data:	0
Minimum Daily Value:	1.2 kph on July 31	Hours of Calibration:	2
Monthly Average:	1.9 kph	Operational Uptime:	100.0

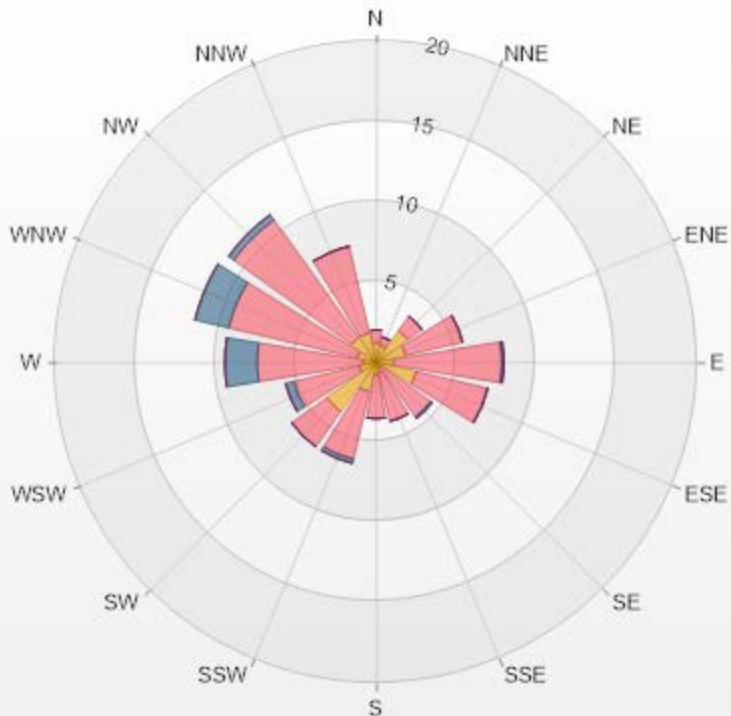
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	7.9	6.1	7.4	6.6	1.1	14.1	18.1	13.3	9.3	8.9	9.4	8.7	9.0	11.8	12.3	11.7	10.3	10.1	9.4	7.4	5.6	3.5	4.8	3.9	1.1	18.1	6.7
Jul 2	3.6	3.4	3.2	5.1	5.9	4.7	5.1	5.3	6.5	6.6	7.7	6.4	3.5	2.3	3.2	4.9	7.2	7.7	5.4	6.2	6.5	5.7	4.5	6.7	2.3	7.7	1.5
Jul 3	7.7	8.9	8.1	8.6	8.5	8.9	6.7	6.6	5.7	5.0	4.0	2.7	3.0	3.5	3.4	2.7	3.1	6.4	5.0	3.3	4.1	3.4	5.4	6.8	2.7	8.9	3.9
Jul 4	6.8	7.6	7.0	6.7	7.8	8.2	9.5	9.5	8.5	8.0	7.0	9.0	10.3	11.2	8.7	7.5	7.2	7.3	7.2	8.5	6.4	6.5	7.4	7.9	6.4	11.2	7.5
Jul 5	7.7	8.3	8.6	9.5	9.9	9.0	9.9	9.1	9.6	9.1	8.9	14.1	14.2	10.3	8.0	10.4	12.9	12.4	12.4	11.8	11.1	10.2	9.6	7.8	7.7	14.2	9.5
Jul 6	8.2	8.6	6.9	6.3	7.2	7.0	7.7	7.5	7.3	7.0	8.1	6.5	5.6	5.7	6.7	7.8	7.3	6.4	6.2	4.9	5.8	6.9	7.3	8.5	4.9	8.6	5.9
Jul 7	9.0	9.2	8.7	8.8	11.0	9.8	10.7	10.1	10.8	11.0	12.3	13.9	15.9	13.9	13.9	10.7	9.7	10.1	10.3	10.2	10.2	12.3	10.7	8.8	8.7	15.9	10.6
Jul 8	8.6	9.0	6.6	4.2	5.0	7.4	8.2	2.2	4.3	4.3	5.4	3.4	2.2	2.0	1.6	1.1	4.2	4.0	5.3	4.9	7.5	5.8	5.1	6.7	1.1	9.0	2.0
Jul 9	5.9	6.2	7.6	7.2	9.7	7.0	7.4	11.9	17.3	15.3	16.8	14.9	15.1	18.2	20.2	18.7	17.8	19.0	16.4	7.4	4.9	6.0	6.1	5.7	4.9	20.2	11.4
Jul 10	6.1	6.4	6.6	8.7	10.9	9.8	8.2	10.5	15.5	15.8	20.4	18.3	15.4	14.8	14.1	15.7	13.1	14.2	10.5	8.5	6.9	7.3	7.6	9.2	6.1	20.4	11.0
Jul 11	9.1	9.0	9.5	9.2	9.2	10.2	11.2	13.4	16.3	18.2	18.2	16.6	12.7	12.0	12.2	16.3	9.8	8.3	8.4	6.8	2.6	3.0	3.8	5.2	2.6	18.2	9.9
Jul 12	5.9	7.7	8.2	8.7	9.7	9.3	9.7	11.8	14.8	16.9	15.9	13.2	12.5	13.4	13.7	11.8	11.3	10.1	9.4	9.5	11.4	13.1	12.4	12.1	5.9	16.9	10.8
Jul 13	11.5	6.5	1.5	9.6	8.0	10.5	10.8	11.0	11.5	13.2	12.8	10.9	10.5	10.4	11.5	14.0	12.7	14.1	11.2	8.2	7.4	8.4	7.4	8.3	1.5	14.1	8.4
Jul 14	9.0	9.2	7.0	6.2	5.8	6.1	4.7	5.0	7.2	9.9	10.0	10.3	15.7	12.3	6.5	2.6	4.1	5.0	4.2	4.6	5.4	7.1	6.8	7.7	2.6	15.7	6.2
Jul 15	8.6	7.9	8.6	8.7	6.7	7.0	5.3	3.5	6.5	5.0	7.2	8.2	8.0	8.2	8.6	8.0	7.8	6.5	4.8	5.5	7.7	8.4	8.3	7.7	3.5	8.7	5.7
Jul 16	5.4	8.7	9.4	9.3	3.5	4.3	5.5	4.0	2.6	2.5	7.0	10.3	11.0	9.5	8.1	7.7	9.3	8.1	7.3	4.1	6.4	7.7	6.7	6.2	2.5	11.0	5.0
Jul 17	6.5	6.1	6.0	7.9	5.5	5.5	3.7	3.7	4.1	5.4	3.6	7.3	6.7	5.5	3.5	3.9	2.6	3.1	3.5	2.5	4.3	5.2	5.7	5.9	2.5	7.9	3.4
Jul 18	6.6	4.8	5.3	6.5	5.6	5.2	6.4	4.7	4.3	5.8	6.1	7.5	7.8	8.9	9.1	7.8	6.0	4.4	5.9	3.7	5.1	6.2	6.7	7.0	3.7	9.1	5.8
Jul 19	7.9	9.2	9.9	11.1	9.9	9.6	10.7	14.9	18.1	16.8	13.9	15.2	15.5	13.3	13.6	12.2	12.1	11.7	13.3	12.5	8.6	9.6	10.3	10.4	7.9	18.1	11.9
Jul 20	10.8	9.9	9.8	9.6	8.7	9.6	12.8	14.1	15.6	17.0	15.0	15.7	16.8	15.0	16.6	16.0	16.6	15.6	12.0	10.0	9.7	10.0	9.6	9.5	8.7	17.0	12.6
Jul 21	10.1	10.4	11.4	9.7	8.3	6.9	7.2	10.1	9.1	11.6	12.8	14.2	13.9	14.7	13.5	10.6	9.8	9.8	5.1	7.0	8.7	8.2	11.2	9.5	5.1	14.7	9.6
Jul 22	9.6	7.9	8.8	10.9	10.0	10.4	13.9	12.3	12.5	13.9	10.6	12.3	10.9	9.4	10.4	C	C	10.3	8.6	6.2	4.6	4.3	4.1	5.6	4.1	13.9	8.2
Jul 23	4.8	5.4	4.6	5.2	6.3	5.8	3.9	5.1	5.0	4.9	3.9	3.5	3.5	4.4	1.0	1.8	3.1	3.2	5.2	6.1	9.3	11.6	10.3	8.9	1.0	11.6	3.7
Jul 24	10.7	11.9	13.2	14.6	14.8	13.7	12.3	12.4	9.7	10.0	10.1	10.2	15.6	16.2	11.9	17.8	11.3	9.2	7.8	6.0	5.8	4.7	5.4	5.9	4.7	17.8	7.2
Jul 25	7.8	5.8	9.4	11.9	9.3	9.0	6.4	7.1	8.5	7.3	7.5	8.1	8.1	7.7	3.5	6.9	7.5	8.8	7.9	6.4	7.3	8.7	10.4	10.4	3.5	11.9	7.2
Jul 26	10.9	10.1	7.9	6.3	6.4	5.9	6.4	6.4	7.8	9.1	9.8	11.5	11.6	10.5	11.0	13.5	9.4	10.2	7.0	5.5	5.9	6.3	6.2	7.1	5.5	13.5	7.5
Jul 27	7.5	6.8	7.1	10.1	8.4	7.5	2.1	5.0	2.8	3.3	2.0	1.8	2.5	6.0	3.4	2.5	2.1	2.6	2.6	5.7	7.0	7.9	8.7	8.4	1.8	10.1	2.5
Jul 28	7.7	6.5	7.8	8.2	5.6	4.3	5.1	5.6	9.0	9.7	11.1	11.7	12.6	11.3	10.1	10.2	10.6	6.4	6.8	8.5	8.9	7.3	6.9	4.3	12.6	8.3	
Jul 29	6.0	6.4	6.6	7.8	6.6	6.8	6.1	9.5	9.8	9.6	9.2	7.4	7.4	7.1	6.6	6.5	7.1	5.3	5.5	7.0	7.5	9.4	4.6	4.8	4.6	9.8	3.0
Jul 30	7.5	7.0	5.6	5.4	9.7	6.2	5.3	2.7	3.3	10.2	11.0	11.3	10.9	9.0	10.2	10.1	10.5	9.6	9.1	8.3	7.1	6.5	6.3	5.5	2.7	11.3	4.2
Jul 31	5.2	6.6	4.4	3.0	1.0	3.0	1.2	0.8	2.0	0.1	1.5	4.8	0.5	2.6	2.4	2.3	0.8	2.5	0.4	0.7	2.6	2.4	1.6	2.7	0.1	6.6	1.2
Diurnal Maximum	12	12	13	15	15	14	18	15	18	18	20	18	17	18	20	19	18	19	16	13	11	13	12	12			
Diurnal Average	7.8	7.7	7.5	8.1	7.7	7.9	7.8	8.0	8.8	9.4	9.6	10.0	9.9	9.8	9.1	9.1	8.6	8.6	7.5	6.7	6.8	7.3	7.2	7.3			
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance										
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure		
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																		
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																											

*Timeseries Chart of Hourly Average for VWS - St. Lina Site*



Wind: St. Lina Monitor: WDS [kph] Monthly: 07-2022 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 2.16% Valid Data: 99.73%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	1.21	0.81	0	0	0	2.02
NNE	1.08	0.54	0	0	0	1.62
NE	2.43	1.08	0	0	0	3.51
ENE	1.89	3.64	0	0	0	5.53
E	1.08	6.74	0.13	0	0	7.95
ESE	2.56	4.58	0	0	0	7.14
SE	0.4	3.77	0.13	0	0	4.3
SSE	0.67	3.1	0	0	0	3.77
S	0.81	2.7	0	0	0	3.51
SSW	1.89	4.31	0.27	0	0	6.47
SW	3.77	2.7	0	0	0	6.47
WSW	1.08	4.18	0.54	0	0	5.8
W	0.81	6.6	2.02	0	0	9.43
WNW	1.21	8.22	2.16	0	0	11.59
NW	1.89	9.03	0.4	0	0	11.32
NNW	1.89	5.53	0	0	0	7.42
Summary	24.67	67.53	5.65	0	0	97.85



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% Icon Classes (kph)

25

1.8-6.0

68

5.0-15.0

6

15.0-29.0

0

29.0-39.0

0

>39.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

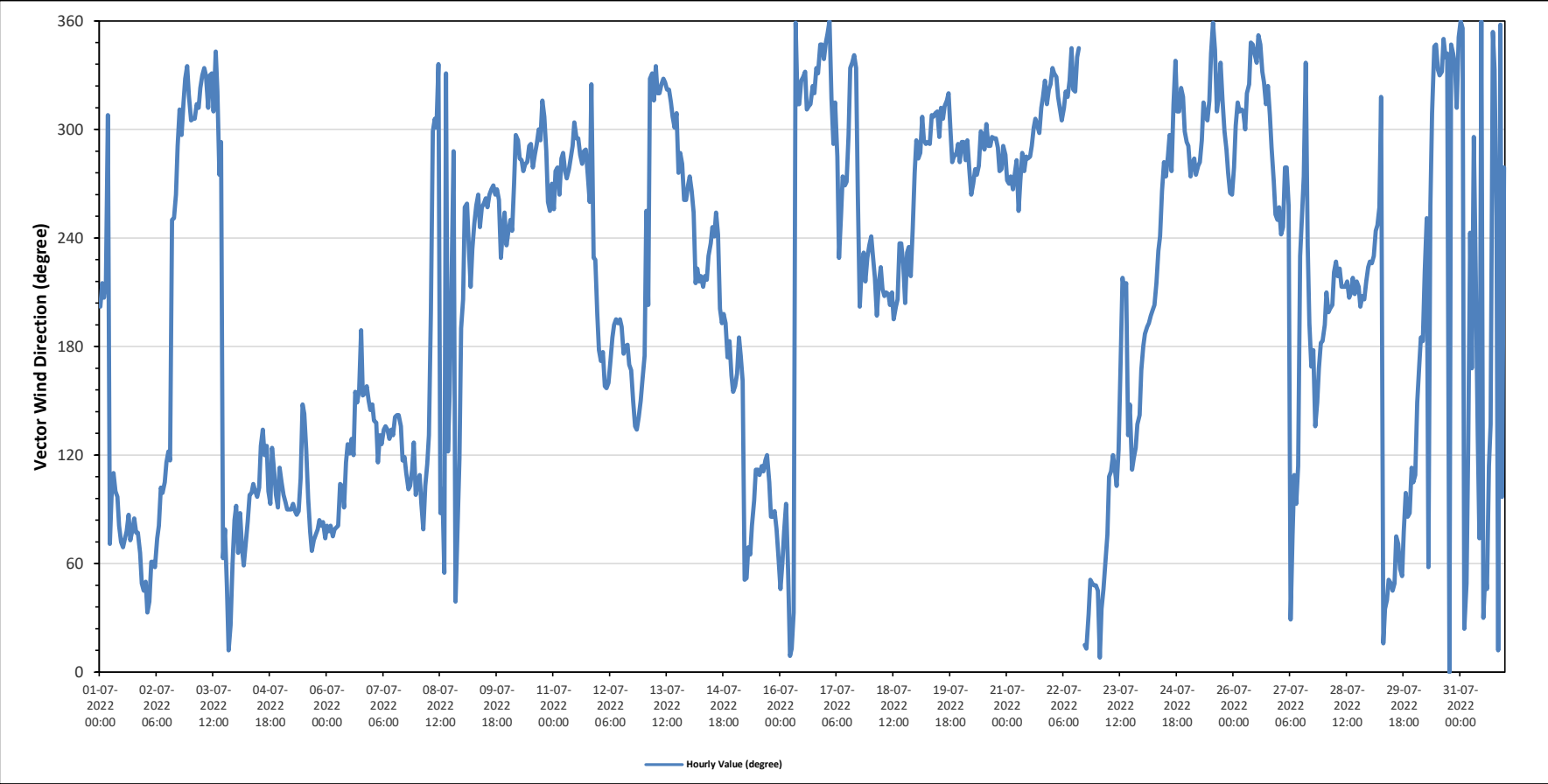
St. Lina Site - July 2022

Summary of Hourly Averages

WIND DIRECTION (VWD) in sector

Monthly Average: 277 (W) degree										Hours in Service: 744																	
										Hours of Data: 742																	
										Hours of Missing Data: 0																	
										Hours of Calibration: 2																	
										Operational Uptime: 100.0																	
Day	Hourly Period Starting at (MST)																								Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant	
Jul 1	SSW	SSW	SSW	SW	NW	ENE	E	ESE	E	E	E	ENE	ENE	ENE	ENE	E	ENE	ENE	E	ENE	ENE	ENE	NE	NE	90	E	
Jul 2	NE	NNE	NE	ENE	ENE	ENE	ENE	E	E	E	ESE	ESE	ESE	ESE	WSW	WSW	W	WNW	NW	WNW	NW	NNW	NNW	NW	27	NNE	
Jul 3	WNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NW	NNW	NNW	NW	NNW	NW	W	WNW	ENE	ENE	NE	NNE	NNE	ENE	E	336	NNW	
Jul 4	E	ENE	E	ENE	ENE	ENE	E	E	E	ESE	E	E	E	SE	SE	ESE	SE	E	E	ESE	ESE	E	E	ESE	99	E	
Jul 5	ESE	E	E	E	E	E	E	E	E	E	ESE	SE	SE	ESE	E	ENE	ENE	ENE	ENE	ENE	E	E	E	ENE	93	E	
Jul 6	E	ENE	E	ENE	ENE	E	E	ESE	ESE	E	ESE	SE	ESE	SE	ESE	SSE	SSE	SSE	S	SSE	SSE	SSE	SSE	SE	118	ESE	
Jul 7	SE	SE	SE	ESE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	ESE	ESE	ESE	E	ESE	ESE	SE	E	128	SE	
Jul 8	ESE	ESE	E	ENE	ESE	ESE	SE	SSW	WNW	NW	WNW	NNW	E	E	NE	NNW	ESE	SSE	SW	WNW	NE	ENE	ESE	S	106	ESE	
Jul 9	SSW	WSW	WSW	SW	SSW	SW	WSW	WSW	W	WSW	WSW	W	WSW	W	W	W	W	W	W	W	SW	WSW	WSW	SW	256	WSW	
Jul 10	WSW	WSW	WSW	W	WNW	WNW	WNW	W	W	W	WNW	WNW	WNW	W	WNW	WNW	WNW	WNW	NW	NW	WNW	WSW	WSW	W	284	WNW	
Jul 11	WSW	W	W	W	WNW	WNW	W	W	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	WSW	NW	SW	SSW	281	W	
Jul 12	S	S	S	SSE	SSE	SSE	S	S	S	SSW	S	SSW	S	S	S	S	SSE	SSE	SSE	SE	SE	SE	SSE	SSE	172	S	
Jul 13	S	WSW	SSW	NNW	NNW	NW	NNW	NW	NW	NNW	NW	NW	NW	NW	NW	NW	WNW	NW	WNW	W	W	W	W	W	305	WNW	
Jul 14	W	W	WSW	SSW	SW	SW	SSW	SW	SSW	SW	SSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	S	SSW	S	S	SSE	SSE	223	SW	
Jul 15	SSE	SSE	S	S	SSE	NE	NE	ENE	ENE	E	E	ESE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	E	ENE	ENE	ENE	109	ESE	
Jul 16	NE	ENE	ENE	E	ENE	N	NNE	NNE	N	NW	NW	NW	NNW	NNW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	349	NNW	
Jul 17	NNW	N	N	NW	WNW	NW	WNW	SW	WSW	W	W	WNW	NNW	NNW	NNW	NNW	NNW	W	SSW	SW	SW	SW	SW	SW	289	WNW	
Jul 18	WSW	SW	SW	SSW	SSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	W	220	SW
Jul 19	WNW	WNW	WNW	NW	WNW	WNW	WNW	WNW	NW	NW	NW	WNW	NW	NW	NW	NW	NW	NW	NW	WNW	W	WNW	WNW	WNW	W	300	WNW
Jul 20	WNW	WNW	W	WNW	W	W	W	W	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	W	WNW	WNW	288	WNW	
Jul 21	W	W	W	W	W	W	WSW	W	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NW	WNW	NW	NW	NW	NW	291	WNW	
Jul 22	NNW	NNW	NNW	NW	WNW	NW	NW	NW	NW	NNW	NW	NNW	NW	NNW	NNW	NNW	NNW	NNW	NNE	NNE	NE	NE	NE	NE	337	NNW	
Jul 23	NE	N	NE	NE	ENE	ENE	ESE	ESE	ESE	ESE	ESE	ESE	SSE	SW	SSW	SSW	SE	SE	ESE	ESE	ESE	SE	SE	SSE	116	ESE	
Jul 24	S	S	S	S	SSW	SSW	SSW	SSW	SW	WSW	W	W	WNW	WNW	W	NW	NNW	NW	NW	NW	NW	NW	WNW	WNW	251	WSW	
Jul 25	WNW	W	W	WNW	W	W	WNW	NW	NW	WNW	NW	NNW	N	NNW	NW	NNW	NW	NNW	NW	WNW	WNW	W	W	W	298	WNW	
Jul 26	W	WNW	NW	NW	NW	NW	WNW	NW	NW	NNW	NNW	NNW	NW	NW	NNW	NNW	NW	NW	NW	WNW	W	WSW	WSW	318	NW		
Jul 27	WSW	WSW	WSW	W	W	WSW	NNE	ENE	ESE	E	ESE	SW	WSW	W	NNW	SW	S	SSE	S	SE	SSE	SSE	S	S	218	SW	
Jul 28	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	211	SSW	
Jul 29	SW	SW	SW	WSW	WSW	WSW	NW	NNE	NE	NE	NE	NE	NE	NE	ENE	ENE	ENE	NE	ENE	E	E	E	ESE	ESE	58	ENE	
Jul 30	ESE	SSE	SSE	S	S	WSW	ENE	WSW	NW	NNW	NNW	NNW	NNW	NNW	NNW	N	NNW	NNW	N	NNW	NNW	NNW	NW	N	332	NNW	
Jul 31	N	N	NNE	NE	SE	WSW	SSE	WNW	SW	SE	ENE	N	NNE	NE	NE	ESE	SE	N	NNW	WSW	NNE	N	E	W	13	NNE	
<b>C</b>	Monthly Calibration						<b>S</b>	Daily Zero-Span Check						<b>Q</b>	Quality Assurance												
<b>K</b>	Collection Error						<b>N</b>	No Data (Machine Not in Service)						<b>Y</b>	Routine Maintenance						<b>P</b>	Power Failure					
<b>X</b>	Invalid Data (Machine Malfunction /Recovery)						<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																			
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																											

*Timeseries Chart of Hourly Average for VWD - St. Lina Site*





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED																												
Maximum Hourly Value: 20.4 kph on July 10 at hour 10													Hours in Service: 744															
Maximum Daily Value: 12.6 kph on July 20													Hours of Data: 742															
Minimum Hourly Value: 0.1 kph on July 31 at hour 9													Hours of Missing Data: 0															
Minimum Daily Value: 1.2 kph on July 31													Hours of Calibration: 2															
Monthly Average: 1.9 kph													Operational Uptime: 100															
WIND DIRECTION																												
Monthly Average: 277 (W) degree																												
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	7.9	6.1	7.4	6.6	1.1	14.1	18.1	13.3	9.3	8.9	9.4	8.7	9.0	11.8	12.3	11.7	10.3	10.1	9.4	7.4	5.6	3.5	4.8	3.9	1.1	18.1	6.7	
Jul 2	3.6	3.4	3.2	5.1	5.9	4.7	5.1	5.3	6.5	6.6	7.7	6.4	3.5	2.3	3.2	4.9	7.2	7.7	5.4	6.2	6.5	5.7	4.5	6.7	2.3	7.7	1.5	
Jul 3	7.7	8.9	8.1	8.6	8.5	8.9	6.7	6.6	5.7	5.0	4.0	2.7	3.0	3.5	3.4	2.7	3.1	6.4	5.0	3.3	4.1	3.4	5.4	6.8	2.7	8.9	3.9	
Jul 4	6.8	7.6	7.0	6.7	7.8	8.2	9.5	9.5	8.5	8.0	7.0	9.0	10.3	11.2	8.7	7.5	7.2	7.3	7.2	8.5	6.4	6.5	7.4	7.9	6.4	11.2	7.5	
Jul 5	7.7	8.3	8.6	9.5	9.9	9.0	9.9	9.1	9.6	9.1	8.9	14.1	14.2	10.3	8.0	10.4	12.9	12.4	12.4	11.8	11.1	10.2	9.6	7.8	7.7	14.2	9.5	
Jul 6	8.2	8.6	6.9	6.3	7.2	7.0	7.7	7.5	7.3	7.0	8.1	6.5	5.6	5.7	6.7	7.8	7.3	6.4	6.2	4.9	5.8	6.9	7.3	8.5	4.9	8.6	5.9	
Jul 7	9.0	9.2	8.7	8.8	11.0	9.8	10.7	10.1	10.8	11.0	12.3	13.9	15.9	13.9	13.9	10.7	9.7	10.1	10.3	10.2	10.2	12.3	10.7	8.8	8.7	15.9	10.6	
Jul 8	8.6	9.0	6.6	4.2	5.0	7.4	8.2	2.2	4.3	4.3	5.4	3.4	2.2	2.0	1.6	1.1	4.2	4.0	5.3	4.9	7.5	5.8	5.1	6.7	1.1	9.0	2.0	
Jul 9	5.9	6.2	7.6	7.2	9.7	7.0	7.4	11.9	17.3	15.3	16.8	14.9	15.1	18.2	20.2	18.7	17.8	19.0	16.4	7.4	4.9	6.0	6.1	5.7	4.9	20.2	11.4	
Jul 10	6.1	6.4	6.6	8.7	10.9	9.8	8.2	10.5	15.5	15.8	20.4	18.3	15.4	14.8	14.1	15.7	13.1	14.2	10.5	8.5	6.9	7.3	7.6	9.2	6.1	20.4	11.0	
Jul 11	9.1	9.0	9.5	9.2	9.2	10.2	11.2	13.4	16.3	18.2	18.2	16.6	12.7	12.0	12.2	16.3	9.8	8.3	8.4	6.8	2.6	3.0	3.8	5.2	2.6	18.2	9.9	
Jul 12	5.9	7.7	8.2	8.7	9.7	9.3	9.7	11.8	14.8	16.9	15.9	13.2	12.5	13.4	13.7	11.8	11.3	10.1	9.4	9.5	11.4	13.1	12.4	12.1	5.9	16.9	10.8	
Jul 13	11.5	6.5	1.5	9.6	8.0	10.5	10.8	11.0	11.5	13.2	12.8	10.9	10.5	10.4	11.5	14.0	12.7	14.1	11.2	8.2	7.4	8.4	7.4	8.3	1.5	14.1	8.4	
Jul 14	9.0	9.2	7.0	6.2	5.8	6.1	4.7	5.0	7.2	9.9	10.0	10.3	15.7	12.3	6.5	2.6	4.1	5.0	4.2	4.6	5.4	7.1	6.8	7.7	2.6	15.7	6.2	
Jul 15	8.6	7.9	8.6	8.7	7.0	5.3	3.5	6.5	5.0	7.2	8.2	8.0	8.2	8.6	8.0	7.8	6.5	4.8	5.5	7.7	8.4	8.3	7.7	3.5	8.7	5.7		
Jul 16	5.4	8.7	9.4	9.3	3.5	4.3	5.5	4.0	2.6	2.5	7.0	10.3	11.0	9.5	8.1	7.7	9.3	8.1	7.3	4.1	6.4	7.7	6.7	6.2	2.5	11.0	5.0	
Jul 17	6.5	6.1	6.0	7.9	5.5	5.5	3.7	3.7	4.1	5.4	3.6	7.3	6.7	5.5	3.5	3.9	2.6	3.1	3.5	2.5	4.3	5.2	5.7	5.9	2.5	7.9	3.4	
Jul 18	6.6	4.8	5.3	6.5	5.6	5.2	6.4	4.7	4.3	5.8	6.1	7.5	7.8	8.9	9.1	7.8	6.0	4.4	5.9	3.7	5.1	6.2	6.7	7.0	3.7	9.1	5.8	
Jul 19	7.9	9.2	9.9	11.1	9.9	9.6	10.7	14.9	18.1	16.8	13.9	15.2	15.5	13.3	13.6	12.2	12.1	11.7	13.3	12.5	8.6	9.6	10.3	10.4	7.9	18.1	11.9	
Jul 20	10.8	9.9	9.8	9.6	8.7	9.6	12.8	14.1	15.6	17.0	15.0	15.7	16.8	15.0	16.6	16.0	16.6	15.6	12.0	10.0	9.7	10.0	9.6	9.5	8.7	17.0	12.6	
Jul 21	WNV	WNV	W	WNV	W	W	W	W	W	W	WNV	WNV	WNV	WNV	WNV	WNV	WNV	WNV	WNV	WNV	W	W	WNV	WNV	WNV	WNV	WNV	WNV





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

St. Lina Site - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED																																																			
Maximum Hourly Value:	20.4 kph on July 10 at hour 10																																																		
Maximum Daily Value:	12.6 kph on July 20																																																		
Minimum Hourly Value:	0.1 kph on July 31 at hour 9																																																		
Minimum Daily Value:	1.2 kph on July 31																																																		
Monthly Average:	1.9 kph																																																		
Hours in Service:	744																																																		
Hours of Data:	742																																																		
Hours of Missing Data:	0																																																		
Hours of Calibration:	2																																																		
Operational Uptime:	100																																																		
WIND DIRECTION																																																			
Monthly Average:	277 (W) degree																																																		
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																									
Jul 21	10.1	10.4	11.4	9.7	8.3	6.9	7.2	10.1	9.1	11.6	12.8	14.2	13.9	14.7	13.5	10.6	9.8	9.8	5.1	7.0	8.7	8.2	11.2	9.5	5.1	14.7	9.6																								
Jul 22	9.6	7.9	8.8	10.9	10.0	10.4	13.9	12.3	12.5	13.9	10.6	12.3	10.9	9.4	10.4	10.3	8.6	6.2	4.6	4.3	4.1	5.6	4.1	13.9	8.2																										
Jul 23	4.8	5.4	4.6	5.2	6.3	5.8	3.9	5.1	5.0	4.9	3.9	3.5	3.5	4.4	1.0	1.8	3.1	3.2	5.2	6.1	9.3	11.6	10.3	8.9	1.0	11.6	3.7																								
Jul 24	10.7	11.9	13.2	14.6	14.8	13.7	12.3	12.4	9.7	10.0	10.1	10.2	15.6	16.2	11.9	17.8	11.3	9.2	7.8	6.0	5.8	4.7	5.4	5.9	4.7	17.8	7.2																								
Jul 25	7.8	5.8	9.4	11.9	9.3	9.0	6.4	7.1	8.5	7.3	7.5	8.1	8.1	7.7	3.5	6.9	7.5	8.8	7.9	6.4	7.3	8.7	10.4	10.4	3.5	11.9	7.2																								
Jul 26	10.9	10.1	7.9	6.3	6.4	5.9	6.4	6.4	7.8	9.1	9.8	11.5	11.6	10.5	11.0	13.5	9.4	10.2	7.0	5.5	5.9	6.3	6.2	7.1	5.5	13.5	7.5																								
Jul 27	7.5	6.8	7.1	10.1	8.4	7.5	2.1	5.0	2.8	3.3	2.0	1.8	2.5	6.0	3.4	2.5	2.1	2.6	2.6	5.7	7.0	7.9	8.7	8.4	1.8	10.1	2.5																								
Jul 28	7.7	6.5	7.8	8.2	8.2	5.6	4.3	5.1	5.6	9.0	9.7	11.1	11.7	12.6	11.3	10.1	10.2	10.6	6.4	6.8	8.5	8.9	7.3	6.9	4.3	12.6	8.3																								
Jul 29	6.0	6.4	6.6	7.8	6.6	6.8	6.1	9.5	9.8	9.6	9.2	7.4	7.4	7.1	6.6	6.5	7.1	5.3	5.5	7.0	7.5	9.4	4.6	4.8	4.6	9.8	3.0																								
Jul 30	7.5	7.0	5.6	5.4	9.7	6.2	5.3	2.7	3.3	10.2	11.0	11.3	10.9	9.0	10.2	10.1	10.5	9.6	9.1	8.3	7.1	6.5	6.3	5.5	2.7	11.3	4.2																								
Jul 31	5.2	6.6	4.4	3.0	1.0	3.0	1.2	0.8	2.0	0.1	1.5	4.8	0.5	2.6	2.4	2.3	0.8	2.5	0.4	0.7	2.6	2.4	1.6	2.7	0.1	6.6	1.2																								
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance																												
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance										P	Power Failure																	
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Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																			



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

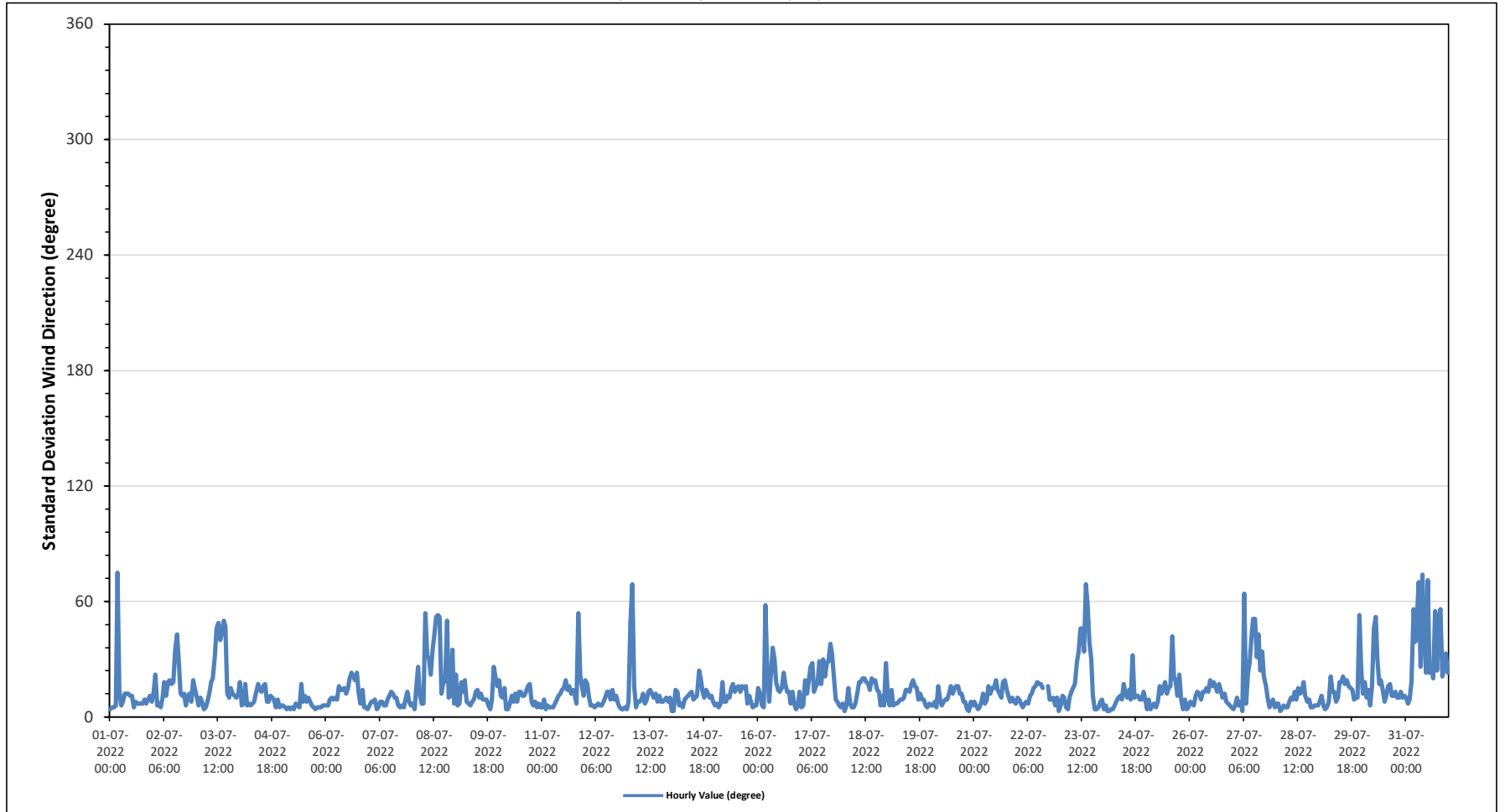
St. Lina Site - July 2022

### Summary of Hour Standard Deviations

#### STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

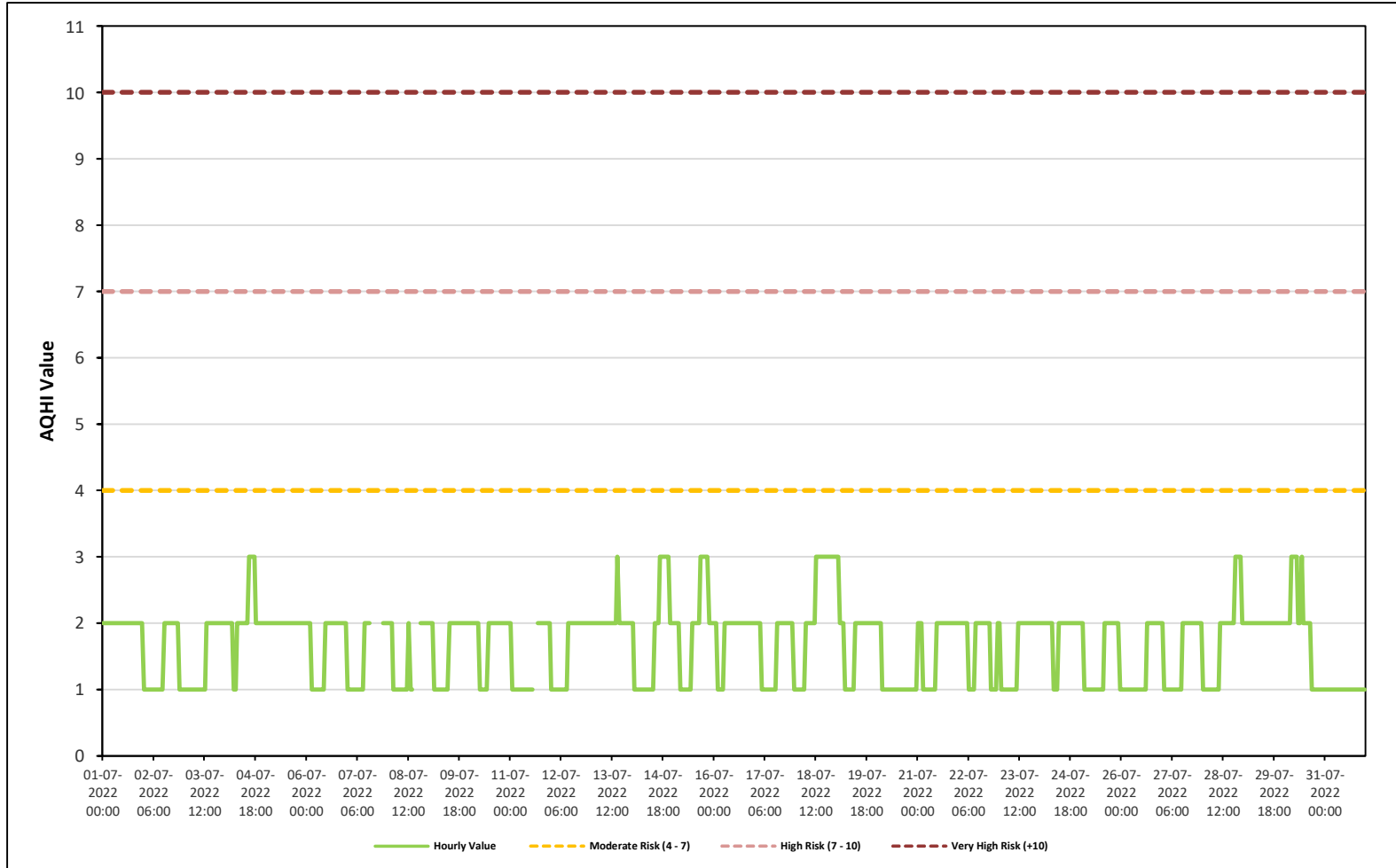
Maximum Hourly Value:		75 degree on July 1 at hour 4														Hours in Service:		744																																									
Minimum Hourly Value:		3 degree on July 14 at hour 0														Hours of Data:		742																																									
																Hours of Missing Data:		0																																									
																Hours of Calibration:		2																																									
																Operational Uptime:		100.0																																									
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum																																		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			23																																	
Jul 1	4	5	5	6	75	13	6	8	12	12	11	11	5	8	7	7	7	9	7	9	11	8	4	75																																			
Jul 2	13	22	6	7	5	10	18	11	18	19	17	18	35	43	30	12	11	12	6	11	12	8	19	14	5	43																																	
Jul 3	10	6	10	8	4	5	8	12	18	20	32	46	49	40	44	50	47	12	10	15	12	11	10	12	4	50																																	
Jul 4	18	6	7	17	6	7	6	7	8	13	17	14	13	16	17	8	8	11	10	9	5	9	5	6	5	18																																	
Jul 5	6	5	4	5	4	5	4	7	6	5	17	8	11	8	10	8	6	5	4	5	5	5	6	6	4	17																																	
Jul 6	6	6	9	10	9	10	9	16	14	14	15	12	15	20	23	21	19	23	13	7	14	5	5	4	4	23																																	
Jul 7	6	8	8	9	4	5	8	8	6	9	11	13	12	10	10	6	5	6	5	9	13	8	6	4	13																																		
Jul 8	7	4	15	26	12	7	7	54	32	30	22	35	42	52	53	52	12	17	19	50	10	11	35	7	4	54																																	
Jul 9	22	6	7	18	13	19	8	7	6	8	9	13	14	10	12	9	9	9	6	4	9	26	21	16	4	26																																	
Jul 10	19	11	10	15	4	4	7	11	8	12	8	13	13	11	11	13	16	17	8	6	8	5	7	5	4	19																																	
Jul 11	5	9	4	6	5	5	5	7	9	11	12	14	15	19	14	16	12	14	11	7	54	22	16	11	4	54																																	
Jul 12	19	17	10	6	6	5	6	7	6	6	8	10	13	13	9	14	9	11	7	5	4	4	5	4	4	19																																	
Jul 13	8	49	69	16	5	8	8	9	12	7	9	13	14	12	10	12	8	11	8	8	9	10	8	10	5	69																																	
Jul 14	3	3	14	13	6	7	5	9	10	11	12	13	9	10	11	24	20	13	10	14	12	10	11	8	3	24																																	
Jul 15	6	7	5	7	18	8	8	11	10	15	17	13	15	16	13	16	15	16	7	11	8	5	6	6	5	18																																	
Jul 16	15	12	6	5	58	23	8	21	36	30	18	14	13	15	23	17	13	13	7	13	7	4	6	13	4	58																																	
Jul 17	5	6	19	12	18	26	28	13	16	17	29	17	30	21	28	29	38	33	21	9	8	6	5	7	5	38																																	
Jul 18	3	6	15	7	5	5	7	12	18	18	20	20	18	17	14	20	18	19	14	13	6	11	6	28	3	28																																	
Jul 19	9	6	14	6	7	7	8	9	9	10	14	14	13	17	19	16	15	9	12	9	9	6	5	7	5	19																																	
Jul 20	6	6	8	5	16	9	6	8	9	9	12	16	12	15	16	16	12	12	8	8	4	3	8	6	3	16																																	
Jul 21	8	6	4	5	8	12	7	9	16	12	15	15	19	14	12	10	18	19	14	11	8	10	8	7	4	19																																	
Jul 22	10	9	7	5	7	8	7	11	12	15	16	18	17	17	15	C	C	16	9	9	10	6	10	3	3	18																																	
Jul 23	6	11	10	5	4	10	13	15	17	29	34	46	46	34	69	59	39	30	11	4	4	5	8	9	4	69																																	
Jul 24	4	6	3	3	4	4	6	8	10	11	9	17	12	10	14	9	32	10	11	11	9	9	13	9	3	32																																	
Jul 25	4	9	4	6	7	5	8	16	12	15	18	12	15	16	42	21	18	11	22	9	4	9	4	5	4	42																																	
Jul 26	8	7	6	11	13	12	9	13	13	15	13	19	16	18	16	13	17	14	10	12	8	7	6	5	5	19																																	
Jul 27	4	6	10	6	8	3	64	7	23	28	42	51	51	31	43	24	34	21	16	10	5	7	9	5	3	64																																	
Jul 28	7	7	3	4	6	5	5	8	10	9	13	9	15	12	13	18	11	8	9	5	5	6	6	6	3	18																																	
Jul 29	8	11	6	4	5	8	21	13	13	8	10	18	18	21	17	19	16	15	14	9	10	10	53	24	4	53																																	
Jul 30	12	18	10	14	6	16	46	52	30	17	19	14	8	11	16	17	11	11	13	10	10	13	10	11	6	52																																	
Jul 31	10	7	9	18	56	39	54	70	26	74	45	23	71	23	27	20	55	24	51	56	21	25	33	23	7	74																																	
Diurnal Minimum	3	3	3	3	4	3	4	7	6	5	8	8	8	5	8	7	6	5	4	4	4	3	4	3																																			
Diurnal Maximum	22	49	69	26	75	39	64	70	36	74	45	51	71	52	69	59	55	33	51	56	54	26	53	28																																			
C	Monthly Calibration														S	Daily Zero-Span Check														Q	Quality Assurance																												
K	Collection Error														N	No Data (Machine Not in Service)														Y	Routine Maintenance														P	Power Failure													
X	Invalid Data (Machine Malfunction /Recovery)														NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																											
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																											

**Timeseries Chart of Hourly Average for STDWD - St. Lina Site**



**LAC LA BICHE STATION**

**Timeseries Chart of Hourly Average for AQHI - Lac La Biche Station**





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

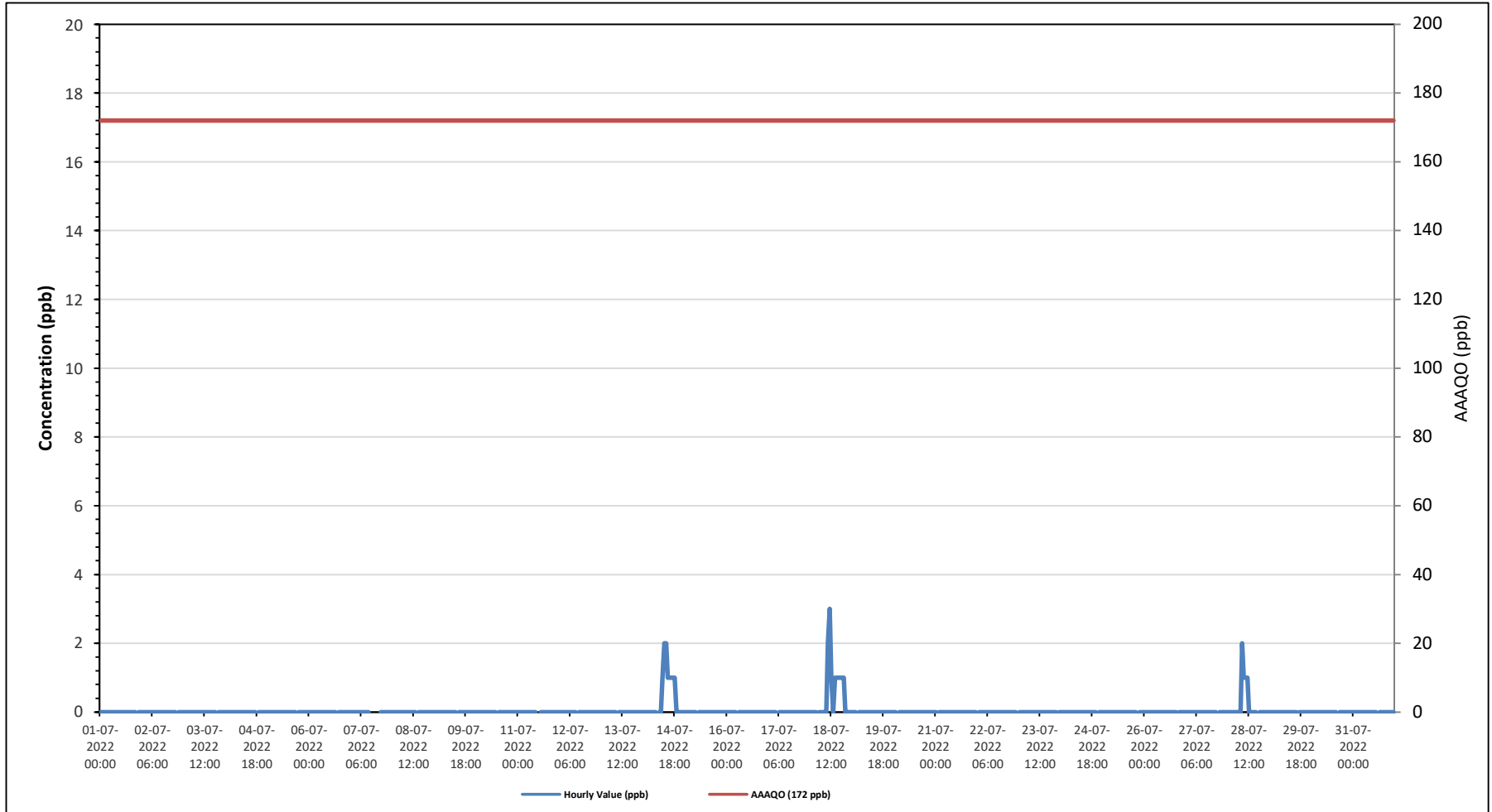
Lac La Biche Station - July 2022

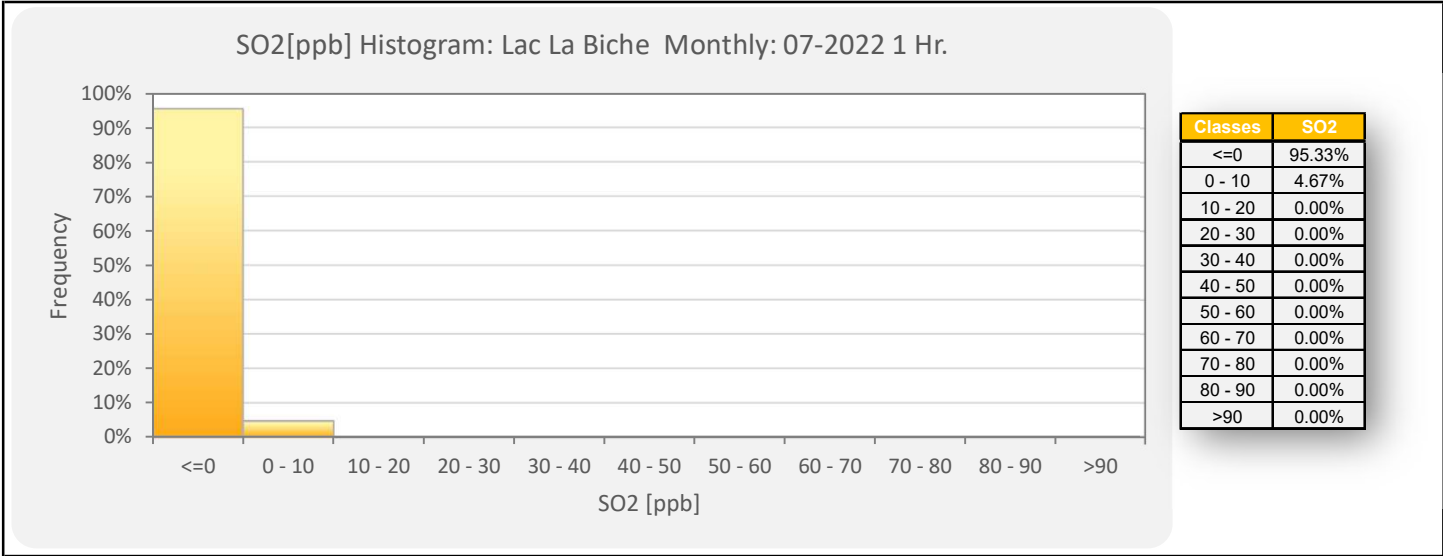
Summary of Hourly Averages

SULPHUR DIOXIDE (SO<sub>2</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 172 ppb, 24-Hour 48 ppb, 30-Day 11 ppb																																											
Number of 1-Hour Exceedances: 0						Number of 24-Hour Exceedances: 0						30-Day Exceedence: 0																															
Maximum Hourly Value: 3 ppb on July 18 at hour 11												Hours in Service: 744																															
Maximum Daily Value: 0.5 ppb on July 18												Hours of Data: 706																															
Minimum Hourly Value: 0 ppb on July 1 at hour 0												Hours of Missing Data: 1																															
Minimum Daily Value: 0.0 ppb on July 1												Hours of Calibration: 37																															
Monthly Average: 0.0 ppb												Operational Uptime: 99.9																															
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23																			
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0																
Jul 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0.0																
Jul 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0																
Jul 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0																
Jul 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0																
Jul 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0.0																
Jul 7	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	C	C	0	0	0	0	0	0	0	0	0	0.0																
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 11	0	0	0	0	0	0	0	0	0	0	0	S	NRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 12	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 13	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 14	0	0	0	0	0	0	0	0	S	0	0	1	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0.4																
Jul 15	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 16	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 17	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 18	0	0	0	0	S	0	0	0	0	0	2	3	1	0	1	1	1	1	1	1	0	0	0	0	0	3	0.5																
Jul 19	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 20	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 21	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 22	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0.0																
Jul 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0.0																
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0.0																
Jul 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0																
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0.0																
Jul 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0																
Jul 28	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	S	0	0	0	0	0	0	2	0.2																
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0																
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0																
Jul 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0																
Diurnal Maximum	0	0	0	0	0	0	0	0	2	1	2	3	2	2	1	1	1	1	1	1	0	0	0	0	0	0																	
Diurnal Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0																	
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance																				
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance										P	Power Failure									
X	Invalid Data (Equipment Malfunction /Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																											

**Timeseries Chart of Hourly Average for SO2 - Lac La Biche Station**

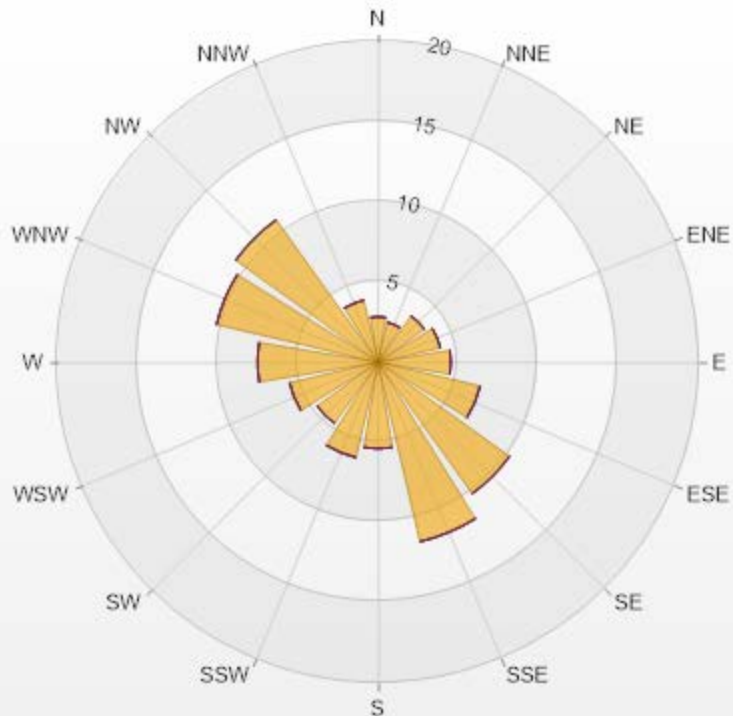






Wind: Lac La Biche Poll.: Lac La Biche-SO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.89% Calm Avg: 0.00 [ppb]

Direction	0-10	10-50	50-100	100-172	>172.0	Total
N	2.83	0	0	0	0	2.83
NNE	2.55	0	0	0	0	2.55
NE	3.54	0	0	0	0	3.54
ENE	3.97	0	0	0	0	3.97
E	4.53	0	0	0	0	4.53
ESE	6.52	0	0	0	0	6.52
SE	10.06	0	0	0	0	10.06
SSE	11.47	0	0	0	0	11.47
S	5.38	0	0	0	0	5.38
SSW	6.09	0	0	0	0	6.09
SW	4.67	0	0	0	0	4.67
WSW	5.67	0	0	0	0	5.67
W	7.51	0	0	0	0	7.51
WNW	10.34	0	0	0	0	10.34
NW	10.91	0	0	0	0	10.91
NNW	3.97	0	0	0	0	3.97
Summary	100	0	0	0	0	100



LICA-202207

% Icon Classes (ppb)

100 0-10

0 10-50

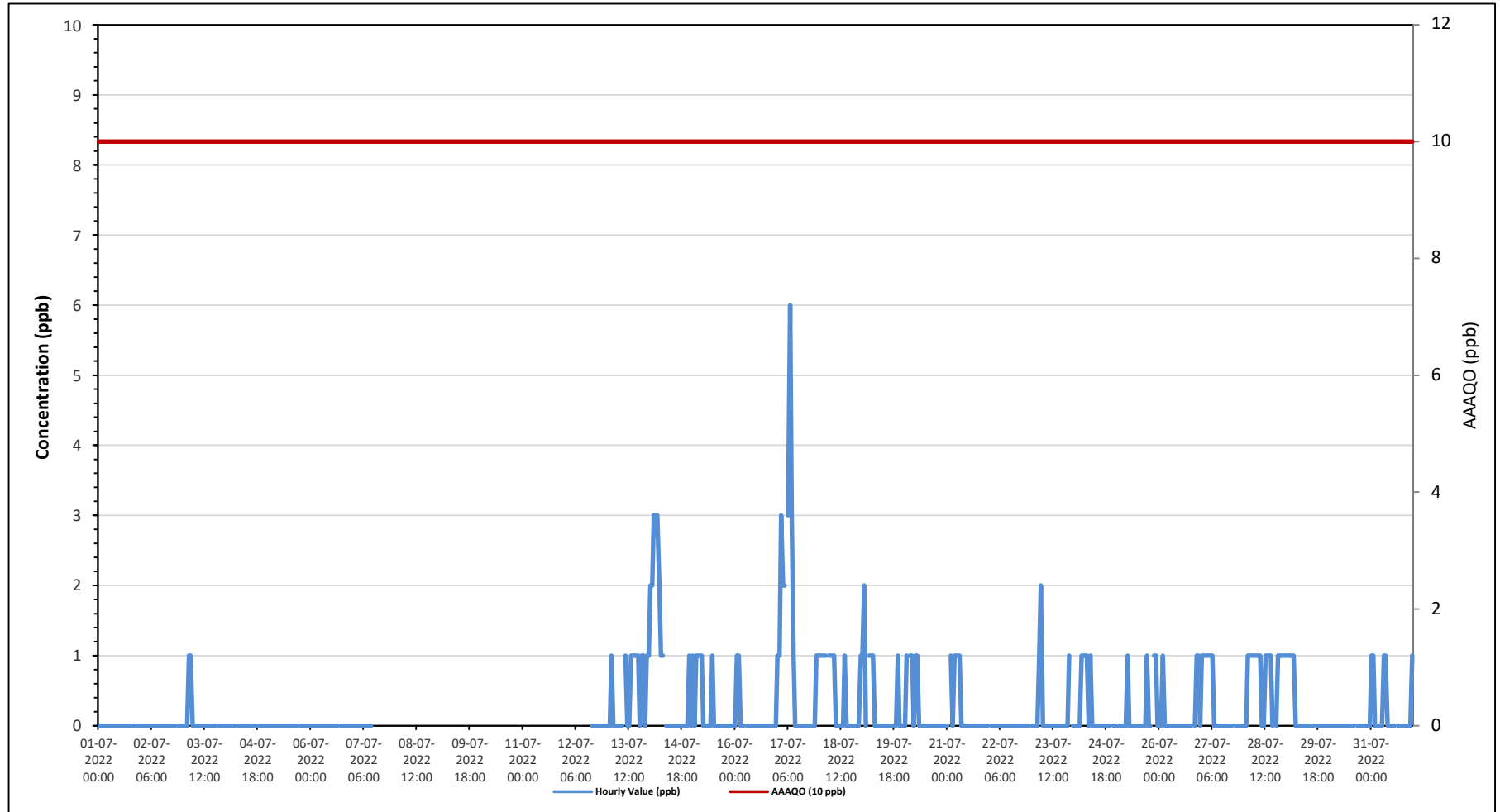
0 50-100

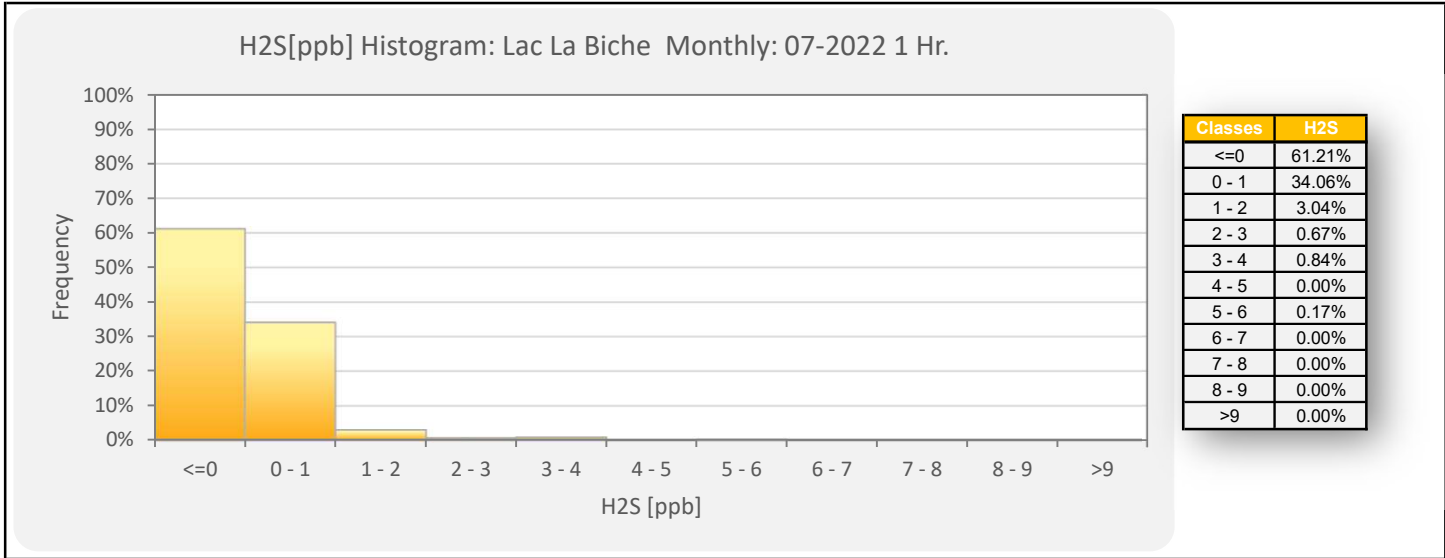
0 100-172

0 >172.0



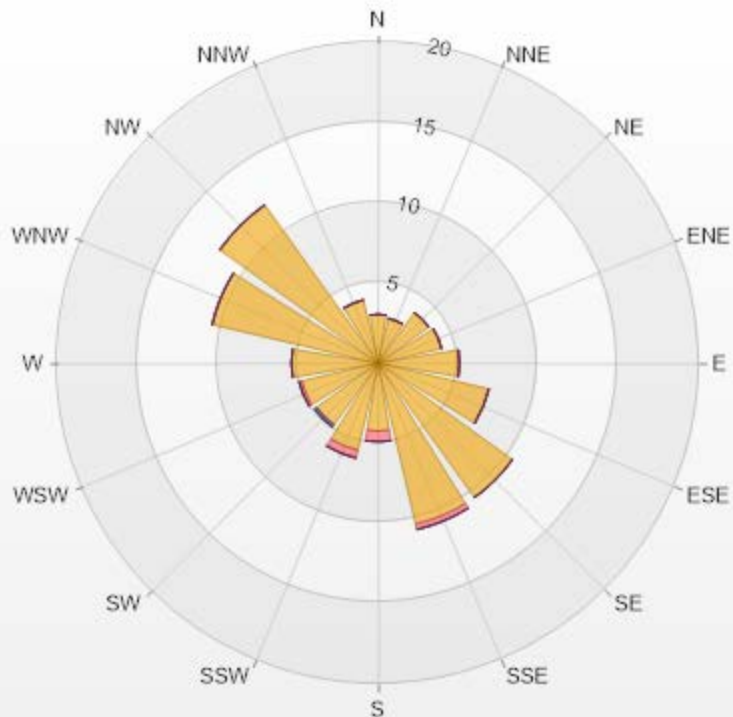
**Timeseries Chart of Hourly Average for H2S - Lac La Biche Station**





Wind: Lac La Biche Poll.: Lac La Biche-H2S[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 79.70% Calm Avg: 0.00 [ppb]

Direction	0-2	2-5	5-10	10-50	>50.0	Total
N	3.04	0	0	0	0	3.04
NNE	2.87	0	0	0	0	2.87
NE	3.88	0	0	0	0	3.88
ENE	4.05	0	0	0	0	4.05
E	5.06	0	0	0	0	5.06
ESE	7.08	0	0	0	0	7.08
SE	10.29	0	0	0	0	10.29
SSE	10.29	0.34	0	0	0	10.63
S	4.22	0.67	0	0	0	4.89
SSW	5.56	0.51	0	0	0	6.07
SW	4.72	0	0.17	0	0	4.89
WSW	4.89	0.17	0	0	0	5.06
W	5.4	0	0	0	0	5.4
WNW	10.62	0	0	0	0	10.62
NW	12.14	0	0	0	0	12.14
NNW	4.05	0	0	0	0	4.05
Summary	98.16	1.69	0.17	0	0	100



LICA-202207

% Icon Classes (ppb)

98

0-2

2

2-5

0

5-10

0

10-50

0

>50.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Lac La Biche Station - July 2022**

**Summary of Hourly Averages**

**OXIDES OF NITROGEN (NOx) in ppb**

Maximum Hourly Value:	10 ppb on July 27 at hour 6	Hours in Service:	744
Maximum Daily Value:	3.2 ppb on July 15	Hours of Data:	705
Minimum Hourly Value:	0 ppb on July 11 at hour 2	Hours of Missing Data:	1
Minimum Daily Value:	1.2 ppb on July 11	Hours of Calibration:	38
Monthly Average:	1.9 ppb	Operational Uptime:	99.9

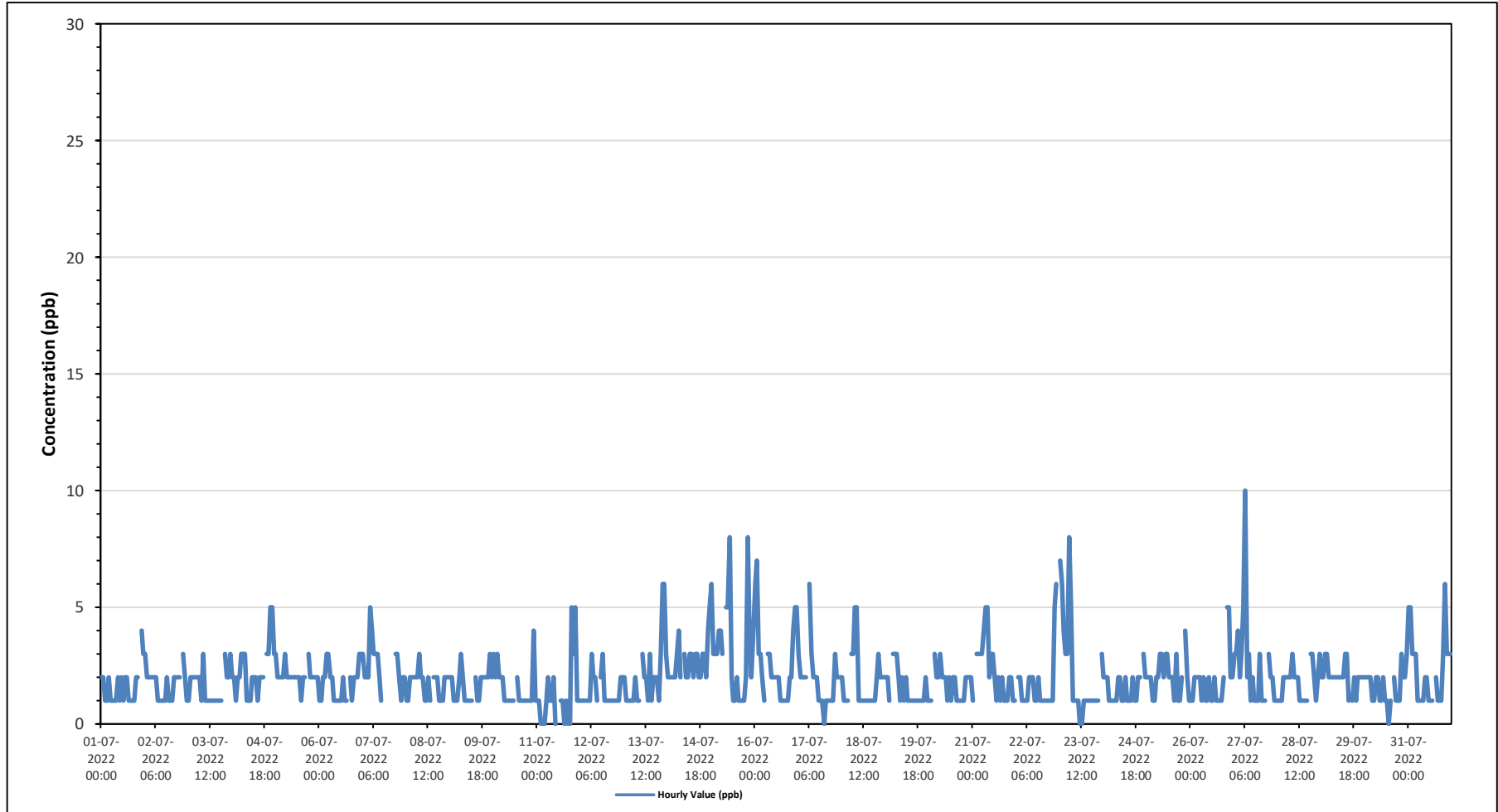
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2	2	1	1	2	1	1	1	1	2	1	2	1	2	2	1	1	1	1	2	2	S	4	3	1	4	1.6	
Jul 2	3	2	2	2	2	2	2	1	1	1	1	1	2	1	1	1	2	2	2	2	2	S	3	2	1	1	3	1.7
Jul 3	1	2	2	2	2	2	2	1	3	1	1	1	1	1	1	1	1	1	1	S	3	2	2	3	1	3	1.6	
Jul 4	2	2	1	2	2	3	3	3	1	1	1	2	2	2	1	2	2	2	S	3	3	5	5	3	1	5	2.3	
Jul 5	3	2	2	2	2	3	2	2	2	2	2	2	2	2	1	2	2	S	3	2	2	2	2	2	1	3	2.1	
Jul 6	1	1	2	2	3	3	2	2	1	1	1	1	1	2	1	1	S	2	1	2	2	2	3	3	1	3	1.7	
Jul 7	3	2	2	2	5	4	3	3	3	2	1	C	C	C	C	C	C	C	C	3	3	2	1	2	2	1	5	-
Jul 8	1	1	2	2	2	2	2	3	2	2	1	1	2	1	S	2	2	2	1	1	1	2	2	2	1	3	1.7	
Jul 9	2	2	1	1	1	2	3	2	1	1	1	1	1	S	2	1	1	2	2	2	2	2	3	2	1	3	1.7	
Jul 10	3	2	3	2	2	2	1	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	4	1	1	4	1.5	
Jul 11	1	1	0	0	0	1	2	1	1	2	0	S	NRM	1	1	0	1	0	0	5	3	5	1	1	0	5	1.2	
Jul 12	1	1	1	1	1	1	3	2	2	1	S	2	3	1	1	1	1	1	1	1	1	1	2	2	1	3	1.4	
Jul 13	2	1	1	1	1	1	2	1	1	S	3	2	2	1	3	1	2	2	2	1	3	6	6	3	1	6	2.1	
Jul 14	2	2	2	2	2	3	4	2	S	3	2	2	3	3	2	3	3	2	2	3	3	2	4	5	2	5	2.7	
Jul 15	6	3	3	3	4	4	3	S	5	8	2	1	1	2	1	1	1	1	2	8	4	2	4	1	8	3.2		
Jul 16	6	7	3	3	2	1	S	3	3	2	2	2	2	2	1	1	1	1	1	2	2	4	5	5	1	7	2.7	
Jul 17	3	2	2	2	2	S	6	3	2	2	2	1	1	1	0	1	1	1	1	1	3	2	2	2	0	6	1.9	
Jul 18	2	1	1	1	S	3	3	5	5	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1	5	1.8	
Jul 19	2	2	1	S	3	3	3	3	2	1	2	1	2	1	1	1	1	1	1	1	1	1	2	1	1	3	1.5	
Jul 20	1	1	S	3	2	2	3	2	2	2	1	2	1	2	2	1	1	1	1	1	2	2	2	2	1	3	1.7	
Jul 21	1	S	3	3	3	3	4	5	5	2	3	3	2	1	2	1	1	1	1	1	1	2	2	1	1	5	2.3	
Jul 22	S	2	2	1	1	1	1	2	2	2	1	1	2	1	1	1	1	1	1	1	1	5	6	S	1	6	1.7	
Jul 23	7	6	4	3	3	8	5	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	3	0	8	2.3	
Jul 24	2	2	2	1	1	1	1	1	2	2	1	1	2	1	1	2	1	1	2	1	2	S	3	2	1	3	1.5	
Jul 25	2	2	2	1	1	2	2	3	3	2	3	3	2	2	2	1	3	1	1	2	S	4	2	1	1	4	2.0	
Jul 26	1	1	2	2	2	2	1	2	1	1	2	1	1	2	1	1	1	1	2	S	5	5	2	2	1	5	1.8	
Jul 27	3	3	4	2	3	5	10	2	3	1	2	1	1	1	3	1	1	1	S	3	2	2	1	1	1	10	2.4	
Jul 28	1	1	1	2	2	2	2	2	3	2	2	2	1	1	1	1	1	S	3	3	2	1	2	3	1	3	1.8	
Jul 29	2	2	3	3	2	2	2	2	2	2	2	2	2	3	3	1	S	1	2	1	2	2	2	2	1	3	2.0	
Jul 30	2	2	2	2	1	1	2	2	1	1	2	1	1	0	1	S	2	1	1	1	3	2	2	3	0	3	1.6	
Jul 31	5	5	3	3	3	1	1	1	1	2	2	1	1	1	S	2	1	1	1	3	6	3	3	3	1	6	2.3	
Diurnal Maximum	7	7	4	3	5	8	10	5	5	5	8	3	3	3	3	3	3	3	2	3	5	8	6	6	5			
Diurnal Average	2.4	2.2	2.0	1.9	2.1	2.4	2.7	2.1	2.1	1.7	1.7	1.5	1.5	1.4	1.4	1.2	1.4	1.2	1.4	1.9	2.5	2.6	2.7	2.3				

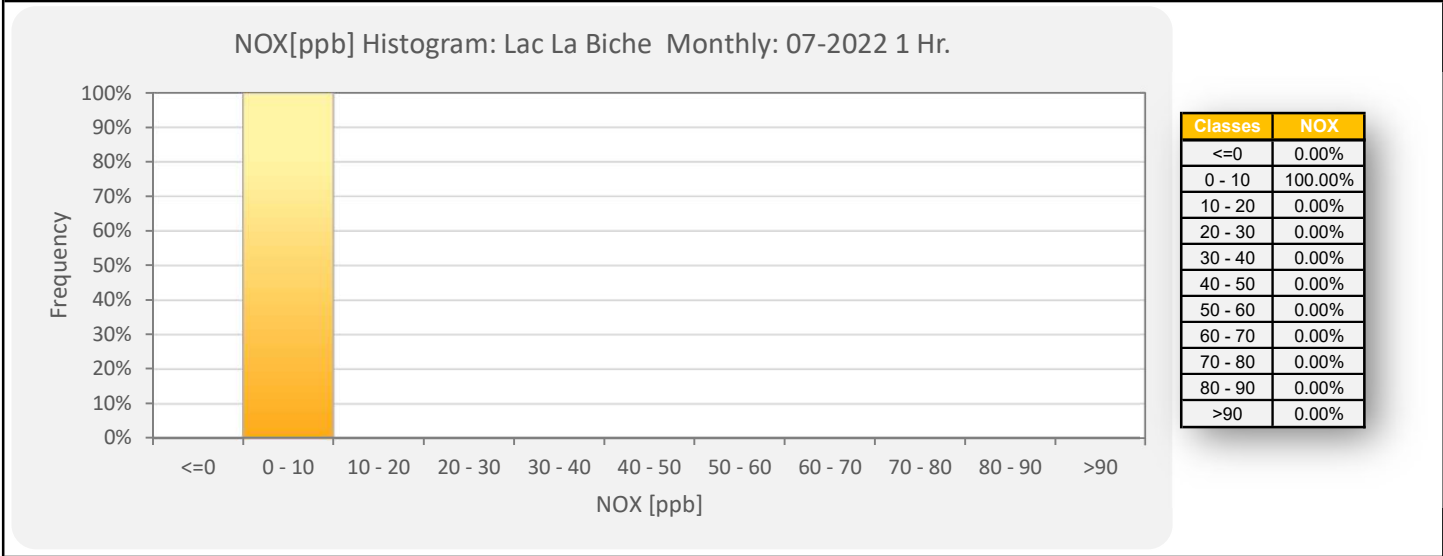
<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



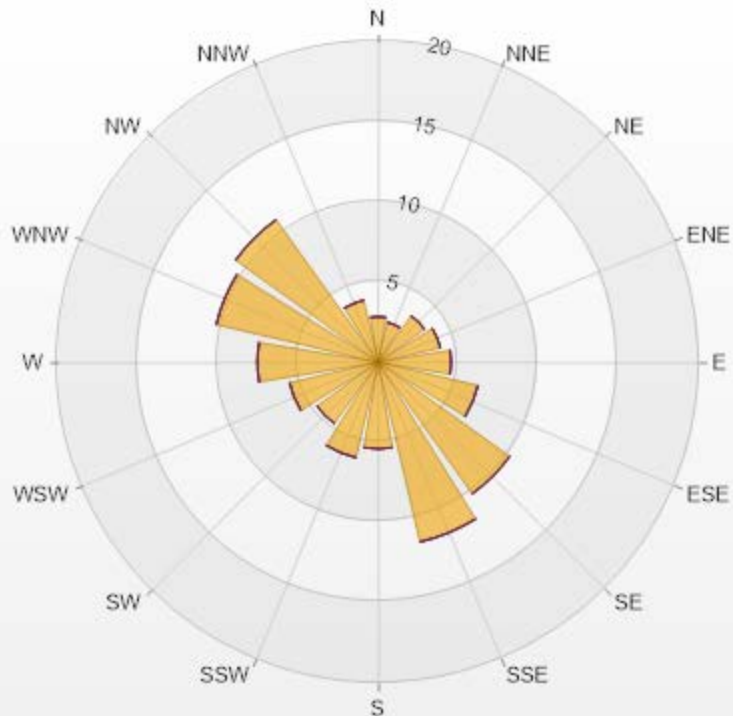
**Timeseries Chart of Hourly Average for NOx - Lac La Biche Station**





Wind: Lac La Biche Poll.: Lac La Biche-NOX[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.84	0	0	0	0	2.84
NNE	2.55	0	0	0	0	2.55
NE	3.55	0	0	0	0	3.55
ENE	3.97	0	0	0	0	3.97
E	4.54	0	0	0	0	4.54
ESE	6.38	0	0	0	0	6.38
SE	10.07	0	0	0	0	10.07
SSE	11.49	0	0	0	0	11.49
S	5.39	0	0	0	0	5.39
SSW	6.1	0	0	0	0	6.1
SW	4.68	0	0	0	0	4.68
WSW	5.67	0	0	0	0	5.67
W	7.52	0	0	0	0	7.52
WNW	10.35	0	0	0	0	10.35
NW	10.92	0	0	0	0	10.92
NNW	3.97	0	0	0	0	3.97
Summary	100	0	0	0	0	100




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% Icon Classes (ppb)

100  0-30

0  30-50

0  50-76

0  76-159

0  >159.0



**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Lac La Biche Station - July 2022**

**Summary of Hourly Averages**

**NITRIC OXIDE (NO) in ppb**

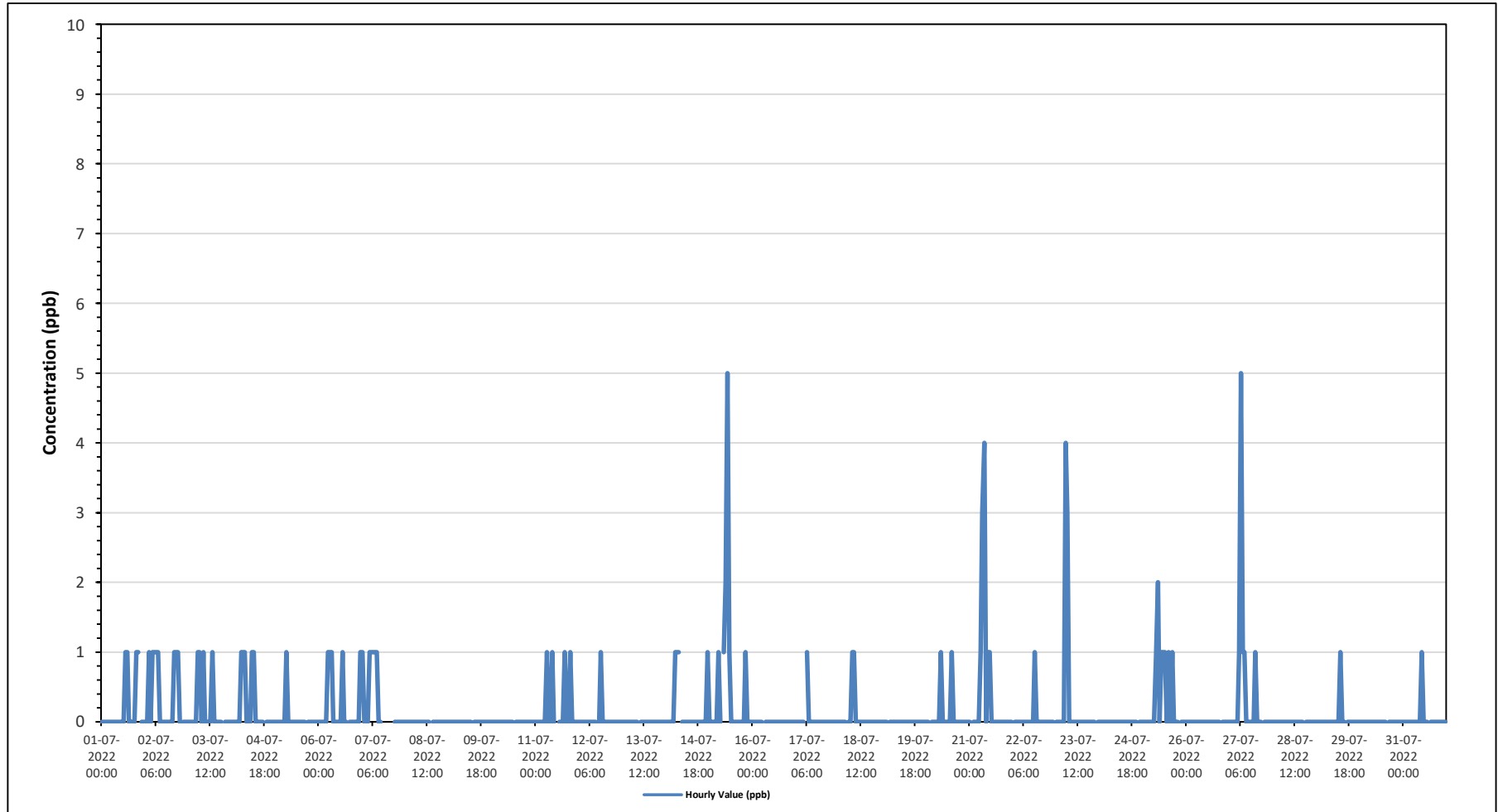
Maximum Hourly Value:	5 ppb on July 15 at hour 10	Hours in Service:	744
Maximum Daily Value:	0.5 ppb on July 15	Hours of Data:	705
Minimum Hourly Value:	0 ppb on July 1 at hour 0	Hours of Missing Data:	1
Minimum Daily Value:	0.0 ppb on July 8	Hours of Calibration:	38
Monthly Average:	0.1 ppb	Operational Uptime:	99.9

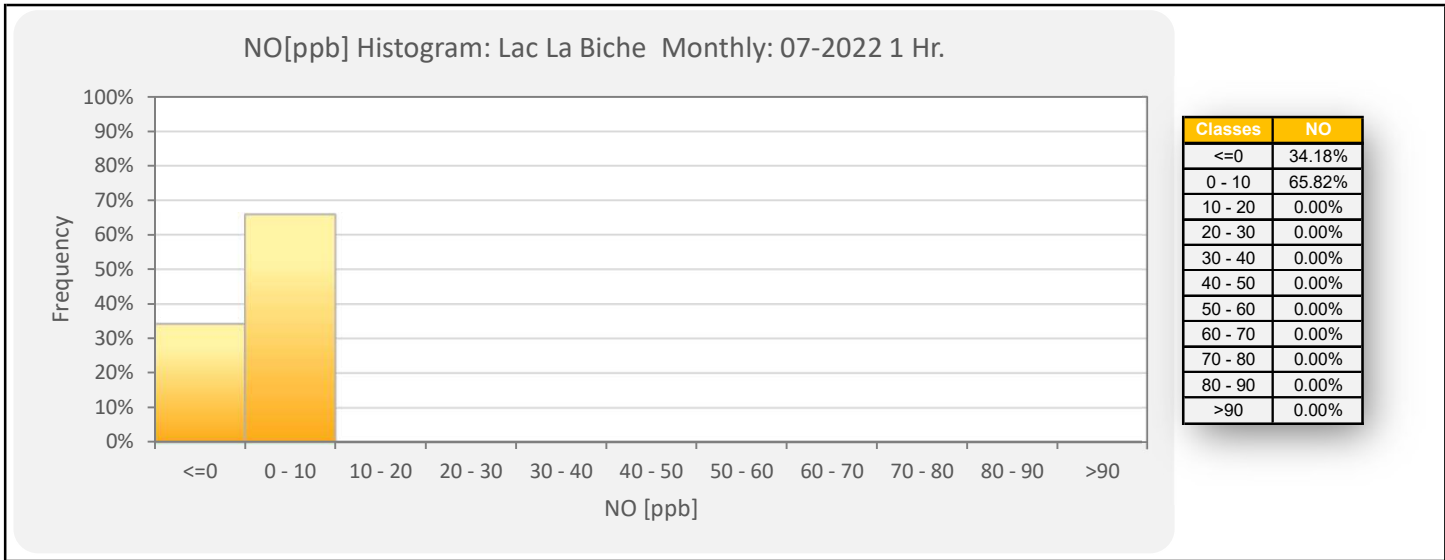
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	S	0	0	0	1	0.2
Jul 2	0	0	1	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	0	S	0	0	0	0	0	0.3
Jul 3	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	S	0	0	0	0	0	0	0.2
Jul 4	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	0	S	0	0	0	0	0	0	0	0.2
Jul 5	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0.0
Jul 6	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	1	0	0.2
Jul 7	1	0	0	0	1	1	1	1	1	0	0	C	C	C	C	C	C	C	0	0	0	0	0	0	0	0	-
Jul 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 9	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 10	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 11	0	0	0	0	0	0	1	0	0	1	S	NRM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0.2
Jul 12	0	0	0	0	0	0	0	0	0	0	S	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 13	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 14	0	0	0	0	0	1	1	1	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.2
Jul 15	0	0	0	0	0	1	0	S	1	2	5	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.5
Jul 16	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 17	0	0	0	0	0	S	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 18	0	0	0	S	S	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Jul 19	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 20	0	0	S	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1
Jul 21	0	S	0	0	0	0	1	3	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Jul 22	S	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	S	0	0.0
Jul 23	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0.3
Jul 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 25	0	0	0	0	0	0	0	1	2	0	1	1	1	0	1	0	1	0	0	0	S	0	0	0	0	0	0.3
Jul 26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0.0
Jul 27	0	0	0	0	0	1	5	1	1	0	0	0	0	1	0	0	0	0	S	0	0	0	0	0	0	0	0.4
Jul 28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0.0
Jul 29	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	S	0	0	0	0	0	0	0	0	0	0	0.0
Jul 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Jul 31	0	0	0	0	0	0	0	0	0	0	1	0	0	0	S	0	0	0	0	0	0	0	0	0	0	0	0.0
Diurnal Maximum	1	0	1	0	1	4	5	3	4	2	5	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	
Diurnal Average	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.4	0.4	0.1	0.3	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1		

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for NO - Lac La Biche Station**

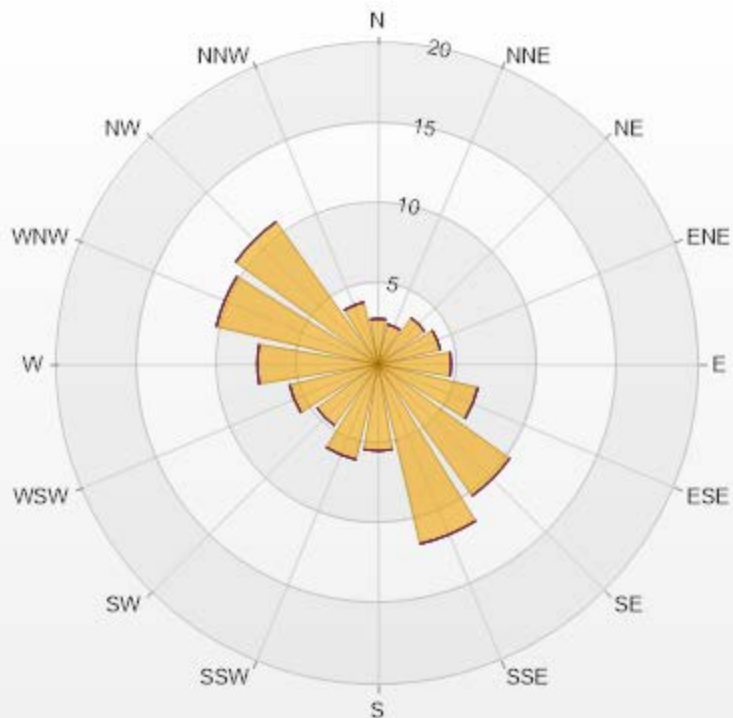




Wind: Lac La Biche Poll.: Lac La Biche-NO[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.84	0	0	0	0	2.84
NNE	2.55	0	0	0	0	2.55
NE	3.55	0	0	0	0	3.55
ENE	3.97	0	0	0	0	3.97
E	4.54	0	0	0	0	4.54
ESE	6.38	0	0	0	0	6.38
SE	10.07	0	0	0	0	10.07
SSE	11.49	0	0	0	0	11.49
S	5.39	0	0	0	0	5.39
SSW	6.1	0	0	0	0	6.1
SW	4.68	0	0	0	0	4.68
WSW	5.67	0	0	0	0	5.67
W	7.52	0	0	0	0	7.52
WNW	10.35	0	0	0	0	10.35
NW	10.92	0	0	0	0	10.92
NNW	3.97	0	0	0	0	3.97
Summary	100	0	0	0	0	100





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% Icon Classes (ppb)

100

0-30

0

30-50

0

50-76

0

76-159

0

>159.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

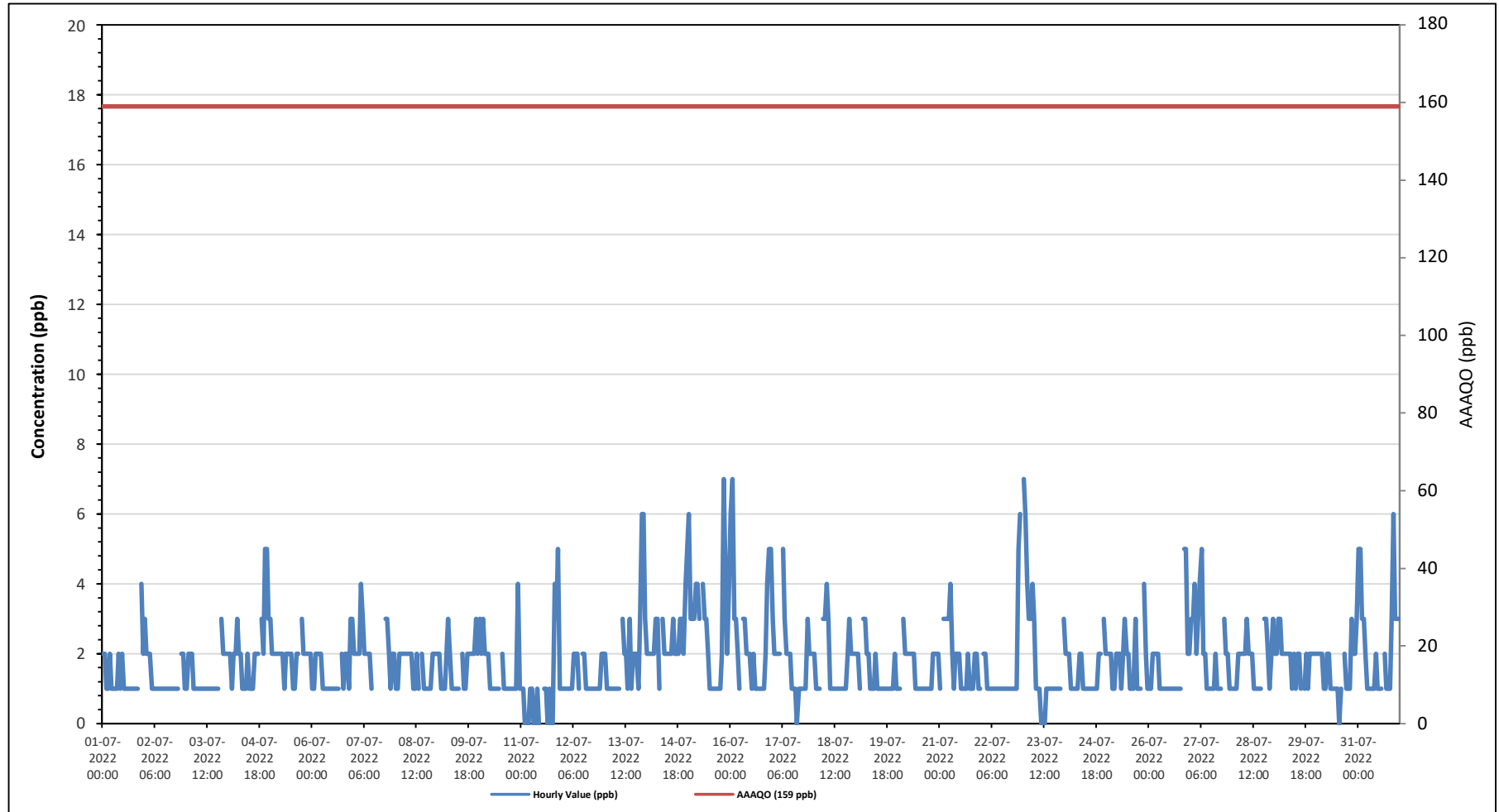
NITROGEN DIOXIDE (NO<sub>2</sub>) in ppb

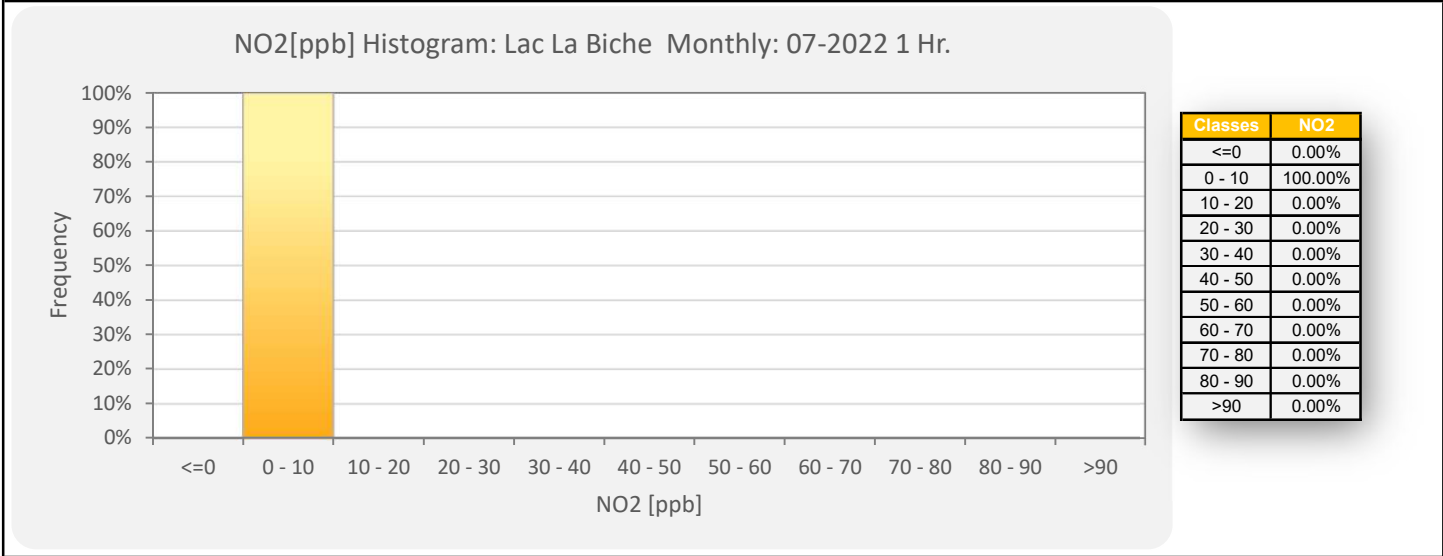
Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 159 ppb																																	
Number of 1-Hour Exceedances: 0																																	
Maximum Hourly Value: 7 ppb on July 15 at hour 20												Hours in Service: 744																					
Maximum Daily Value: 2.8 ppb on July 15												Hours of Data: 705																					
Minimum Hourly Value: 0 ppb on July 11 at hour 2												Hours of Missing Data: 1																					
Minimum Daily Value: 1.0 ppb on July 11												Hours of Calibration: 38																					
Monthly Average: 1.8 ppb												Operational Uptime: 99.9																					
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23						
Jul 1	2	2	1	1	2	1	1	1	1	2	1	2	1	1	1	1	1	1	1	1	1	S	4	2	1	4	1.4						
Jul 2	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	2	2	1	3	1.3						
Jul 3	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	S	3	2	2	2	1	3	1.3						
Jul 4	2	2	1	2	2	3	2	2	1	1	2	1	1	1	2	2	2	S	3	2	5	5	3	1	5	2.1							
Jul 5	3	2	2	2	2	2	2	2	1	2	2	2	1	1	2	2	S	3	2	2	2	2	2	2	1	3	2.0						
Jul 6	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	S	2	1	2	2	1	3	3	1	3	1.5							
Jul 7	2	2	2	2	4	3	2	2	2	2	1	C	C	C	C	C	C	C	3	3	2	1	2	2	1	4	-						
Jul 8	1	1	2	2	2	2	2	2	2	1	1	2	1	S	2	1	1	1	1	1	2	2	2	1	2	1.6							
Jul 9	2	2	1	1	1	2	3	2	1	1	1	1	S	2	1	1	2	2	2	2	2	3	2	1	3	1.7							
Jul 10	3	2	3	2	2	2	1	1	1	1	1	S	2	1	1	1	1	1	1	1	1	1	4	1	4	1.5							
Jul 11	1	1	0	0	0	1	1	0	0	1	0	S	NRM	1	1	0	1	0	0	4	3	5	1	1	0	5	1.0						
Jul 12	1	1	1	1	1	1	2	2	2	1	S	2	1	1	1	1	1	1	1	1	1	1	2	2	1	2	1.3						
Jul 13	2	1	1	1	1	1	1	1	1	S	3	2	2	1	3	1	2	2	2	1	3	6	6	3	1	6	2.0						
Jul 14	2	2	2	2	2	3	3	S	3	2	2	2	2	2	3	2	2	2	3	3	2	4	5	1	5	2.4							
Jul 15	6	3	3	3	4	4	3	S	4	3	3	2	1	1	1	1	1	1	1	2	7	4	2	4	1	7	2.8						
Jul 16	6	7	3	3	2	1	S	3	3	2	2	2	1	2	1	1	1	1	1	1	2	4	5	5	1	7	2.6						
Jul 17	3	2	2	2	2	S	5	3	2	2	2	1	1	1	0	1	1	1	1	1	3	2	2	2	0	5	1.8						
Jul 18	2	1	1	1	S	3	3	4	3	1	1	1	1	1	1	1	1	1	1	2	3	2	2	2	1	4	1.7						
Jul 19	2	2	1	S	3	3	2	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	1	1	3	1.4						
Jul 20	1	1	S	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	3	1.5						
Jul 21	1	S	3	3	3	3	4	2	1	2	2	1	1	1	1	2	1	1	1	1	2	2	1	1	1	4	1.8						
Jul 22	S	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	6	S	1	6	1.5						
Jul 23	7	6	4	3	3	4	3	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	S	3	0	7	2.0						
Jul 24	2	2	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	2	S	3	2	1	3	1.4						
Jul 25	2	2	2	1	1	2	2	2	1	2	3	2	2	1	1	3	1	1	1	1	2	S	4	2	1	4	1.7						
Jul 26	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	S	5	5	2	2	1	5	1.6						
Jul 27	3	3	4	2	3	4	5	2	2	1	1	1	1	1	2	1	1	1	S	3	2	2	1	1	1	5	2.0						
Jul 28	1	1	1	2	2	2	2	2	3	2	2	1	1	1	1	1	1	1	S	3	3	2	1	2	3	1	3	1.8					
Jul 29	2	2	3	3	2	2	2	2	2	2	1	2	1	2	2	1	S	1	2	1	2	2	2	2	1	3	1.9						
Jul 30	2	2	2	2	1	1	2	2	1	1	1	1	1	0	1	S	2	1	1	1	3	2	2	3	0	3	1.5						
Jul 31	5	5	3	3	2	1	1	1	1	1	2	1	1	S	2	1	1	1	1	3	6	3	3	3	1	6	2.2						
Diurnal Maximum	7	7	4	3	4	4	5	4	4	3	3	2	2	2	3	3	3	2	3	4	7	6	6	5									
Diurnal Average	2.4	2.2	2.0	1.9	1.9	2.0	2.1	1.7	1.5	1.5	1.4	1.4	1.2	1.1	1.2	1.2	1.3	1.1	1.3	1.7	2.4	2.6	2.7	2.3									
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance										
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance					P	Power Failure				
X	Invalid Data (Equipment Malfunction /Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																					

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.

Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for NO2 - Lac La Biche Station**

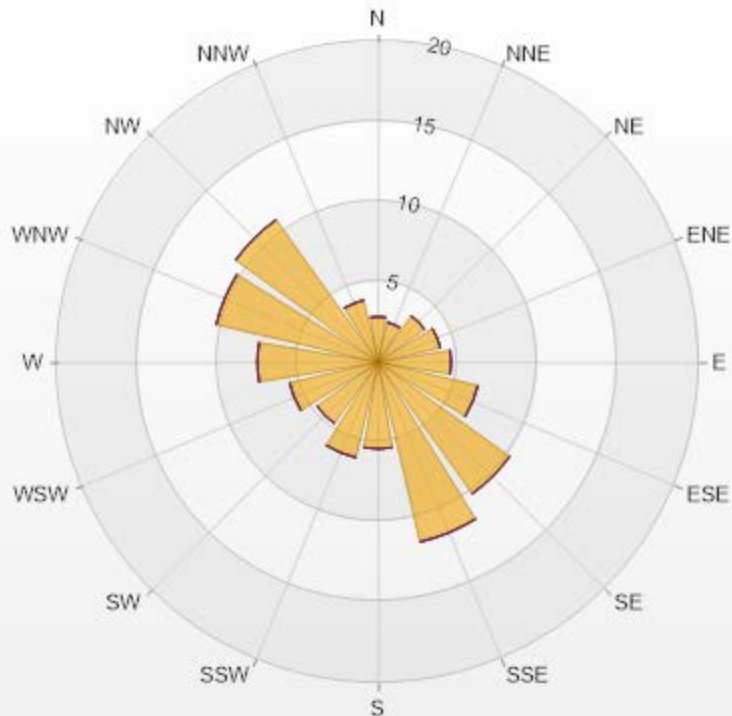




Wind: Lac La Biche Poll.: Lac La Biche-NO2[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.

Calm: 0.00% Valid Data: 94.76% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	2.84	0	0	0	0	2.84
NNE	2.55	0	0	0	0	2.55
NE	3.55	0	0	0	0	3.55
ENE	3.97	0	0	0	0	3.97
E	4.54	0	0	0	0	4.54
ESE	6.38	0	0	0	0	6.38
SE	10.07	0	0	0	0	10.07
SSE	11.49	0	0	0	0	11.49
S	5.39	0	0	0	0	5.39
SSW	6.1	0	0	0	0	6.1
SW	4.68	0	0	0	0	4.68
WSW	5.67	0	0	0	0	5.67
W	7.52	0	0	0	0	7.52
WNW	10.35	0	0	0	0	10.35
NW	10.92	0	0	0	0	10.92
NNW	3.97	0	0	0	0	3.97
Summary	100	0	0	0	0	100



LICA-202207

% Icon Classes (ppb)

100

0-30

0

30-50

0

50-76

0

76-159

0

>159.0



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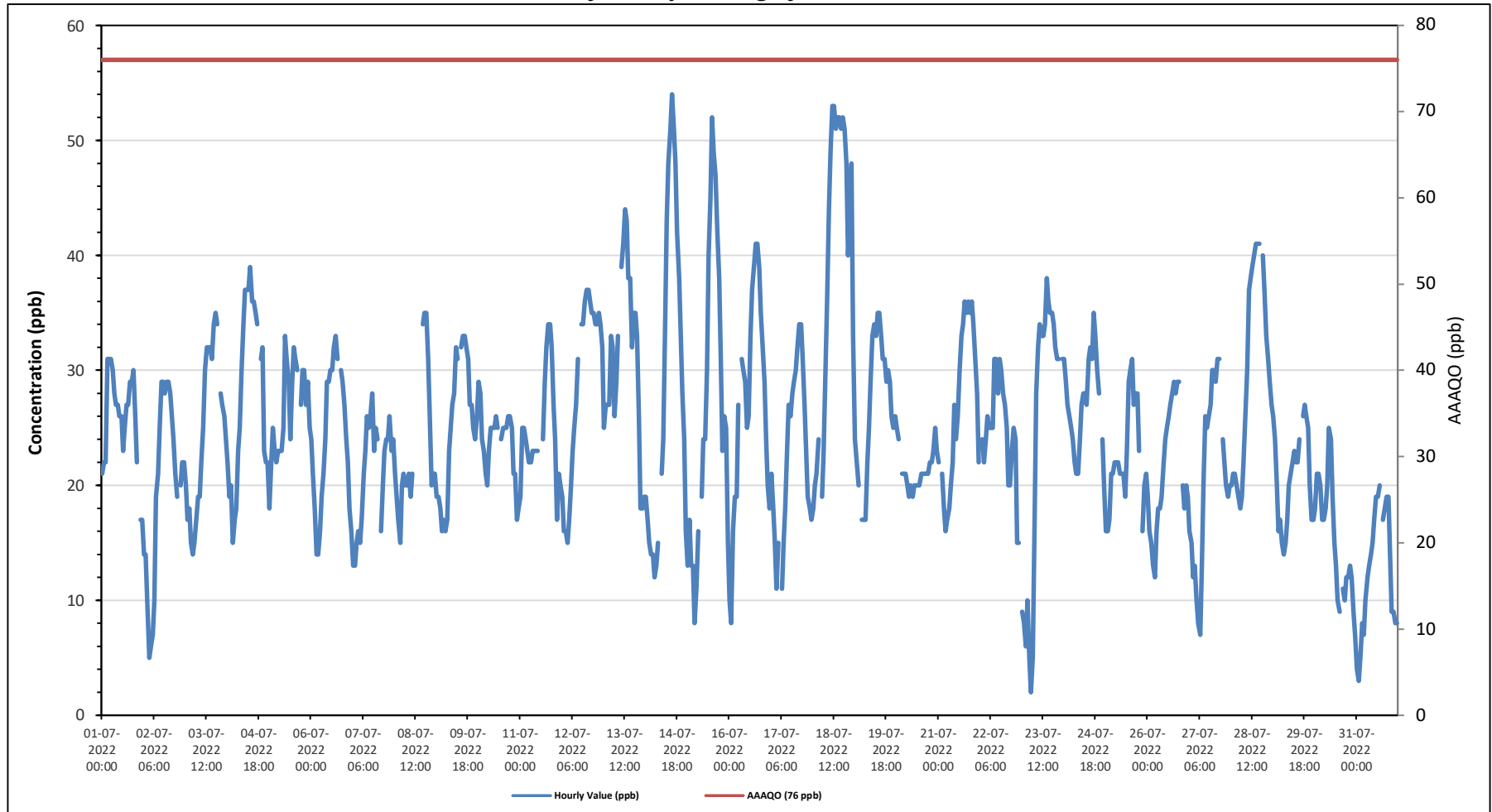
Lac La Biche Station - July 2022

Summary of Hourly Averages

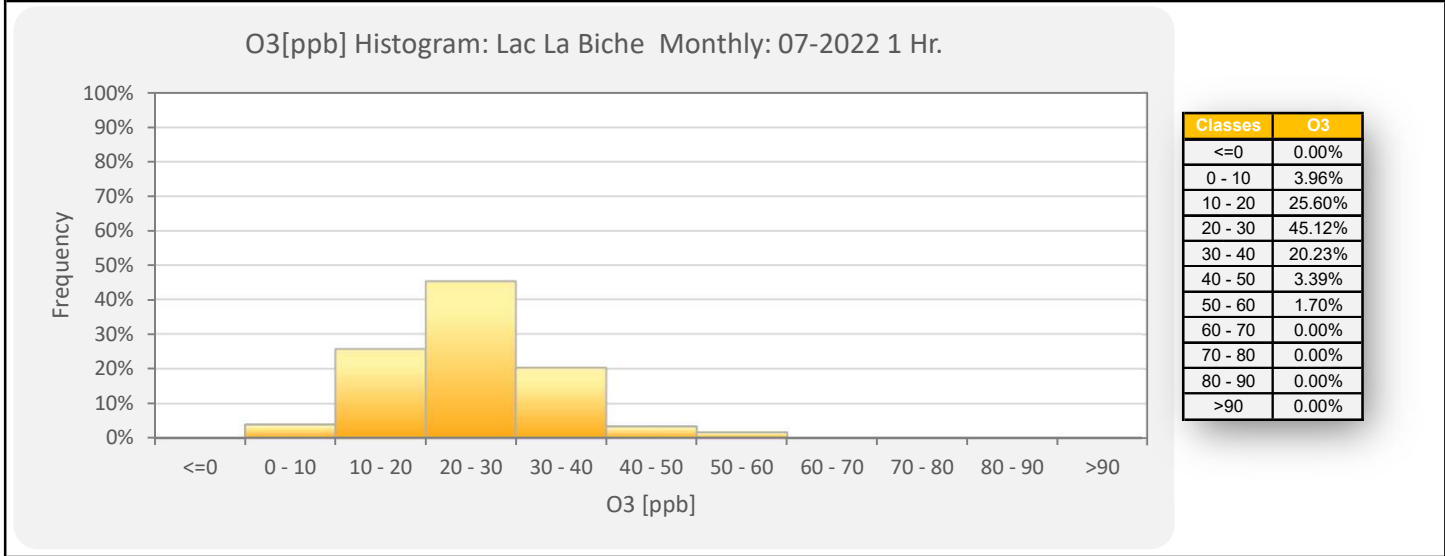
OZONE (O<sub>3</sub>) in ppb

Alberta Ambient Air Quality Objectives (AAAQO): 1-Hour 76 ppb																																															
Number of 1-Hour Exceedances: 0																																															
Maximum Hourly Value: 54.0 ppb on July 14 at hour 15												Hours in Service: 744																																			
Maximum Daily Value: 39.6 ppb on July 18												Hours of Data: 707																																			
Minimum Hourly Value: 2.0 ppb on July 23 at hour 5												Hours of Missing Data: 1																																			
Minimum Daily Value: 12.5 ppb on July 31												Hours of Calibration: 36																																			
Monthly Average: 24.8 ppb												Operational Uptime: 99.9																																			
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23																							
Jul 1	21	22	22	31	31	31	30	28	27	27	26	26	23	25	27	27	29	29	30	26	22	S	17	17	17.0	31.0	25.8																				
Jul 2	14	14	10	5	6	7	10	19	21	25	29	29	28	29	29	28	26	24	21	19	S	20	22	22	5.0	29.0	19.9																				
Jul 3	20	17	18	15	14	15	17	19	19	22	25	30	32	32	32	31	34	35	34	S	28	27	26	24	14.0	35.0	24.6																				
Jul 4	22	19	20	15	17	18	23	25	30	34	37	37	37	39	36	36	35	34	S	31	32	23	22	22	15.0	39.0	28.0																				
Jul 5	18	22	25	23	22	23	23	25	33	31	29	24	29	32	31	30	S	27	30	30	27	29	25	25	18.0	33.0	26.6																				
Jul 6	24	21	18	14	14	16	19	21	24	29	29	30	30	32	33	31	S	30	29	27	24	22	18	16	14.0	33.0	24.0																				
Jul 7	13	13	15	16	15	17	21	23	26	25	26	28	23	25	24	S	16	20	23	24	24	26	23	24	13.0	28.0	21.3																				
Jul 8	21	19	17	15	20	21	20	21	19	21	C	C	C	C	C	C	34	35	35	31	26	20	21	21	15.0	35.0	23.0																				
Jul 9	19	19	18	16	17	16	17	23	25	27	28	32	31	S	32	33	33	32	31	27	27	25	24	26	16.0	33.0	25.1																				
Jul 10	29	28	24	23	21	20	23	25	25	25	26	25	S	24	25	25	25	26	26	25	21	21	17	18	17.0	29.0	23.8																				
Jul 11	19	25	25	24	23	22	22	23	23	23	S	NRM	24	29	32	34	34	32	27	24	17	21	20	20	17.0	34.0	24.8																				
Jul 12	19	16	16	15	17	20	23	25	27	31	S	34	34	36	37	37	36	35	35	34	34	35	34	32	15.0	37.0	28.8																				
Jul 13	25	27	27	27	33	32	26	29	33	S	39	41	44	43	38	38	32	35	35	33	26	18	18	19	18.0	44.0	31.2																				
Jul 14	19	17	15	14	14	12	13	15	S	21	24	34	43	48	51	54	51	48	42	38	33	28	24	16	12.0	54.0	29.3																				
Jul 15	13	17	13	13	8	11	16	S	19	24	24	30	40	45	52	49	47	42	38	31	23	26	25	15	8.0	52.0	27.0																				
Jul 16	10	8	16	19	19	27	S	31	30	29	25	26	33	37	39	41	41	39	35	32	29	24	20	18	8.0	41.0	27.3																				
Jul 17	21	18	15	11	15	S	11	15	18	23	27	26	28	29	30	32	34	34	31	27	23	19	18	17	11.0	34.0	22.7																				
Jul 18	18	20	21	24	S	19	23	29	36	44	49	53	53	51	52	52	51	52	51	48	40	43	48	33	18.0	53.0	39.6																				
Jul 19	24	22	20	S	17	17	17	22	25	29	33	34	33	35	35	33	31	31	29	30	29	26	25	26	17.0	35.0	27.1																				
Jul 20	25	24	S	21	21	21	20	19	20	19	20	20	20	20	21	21	21	21	21	22	22	23	25	23	19.0	25.0	21.3																				
Jul 21	22	S	21	18	16	17	18	20	22	27	24	26	30	33	34	36	35	36	35	36	34	31	28	22	16.0	36.0	27.0																				
Jul 22	S	24	22	24	26	25	25	25	31	31	28	31	30	28	27	25	20	20	23	25	24	15	15	S	15.0	31.0	24.7																				
Jul 23	9	8	6	10	5	2	5	17	28	32	34	33	33	34	38	36	35	35	34	32	31	31	S	31	2.0	38.0	24.3																				
Jul 24	31	29	27	26	25	24	22	21	21	24	27	28	28	27	31	32	31	35	33	30	28	S	24	20	20.0	35.0	27.1																				
Jul 25	16	16	17	21	21	22	22	22	21	21	21	19	23	29	30	31	27	28	28	23	S	16	20	21	16.0	31.0	22.4																				
Jul 26	19	16	15	13	12	16	18	18	19	22	24	25	26	27	28	29	28	29	29	S	20	18	20	19	12.0	29.0	21.3																				
Jul 27	16	15	12	13	10	8	7	13	20	26	25	26	27	30	30	29	31	31	S	24	22	20	19	20	7.0	31.0	20.6																				
Jul 28	20	21	21	20	19	18	19	22	26	30	37	38	39	40	41	41	41	S	40	37	33	31	29	27	18.0	41.0	30.0																				
Jul 29	26	24	20	16	17	15	14	15	17	20	21	22	23	22	22	24	S	26	27	26	25	20	17	17	14.0	27.0	20.7																				
Jul 30	18	21	21	20	17	17	18	20	25	24	19	15	13	10	9	S	11	10	12	12	13	12	9	7	7.0	25.0	15.3																				
Jul 31	4	3	5	8	7	10	12	13	14	15	17	19	19	20	S	17	18	19	19	14	9	8	8	8	3.0	20.0	12.5																				
Diurnal Maximum	31	29	27	31	33	32	30	31	36	44	49	53	53	51	52	54	51	52	51	48	40	43	48	33																							
Diurnal Average	19.2	18.8	18.1	17.7	17.3	18.0	18.5	21.3	23.9	26.0	27.3	29.2	30.3	31.1	32.6	33.3	31.6	31.2	30.5	28.3	26.1	23.2	22.2	20.9																							
C	Monthly Calibration											S	Daily Zero-Span Check											Q	Quality Assurance																						
K	Collection Error											N	No Data (Machine Not in Service)											Y	Routine Maintenance											P	Power Failure										
X	Invalid Data (Equipment Malfunction /Recovery)											NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																		
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																															
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																															

**Timeseries Chart of Hourly Average for O3 - Lac La Biche Station**

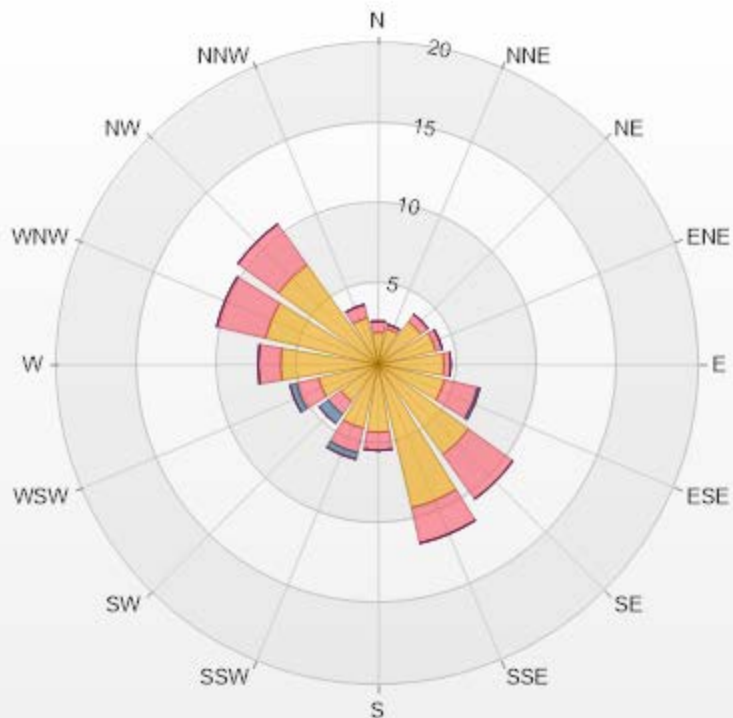






Wind: Lac La Biche Poll.: Lac La Biche-O3[ppb] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppb]

Direction	0-30	30-50	50-76	76-159	>159.0	Total
N	1.98	0.71	0	0	0	2.69
NNE	2.26	0.28	0	0	0	2.54
NE	3.25	0.57	0	0	0	3.82
ENE	3.68	0.42	0	0	0	4.1
E	4.1	0.42	0	0	0	4.52
ESE	4.24	2.12	0.14	0	0	6.5
SE	6.93	3.39	0	0	0	10.32
SSE	9.19	2.26	0	0	0	11.45
S	4.24	1.13	0	0	0	5.37
SSW	4.1	1.56	0.42	0	0	6.08
SW	2.83	0.99	0.71	0	0	4.53
WSW	3.82	1.41	0.42	0	0	5.65
W	6.08	1.41	0	0	0	7.49
WNW	7.21	3.11	0	0	0	10.32
NW	7.64	3.11	0	0	0	10.75
NNW	2.97	0.85	0	0	0	3.82
Summary	74.52	23.74	1.69	0	0	100



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% Icon Classes (ppb)

75 0-30

24 30-50

2 50-76

0 76-159

0 >159.0



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Lac La Biche Station - July 2022

Summary of Hourly Averages

TOTAL HYDROCARBONS (THC) in ppm

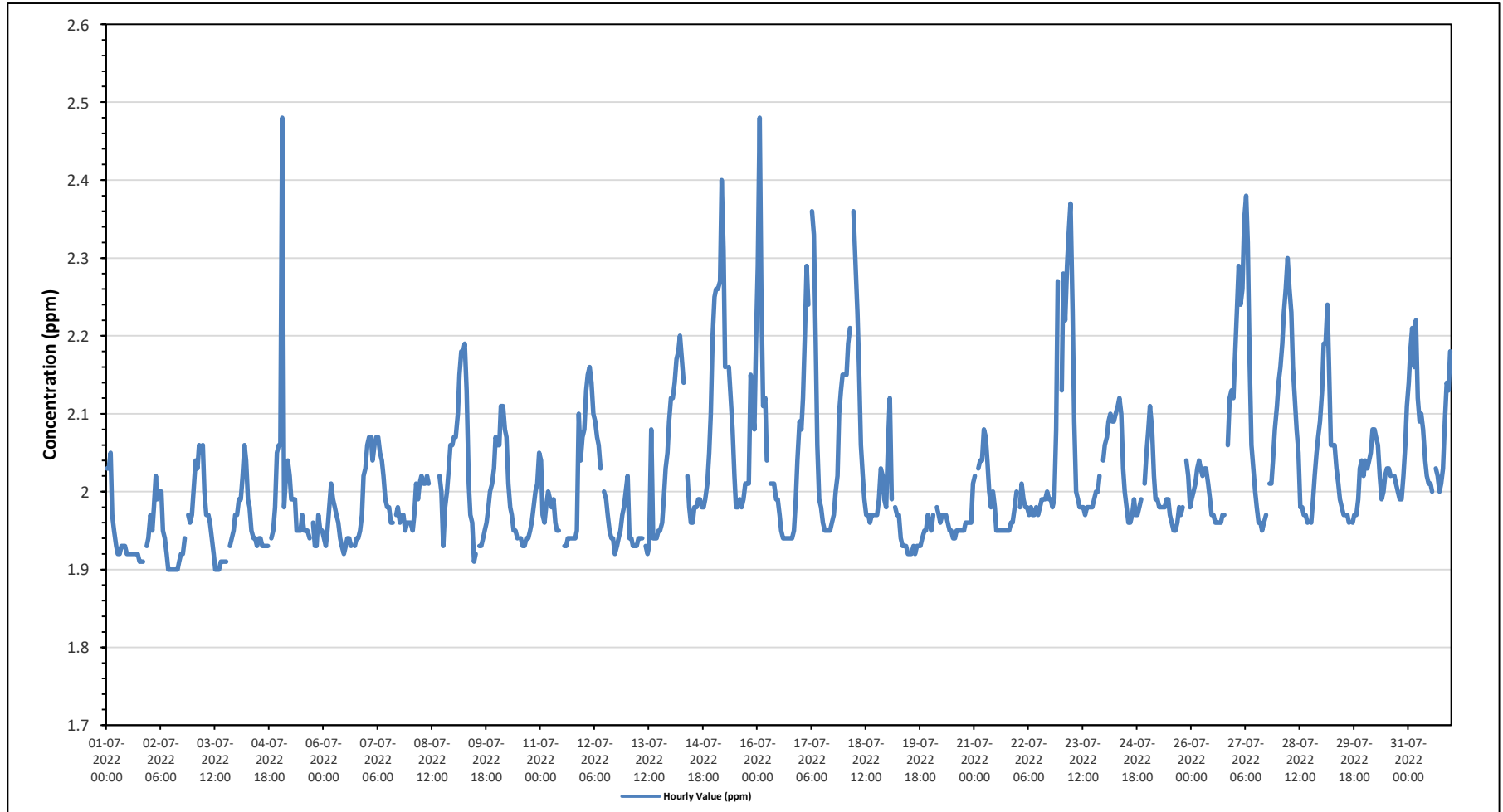
Maximum Hourly Value:	2.48 ppm on July 5 at hour 1	Hours in Service:	744
Maximum Daily Value:	2.12 ppm on July 15	Hours of Data:	707
Minimum Hourly Value:	1.90 ppm on July 2 at hour 10	Hours of Missing Data:	1
Minimum Daily Value:	1.94 ppm on July 1	Hours of Calibration:	36
Monthly Average:	2.02 ppm	Operational Uptime:	99.9

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	2.03	2.03	2.05	1.97	1.95	1.93	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	S	1.93	1.94	1.91	2.05	1.94	
Jul 2	1.97	1.95	1.98	2.02	1.99	2.00	2.00	1.95	1.94	1.92	1.90	1.90	1.90	1.90	1.90	1.91	1.92	1.92	1.92	1.94	S	1.97	1.96	1.97	1.90	2.02	1.94	
Jul 3	2.00	2.04	2.03	2.06	2.05	2.06	2.00	1.97	1.97	1.96	1.94	1.92	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.91	S	1.93	1.94	1.95	1.97	1.90	2.06	1.96
Jul 4	1.97	1.99	1.99	2.02	2.06	2.04	1.99	1.98	1.95	1.94	1.94	1.93	1.94	1.94	1.93	1.93	1.93	1.93	S	1.94	1.95	1.98	2.05	2.06	1.93	2.06	1.97	
Jul 5	2.06	2.48	1.98	2.02	2.04	2.02	1.99	1.99	1.99	1.95	1.95	1.95	1.97	1.95	1.95	1.94	S	1.96	1.93	1.93	1.97	1.95	1.95	1.95	1.93	2.48	1.99	
Jul 6	1.94	1.93	1.95	1.98	2.01	1.99	1.98	1.97	1.96	1.94	1.93	1.92	1.93	1.94	1.94	1.93	S	1.93	1.94	1.94	1.95	1.97	2.02	2.03	1.92	2.03	1.96	
Jul 7	2.06	2.07	2.07	2.04	2.06	2.07	2.07	2.05	2.04	2.02	1.99	1.98	1.98	1.96	1.96	S	1.97	1.98	1.96	1.97	1.97	1.95	1.96	1.96	1.95	2.07	2.01	
Jul 8	1.96	1.95	1.97	2.01	1.99	2.01	2.02	2.01	2.01	2.02	2.01	C	C	C	C	C	2.02	2.00	1.93	1.98	2.00	2.03	2.06	2.06	1.93	2.06	2.00	
Jul 9	2.07	2.07	2.10	2.15	2.18	2.18	2.19	2.13	2.01	1.97	1.96	1.91	1.92	S	1.93	1.93	1.94	1.95	1.96	1.98	2.00	2.01	2.03	2.07	1.91	2.19	2.03	
Jul 10	2.06	2.06	2.11	2.11	2.08	2.07	2.01	1.98	1.97	1.95	1.95	1.94	S	1.94	1.93	1.93	1.94	1.94	1.95	1.96	1.98	2.00	2.01	2.05	1.93	2.11	2.00	
Jul 11	2.04	1.97	1.96	1.98	2.00	1.99	1.98	1.99	1.96	1.95	1.95	S	S	NRM	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.95	2.10	2.04	2.07	1.93	2.10	1.98
Jul 12	2.08	2.13	2.15	2.16	2.14	2.10	2.09	2.07	2.06	2.03	S	2.00	1.99	1.97	1.95	1.94	1.94	1.92	1.93	1.94	1.95	1.97	1.98	2.00	1.92	2.16	2.02	
Jul 13	2.02	1.94	1.94	1.93	1.93	1.93	1.94	1.94	1.94	S	1.93	1.92	1.93	2.08	1.94	1.94	1.94	1.95	1.95	1.96	1.99	2.03	2.05	2.09	1.92	2.09	1.97	
Jul 14	2.12	2.12	2.14	2.17	2.18	2.20	2.17	2.14	S	2.02	1.98	1.96	1.96	1.98	1.98	1.99	1.99	1.98	1.98	1.99	2.01	2.05	2.10	2.20	1.96	2.20	2.06	
Jul 15	2.25	2.26	2.26	2.27	2.40	2.31	2.16	S	2.16	2.12	2.08	2.02	1.98	1.98	1.99	1.98	1.99	2.01	2.01	2.15	2.11	2.08	2.19	1.98	2.40	2.12		
Jul 16	2.29	2.48	2.26	2.11	2.12	2.04	S	2.01	2.01	2.01	1.99	1.99	1.97	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.99	2.04	2.09	1.94	2.48	2.04	
Jul 17	2.08	2.12	2.20	2.29	2.24	S	2.36	2.33	2.19	2.06	1.99	1.98	1.96	1.95	1.95	1.95	1.96	1.97	2.00	2.02	2.10	2.13	2.15	1.95	2.36	2.08		
Jul 18	2.15	2.15	2.19	2.21	S	2.36	2.29	2.23	2.16	2.06	2.02	1.99	1.97	1.96	1.97	1.97	1.97	1.97	1.97	1.99	2.03	2.02	1.99	1.98	1.96	2.36	2.07	
Jul 19	2.06	2.12	1.99	S	1.98	1.97	1.97	1.94	1.93	1.93	1.92	1.92	1.92	1.93	1.92	1.93	1.93	1.93	1.94	1.95	1.95	1.97	1.96	1.92	1.92	2.12	1.96	
Jul 20	1.95	1.97	S	1.98	1.97	1.96	1.97	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	2.01	1.94	2.01	1.96	
Jul 21	2.02	S	2.03	2.04	2.04	2.08	2.07	2.04	2.00	1.98	2.00	1.98	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.98	2.00	1.95	2.08	1.99	
Jul 22	S	1.98	2.01	1.99	1.98	1.98	1.97	1.98	1.97	1.97	1.98	1.97	1.98	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.08	2.27	S	1.97	2.27	2.00	
Jul 23	2.13	2.28	2.22	2.29	2.33	2.37	2.23	2.09	2.00	1.99	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.02	S	2.04	1.97	2.37	2.08	
Jul 24	2.06	2.07	2.09	2.10	2.09	2.09	2.10	2.11	2.12	2.10	2.03	2.00	1.98	1.96	1.96	1.97	1.99	1.97	1.97	1.98	1.99	S	2.01	2.05	1.96	2.12	2.03	
Jul 25	2.08	2.11	2.08	2.02	1.99	1.99	1.98	1.98	1.98	1.98	1.99	1.99	1.97	1.96	1.95	1.95	1.96	1.98	1.97	1.98	S	2.04	2.02	1.98	1.95	2.11	2.00	
Jul 26	1.99	2.00	2.01	2.03	2.04	2.03	2.02	2.03	2.03	2.01	1.99	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	S	2.06	2.12	2.13	1.96	2.13	2.01	
Jul 27	2.18	2.23	2.29	2.24	2.26	2.35	2.38	2.32	2.17	2.06	2.03	2.00	1.98	1.96	1.96	1.95	1.96	1.97	S	2.01	2.01	2.04	2.08	2.11	1.95	2.38	2.11	
Jul 28	2.14	2.16	2.19	2.23	2.26	2.30	2.26	2.23	2.16	2.12	2.08	2.05	1.98	1.98	1.97	1.97	1.96	S	1.96	1.99	2.02	2.05	2.07	2.09	1.96	2.30	2.10	
Jul 29	2.13	2.19	2.19	2.24	2.16	2.06	2.06	2.06	2.03	2.01	1.99	1.98	1.97	1.97	1.96	S	1.96	1.97	1.97	1.99	2.03	2.04	2.02	1.96	2.24	2.04		
Jul 30	2.04	2.03	2.04	2.05	2.08	2.08	2.07	2.06	2.02	1.99	2.00	2.02	2.03	2.03	2.02	S	2.02	2.01	2.00	1.99	1.99	2.02	2.06	2.11	1.99	2.11	2.03	
Jul 31	2.14	2.18	2.21	2.16	2.22	2.12	2.09	2.10	2.08	2.04	2.02	2.01	2.01	2.00	S	2.03	2.02	2.00	2.01	2.03	2.09	2.14	2.13	2.18	2.00	2.22	2.09	
Diurnal Maximum	2.29	2.48	2.29	2.29	2.40	2.37	2.38	2.33	2.19	2.12	2.08	2.05	2.03	2.08	2.02	2.03	2.02	2.01	2.01	2.03	2.15	2.14	2.27	2.20				
Diurnal Average	2.07	2.10	2.09	2.10	2.09	2.09	2.08	2.05	2.02	2.00	1.98	1.97	1.96	1.96	1.95	1.95	1.96	1.96	1.96	1.97	1.99	2.02	2.04	2.05				

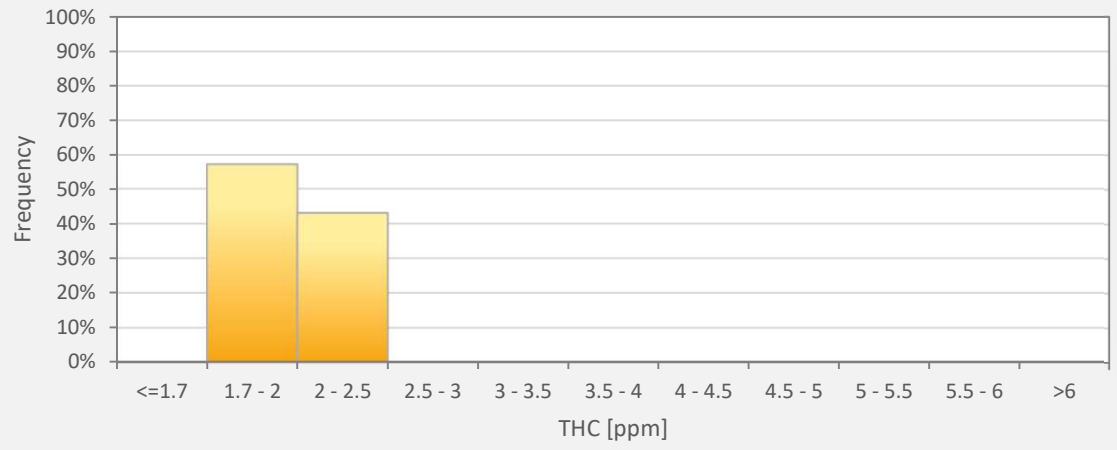
<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for THC - Lac La Biche Station**



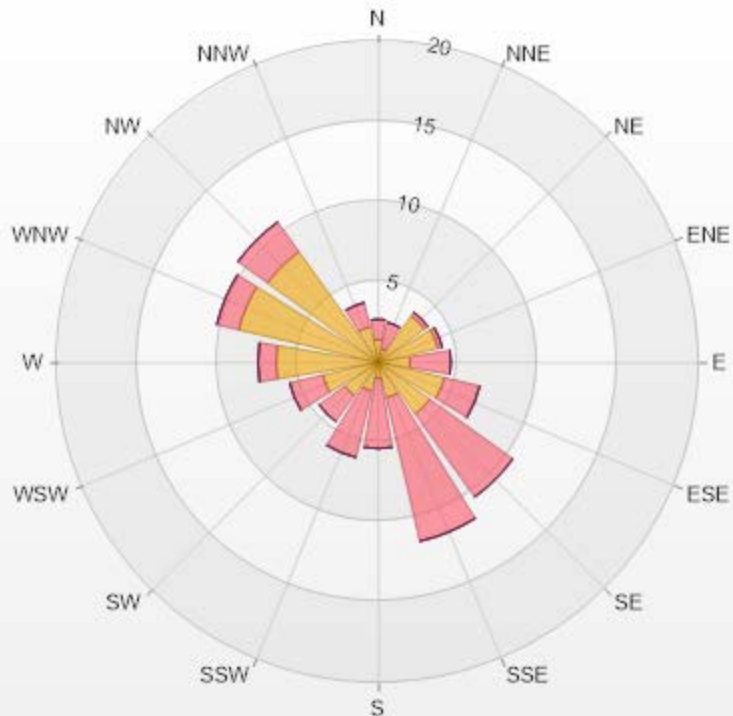
THC55[ppm] Histogram: Lac La Biche Monthly: 07-2022 1 Hr.



Classes	THC55
<=1.7	0.00%
1.7 - 2	57.00%
2 - 2.5	43.00%
2.5 - 3	0.00%
3 - 3.5	0.00%
3.5 - 4	0.00%
4 - 4.5	0.00%
4.5 - 5	0.00%
5 - 5.5	0.00%
5.5 - 6	0.00%
>6	0.00%

Wind: Lac La Biche Poll.: Lac La Biche-THC55[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-40	>40.0	Total
N	1.41	1.27	0	0	0	2.68
NNE	0.85	1.7	0	0	0	2.55
NE	3.54	0.28	0	0	0	3.82
ENE	3.82	0.28	0	0	0	4.1
E	1.98	2.55	0	0	0	4.53
ESE	4.24	2.26	0	0	0	6.5
SE	3.96	6.36	0	0	0	10.32
SSE	2.26	9.19	0	0	0	11.45
S	0.99	4.38	0	0	0	5.37
SSW	1.84	4.24	0	0	0	6.08
SW	2.55	1.98	0	0	0	4.53
WSW	3.54	2.12	0	0	0	5.66
W	6.36	1.13	0	0	0	7.49
WNW	8.91	1.41	0	0	0	10.32
NW	8.49	2.26	0	0	0	10.75
NNW	2.26	1.56	0	0	0	3.82
Summary	57	42.97	0	0	0	100



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% Icon Classes (ppm)	57	0-2	43	2-5	0	5-10	0	10-40	0	>40.0
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Lac La Biche Station - July 2022

Summary of Hourly Averages

METHANE (CH4) in ppm

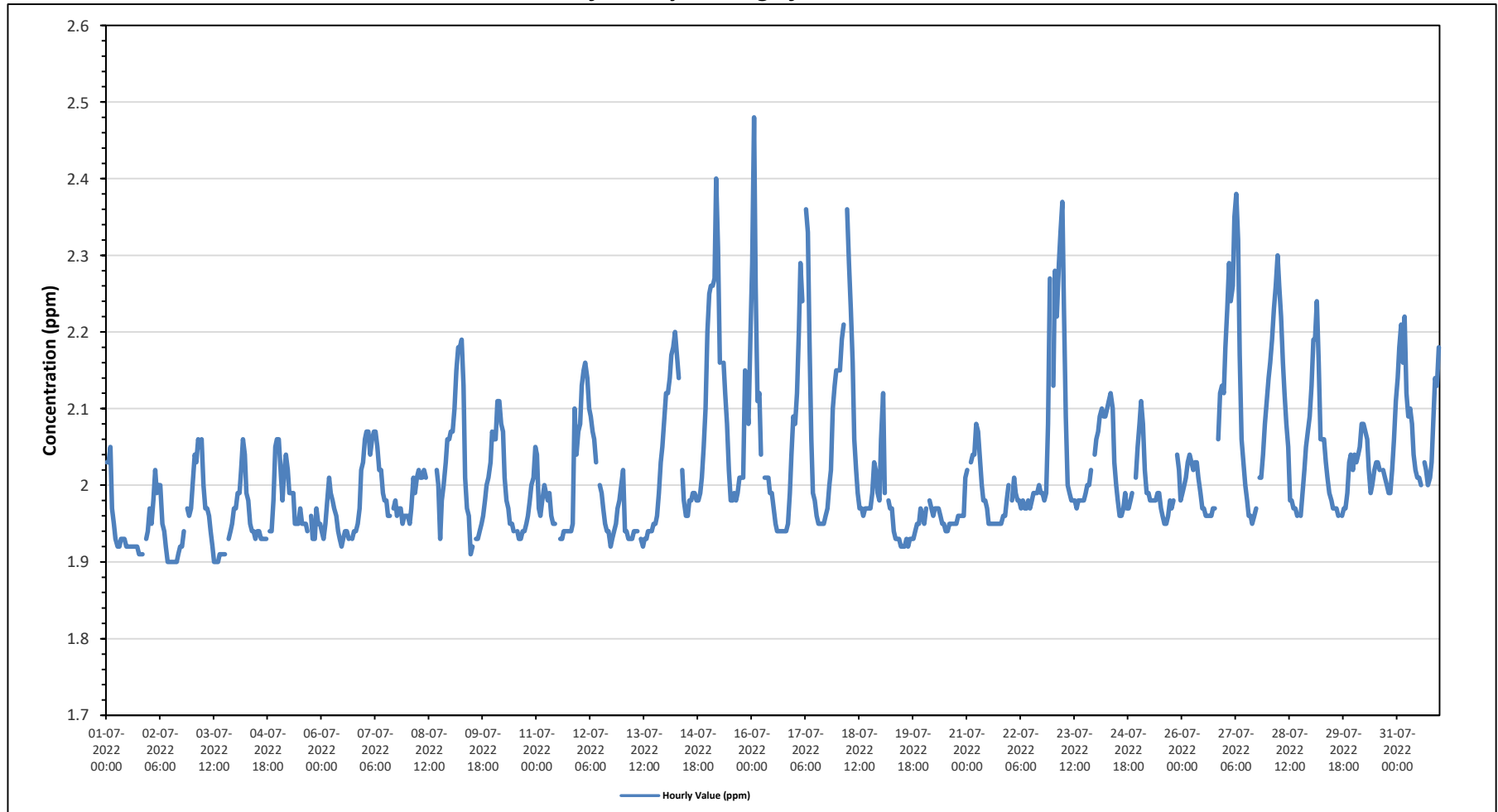
Maximum Hourly Value:	2.48 ppm on July 16 at hour 1	Hours in Service:	744
Maximum Daily Value:	2.12 ppm on July 15	Hours of Data:	707
Minimum Hourly Value:	1.90 ppm on July 2 at hour 10	Hours of Missing Data:	1
Minimum Daily Value:	1.94 ppm on July 1	Hours of Calibration:	36
Monthly Average:	2.02 ppm	Operational Uptime:	99.9

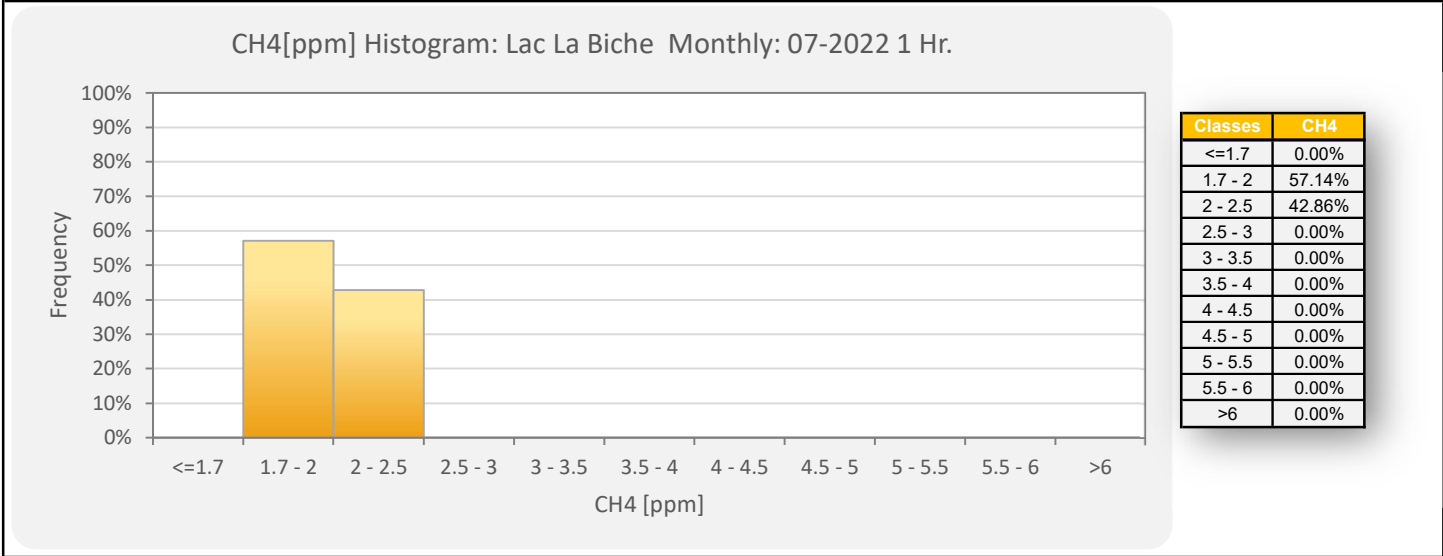
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	2.03	2.03	2.05	1.97	1.95	1.93	1.92	1.92	1.93	1.93	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.91	1.91	1.91	S	1.93	1.94	1.91	2.05	1.94	
Jul 2	1.97	1.95	1.98	2.02	1.99	2.00	2.00	1.95	1.94	1.92	1.90	1.90	1.90	1.90	1.90	1.91	1.92	1.92	1.92	S	1.97	1.96	1.97	1.90	2.02	1.94	
Jul 3	2.00	2.04	2.03	2.06	2.05	2.06	2.00	1.97	1.97	1.96	1.94	1.92	1.90	1.90	1.90	1.91	1.91	1.91	1.91	S	1.93	1.94	1.95	1.97	1.90	2.06	1.96
Jul 4	1.97	1.99	1.99	2.02	2.06	2.04	1.99	1.98	1.95	1.94	1.94	1.93	1.94	1.94	1.93	1.93	1.93	1.93	S	1.94	1.94	1.98	2.05	2.06	1.93	2.06	1.97
Jul 5	2.06	2.02	1.98	2.02	2.04	2.02	1.99	1.99	1.99	1.95	1.95	1.95	1.97	1.95	1.95	1.95	1.94	S	1.96	1.93	1.93	1.97	1.95	1.95	1.93	2.06	1.97
Jul 6	1.94	1.93	1.95	1.98	2.01	1.99	1.98	1.97	1.96	1.94	1.93	1.92	1.93	1.94	1.94	1.93	S	1.93	1.94	1.94	1.95	1.97	2.02	2.03	1.92	2.03	1.96
Jul 7	2.06	2.07	2.07	2.04	2.06	2.07	2.07	2.05	2.02	2.02	1.99	1.98	1.98	1.96	1.96	S	1.97	1.98	1.96	1.97	1.97	1.95	1.96	1.96	1.95	2.07	2.01
Jul 8	1.96	1.95	1.97	2.01	1.99	2.01	2.02	2.01	2.01	2.02	2.01	C	C	C	C	C	2.02	2.00	1.93	1.98	2.00	2.03	2.06	2.06	1.93	2.06	2.00
Jul 9	2.07	2.07	2.10	2.15	2.18	2.18	2.19	2.13	2.01	1.97	1.96	1.91	1.92	S	1.93	1.93	1.94	1.95	1.96	1.98	2.00	2.01	2.03	2.07	1.91	2.19	2.03
Jul 10	2.06	2.06	2.11	2.11	2.08	2.07	2.01	1.98	1.97	1.95	1.95	1.94	S	1.94	1.93	1.93	1.94	1.94	1.95	1.96	1.98	2.00	2.01	2.05	1.93	2.11	2.00
Jul 11	2.04	1.97	1.96	1.98	2.00	1.99	1.98	1.99	1.96	1.95	1.95	S	NRM	1.93	1.93	1.94	1.94	1.94	1.94	1.94	1.94	2.10	2.04	2.07	1.93	2.10	1.98
Jul 12	2.08	2.13	2.15	2.16	2.14	2.10	2.09	2.07	2.06	2.03	S	2.00	1.99	1.97	1.95	1.94	1.94	1.92	1.93	1.94	1.95	1.97	1.98	2.00	1.92	2.16	2.02
Jul 13	2.02	1.94	1.94	1.93	1.93	1.93	1.94	1.94	1.94	S	1.93	1.92	1.93	1.93	1.94	1.94	1.94	1.95	1.95	1.96	1.99	2.03	2.05	2.09	1.92	2.09	1.96
Jul 14	2.12	2.12	2.14	2.17	2.18	2.20	2.17	2.14	S	2.02	1.98	1.96	1.96	1.98	1.98	1.99	1.99	1.98	1.98	1.99	2.01	2.05	2.10	2.20	1.96	2.20	2.06
Jul 15	2.25	2.26	2.26	2.27	2.40	2.31	2.16	S	2.16	2.12	2.08	2.02	1.98	1.98	1.99	1.98	1.99	2.01	2.01	2.15	2.11	2.08	2.19	1.98	2.40	2.12	
Jul 16	2.29	2.48	2.26	2.11	2.12	2.04	S	2.01	2.01	2.01	1.99	1.99	1.97	1.95	1.94	1.94	1.94	1.94	1.94	1.94	1.95	1.99	2.04	2.09	1.94	2.48	2.04
Jul 17	2.08	2.12	2.20	2.29	2.24	S	2.36	2.33	2.19	2.06	1.99	1.98	1.96	1.95	1.95	1.95	1.95	1.96	1.97	2.00	2.02	2.10	2.13	2.15	1.95	2.36	2.08
Jul 18	2.15	2.15	2.19	2.21	S	2.36	2.29	2.23	2.16	2.06	2.02	1.99	1.97	1.97	1.96	1.97	1.97	1.97	1.97	1.99	2.03	2.02	1.99	1.98	1.96	2.36	2.07
Jul 19	2.06	2.12	1.99	S	1.98	1.97	1.97	1.94	1.93	1.93	1.92	1.92	1.92	1.93	1.92	1.93	1.93	1.93	1.94	1.95	1.95	1.97	1.96	1.96	1.92	2.12	1.96
Jul 20	1.95	1.97	S	1.98	1.97	1.96	1.97	1.97	1.97	1.96	1.95	1.95	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.96	1.96	2.01	1.94	2.01	1.96
Jul 21	2.02	S	2.03	2.04	2.04	2.08	2.07	2.04	2.00	1.98	1.98	1.97	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.96	1.96	1.98	2.00	1.95	2.08	1.99
Jul 22	S	1.98	2.01	1.99	1.98	1.98	1.97	1.98	1.97	1.97	1.98	1.97	1.98	1.99	1.99	1.99	2.00	1.99	1.99	1.99	1.99	2.08	2.27	S	1.97	2.27	2.00
Jul 23	2.13	2.28	2.22	2.29	2.33	2.37	2.23	2.09	2.00	1.99	1.98	1.98	1.98	1.97	1.98	1.98	1.98	1.98	1.99	2.00	2.00	2.02	S	2.04	1.97	2.37	2.08
Jul 24	2.06	2.07	2.09	2.10	2.09	2.09	2.10	2.11	2.12	2.10	2.03	2.00	1.98	1.96	1.96	1.97	1.99	1.97	1.97	1.97	1.98	1.99	S	2.01	1.96	2.12	2.03
Jul 25	2.08	2.11	2.08	2.02	1.99	1.99	1.98	1.98	1.98	1.98	1.99	1.99	1.97	1.96	1.95	1.95	1.96	1.98	1.97	1.98	S	2.04	2.02	1.98	1.95	2.11	2.00
Jul 26	1.99	2.00	2.01	2.03	2.04	2.03	2.02	2.03	2.03	2.01	1.99	1.97	1.97	1.96	1.96	1.96	1.96	1.97	1.97	1.97	S	2.06	2.12	2.13	1.96	2.13	2.01
Jul 27	2.18	2.23	2.29	2.24	2.26	2.35	2.38	2.32	2.17	2.06	2.03	2.00	1.98	1.96	1.96	1.95	1.96	1.97	S	2.01	2.01	2.04	2.08	2.11	1.95	2.38	2.11
Jul 28	2.14	2.16	2.19	2.23	2.26	2.30	2.26	2.22	2.16	2.12	2.08	2.05	1.98	1.98	1.97	1.97	1.96	S	1.96	1.99	2.02	2.05	2.07	2.09	1.96	2.30	2.10
Jul 29	2.13	2.19	2.19	2.24	2.16	2.06	2.06	2.06	2.03	2.01	1.99	1.98	1.97	1.97	1.96	S	1.96	1.97	1.97	1.99	2.03	2.04	2.02	1.96	2.24	2.04	
Jul 30	2.04	2.03	2.04	2.05	2.08	2.08	2.07	2.06	2.02	1.99	2.00	2.02	2.03	2.03	2.02	S	2.02	2.01	2.00	1.99	1.99	2.02	2.06	2.11	1.99	2.11	2.03
Jul 31	2.14	2.18	2.21	2.16	2.22	2.12	2.09	2.10	2.08	2.04	2.02	2.01	2.01	2.00	S	2.03	2.02	2.00	2.01	2.03	2.09	2.14	2.13	2.18	2.00	2.22	2.09
Diurnal Maximum	2.29	2.48	2.29	2.29	2.40	2.37	2.38	2.33	2.19	2.12	2.08	2.05	2.03	2.03	2.02	2.03	2.02	2.01	2.01	2.03	2.15	2.14	2.27	2.20			
Diurnal Average	2.07	2.09	2.09	2.10	2.09	2.09	2.08	2.05	2.02	2.00	1.98	1.97	1.96	1.96	1.95	1.95	1.96	1.96	1.96	1.97	1.99	2.02	2.04	2.05			

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
 Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

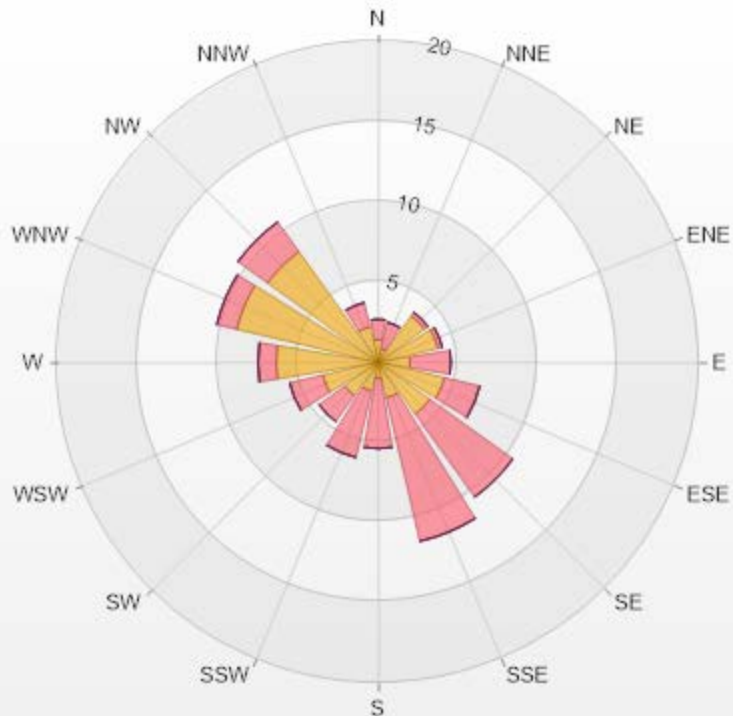
**Timeseries Chart of Hourly Average for CH4 - Lac La Biche Station**





Wind: Lac La Biche Poll.: Lac La Biche-CH4[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

Direction	0-2	2-5	5-10	10-20	>20.0	Total
N	1.41	1.27	0	0	0	2.68
NNE	0.85	1.7	0	0	0	2.55
NE	3.54	0.28	0	0	0	3.82
ENE	3.82	0.28	0	0	0	4.1
E	1.98	2.55	0	0	0	4.53
ESE	4.24	2.26	0	0	0	6.5
SE	3.96	6.36	0	0	0	10.32
SSE	2.26	9.19	0	0	0	11.45
S	0.99	4.38	0	0	0	5.37
SSW	1.84	4.24	0	0	0	6.08
SW	2.55	1.98	0	0	0	4.53
WSW	3.54	2.12	0	0	0	5.66
W	6.36	1.13	0	0	0	7.49
WNW	9.05	1.27	0	0	0	10.32
NW	8.49	2.26	0	0	0	10.75
NNW	2.26	1.56	0	0	0	3.82
Summary	57.14	42.83	0	0	0	100



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% Icon Classes (ppm)

57 0-2

43 2-5

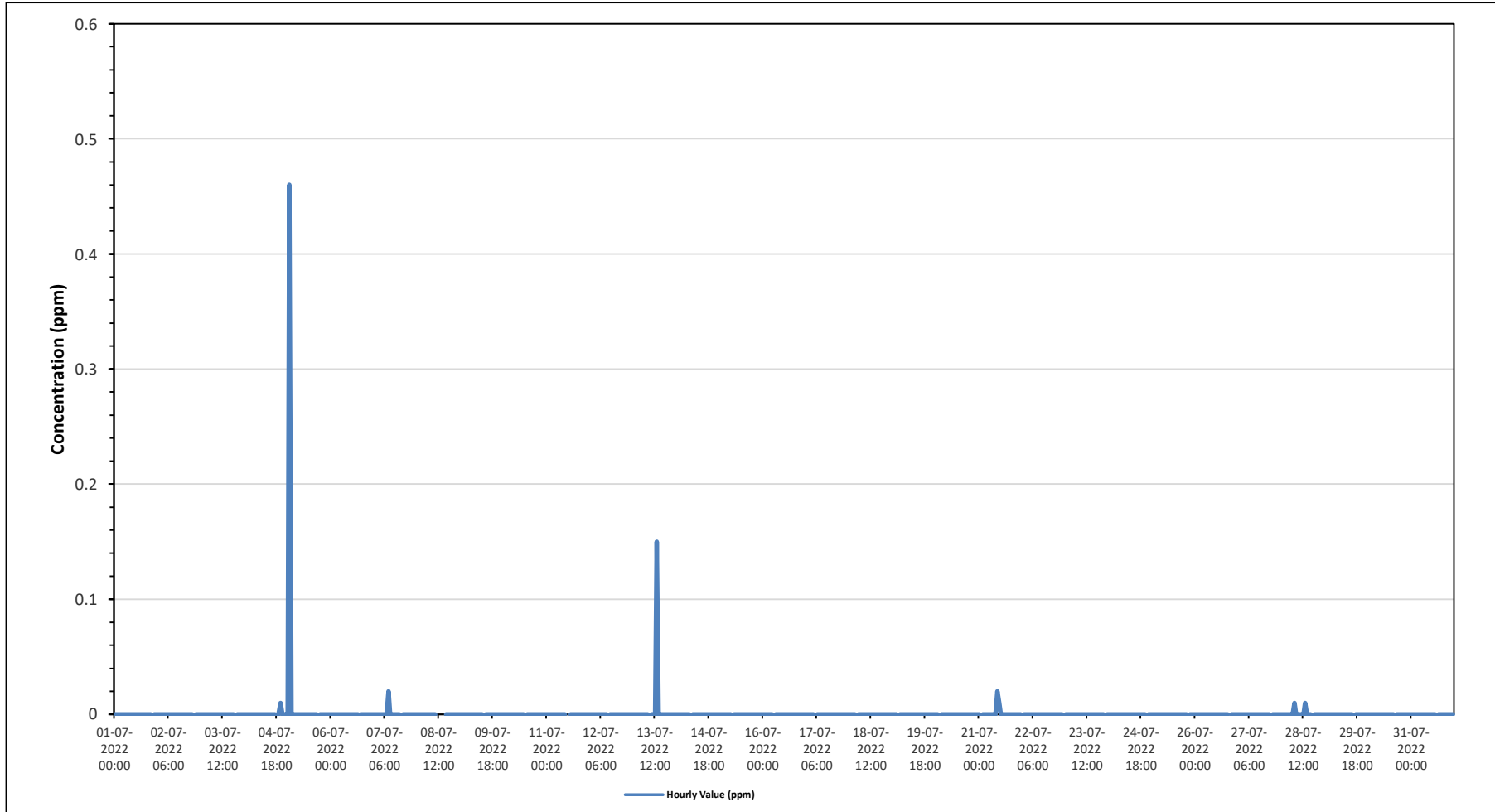
0 5-10

0 10-20

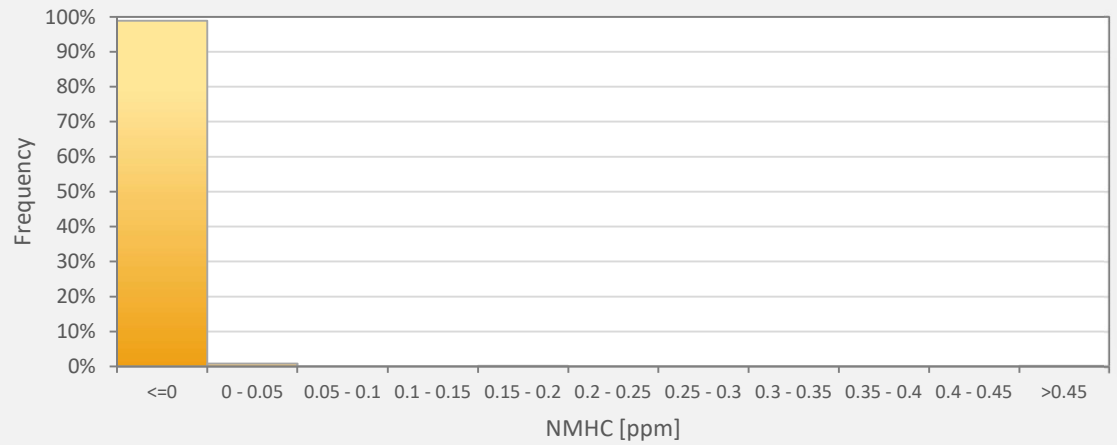
0 >20.0



**Timeseries Chart of Hourly Average for NMHC - Lac La Biche Station**



NMHC[ppm] Histogram: Lac La Biche Monthly: 07-2022 1 Hr.



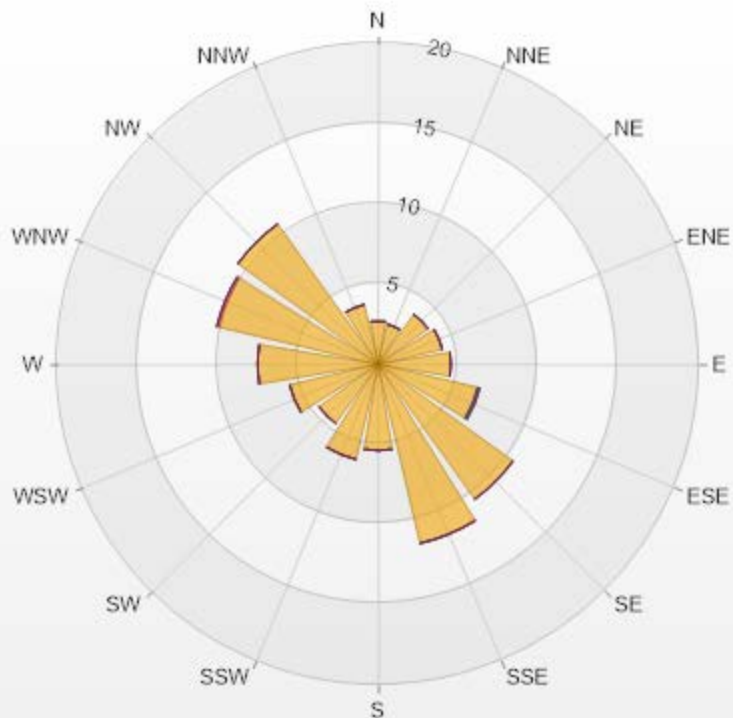
Classes	NMHC
<=0	98.87%
0 - 0.05	0.85%
0.05 - 0.1	0.00%
0.1 - 0.15	0.00%
0.15 - 0.2	0.14%
0.2 - 0.25	0.00%
0.25 - 0.3	0.00%
0.3 - 0.35	0.00%
0.35 - 0.4	0.00%
0.4 - 0.45	0.00%
>0.45	0.14%



Wind: Lac La Biche Poll.: Lac La Biche-NMHC[ppm] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.

Calm: 0.00% Valid Data: 95.03% Calm Avg: 0.00 [ppm]

Direction	0-0.1	0.1-0.3	0.3-1	1-2	>2.0	Total
N	2.69	0	0	0	0	2.69
NNE	2.55	0	0	0	0	2.55
NE	3.82	0	0	0	0	3.82
ENE	4.1	0	0	0	0	4.1
E	4.53	0	0	0	0	4.53
ESE	6.36	0	0.14	0	0	6.5
SE	10.33	0	0	0	0	10.33
SSE	11.46	0	0	0	0	11.46
S	5.37	0	0	0	0	5.37
SSW	6.08	0	0	0	0	6.08
SW	4.53	0	0	0	0	4.53
WSW	5.66	0	0	0	0	5.66
W	7.5	0	0	0	0	7.5
WNW	10.18	0.14	0	0	0	10.32
NW	10.75	0	0	0	0	10.75
NNW	3.82	0	0	0	0	3.82
Summary	100	0.14	0.14	0	0	100



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% Icon Classes (ppm)

100 0-0.1

0 0.1-0.3

0 0.3-1

0 1-2

0 >2.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

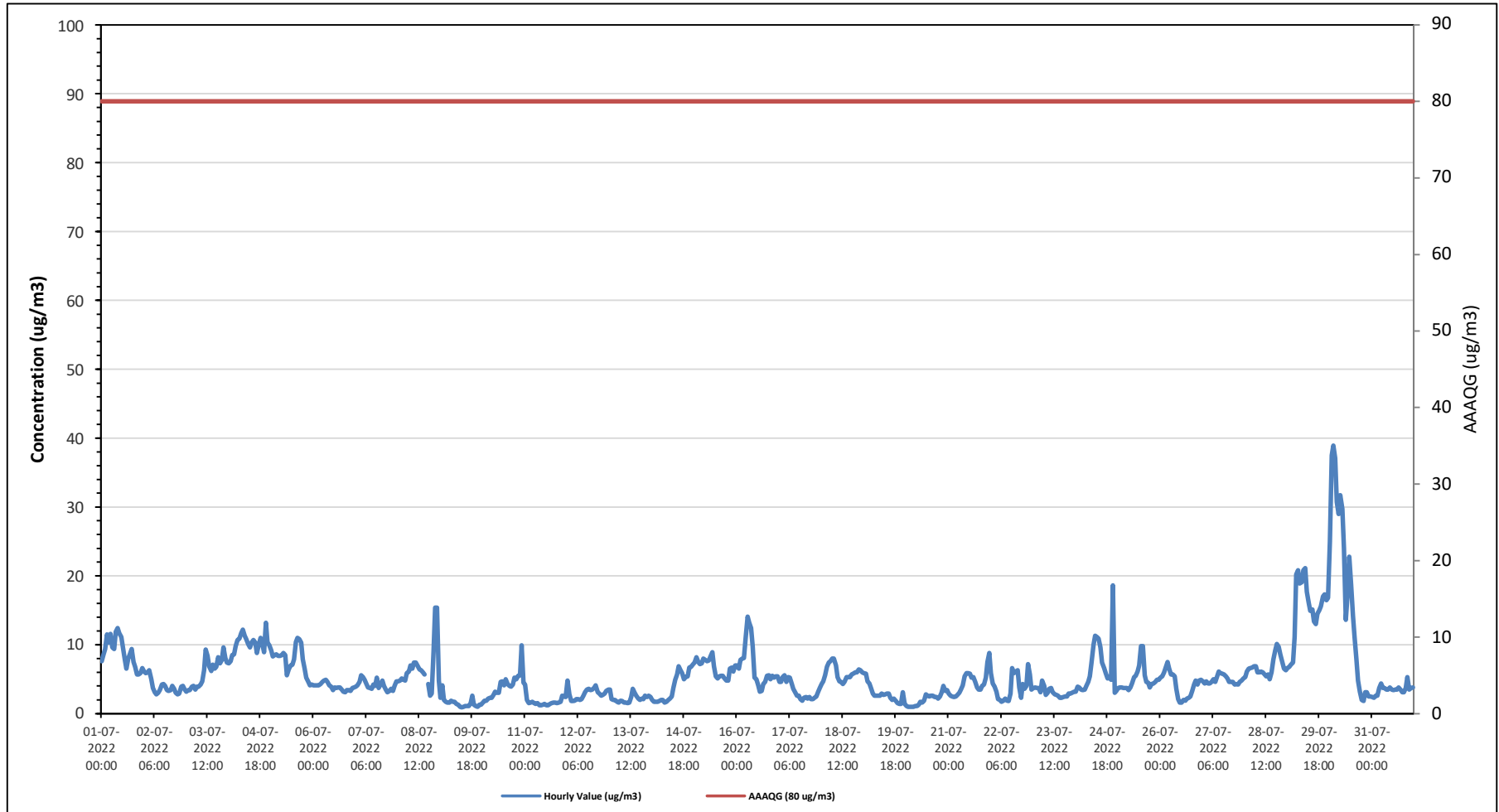
Lac La Biche Station - July 2022

Summary of Hourly Averages

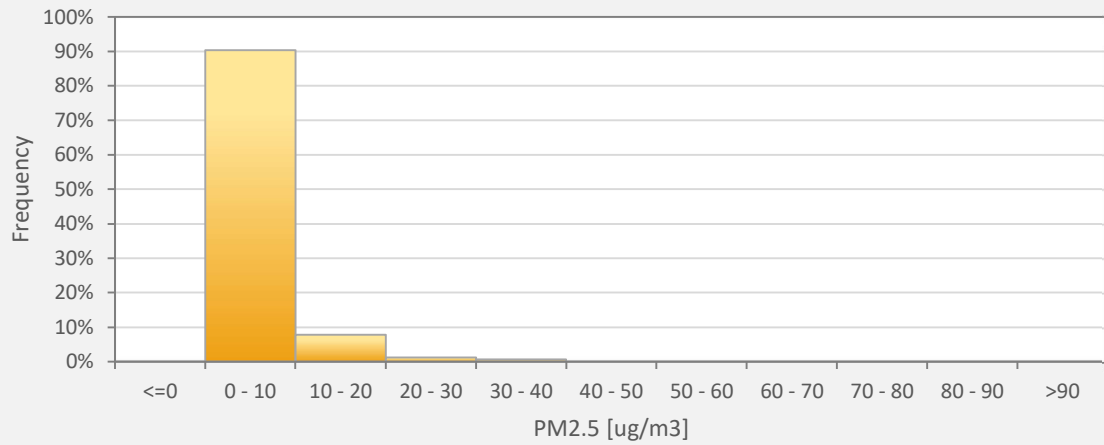
### PARTICULATE MATTER 2.5 (PM<sub>2.5</sub>) in µg/m<sup>3</sup>

Alberta Ambient Air Quality Guideline (AAAQG): 1-Hour 80 µg/m <sup>3</sup> , Alberta Ambient Air Quality Objective (AAAO): 24-Hour 29 µg/m <sup>3</sup>																														
Number of 1-Hour Exceedances: 0													Number of 24-Hour Exceedances: 0																	
Maximum Hourly Value: 39 µg/m <sup>3</sup> on July 30 at hour 2													Hours in Service: 744																	
Maximum Daily Value: 17.2 µg/m <sup>3</sup> on July 30													Hours of Data: 743																	
Minimum Hourly Value: 1 µg/m <sup>3</sup> on July 9 at hour 12													Hours of Missing Data: 0																	
Minimum Daily Value: 2 µg/m <sup>3</sup> on July 9													Hours of Calibration: 1																	
Monthly Average: 5.5 µg/m <sup>3</sup>													Operational Uptime: 100.0																	
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23			
Jul 1	8	9	9	12	10	12	10	9	12	12	12	11	10	8	7	8	9	9	8	7	6	6	6	7	6	12	8.9			
Jul 2	6	6	6	6	5	4	3	3	3	3	4	4	4	3	3	4	4	3	3	3	4	4	4	4	3	6	4.0			
Jul 3	3	3	3	4	4	4	4	4	4	4	5	6	9	8	7	6	7	7	8	7	8	10	8	7	3	10	6.0			
Jul 4	7	8	9	9	10	11	11	12	12	11	11	10	10	10	11	10	9	10	11	10	9	13	10	10	7	13	10.1			
Jul 5	9	8	9	9	8	8	9	9	9	6	6	7	7	8	10	11	11	10	8	7	5	5	4	4	4	11	7.8			
Jul 6	4	4	4	4	4	5	5	5	5	4	4	3	4	4	4	4	3	3	3	3	3	4	4	4	3	5	3.9			
Jul 7	4	4	5	6	5	5	4	4	4	4	4	4	5	4	4	5	4	4	3	3	4	3	4	5	3	6	4.1			
Jul 8	5	5	5	5	5	6	6	7	7	7	7	7	6	6	6	6	6	4	3	3	9	15	15	5	3	15	6.5			
Jul 9	2	4	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	1	4	1.6			
Jul 10	2	2	2	2	2	2	3	3	3	3	5	5	4	5	4	4	4	4	5	5	6	6	10	5	2	10	3.9			
Jul 11	4	2	2	2	2	2	1	2	1	1	1	1	1	1	1	2	2	2	2	2	2	3	3	2	1	4	1.7			
Jul 12	5	3	2	2	2	2	2	2	2	3	3	4	4	3	4	4	3	3	3	3	3	3	3	4	2	5	2.9			
Jul 13	4	2	2	2	2	2	2	2	2	2	2	2	2	4	3	3	2	2	2	2	3	2	3	2	2	4	2.2			
Jul 14	2	2	2	2	2	2	2	2	2	2	2	3	4	5	6	7	6	6	5	5	5	7	7	7	2	7	3.9			
Jul 15	7	8	8	7	7	8	8	8	8	8	9	7	5	5	6	6	5	5	5	5	7	7	6	7	5	9	6.7			
Jul 16	7	7	8	8	8	11	14	13	12	10	5	5	4	3	3	4	5	6	6	5	6	5	5	5	3	14	6.9			
Jul 17	5	5	5	6	5	5	5	4	4	3	3	3	2	2	2	2	2	2	2	2	2	3	3	4	2	6	3.4			
Jul 18	4	5	6	7	7	8	8	8	7	5	5	5	4	5	5	5	6	6	6	6	6	6	6	6	4	8	5.9			
Jul 19	6	6	5	4	4	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	1	1	3	1	1	6	2.9			
Jul 20	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3	2	2	2	3	3	4	3	3	1	4	2.1			
Jul 21	3	3	3	2	3	3	3	4	4	5	6	6	6	5	5	4	4	4	4	4	4	5	8	9	2	9	4.4			
Jul 22	6	4	4	3	2	2	2	2	2	2	2	3	7	6	6	6	4	4	4	4	4	7	6	4	2	7	3.9			
Jul 23	4	4	4	4	3	5	4	3	3	4	4	3	3	3	2	2	2	3	3	3	3	3	3	3	2	5	3.1			
Jul 24	3	4	4	4	3	4	4	5	5	7	10	11	11	11	10	7	7	6	5	5	5	19	3	3	3	19	6.5			
Jul 25	4	4	4	4	4	4	3	4	4	5	6	6	7	10	10	6	5	5	4	4	4	5	5	5	3	10	5.0			
Jul 26	5	5	6	7	8	7	6	6	5	4	2	2	2	2	2	2	2	3	3	4	5	4	5	5	2	8	4.2			
Jul 27	5	4	5	4	4	5	5	5	5	6	6	6	6	5	5	5	5	5	4	4	4	5	5	5	4	6	4.9			
Jul 28	5	6	7	7	7	7	7	6	6	6	6	6	5	6	5	6	8	9	10	10	9	7	7	6	5	10	6.8			
Jul 29	7	7	7	7	11	20	21	19	19	19	21	21	18	16	15	15	13	13	15	15	16	17	17	17	7	21	15.1			
Jul 30	25	38	39	37	31	29	32	30	24	14	17	23	19	14	11	8	5	3	2	2	3	3	3	3	2	39	17.2			
Jul 31	2	2	3	3	4	4	4	4	4	4	4	4	3	4	4	4	4	3	3	4	5	4	4	4	2	5	3.5			
Diurnal Maximum	25	38	39	37	31	29	32	30	24	14	17	23	19	14	11	8	5	3	2	2	3	3	3	3	2	39	17.2			
Diurnal Average	5.3	5.6	5.7	5.8	5.6	6.1	6.2	6.0	5.9	5.6	5.7	5.9	5.7	5.5	5.4	5.2	4.8	4.8	4.7	4.6	5.0	6.0	5.6	5.0	2	5	3.5			
<b>C</b>	Monthly Calibration											<b>S</b>	Daily Zero-Span Check						<b>Q</b>	Quality Assurance										
<b>K</b>	Collection Error											<b>N</b>	No Data (Machine Not in Service)						<b>Y</b>	Routine Maintenance								<b>P</b>	Power Failure	
<b>X</b>	Invalid Data (Equipment Malfunction/Recovery)											<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																	
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																														
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																														

**Timeseries Chart of Hourly Average for PM2.5 - Lac La Biche Station**



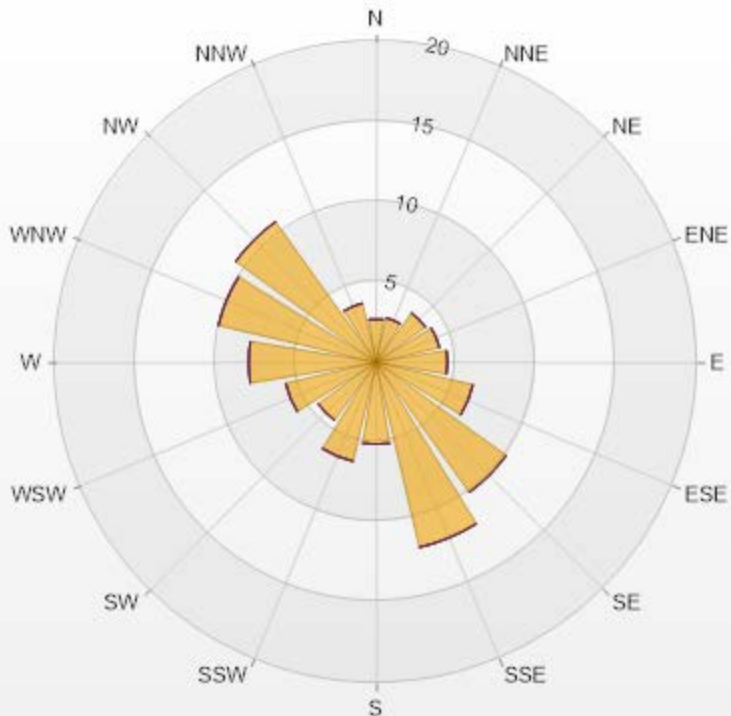
PM2.5[ug/m3(L)] Histogram: Lac La Biche Monthly: 07-2022 1 Hr.



Classes	PM2.5
<=0	0.00%
0 - 10	90.31%
10 - 20	7.81%
20 - 30	1.21%
30 - 40	0.67%
40 - 50	0.00%
50 - 60	0.00%
60 - 70	0.00%
70 - 80	0.00%
80 - 90	0.00%
>90	0.00%

Wind: Lac La Biche Poll.: Lac La Biche-PM2.5[ug/m3(L)] Monthly: 07-2022 Type: PollutionRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 0.00% Valid Data: 99.87% Calm Avg: 0.00 [ug/m3(L)]


Direction	0-50	50-80	80-120	120-240	>240.0	Total
N	2.69	0	0	0	0	2.69
NNE	2.83	0	0	0	0	2.83
NE	3.77	0	0	0	0	3.77
ENE	4.04	0	0	0	0	4.04
E	4.44	0	0	0	0	4.44
ESE	6.19	0	0	0	0	6.19
SE	9.96	0	0	0	0	9.96
SSE	11.84	0	0	0	0	11.84
S	5.11	0	0	0	0	5.11
SSW	6.33	0	0	0	0	6.33
SW	4.44	0	0	0	0	4.44
WSW	5.79	0	0	0	0	5.79
W	7.94	0	0	0	0	7.94
WNW	10.09	0	0	0	0	10.09
NW	10.77	0	0	0	0	10.77
NNW	3.77	0	0	0	0	3.77
Summary	100	0	0	0	0	100




LICA-202207

% Icon Classes (ug/m3(L))

100  0-50

0  50-80

0  80-120

0  120-240

0  >240.0



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

RELATIVE HUMIDITY (RH) in %

Maximum Hourly Value:	100 %	on July 2 at hour 3	Hours in Service:	744
Maximum Daily Value:	92.2 %	on July 8	Hours of Data:	744
Minimum Hourly Value:	29 %	on July 21 at hour 16	Hours of Missing Data:	0
Minimum Daily Value:	50.2 %	on July 20	Hours of Calibration:	0
Monthly Average:	70.2 %		Operational Uptime:	100.0

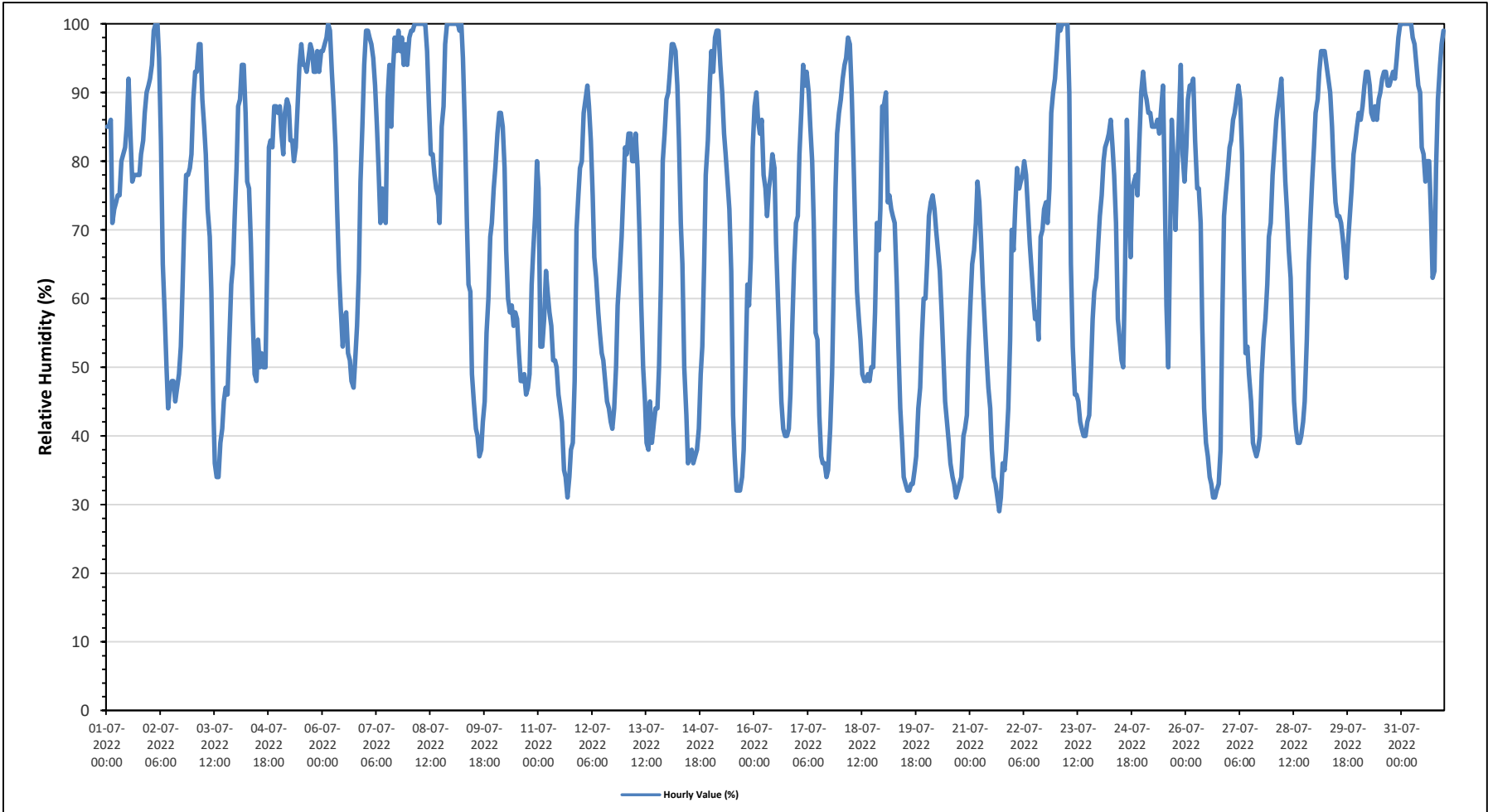
  

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	85	85	86	71	73	74	75	75	80	81	82	85	92	85	77	78	78	78	81	83	87	90	91	71	92	81.3	
Jul 2	92	94	99	100	100	95	83	65	58	50	44	47	48	48	45	47	49	53	61	71	78	78	79	81	44	100	69.4
Jul 3	89	93	93	97	97	89	85	81	73	69	61	45	36	34	34	39	41	45	47	46	53	62	65	72	34	97	64.4
Jul 4	79	88	89	94	94	87	77	76	68	57	49	48	54	50	52	50	64	82	83	82	88	88	87	48	94	72.3	
Jul 5	88	84	81	87	89	88	83	83	80	82	88	94	97	94	94	93	95	97	96	93	93	96	93	96	80	97	90.2
Jul 6	96	97	98	100	99	93	88	82	73	64	59	53	57	58	52	51	48	47	51	56	64	77	85	94	47	100	72.6
Jul 7	99	99	98	97	95	91	85	79	71	76	75	71	89	94	85	93	98	96	99	96	98	94	97	94	71	99	90.4
Jul 8	98	99	99	100	100	100	100	100	100	100	96	88	81	81	78	76	75	71	85	88	97	100	100	100	71	100	92.2
Jul 9	100	100	100	100	99	100	95	84	71	62	61	49	45	41	40	37	38	42	45	55	60	69	71	76	37	100	68.3
Jul 10	79	84	87	87	85	79	67	60	58	59	56	58	57	52	48	48	49	46	47	49	62	67	72	80	46	87	64.0
Jul 11	76	53	53	57	64	61	58	56	51	51	50	46	44	42	35	34	31	34	38	39	48	70	75	79	31	79	51.9
Jul 12	80	87	89	91	88	83	75	66	63	58	55	52	51	48	45	44	42	41	44	50	59	64	69	75	41	91	63.3
Jul 13	82	81	84	84	80	80	84	79	70	59	50	45	39	38	45	39	42	44	44	50	62	80	84	89	38	89	63.9
Jul 14	90	93	97	97	96	91	83	71	65	50	43	36	37	38	36	37	38	41	49	53	65	78	83	91	36	97	64.9
Jul 15	96	93	98	99	99	94	90	84	81	77	73	64	43	37	32	32	32	34	38	50	62	59	66	82	32	99	67.3
Jul 16	88	90	86	84	86	78	76	72	76	78	81	79	68	60	52	45	41	40	40	41	46	56	65	71	40	90	66.6
Jul 17	72	81	87	94	91	93	90	85	80	71	55	54	43	37	36	36	34	35	41	49	61	76	84	87	34	94	65.5
Jul 18	89	92	94	95	98	97	90	80	69	61	57	54	49	48	48	49	48	50	50	58	71	67	73	88	48	98	69.8
Jul 19	88	90	74	75	73	72	71	62	53	44	39	34	33	32	32	33	33	35	37	44	47	54	60	60	32	90	53.1
Jul 20	65	72	74	75	73	70	67	64	58	51	45	42	39	36	34	33	31	32	33	34	40	41	43	52	31	75	50.2
Jul 21	59	65	67	71	77	74	68	62	56	51	47	44	38	34	33	31	29	31	36	35	38	44	54	70	29	77	50.6
Jul 22	67	73	79	76	77	78	80	78	73	68	64	60	57	58	54	69	70	73	74	71	76	87	90	92	54	92	72.7
Jul 23	96	100	99	100	100	100	100	90	65	53	46	46	45	42	41	40	40	42	43	49	57	61	63	68	40	100	66.1
Jul 24	72	75	80	82	83	84	86	82	78	71	57	54	51	50	64	86	75	66	76	77	78	75	83	90	50	90	74.0
Jul 25	93	90	89	87	87	85	85	85	86	84	87	91	78	59	50	66	86	79	70	79	86	94	81	77	50	94	81.4
Jul 26	82	89	91	91	92	83	76	76	71	56	44	39	37	34	33	31	31	32	33	38	56	72	75	78	31	92	60.0
Jul 27	82	83	86	87	89	91	89	81	64	52	53	49	45	39	38	37	38	40	49	54	57	62	69	71	37	91	62.7
Jul 28	78	82	86	88	90	92	85	77	73	67	63	54	45	41	39	39	40	42	45	54	65	71	77	82	39	92	65.6
Jul 29	87	89	93	96	96	96	94	92	90	85	79	74	72	72	71	69	66	63	68	72	76	81	83	85	63	96	81.2
Jul 30	87	86	88	91	93	93	91	87	86	88	86	89	90	92	93	93	91	91	92	93	92	95	98	100	86	100	91.0
Jul 31	100	100	100	100	100	100	98	97	94	91	90	82	81	77	80	80	72	63	64	79	89	94	97	99	63	100	88.6
Diurnal Maximum	100	100	100	100	100	100	100	100	100	100	96	94	97	94	94	93	98	97	99	96	98	100	100	100			
Diurnal Average	85.0	86.7	87.9	88.8	89.1	86.8	83.0	77.8	72.1	66.6	62.4	58.9	56.2	53.3	51.5	52.7	52.6	53.1	56.6	60.9	67.8	74.2	77.8	82.5			
<b>C</b>	Monthly Calibration		<b>S</b>	Daily Zero-Span Check		<b>Q</b>	Quality Assurance																				
<b>K</b>	Collection Error		<b>N</b>	No Data (Machine Not in Service)		<b>Y</b>	Routine Maintenance																				
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)		<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)		<b>P</b>	Power Failure																				

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.



**Timeseries Chart of Hourly Average for RH - Lac La Biche Station**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

### BAROMETRIC PRESSURE (BP) in millibar

Maximum Hourly Value:	953 mb on July 1 at hour 20	Hours in Service:	744
Maximum Daily Value:	952 mb on July 2	Hours of Data:	744
Minimum Hourly Value:	938 mb on July 12 at hour 22	Hours of Missing Data:	0
Minimum Daily Value:	940 mb on July 18	Hours of Calibration:	0
Monthly Average:	947 mb	Operational Uptime:	100.0

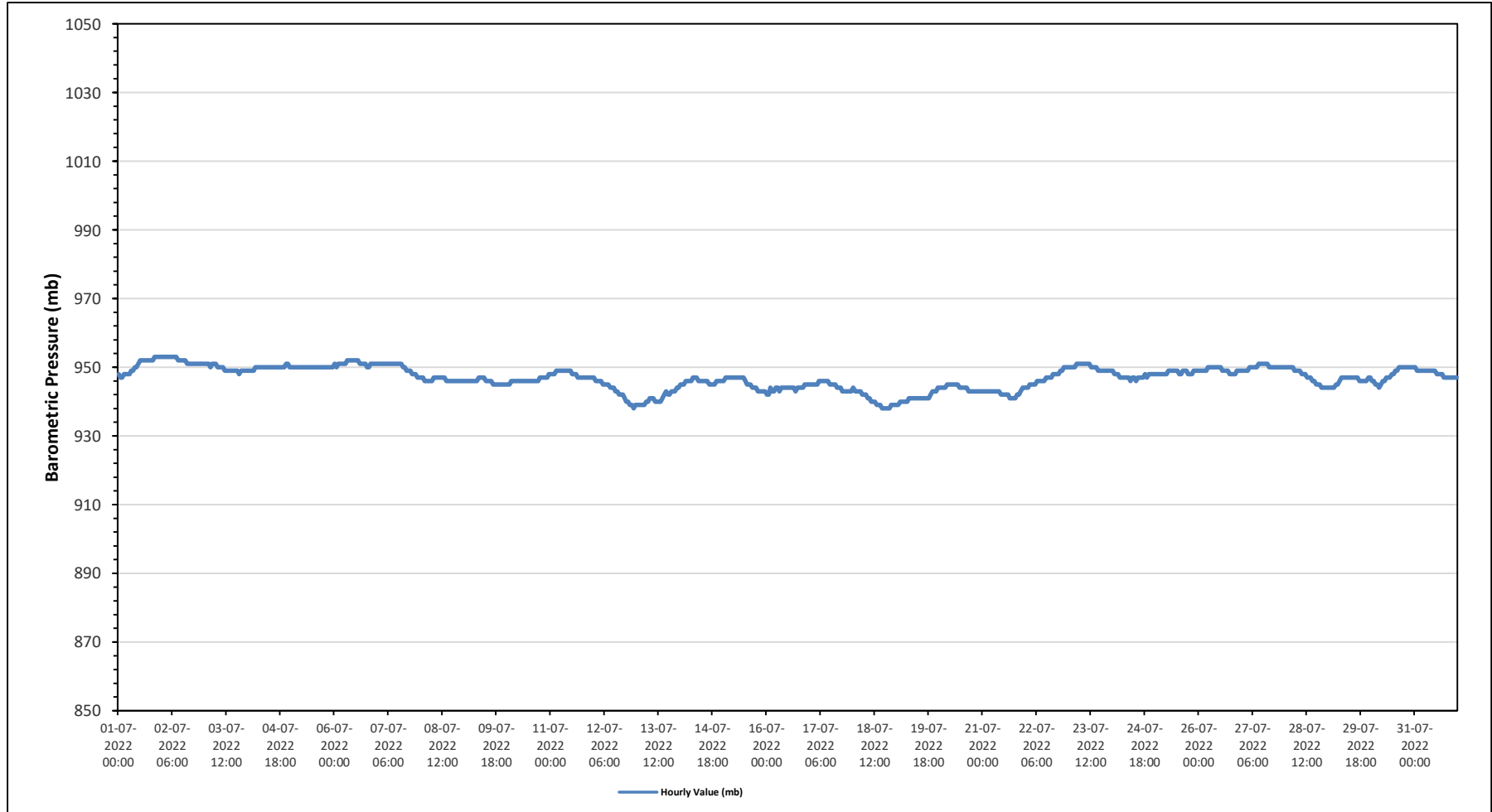
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23	
Jul 1	948	947	947	948	948	948	948	949	949	950	950	951	952	952	952	952	952	952	952	952	953	953	953	953	947	953	950	
Jul 2	953	953	953	953	953	953	953	953	953	953	952	952	952	952	952	951	951	951	951	951	951	951	951	951	951	951	951	951
Jul 3	951	951	951	950	951	951	951	950	950	950	950	949	949	949	949	949	949	949	949	949	948	949	949	949	949	948	951	950
Jul 4	949	949	949	949	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	951	951	950	949	951	950
Jul 5	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950	950
Jul 6	951	950	951	951	951	951	951	952	952	952	952	952	952	952	951	951	951	951	950	950	951	951	951	951	950	952	951	951
Jul 7	951	951	951	951	951	951	951	951	951	951	951	951	951	951	950	950	949	949	949	948	948	948	948	947	947	947	947	947
Jul 8	947	947	946	946	946	946	946	947	947	947	947	947	947	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946
Jul 9	946	946	946	946	946	946	946	946	947	947	947	947	947	946	946	946	945	945	945	945	945	945	945	945	945	945	945	946
Jul 10	945	945	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	946	947	947	947	947	947	947	948	945	948	946
Jul 11	948	948	948	949	949	949	949	949	949	949	949	948	948	948	947	947	947	947	947	947	947	947	947	947	947	949	949	948
Jul 12	947	946	946	946	946	945	945	945	945	944	944	944	943	943	942	942	941	940	940	939	939	939	938	939	938	939	947	943
Jul 13	939	939	939	939	939	940	940	941	941	941	940	940	940	940	941	942	943	942	942	943	943	943	944	944	939	944	941	941
Jul 14	945	945	945	946	946	946	946	947	947	947	946	946	946	946	946	946	945	945	945	945	946	946	946	946	945	947	946	946
Jul 15	946	947	947	947	947	947	947	947	947	947	947	947	946	945	945	945	944	944	944	943	943	943	943	943	943	943	943	945
Jul 16	942	942	944	943	943	944	944	943	944	944	944	944	944	944	944	944	943	944	944	944	944	944	945	945	945	942	945	944
Jul 17	945	945	945	945	945	946	946	946	946	946	946	946	945	945	945	945	944	944	944	943	943	943	943	943	943	943	946	945
Jul 18	944	943	943	943	943	942	942	942	941	941	940	940	940	939	939	939	938	938	938	938	938	939	939	939	938	944	940	940
Jul 19	939	939	940	940	940	940	940	941	941	941	941	941	941	941	941	941	941	941	941	942	943	943	944	939	944	941	941	
Jul 20	944	944	944	944	945	945	945	945	945	945	945	944	944	944	944	944	944	943	943	943	943	943	943	943	943	945	944	944
Jul 21	943	943	943	943	943	943	943	943	943	943	942	942	942	942	942	941	941	941	941	942	942	943	944	944	941	944	942	942
Jul 22	944	944	945	945	945	945	946	946	946	946	946	947	947	947	947	948	948	948	948	948	949	949	950	950	944	950	947	947
Jul 23	950	950	950	950	951	951	951	951	951	951	951	951	950	950	950	950	949	949	949	949	949	949	949	949	949	949	949	949
Jul 24	949	948	948	948	947	947	947	947	947	947	946	947	947	946	947	947	947	947	947	948	947	948	948	948	948	948	949	947
Jul 25	948	948	948	948	948	948	948	949	949	949	949	949	949	948	948	949	949	949	948	948	948	948	949	949	949	948	949	949
Jul 26	949	949	949	949	949	950	950	950	950	950	950	950	950	949	949	949	949	948	948	948	948	948	949	949	949	948	950	949
Jul 27	949	949	949	949	950	950	950	950	950	951	951	951	951	951	951	950	950	950	950	950	950	950	950	950	949	951	950	950
Jul 28	950	950	950	950	950	949	949	949	949	949	948	948	947	947	947	946	946	945	945	945	944	944	944	944	944	944	950	947
Jul 29	944	944	944	944	945	945	946	947	947	947	947	947	947	947	947	947	947	946	946	946	946	946	947	947	944	947	946	946
Jul 30	946	946	945	945	944	945	946	946	947	947	947	948	948	949	949	950	950	950	950	950	950	950	950	950	944	950	948	948
Jul 31	950	949	949	949	949	949	949	949	949	949	949	949	948	948	948	948	947	947	947	947	947	947	947	947	947	950	948	948
Diurnal Maximum	953	953	953	953	953	953	953	953	953	952	952	952	952	952	952	952	952	952	952	952	952	953	953	953	953	953	953	953
Diurnal Average	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947	947

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for BP - Lac La Biche Station**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

### AMBIENT TEMPERATURE (AT) in Degree Celsius

Maximum Hourly Value:	30.3 °C	on July 28 at hour 15	Hours in Service:	744
Maximum Daily Value:	24.3 °C	on July 28	Hours of Data:	744
Minimum Hourly Value:	7.6 °C	on July 23 at hour 4	Hours of Missing Data:	0
Minimum Daily Value:	12.9 °C	on July 1	Hours of Calibration:	0
Monthly Average:	18.4 °C		Operational Uptime:	100.0

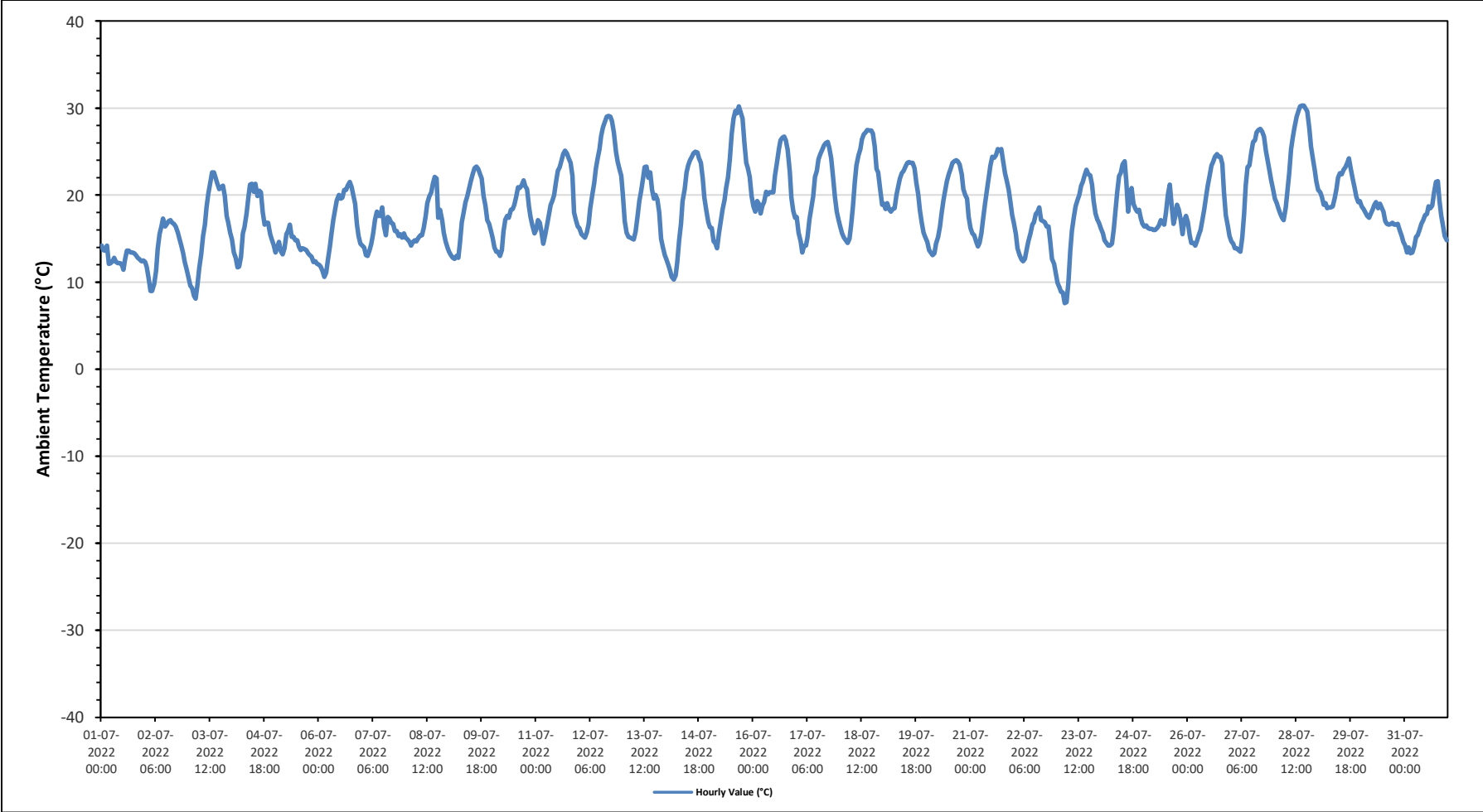
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	14.2	13.7	13.6	14.2	12.1	12.2	12.4	12.8	12.3	12.2	12.2	12.1	11.4	12.6	13.6	13.6	13.4	13.4	13.3	13.1	12.8	12.6	12.4	12.5	11.4	14.2	12.9
Jul 2	12.3	11.7	10.4	9	9	9.8	11.3	13.8	15.5	16.4	17.3	16.4	16.7	17	17.1	16.8	16.7	16.4	15.7	15	14.2	13.3	12.3	11.5	9.0	17.3	14.0
Jul 3	10.4	9.6	9.3	8.4	8.1	9.7	11.7	13.2	15.3	16.6	18.6	20.2	21.4	22.6	22.6	21.9	21.3	20.7	20.9	21.1	19.9	17.6	16.8	15.7	8.1	22.6	16.4
Jul 4	14.9	13.4	12.8	11.7	11.8	12.9	15.6	16.3	17.9	19.8	21.2	21.3	20.4	21.3	19.9	20.5	20.3	18	16.6	16.8	16.8	15.5	14.9	14.3	11.7	21.3	16.9
Jul 5	13.4	13.9	14.6	13.5	13.2	13.9	15.5	15.9	16.6	15.2	15.2	14.8	14.8	14.1	13.7	13.9	13.8	13.7	13.3	13.1	12.9	12.3	12.4	12.1	12.1	16.6	14.0
Jul 6	12	11.8	11.3	10.6	11.1	12.7	14.1	15.6	17.2	18.4	19.4	20	19.6	19.7	20.6	20.6	21.1	21.5	20.9	20	19	16.6	15.3	14.4	10.6	21.5	16.8
Jul 7	14.2	14	13.1	13	13.6	14.4	15.6	17.2	18.1	17.6	17.6	18.6	16.4	15.4	17.5	17.3	16.8	16.7	15.9	15.9	15.3	15.5	15.1	15.6	13.0	18.6	15.9
Jul 8	15.1	14.9	14.6	14.2	14.6	14.8	14.7	15.1	15.4	15.4	16.3	17.6	19.1	19.8	20.3	21.3	22.1	21.9	17.4	18.3	17.1	15.7	14.7	14	14.0	22.1	16.9
Jul 9	13.5	13.1	12.8	12.7	13	12.8	14.5	16.9	18	19.2	19.9	20.8	21.6	22.4	23.1	23.3	23	22.4	21.9	19.9	18.8	17.1	16.7	15.9	12.7	23.3	18.1
Jul 10	15.1	14	13.5	13.5	13	13.7	15.8	17.2	17.6	17.4	18.3	18.4	18.9	19.8	20.9	20.8	21.1	21.7	21	20.7	18.7	17.5	16.5	15.6	13.0	21.7	17.5
Jul 11	16	17.1	16.8	15.8	14.4	15.4	16.5	17.7	18.9	19.3	20	21.5	22.8	23.2	24	24.7	25.1	24.8	24.2	23.7	22.2	18	17.1	16.4	14.4	25.1	19.8
Jul 12	16.2	15.5	15.3	15.1	15.7	16.7	18.5	20.1	21.4	23	24.2	25.3	26.8	27.8	28.5	29	29.1	29	28.5	27.2	25	23.9	23	22.2	15.1	29.1	22.8
Jul 13	20	17	15.7	15.2	15.1	15	14.9	15.8	17.5	19.3	20.5	21.9	23.2	23.3	22	22.6	20.6	19.6	20	19.5	18	15	14	13.1	13.1	23.3	18.3
Jul 14	12.6	12	11.3	10.6	10.3	10.8	12.3	14.8	16.7	19.3	20.7	22.6	23.4	24	24.4	24.8	25	24.9	24.2	23.7	21.9	19.7	18.3	16.9	10.3	25.0	18.6
Jul 15	16.3	16.2	14.7	14.5	13.9	15.6	17	18.4	19.4	20.8	22	24.1	27	28.8	29.7	29.4	30.2	29.5	28.8	26	23.7	23.1	22.1	19.9	13.9	30.2	22.1
Jul 16	18.7	18.1	19.3	19	17.9	18.8	19.2	20.4	20.1	20.3	20.3	20.3	22.2	23.8	25.3	26.3	26.6	26.7	26.3	25.2	22.7	19.7	18.2	17.4	17.4	26.7	21.4
Jul 17	17.5	15.7	14.7	13.4	14.2	14.2	15.2	17.2	18.5	19.8	22.1	22.8	24.1	24.7	25.2	25.7	26	26.1	25.4	24.2	22.1	19.8	18.1	17.1	13.4	26.1	20.2
Jul 18	16.4	15.6	15.1	14.8	14.5	15	16.5	18.7	21.5	23.4	24.6	25.3	26.4	27	27.2	27.5	27.4	27.4	27.1	25.6	23	22.6	20.8	18.9	14.5	27.5	21.8
Jul 19	19	18.4	19.1	18.4	18.1	18.4	18.5	20	20.9	21.9	22.5	22.8	23.3	23.7	23.8	23.7	23.7	23.1	21.4	20.1	18.3	16.9	15.7	15.2	15.2	23.8	20.3
Jul 20	14.6	13.7	13.4	13.1	13.3	14.4	15.2	16.4	17.9	19.4	20.6	21.6	22.4	23.1	23.7	23.9	24	23.9	23.5	22.4	20.7	20	19.6	17.5	13.1	24.0	19.1
Jul 21	16.2	15.6	15.4	14.7	14.1	14.5	15.6	17.4	19.1	20.6	22.1	23.4	24.4	24.3	24.6	25.3	25.1	25.3	23.9	22.5	21.6	20.6	19.1	17.7	14.1	25.3	20.1
Jul 22	16.7	15.5	13.9	13.1	12.6	12.4	12.7	13.8	14.7	15.6	16.6	16.9	17.8	18.1	18.6	17.1	17	16.9	16.4	16.4	14.8	12.7	12.1	11.1	11.1	18.6	15.1
Jul 23	9.9	9.4	8.9	8.8	7.6	7.7	10	13.6	15.9	17.4	18.7	19.4	20	21.1	21.5	22.3	22.9	22.4	22.3	21.2	19.3	17.9	17.2	16.8	7.6	22.9	16.3
Jul 24	16.1	15.6	14.8	14.5	14.2	14.2	14.4	16.1	18.1	20.4	22.2	22.5	23.5	23.9	21.6	18.1	19.9	20.8	19	18.4	18.1	18.3	17.3	16.7	14.2	23.9	18.3
Jul 25	16.4	16.5	16.2	16.1	16.1	16	16	16.2	16.5	17.1	16.8	16.6	18.1	20.1	21.2	18.8	16.7	17.5	18.9	18.3	17.2	15.5	17.1	17.6	15.5	21.2	17.2
Jul 26	16.9	15.4	14.5	14.5	14.2	14.7	15.4	16	17	18.4	19.9	21.1	22.2	23.4	23.8	24.4	24.7	24.4	24.4	23.6	20.4	17.7	16.4	15.3	14.2	24.7	19.1
Jul 27	14.7	14.4	13.9	13.9	13.7	13.5	15.1	17.8	21.1	23.2	23.4	24.9	26.1	26.3	27.2	27.5	27.6	27.3	26.7	25.1	24.1	22.9	21.7	20.7	13.5	27.6	21.4
Jul 28	19.6	19.1	18.5	17.9	17.4	17.1	18.6	20.7	22.5	25.3	26.7	27.8	29	29.7	30.2	30.3	30.3	30	29.6	27.6	25.6	24.2	22.9	21.6	17.1	30.3	24.3
Jul 29	20.6	20.3	19.8	18.9	19.1	18.5	18.6	18.6	18.7	19.6	20.7	22	22.5	22.4	22.9	23.2	23.7	24.2	23	21.9	20.9	19.8	19.2	19.3	18.5	24.2	20.8
Jul 30	18.7	18.4	18	17.6	17.4	17.8	18.3	18.9	19.2	18.5	19	18.6	18.1	17	16.7	16.6	16.7	16.8	16.6	16.6	16.7	16	15.3	14.6	14.6	19.2	17.4
Jul 31	14.2	13.4	14	13.3	13.4	14.1	15.2	15.4	16	16.7	17.1	17.7	17.8	18.7	18.5	18.8	20.3	21.5	21.6	19.4	17.6	16.4	15.3	14.8	13.3	21.6	16.7
Diurnal Maximum	20.6	20.3	19.8	19.0	19.1	18.8	19.2	20.7	22.5	25.3	26.7	27.8	29.0	29.7	30.2	30.3	30.3	30.0	29.6	27.6	25.6	24.2	23.0	22.2			
Diurnal Average	15.6	14.9	14.5	14.0	13.8	14.2	15.3	16.7	17.9	19.0	19.9	20.6	21.3	21.9	22.3	22.3	22.3	22.2	21.6	20.7	19.3	17.9	17.0	16.2			

<b>C</b>	Monthly Calibration	<b>S</b>	Daily Zero-Span Check	<b>Q</b>	Quality Assurance
<b>K</b>	Collection Error	<b>N</b>	No Data (Machine Not in Service)	<b>Y</b>	Routine Maintenance
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)	<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)	<b>P</b>	Power Failure

Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.  
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.

**Timeseries Chart of Hourly Average for AT - Lac La Biche Station**





## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

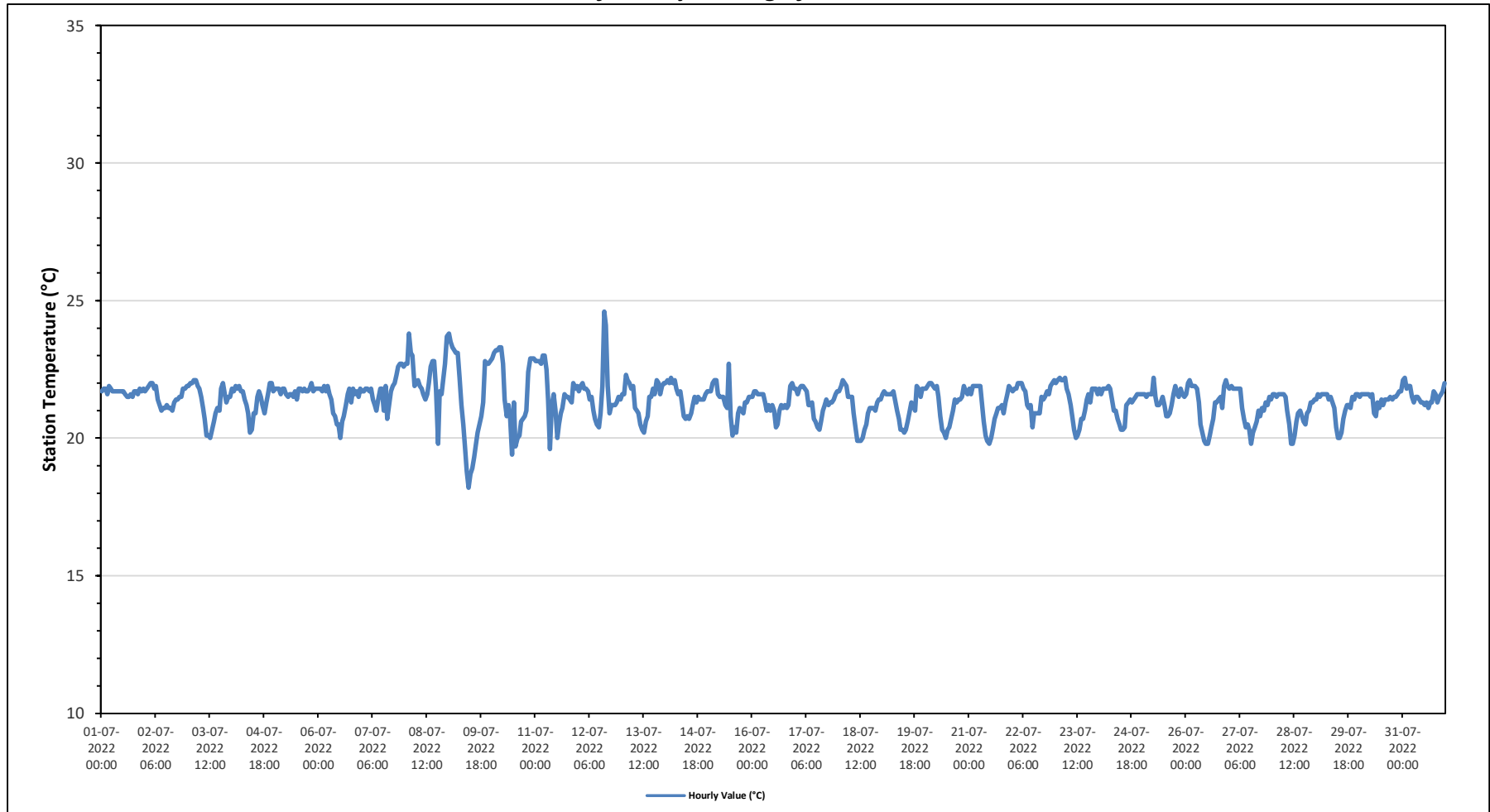
### STATION TEMPERATURE (ST) in Degree Celsius

Maximum Hourly Value:	24.6 °C	on July 12 at hour 14	Hours in Service:	744
Maximum Daily Value:	22.2 °C	on July 8	Hours of Data:	744
Minimum Hourly Value:	18.2 °C	on July 9 at hour 11	Hours of Missing Data:	0
Minimum Daily Value:	21.0 °C	on July 28	Hours of Calibration:	0
Monthly Average:	21.4 °C		Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	21.7	21.8	21.8	21.6	21.9	21.8	21.7	21.7	21.7	21.7	21.7	21.7	21.6	21.5	21.5	21.6	21.5	21.7	21.6	21.8	21.7	21.8	21.8	21.5	21.9	21.7	
Jul 2	21.7	21.8	21.9	22.0	22.0	21.8	21.9	21.4	21.2	21.0	21.1	21.1	21.2	21.1	21.1	21.0	21.3	21.4	21.4	21.5	21.5	21.8	21.8	21.9	21.0	22.0	21.5
Jul 3	21.9	22.0	22.0	22.1	22.1	21.9	21.8	21.5	21.1	20.7	20.1	20.1	20.0	20.3	20.6	20.9	21.1	21.0	21.8	22.0	21.6	21.3	21.5	21.5	20.0	22.1	21.3
Jul 4	21.8	21.7	21.9	21.8	21.9	21.7	21.7	21.4	21.2	20.9	20.2	20.3	20.9	20.9	21.5	21.7	21.5	21.2	20.9	21.3	21.6	22.0	22.0	21.7	20.2	22.0	21.4
Jul 5	21.8	21.8	21.8	21.6	21.8	21.8	21.6	21.5	21.6	21.6	21.5	21.7	21.4	21.8	21.8	21.7	21.8	21.7	21.7	21.8	22.0	21.7	21.8	21.8	21.4	22.0	21.7
Jul 6	21.8	21.8	21.7	21.9	21.7	21.9	21.6	21.4	20.9	20.8	20.5	20.5	20.0	20.6	20.8	21.2	21.6	21.8	21.3	21.8	21.6	21.7	21.5	21.8	20.0	21.9	21.3
Jul 7	21.7	21.7	21.8	21.8	21.7	21.8	21.4	21.2	21.0	21.4	21.8	21.8	21.0	21.9	20.7	21.2	21.7	21.9	22.0	22.3	22.6	22.7	22.7	22.6	20.7	22.7	21.8
Jul 8	22.7	22.7	23.8	23.1	23.0	21.9	22.0	22.1	21.9	21.8	21.6	21.4	21.6	22.0	22.6	22.8	22.8	21.8	19.8	21.7	21.6	22.2	22.7	23.7	19.8	23.8	22.2
Jul 9	23.8	23.5	23.3	23.2	23.1	22.2	21.2	20.5	19.6	18.8	18.2	18.7	18.9	19.3	19.8	20.2	20.5	20.8	21.3	22.8	22.7	22.7	22.8	18.2	23.8	21.3	
Jul 10	22.9	23.1	23.2	23.2	23.3	23.3	22.7	21.4	20.8	21.2	20.7	19.4	21.3	19.7	20.0	20.1	20.6	20.7	20.8	21.0	22.4	22.9	22.9	22.9	19.4	23.3	21.7
Jul 11	22.8	22.8	22.8	22.7	23.0	23.0	22.5	21.4	19.6	21.2	21.6	21.0	20.0	20.5	20.9	21.1	21.6	21.5	21.5	21.4	21.3	22.0	21.8	21.9	19.6	23.0	21.7
Jul 12	21.7	21.9	22.0	21.8	21.8	21.7	21.4	21.5	21.0	20.7	20.5	20.4	20.9	21.9	24.6	24.1	21.9	20.9	21.2	21.2	21.3	21.5	21.4	20.4	20.4	24.6	21.6
Jul 13	21.6	21.6	22.3	22.1	22.0	21.8	21.9	21.1	21.0	20.9	20.5	20.3	20.2	20.6	20.8	21.5	21.5	21.8	21.6	22.1	22.0	21.6	21.9	22.0	20.2	22.3	21.4
Jul 14	22.0	22.1	22.0	22.2	22.0	22.1	21.8	21.6	21.7	21.3	20.8	20.7	20.8	20.7	20.9	21.2	21.5	21.3	21.5	21.4	21.4	21.4	21.6	21.7	20.7	22.2	21.5
Jul 15	21.7	21.7	22.0	22.1	22.1	21.6	21.5	21.5	21.5	21.2	21.1	22.7	20.8	20.1	20.4	20.2	20.9	21.1	21.0	20.9	21.3	21.3	21.5	21.5	20.1	22.7	21.3
Jul 16	21.5	21.7	21.7	21.6	21.6	21.6	21.6	21.3	21.0	21.2	21.0	21.2	21.0	20.4	20.5	21.0	21.2	21.1	21.2	21.1	21.2	21.1	21.2	21.9	22.0	21.8	21.3
Jul 17	21.8	21.6	21.8	21.9	21.9	21.8	21.7	21.2	21.2	21.3	20.7	20.6	20.4	20.3	20.6	21.0	21.2	21.4	21.2	21.3	21.3	21.4	21.6	21.7	20.3	21.9	21.3
Jul 18	21.7	21.9	22.1	22.0	21.9	21.5	21.5	20.9	20.4	19.9	19.9	19.9	20.0	20.3	20.5	20.9	21.1	21.1	21.1	21.0	21.3	21.4	21.4	21.4	19.9	22.1	21.1
Jul 19	21.6	21.7	21.6	21.6	21.6	21.6	21.7	21.4	21.0	20.7	20.3	20.3	20.2	20.3	20.6	21.0	21.3	21.2	21.0	21.9	21.8	21.5	21.8	21.8	20.2	21.9	21.2
Jul 20	21.8	21.9	22.0	22.0	21.9	21.8	21.9	21.5	20.8	20.3	20.2	20.0	20.3	20.4	20.7	21.0	21.4	21.3	21.4	21.4	21.5	21.9	21.7	21.6	20.0	22.0	21.3
Jul 21	21.8	21.6	21.9	21.9	21.9	21.9	21.9	21.3	20.6	20.1	19.9	19.8	20.0	20.3	20.7	20.9	21.1	21.1	21.2	20.9	21.3	21.6	21.9	21.8	19.8	21.9	21.1
Jul 22	21.7	21.8	21.8	22.0	22.0	22.0	21.8	21.7	21.2	21.1	21.2	20.4	20.9	20.9	20.9	20.9	21.5	21.4	21.5	21.7	21.6	21.9	22.0	22.1	20.4	22.1	21.5
Jul 23	22.0	22.1	22.2	22.1	22.1	22.2	21.8	21.6	21.2	20.8	20.3	20.0	20.1	20.3	20.7	20.7	21.0	21.4	21.6	21.3	21.8	21.8	21.8	21.6	20.0	22.2	21.4
Jul 24	21.8	21.6	21.8	21.8	21.8	21.9	21.8	21.4	21.0	21.0	20.7	20.5	20.3	20.3	20.4	21.2	21.3	21.4	21.3	21.4	21.5	21.6	21.6	21.6	20.3	21.9	21.3
Jul 25	21.6	21.6	21.5	21.6	21.6	21.6	22.2	21.5	21.2	21.2	21.3	21.5	21.2	20.8	20.8	20.9	21.2	21.6	21.9	21.6	21.5	21.8	21.6	21.5	20.8	22.2	21.5
Jul 26	21.6	22.0	22.1	21.9	21.9	21.9	21.8	21.3	20.5	20.2	19.9	19.8	19.8	20.1	20.4	20.7	21.3	21.3	21.4	21.5	21.1	21.9	22.1	21.9	19.8	22.1	21.2
Jul 27	21.8	21.9	21.8	21.8	21.8	21.8	21.8	21.1	20.7	20.4	20.5	20.3	19.8	20.2	20.4	20.6	21.0	20.8	21.1	21.0	21.3	21.2	21.5	21.4	19.8	21.9	21.1
Jul 28	21.6	21.6	21.5	21.6	21.6	21.6	21.6	21.5	21.0	20.5	19.8	19.8	20.1	20.6	20.9	21.0	20.8	20.6	20.5	20.9	21.0	21.2	21.3	21.4	19.8	21.6	21.0
Jul 29	21.4	21.6	21.5	21.6	21.6	21.6	21.6	21.4	21.5	21.3	21.1	20.4	20.0	20.0	20.2	20.7	21.0	21.2	21.2	21.1	21.5	21.4	21.6	21.6	20.0	21.6	21.2
Jul 30	21.5	21.6	21.6	21.6	21.6	21.6	21.5	21.6	20.9	20.8	21.3	21.1	21.4	21.2	21.4	21.4	21.4	21.5	21.4	21.5	21.5	21.6	21.7	21.7	20.8	21.7	21.4
Jul 31	22.1	22.2	21.8	21.9	21.9	21.5	21.3	21.5	21.5	21.4	21.3	21.3	21.2	21.3	21.1	21.3	21.3	21.7	21.6	21.3	21.5	21.6	21.7	22.0	21.1	22.2	21.6
Diurnal Maximum	23.8	23.5	23.8	23.2	23.3	22.7	22.1	21.9	21.8	21.8	22.7	21.7	22.0	24.6	24.1	22.8	21.9	22.0	22.3	22.8	22.9	22.9	23.7				
Diurnal Average	21.9	21.9	22.0	22.0	22.0	21.9	21.8	21.4	21.1	20.9	20.7	20.6	20.6	20.9	21.1	21.3	21.3	21.3	21.4	21.6	21.7	21.8	21.9				
<b>C</b>	Monthly Calibration						<b>S</b>	Daily Zero-Span Check						<b>Q</b>	Quality Assurance												
<b>K</b>	Collection Error						<b>N</b>	No Data (Machine Not in Service)						<b>Y</b>	Routine Maintenance						<b>P</b>	Power Failure					
<b>X</b>	Invalid Data (Equipment Malfunction /Recovery)						<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																			
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																											

*Timeseries Chart of Hourly Average for ST - Lac La Biche Station*





**LAKELAND INDUSTRY & COMMUNITY ASSOCIATION**

**Lac La Biche Station - July 2022**

**Summary of Hourly Averages**

**VECTOR WIND SPEED (VWS) in km/hr**

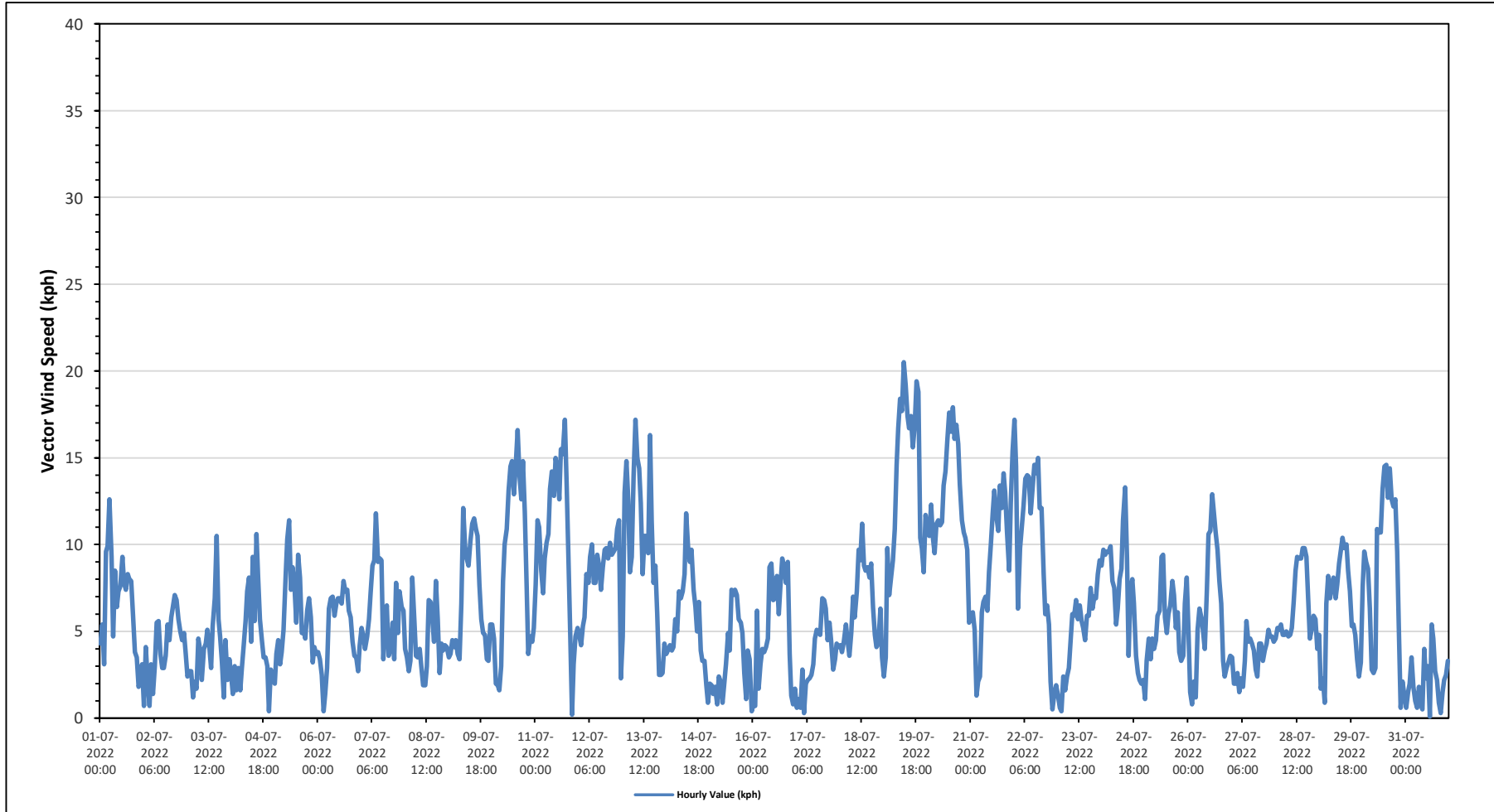
Maximum Hourly Value:	20.5 kph on July 19 at hour 11	Hours in Service:	744
Maximum Daily Value:	13.0 kph on July 19	Hours of Data:	744
Minimum Hourly Value:	0.1 kph on July 31 at hour 13	Hours of Missing Data:	0
Minimum Daily Value:	0.2 kph on July 8	Hours of Calibration:	0
Monthly Average:	1.7 kph	Operational Uptime:	100.0

Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	4.3	5.4	3.1	9.6	9.9	12.6	9.3	4.7	8.5	6.4	7.3	7.6	9.3	7.8	7.4	8.3	8.0	7.9	5.9	3.8	3.5	1.8	2.2	3.1	1.8	12.6	5.5
Jul 2	0.7	4.1	2.2	0.7	3.1	1.4	3.0	5.5	5.6	3.7	2.9	2.9	3.6	5.4	4.5	5.8	6.5	7.1	6.8	5.7	5.0	4.5	4.9	3.8	0.7	7.1	1.3
Jul 3	2.4	2.7	2.7	1.2	2.1	1.7	4.6	3.9	2.2	4.0	4.3	5.1	4.2	2.9	5.3	6.9	10.5	5.7	4.7	3.2	1.2	4.5	2.2	3.4	1.2	10.5	2.2
Jul 4	2.6	1.4	3.0	1.6	2.9	1.6	2.9	4.2	5.6	7.3	8.1	4.4	9.3	5.6	10.6	8.2	5.7	4.4	3.5	3.5	3.0	0.4	2.8	2.3	0.4	10.6	3.2
Jul 5	2.0	3.7	4.5	3.1	3.8	5.1	8.2	10.3	11.4	7.4	8.7	7.7	5.5	9.4	8.1	4.9	5.1	4.6	6.2	6.9	5.8	3.2	4.1	3.7	2.0	11.4	5.8
Jul 6	3.8	3.4	2.5	0.4	1.4	2.9	6.3	6.9	7.0	5.9	6.6	6.9	6.6	6.6	7.9	7.3	7.4	6.2	5.8	4.4	3.6	3.5	2.7	4.2	0.4	7.9	4.3
Jul 7	5.2	4.7	4.0	4.7	5.7	7.2	8.8	9.1	11.8	9.0	9.2	9.1	3.4	5.6	6.5	3.6	4.0	5.5	3.4	7.8	4.9	7.3	6.4	6.2	3.4	11.8	5.6
Jul 8	4.0	3.5	2.7	3.3	8.1	5.6	3.6	3.5	4.0	3.0	1.9	1.9	3.0	6.8	6.7	5.8	4.4	7.9	5.7	2.6	4.3	3.9	4.2	4.1	1.9	8.1	0.2
Jul 9	3.5	3.7	4.5	4.1	4.5	3.7	3.4	6.6	12.1	9.9	9.2	8.8	10.2	11.2	11.5	10.9	10.5	7.7	5.7	4.9	4.8	3.4	3.3	5.4	3.3	12.1	5.2
Jul 10	5.4	4.6	2.0	1.9	1.6	3.0	7.9	10.0	10.9	13.1	14.5	14.8	12.9	14.6	16.6	14.0	12.6	14.8	11.9	7.6	3.7	4.7	4.4	5.2	1.6	16.6	7.8
Jul 11	7.7	11.4	11.0	8.5	7.2	9.2	10.1	10.6	13.2	14.2	12.8	15.0	14.3	12.6	15.5	15.2	17.2	13.3	9.5	5.0	0.2	3.1	4.7	5.2	0.2	17.2	8.7
Jul 12	4.8	4.2	5.3	5.8	8.3	7.8	9.3	10.0	7.8	7.8	9.4	8.8	7.4	8.7	9.7	9.8	9.2	10.1	9.4	9.6	9.8	10.9	11.4	2.3	2.3	11.4	7.9
Jul 13	4.7	13.0	14.8	12.5	8.4	9.3	14.0	17.2	15.0	14.4	12.4	8.3	10.5	10.5	9.5	16.3	11.4	7.8	8.8	6.0	2.5	2.5	2.6	4.3	2.5	17.2	8.5
Jul 14	3.7	3.9	4.2	3.9	4.1	5.7	5.0	7.3	6.9	7.3	8.3	11.8	9.9	9.0	9.7	7.4	6.4	5.0	6.7	3.9	3.3	1.9	0.9	0.9	11.8	5.1	
Jul 15	2.0	1.9	1.4	1.8	0.8	2.4	2.1	0.9	1.9	3.1	4.9	3.9	7.4	7.1	7.4	7.1	5.7	5.5	4.9	2.6	1.1	3.9	3.4	0.4	0.4	7.4	2.5
Jul 16	0.8	0.7	6.2	1.7	3.1	4.0	3.8	4.1	4.6	8.7	8.9	6.8	6.9	8.2	6.0	7.6	9.2	8.7	7.8	9.0	3.7	1.3	0.8	1.7	0.7	9.2	4.2
Jul 17	0.6	1.1	0.6	2.8	0.3	2.0	2.2	2.3	2.5	3.1	4.6	5.1	4.9	4.8	6.9	6.8	6.3	4.5	5.5	4.5	2.8	3.4	4.3	4.1	0.3	6.9	3.0
Jul 18	4.2	3.8	4.4	5.4	4.5	3.6	4.9	7.0	5.8	7.3	9.7	9.1	11.2	8.8	8.5	8.7	8.1	8.9	6.4	4.8	4.1	4.3	6.3	3.5	3.5	11.2	5.7
Jul 19	2.4	3.5	9.8	7.1	8.1	9.1	10.9	14.6	16.7	18.4	17.7	20.5	19.2	17.4	16.7	17.4	15.6	16.8	19.4	18.8	10.4	9.8	8.4	11.7	2.4	20.5	13.0
Jul 20	10.8	10.5	12.3	10.5	9.5	11.2	11.4	11.1	11.3	13.4	14.2	16.0	17.6	16.5	17.9	16.1	16.9	15.8	13.5	11.4	10.7	10.4	9.7	5.5	5.5	17.9	12.6
Jul 21	5.8	6.1	5.1	1.3	2.1	2.4	6.1	6.7	7.0	6.2	8.4	10.0	11.8	13.1	11.6	10.8	13.4	12.1	14.1	13.0	10.7	8.5	12.4	15.4	1.3	15.4	8.4
Jul 22	17.2	14.5	6.3	9.8	10.9	12.2	13.8	14.0	13.9	11.8	13.4	14.6	14.1	15.0	12.1	12.1	8.3	6.0	6.5	5.4	2.1	0.5	1.4	1.9	0.5	17.2	8.8
Jul 23	1.3	0.6	0.4	2.4	1.6	2.4	2.9	4.6	6.0	5.9	6.8	5.7	6.5	5.6	5.2	4.5	5.9	5.9	7.5	6.3	7.0	6.9	8.3	9.1	0.4	9.1	4.7
Jul 24	8.8	9.7	9.4	9.6	9.6	9.9	7.9	7.5	5.4	6.3	8.0	8.6	11.4	13.3	9.2	3.6	7.4	8.0	6.6	3.6	2.6	2.2	2.0	2.2	2.0	13.3	3.6
Jul 25	1.1	3.3	4.6	3.4	4.6	4.0	4.5	5.9	6.2	9.3	9.4	5.8	4.9	6.0	6.5	7.9	7.1	5.2	6.1	3.8	3.3	3.6	6.6	8.1	1.1	9.4	4.3
Jul 26	4.8	1.5	0.8	2.1	1.2	5.1	6.3	5.8	5.1	4.0	7.4	10.6	10.8	12.9	11.9	10.7	9.7	7.9	6.6	3.3	2.4	2.9	3.2	3.6	0.8	12.9	4.8
Jul 27	3.5	2.0	2.0	2.6	1.5	2.3	1.8	3.3	5.6	4.4	4.6	4.3	3.9	2.8	2.4	4.3	4.3	3.3	3.9	4.3	5.1	4.7	4.7	4.4	1.5	5.6	2.6
Jul 28	4.6	5.2	5.1	5.4	4.8	4.8	5.0	4.7	4.8	5.2	6.7	8.5	9.3	9.2	9.2	9.8	9.8	9.3	7.1	4.6	5.2	5.9	5.7	4.0	4.0	9.8	6.0
Jul 29	4.8	1.7	2.3	0.9	6.6	8.2	6.9	7.6	8.1	6.9	7.7	8.9	9.7	10.4	9.8	10.0	8.5	7.3	5.3	5.4	4.8	3.4	2.4	3.2	0.9	10.4	4.7
Jul 30	7.6	9.6	9.0	8.6	6.3	2.8	2.6	2.9	10.9	10.7	10.7	13.2	14.5	14.6	12.7	14.4	12.6	12.2	12.6	9.6	5.3	0.6	2.1	1.3	0.6	14.6	4.8
Jul 31	0.6	1.5	2.0	3.5	1.8	1.0	0.6	1.8	0.8	0.5	4.0	2.3	3.0	0.1	5.4	4.6	2.7	2.2	0.9	0.3	1.5	2.2	2.5	3.3	0.1	5.4	0.8
Diurnal Maximum	17	15	15	13	11	13	14	17	17	18	18	21	19	17	18	17	17	17	19	19	11	11	12	15			
Diurnal Average	4.4	4.7	4.8	4.5	4.8	5.3	6.1	6.9	7.7	7.7	8.5	8.6	9.0	9.1	9.3	9.1	8.7	8.0	7.4	6.0	4.5	4.2	4.6	4.4			
<b>C</b>	Monthly Calibration							<b>S</b>	Daily Zero-Span Check							<b>Q</b>	Quality Assurance										
<b>K</b>	Collection Error							<b>N</b>	No Data (Machine Not in Service)							<b>Y</b>	Routine Maintenance							<b>P</b>	Power Failure		
<b>X</b>	InValid Data (Equipment Malfunction /Recovery)							<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																		
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																											

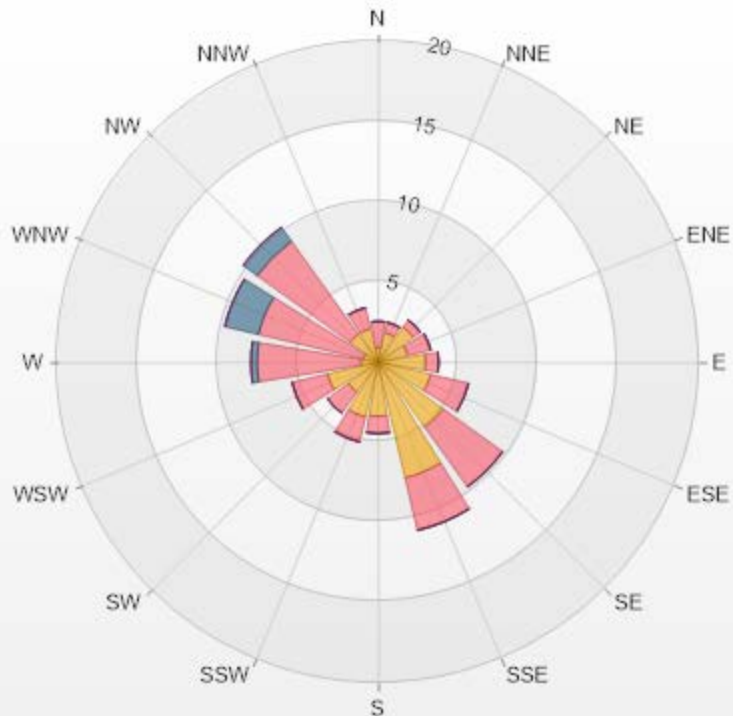


**Timeseries Chart of Hourly Average for VWS - Lac La Biche Station**



Wind: Lac La Biche Monitor: WDS [kph] Monthly: 07-2022 Type: WindRose Direction: Blowing From (Wind Frequency) Based On 1 Hr.  
 Calm: 7.93% Valid Data: 100.00%

Direction	1.8-6.0	6.0-15.0	15.0-29.0	29.0-39.0	>39.0	Total
N	0.94	1.61	0	0	0	2.55
NNE	1.88	0.67	0	0	0	2.55
NE	2.69	0.54	0	0	0	3.23
ENE	1.88	1.48	0	0	0	3.36
E	2.96	0.81	0	0	0	3.77
ESE	3.36	2.42	0	0	0	5.78
SE	4.97	4.57	0	0	0	9.54
SSE	7.39	3.36	0	0	0	10.75
S	3.36	1.08	0	0	0	4.44
SSW	3.49	1.61	0	0	0	5.1
SW	2.28	1.61	0	0	0	3.89
WSW	3.23	2.28	0	0	0	5.51
W	1.08	6.45	0.4	0	0	7.93
WNW	0.94	6.72	2.15	0	0	9.81
NW	2.15	7.12	1.08	0	0	10.35
NNW	2.15	1.34	0	0	0	3.49
Summary	44.75	43.67	3.63	0	0	92.05



LICA-202207

% Icon Classes (kph)	45	1.8-6.0	44	6.0-15.0	4	15.0-29.0	0	29.0-39.0	0	>39.0
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## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

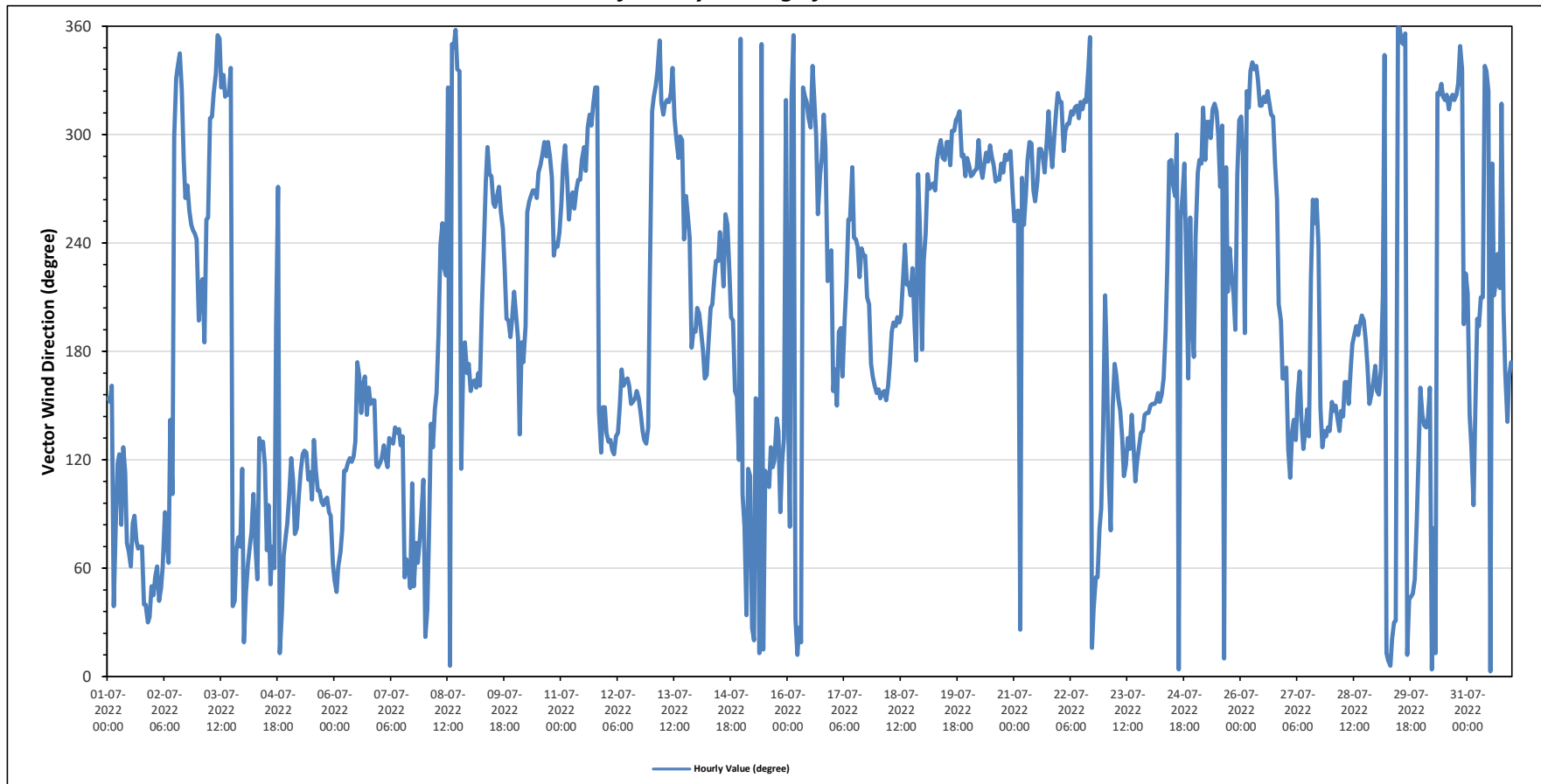
Lac La Biche Station - July 2022

Summary of Hourly Averages

### WIND DIRECTION (VWD) in sector

Monthly Average: 271 (W) degree										Hours in Service: 744																																	
										Hours of Data: 744																																	
										Hours of Missing Data: 0																																	
										Hours of Calibration: 0																																	
										Operational Uptime: 100.0																																	
Day	Hourly Period Starting at (MST)																							Daily Average																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Degree	Quadrant																	
Jul 1	SSE	SSE	SSE	NE	E	ESE	ESE	E	SE	ESE	ENE	ENE	ENE	E	E	ENE	ENE	ENE	ENE	NE	NE	NNE	NNE	NE	86	E																	
Jul 2	NE	NE	ENE	NE	NE	ENE	E	ENE	ENE	SE	E	WNW	NNW	NNW	NNW	NNW	NNW	W	W	WSW	WSW	WSW	WSW	WSW	308	NW																	
Jul 3	SSW	SW	SW	S	WSW	WSW	NW	NW	NW	NNW	N	N	NW	NNW	NW	NW	NW	NNW	NE	NE	ENE	ENE	ENE	ESE	335	NNW																	
Jul 4	NNE	NE	ENE	ENE	E	E	ENE	NE	SE	SE	SE	ESE	ENE	E	NE	ENE	ENE	SSW	W	NNE	NE	ENE	ENE	E	82	E																	
Jul 5	E	ESE	ESE	ENE	E	E	ESE	ESE	SE	ESE	ESE	ESE	E	SE	ESE	ESE	ESE	E	E	E	E	E	E	ENE	108	ESE																	
Jul 6	NE	NE	ENE	ENE	E	ESE	ESE	ESE	ESE	ESE	ESE	SE	S	SSE	SE	SSE	SSE	SE	SSE	SSE	SSE	SSE	ESE	ESE	135	SE																	
Jul 7	ESE	ESE	SE	ESE	ESE	SE	SE	SE	SE	SE	SE	SE	NE	ENE	ENE	NE	ESE	NE	ENE	ENE	ENE	E	ESE	ESE	109	ESE																	
Jul 8	NNE	NE	ENE	SE	SE	SE	SE	S	WSW	WSW	SW	SW	NW	N	NNW	N	NNW	NNW	NNW	ESE	S	S	SSE	S	54	NE																	
Jul 9	SSE	SSE	SSE	SSE	SSE	SSE	SSW	SW	W	WNW	W	W	W	WSW	W	W	WSW	WSW	SW	SSW	SSW	S	SSW	SSW	243	WSW																	
Jul 10	SSW	S	SE	S	S	SSW	WSW	W	W	W	W	W	W	W	WNW	WNW	WNW	WNW	WNW	W	SW	WSW	SW	WSW	270	W																	
Jul 11	W	W	WNW	W	WSW	W	W	WSW	W	W	W	WNW	WNW	W	WNW	WNW	WNW	WNW	NW	NW	SE	ESE	SSE	SSE	285	WNW																	
Jul 12	SE	SE	SE	SE	ESE	SE	SE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SE	SE	SE	SE	SE	SE	SW	146	SE																	
Jul 13	NW	NW	NW	NNW	N	NW	NW	NW	NW	NW	NW	NNW	NW	WNW	WNW	WNW	WNW	WSW	W	WSW	WSW	S	S	S	308	NW																	
Jul 14	SSW	SSW	S	S	SSE	SSE	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSE	SSE	ESE	N	213	SSW																	
Jul 15	E	E	NE	ESE	ESE	NNE	NNE	SSE	SSE	NNE	N	NNE	ESE	ESE	ESE	SE	ESE	ESE	SE	SE	E	ESE	SE	NW	103	ESE																	
Jul 16	SSE	E	NW	N	NNE	NNE	NNE	NNE	NW	NW	NW	NW	WNW	NNW	WNW	WNW	WNW	W	WNW	NW	WNW	SW	SW	SW	312	NW																	
Jul 17	SSE	SSE	SSE	S	S	SSE	SSW	SW	WSW	WSW	W	WSW	WSW	SW	SW	SW	SW	SW	SSW	SSW	S	SSE	SSE	SSE	217	SW																	
Jul 18	SSE	SSE	SSE	SSE	SSE	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	S	W	WSW	S	200	SSW																	
Jul 19	SW	WSW	W	W	W	W	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	WNW	WNW	NW	NW	NW	WNW	WNW	W	WNW	291	WNW																	
Jul 20	W	W	W	W	W	WNW	W	W	W	WNW	WNW	WNW	WNW	W	W	W	W	WNW	W	WNW	WNW	WNW	WNW	W	283	W																	
Jul 21	WSW	WSW	WSW	NNE	W	WSW	W	WNW	WNW	WNW	W	W	W	WNW	WNW	WNW	W	WNW	NW	WNW	W	WNW	NW	NW	289	WNW																	
Jul 22	NW	NW	WNW	WNW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	N	NNE	NE	NE	E	E	SE	SE	321	NW																	
Jul 23	SSW	SSE	ESE	E	SSE	S	SSE	SSE	SE	SE	ESE	ESE	SE	SE	SE	SE	ESE	ESE	SE	SE	SE	SE	SE	SE	135	SE																	
Jul 24	SSE	SSE	SSE	SSE	SSE	SSE	SSE	SSE	S	SW	WNW	WNW	W	W	WNW	N	WSW	W	WNW	SW	SSE	WSW	SSW	S	213	SSW																	
Jul 25	WSW	W	WNW	WNW	NW	WNW	NW	WNW	NW	NW	NW	WNW	NW	NW	WNW	N	W	SSW	SW	SW	SSW	S	W	NW	291	WNW																	
Jul 26	NW	WNW	S	NW	NW	NNW	NNW	NNW	NNW	NNW	NW	NW	NW	NW	NW	NW	NW	WNW	W	SSW	SSW	SSE	SSE	313	NW																		
Jul 27	S	SE	ESE	SE	SE	SE	SSE	SSE	SE	SE	SE	SE	SE	SE	SE	W	WSW	W	WSW	SSE	SE	SE	SE	SE	153	SSE																	
Jul 28	SSE	SE	SSE	SE	SE	SE	SSE	SSE	SSE	SSE	S	S	SSW	S	SSW	SSW	SSW	SSW	S	S	SSE	SSE	SSE	S	172	S																	
Jul 29	SSE	SSE	SSE	SSW	NNW	NNE	N	N	NNE	NNE	NNE	N	N	N	N	NNE	NE	NE	NE	NE	E	ESE	SSE	18	NNE																		
Jul 30	SE	SE	SE	SE	SSE	N	E	NNE	NW	NW	NNW	NW	NW	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	SSW	SW	324	NW																	
Jul 31	SSW	SE	SE	E	SE	SSW	SSW	SSW	SSW	NNW	NNW	NW	N	WNW	SSW	SW	SW	SSW	NW	SSW	SSE	SE	SSE	S	196	SSW																	
<b>C</b>	Monthly Calibration										<b>S</b>	Daily Zero-Span Check										<b>Q</b>	Quality Assurance																				
<b>K</b>	Collection Error										<b>N</b>	No Data (Machine Not in Service)										<b>Y</b>	Routine Maintenance										<b>P</b>	Power Failure									
<b>X</b>	Invalid Data (Machine Malfunction /Recovery)										<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																											

**Timeseries Chart of Hourly Average for VWD - Lac La Biche Station**





LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED																											
Maximum Hourly Value:	20.5	kph	on July 19 at hour 11												Hours in Service:	744											
Maximum Daily Value:	13.0	kph	on July 19												Hours of Data:	744											
Minimum Hourly Value:	0.1	kph	on July 31 at hour 13												Hours of Missing Data:	0											
Minimum Daily Value:	0.2	kph	on July 8												Hours of Calibration:	0											
Monthly Average:	1.7	kph													Operational Uptime:	100											
WIND DIRECTION																											
Monthly Average:	271	(W)	degree																								
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22				23
Jul 1	4.3	5.4	3.1	9.6	9.9	12.6	9.3	4.7	8.5	6.4	7.3	7.6	9.3	7.8	7.4	8.3	8.0	7.9	5.9	3.8	3.5	1.8	2.2	3.1	1.8	12.6	5.5
Jul 2	0.7	4.1	2.2	0.7	3.1	1.4	3.0	5.5	5.6	3.7	2.9	2.9	3.6	5.4	4.5	5.8	6.5	7.1	6.8	5.7	5.0	4.5	4.9	3.8	0.7	7.1	1.3
Jul 3	2.4	2.7	2.7	1.2	2.1	1.7	4.6	3.9	2.2	4.0	4.3	5.1	4.2	2.9	5.3	6.9	10.5	5.7	4.7	3.2	1.2	4.5	2.2	3.4	1.2	10.5	2.2
Jul 4	2.6	1.4	3.0	1.6	2.9	1.6	2.9	4.2	5.6	7.3	8.1	4.4	9.3	5.6	10.6	8.2	5.7	4.4	3.5	3.5	3.0	0.4	2.8	2.3	0.4	10.6	3.2
Jul 5	2.0	3.7	4.5	3.1	3.8	5.1	8.2	10.3	11.4	7.4	8.7	7.7	5.5	9.4	8.1	4.9	5.1	4.6	6.2	6.9	5.8	3.2	4.1	3.7	2.0	11.4	5.8
Jul 6	3.8	3.4	2.5	0.4	1.4	2.9	6.3	6.9	7.0	5.9	6.6	6.9	6.9	6.6	7.9	7.3	7.4	6.2	5.8	4.4	3.6	3.5	2.7	4.2	0.4	7.9	4.3
Jul 7	5.2	4.7	4.0	4.7	5.7	7.2	8.8	9.1	11.8	9.0	9.2	9.1	3.4	5.6	6.5	3.6	4.0	5.5	3.4	7.8	4.9	7.3	6.4	6.2	3.4	11.8	5.6
Jul 8	4.0	3.5	2.7	3.3	8.1	5.6	3.6	3.5	4.0	3.0	1.9	1.9	3.0	6.8	6.7	5.8	4.4	7.9	5.7	2.6	4.3	3.9	4.2	4.1	1.9	8.1	0.2
Jul 9	3.5	3.7	4.5	4.1	4.5	3.7	3.4	6.6	12.1	9.9	9.2	8.8	10.2	11.2	11.5	10.9	10.5	7.7	5.7	4.9	4.8	3.4	3.3	5.4	3.3	12.1	5.2
Jul 10	5.4	4.6	2.0	1.9	1.6	3.0	7.9	10.0	10.9	13.1	14.5	14.8	12.9	14.6	16.6	14.0	12.6	14.8	11.9	7.6	3.7	4.7	4.4	5.2	1.6	16.6	7.8
Jul 11	7.7	11.4	11.0	8.5	7.2	9.2	10.1	10.6	13.2	14.2	12.8	15.0	14.3	12.6	15.5	15.2	17.2	13.3	9.5	5.0	0.2	3.1	4.7	5.2	0.2	17.2	8.7
Jul 12	4.8	4.2	5.3	5.8	8.3	7.8	9.3	10.0	7.8	7.8	9.4	8.8	7.4	8.7	9.7	9.8	9.2	10.1	9.4	9.6	9.8	10.9	11.4	2.3	2.3	11.4	7.9
Jul 13	4.7	13.0	14.8	12.5	8.4	9.3	14.0	17.2	15.0	14.4	12.4	8.3	10.5	10.5	9.5	16.3	11.4	7.8	8.8	6.0	2.5	2.5	2.6	4.3	2.5	17.2	8.5
Jul 14	3.7	3.9	4.2	3.9	4.1	5.7	5.0	7.3	6.9	7.3	8.3	11.8	9.9	9.0	9.7	7.4	6.4	5.0	6.7	3.9	3.3	3.3	1.9	0.9	0.9	11.8	5.1
Jul 15	2.0	1.9	1.4	1.8	0.8	2.4	2.1	0.9	1.9	3.1	4.9	3.9	7.4	7.1	7.4	7.1	5.7	5.5	4.9	2.6	1.1	3.9	3.4	0.4	0.4	7.4	2.5
Jul 16	0.8	0.7	6.2	1.7	3.1	4.0	3.8	4.1	4.6	8.7	8.9	6.8	6.9	8.2	6.0	7.6	9.2	8.7	7.8	9.0	3.7	1.3	0.8	1.7	0.7	9.2	4.2
Jul 17	0.6	1.1	0.6	2.8	0.3	2.0	2.2	2.3	2.5	3.1	4.6	5.1	4.9	4.8	6.9	6.8	6.3	4.5	5.5	4.5	2.8	3.4	4.3	4.1	0.3	6.9	3.0
Jul 18	4.2	3.8	4.4	5.4	4.5	3.6	4.9	7.0	5.8	7.3	9.7	9.1	11.2	8.8	8.5	8.7	8.1	8.9	6.4	4.8	4.1	4.3	6.3	3.5	3.5	11.2	5.7
Jul 19	2.4	3.5	9.8	7.1	8.1	9.1	10.9	14.6	16.7	18.4	17.7	20.5	19.2	17.4	16.7	17.4	15.6	16.8	19.4	18.8	10.4	9.8	8.4	11.7	2.4	20.5	13.0
Jul 20	10.8	10.5	12.3	10.5	9.5	11.2	11.4	11.1	11.3	13.4	14.2	16.0	17.6	16.5	17.9	16.1	16.9	15.8	13.5	11.4	10.7	10.4	9.7	5.5	5.5	17.9	12.6



LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

Summary of Hourly Averages

VECTOR WIND SPEED (VWS) in km/hr & WIND DIRECTION (VWD) in sector

WIND SPEED																																											
Maximum Hourly Value:	20.5 kph on July 19 at hour 11																																										
Maximum Daily Value:	13.0 kph on July 19																																										
Minimum Hourly Value:	0.1 kph on July 31 at hour 13																																										
Minimum Daily Value:	0.2 kph on July 8																																										
Monthly Average:	1.7 kph																																										
Hours in Service:	744																																										
Hours of Data:	744																																										
Hours of Missing Data:	0																																										
Hours of Calibration:	0																																										
Operational Uptime:	100																																										
WIND DIRECTION																																											
Monthly Average:	271 (W) degree																																										
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum	Daily Average																	
Jul 21	5.8	6.1	5.1	1.3	2.1	2.4	6.1	6.7	7.0	6.2	8.4	10.0	11.8	13.1	11.6	10.8	13.4	12.1	14.1	13.0	10.7	8.5	12.4	15.4	1.3	15.4	8.4																
Jul 22	17.2	14.5	6.3	9.8	10.9	12.2	13.8	14.0	13.9	11.8	13.4	14.6	14.1	15.0	12.1	12.1	8.3	6.0	6.5	5.4	2.1	0.5	1.4	1.9	0.5	17.2	8.8																
Jul 23	1.3	0.6	0.4	2.4	1.6	2.4	2.9	4.6	6.0	5.9	6.8	5.7	6.5	5.6	5.2	4.5	5.9	5.9	7.5	6.3	7.0	6.9	8.3	9.1	0.4	9.1	4.7																
Jul 24	8.8	9.7	9.4	9.6	9.6	9.9	7.9	7.5	5.4	6.3	8.0	8.6	11.4	13.3	9.2	3.6	7.4	8.0	6.6	3.6	2.6	2.2	2.0	2.2	2.0	13.3	3.6																
Jul 25	1.1	3.3	4.6	3.4	4.6	4.0	4.5	5.9	6.2	9.3	9.4	5.8	4.9	6.0	6.5	7.9	7.1	5.2	6.1	3.8	3.3	3.6	6.6	8.1	1.1	9.4	4.3																
Jul 26	4.8	1.5	0.8	2.1	1.2	5.1	6.3	5.8	5.1	4.0	7.4	10.6	10.8	12.9	11.9	10.7	9.7	7.9	6.6	3.3	2.4	2.9	3.2	3.6	0.8	12.9	4.8																
Jul 27	3.5	2.0	2.0	2.6	1.5	2.3	1.8	3.3	5.6	4.4	4.6	4.3	3.9	2.8	2.4	4.3	4.3	3.3	3.9	4.3	5.1	4.7	4.7	4.4	1.5	5.6	2.6																
Jul 28	4.6	5.2	5.1	5.4	4.8	4.8	5.0	4.7	4.8	5.2	6.7	8.5	9.3	9.2	9.2	9.8	9.8	9.3	7.1	4.6	5.2	5.9	5.7	4.0	4.0	9.8	6.0																
Jul 29	4.8	1.7	2.3	0.9	6.6	8.2	6.9	7.6	8.1	6.9	7.7	8.9	9.7	10.4	9.8	10.0	8.5	7.3	5.3	5.4	4.8	3.4	2.4	3.2	0.9	10.4	4.7																
Jul 30	7.6	9.6	9.0	8.6	6.3	2.8	2.6	2.9	10.9	10.7	13.2	14.5	14.6	12.7	14.4	12.6	12.2	12.6	9.6	5.3	0.6	2.1	1.3	0.6	14.6	4.8																	
Jul 31	0.6	1.5	2.0	3.5	1.8	1.0	0.6	1.8	0.8	0.5	4.0	2.3	3.0	0.1	5.4	4.6	2.7	2.2	0.9	0.3	1.5	2.2	2.5	3.3	0.1	5.4	0.8																
C	Monthly Calibration										S	Daily Zero-Span Check										Q	Quality Assurance																				
K	Collection Error										N	No Data (Machine Not in Service)										Y	Routine Maintenance										P	Power Failure									
X	Invalid Data (Equipment Malfunction/Recovery)										NRM	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																															
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																											



## LAKELAND INDUSTRY & COMMUNITY ASSOCIATION

Lac La Biche Station - July 2022

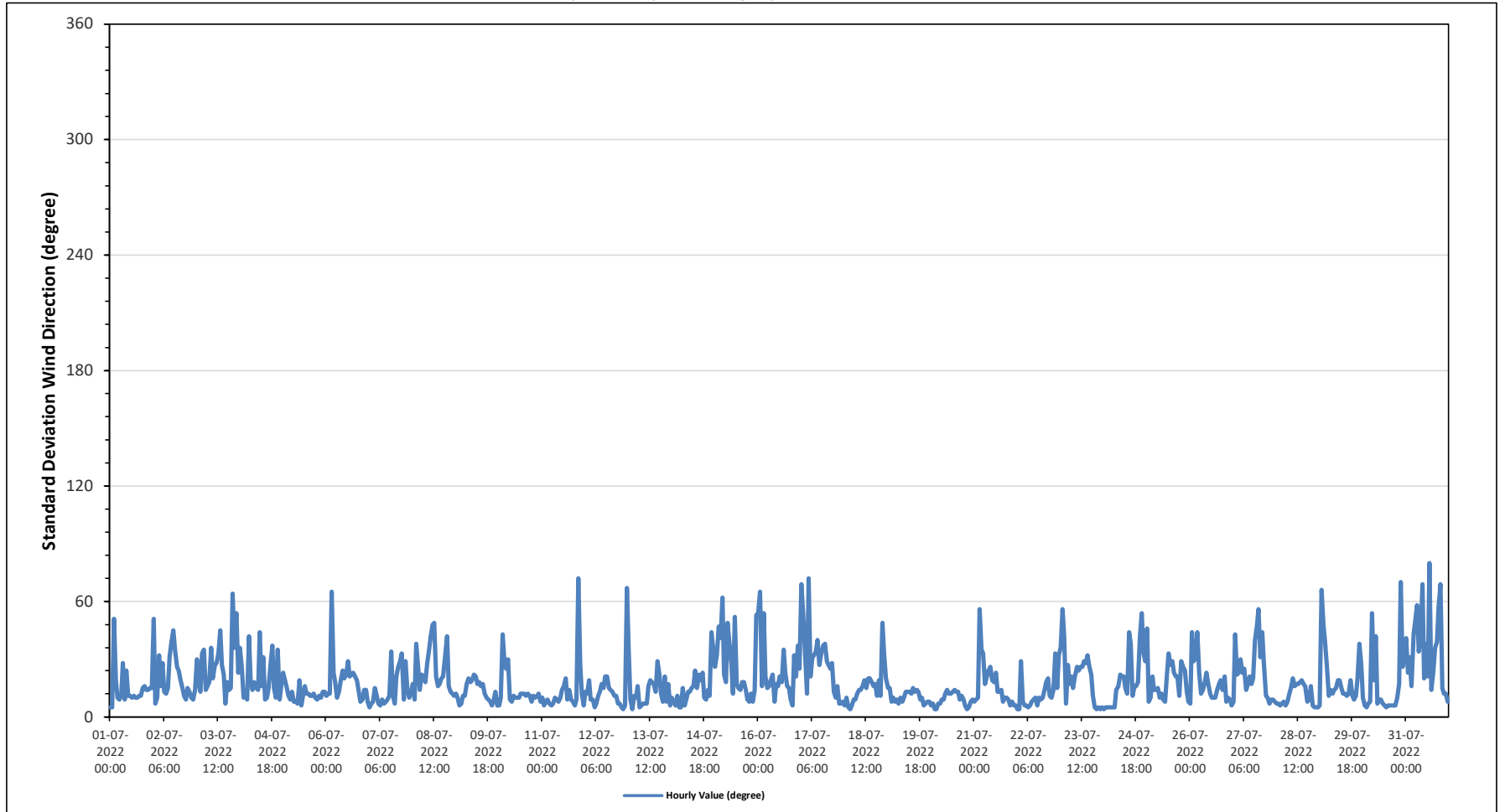
### Summary of Hour Standard Deviations

#### STANDARD DEVIATION WIND DIRECTION (STDWD) in Degree

Maximum Hourly Value:		80 degree on July 31 at hour 13														Hours in Service:		744																																									
Minimum Hourly Value:		4 degree on July 12 at hour 21														Hours of Data:		744																																									
																Hours of Missing Data:		0																																									
																Hours of Calibration:		0																																									
																Operational Uptime:		100.0																																									
Day	Hourly Period Starting at (MST)																							Daily Minimum	Daily Maximum																																		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			23																																	
Jul 1	5	5	51	19	10	9	11	28	9	24	11	11	10	11	10	10	11	11	15	16	14	14	15	15	5	51																																	
Jul 2	51	7	10	32	16	28	13	12	15	31	39	45	34	26	24	19	15	11	9	15	13	10	9	14	7	51																																	
Jul 3	30	18	13	33	35	14	16	18	36	20	27	28	33	45	27	22	7	18	14	15	64	36	54	23	7	64																																	
Jul 4	36	26	10	12	9	42	19	14	18	15	14	44	16	31	9	10	15	27	37	15	10	35	9	17	9	44																																	
Jul 5	23	19	15	11	9	13	8	8	7	19	6	11	16	12	12	11	11	12	10	9	11	10	13	13	6	23																																	
Jul 6	11	12	12	65	23	18	10	13	19	24	20	22	29	21	22	23	21	19	14	8	9	14	14	8	8	65																																	
Jul 7	5	7	8	15	11	7	6	9	7	8	9	11	34	11	7	21	26	29	33	9	29	14	10	12	5	34																																	
Jul 8	17	9	38	26	14	22	21	18	28	35	42	48	49	21	16	17	20	21	32	42	16	13	12	11	9	49																																	
Jul 9	12	10	6	7	11	11	17	20	18	19	22	21	17	18	16	17	12	10	9	8	6	9	13	6	6	22																																	
Jul 10	6	10	43	28	25	30	9	8	11	10	10	10	12	12	12	11	12	11	8	11	10	11	12	8	6	43																																	
Jul 11	10	6	8	9	7	6	7	10	9	8	10	14	16	20	9	14	9	8	6	9	72	27	12	6	6	72																																	
Jul 12	13	12	19	9	9	5	7	11	13	17	15	21	21	15	14	13	11	11	7	7	5	4	6	67	4	67																																	
Jul 13	37	9	4	11	10	16	5	6	7	7	7	16	19	18	17	13	29	22	12	8	21	8	17	6	4	37																																	
Jul 14	10	8	6	11	5	5	15	6	9	13	13	15	16	24	15	22	19	23	10	9	14	11	44	36	5	44																																	
Jul 15	26	32	47	41	62	22	18	49	38	28	12	52	17	15	14	18	18	14	9	8	12	8	14	53	8	62																																	
Jul 16	54	65	16	54	21	15	16	19	22	8	17	16	21	18	35	23	16	15	9	6	32	21	37	25	6	65																																	
Jul 17	69	53	32	12	72	21	31	32	34	40	27	33	37	38	29	27	25	28	13	10	16	7	7	8	7	72																																	
Jul 18	6	10	5	4	6	9	9	12	14	14	16	19	15	20	20	18	16	17	11	19	11	49	33	20	4	49																																	
Jul 19	15	15	8	10	8	9	7	10	8	10	13	13	13	12	15	13	14	13	9	10	6	7	8	8	6	15																																	
Jul 20	6	7	4	4	7	7	9	9	12	14	12	12	13	14	13	13	9	11	9	6	4	5	8	9	4	14																																	
Jul 21	8	9	10	56	35	33	17	21	24	26	19	18	23	13	13	14	8	10	10	9	6	8	6	6	6	56																																	
Jul 22	4	4	29	8	6	6	5	6	8	9	10	6	10	9	10	14	18	20	11	10	14	33	15	32	4	33																																	
Jul 23	36	56	42	7	27	17	21	15	21	26	24	26	26	29	28	32	26	22	11	5	4	5	4	5	4	56																																	
Jul 24	4	5	5	5	5	5	14	16	22	21	21	15	12	44	38	11	16	16	18	41	54	33	29	4	54																																		
Jul 25	46	8	10	21	14	14	15	10	12	9	8	22	33	27	29	23	21	21	11	29	26	24	13	8	8	46																																	
Jul 26	7	44	29	32	44	23	12	14	18	23	17	12	10	10	10	14	17	19	14	21	8	10	9	6	6	44																																	
Jul 27	8	43	22	23	30	23	25	14	17	21	17	20	40	47	56	31	44	28	11	10	7	9	9	8	7	56																																	
Jul 28	7	7	6	7	8	6	8	12	15	20	16	17	17	18	19	17	16	8	9	16	6	5	5	5	5	20																																	
Jul 29	6	66	48	39	26	11	14	12	14	15	19	19	15	12	12	11	12	19	11	9	11	20	38	27	6	66																																	
Jul 30	10	6	5	7	8	54	19	42	7	9	9	7	6	5	6	6	6	6	6	10	17	70	26	32	5	70																																	
Jul 31	41	23	31	16	43	50	58	34	41	69	20	38	21	80	14	23	36	39	57	69	15	12	12	8	8	80																																	
Diurnal Minimum	4	4	4	4	5	5	5	6	7	7	6	6	6	5	6	6	6	6	6	5	4	4	4	4	5																																		
Diurnal Maximum	69	66	51	65	72	54	58	49	41	69	42	52	49	80	56	38	44	39	57	69	72	70	54	67																																			
<b>C</b>	Monthly Calibration														<b>S</b>	Daily Zero-Span Check														<b>Q</b>	Quality Assurance																												
<b>K</b>	Collection Error														<b>N</b>	No Data (Machine Not in Service)														<b>Y</b>	Routine Maintenance														<b>P</b>	Power Failure													
<b>X</b>	Invalid Data (Machine Malfunction /Recovery)														<b>NRM</b>	UnitMaint (Repeat Calibration / Repeat Daily Zero-Span Check / Non-Routine Maintenance)																																											
Daily Average is shown "-" if minimum data completeness criteria of 75% or 18 hours per day is not met.																																																											
Monthly Average is shown "-" if minimum data completeness criteria of 75% of days per month is not met.																																																											



**Timeseries Chart of Hourly Average for STDWD - Lac La Biche Station**



END OF REPORT

This page, 298 of 298, ends the July 2022 Monthly Ambient Air Quality Monitoring Report.



**Lakeland Industry & Community Association**

**JULY 2022**

**Ambient Air Monitoring Calibration Report**

**- COLD LAKE SOUTH STATION-**

**CAL-LICA-202207-01174**

**Station Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

LICA / Bureau Veritas Canada

August 22, 2022

**DAILY INTERNAL ZERO-SPAN CALIBRATION  
RECORDS**

# MULTI-POINT CALIBRATION RECORDS

**End of Report**



**Lakeland Industry & Community Association**

**JULY 2022**

**Ambient Air Monitoring Calibration Report**

**- TAMARACK STATION-**

**CAL-LICA-202207-01248**

**Station Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

LICA / Bureau Veritas Canada

August 22, 2022

**DAILY INTERNAL ZERO-SPAN CALIBRATION  
RECORDS**



# MULTI-POINT CALIBRATION RECORDS

**End of Report**



**Lakeland Industry & Community Association**

**JULY 2022**

**Ambient Air Monitoring Calibration Report**

**- ST. LINA STATION-**

**CAL-LICA-202207-01250**

**Station Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

LICA / Bureau Veritas Canada

August 22, 2022

**DAILY INTERNAL ZERO-SPAN CALIBRATION  
RECORDS**

# MULTI-POINT CALIBRATION RECORDS

**End of Report**



**Lakeland Industry & Community Association**

**JULY 2022**

**Ambient Air Monitoring Calibration Report**

**- LAC LA BICHE STATION-**

**CAL-LICA-202207-01690**

**Station Operation and Maintenance:**

Bureau Veritas Canada

**Data Validation and Report:**

LICA / Bureau Veritas Canada

August 22, 2022

**DAILY INTERNAL ZERO-SPAN CALIBRATION  
RECORDS**



# MULTI-POINT CALIBRATION RECORDS

**End of Report**