



KITIMAT AIRSHED GROUP

Quarterly Air Quality Data Reports 2024

January – March 2024

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Kitimat Airshed Group Society

Quarterly Data Summary Reports for January 1 to March 31, 2024

Our first quarterly data summary report includes ambient air quality stations in Kitimat, Kitimaat Village and Terrace. These reports are automatically generated using unverified data extracted from the BC Air Data Archive (Envista database) managed by the Ministry of Environment and Climate Change Strategy (BC ENV). Summary reports will be posted quarterly to provide an overview of the air quality status in the Kitimat Terrace airshed. These reports are reviewed and elaborated on by the Data Review Committee.

Trinity Consultants maintains and operates the air quality stations for Rio Tinto in Kitimat, Kitimaat Village, and Lakelse Lake. Trinity's station notes are attached at the end of the report for reference.

Other notable activities in the Kitimat airshed are the ongoing construction at [LNG Canada's](#) project site.

Submitted by Brittany Bayne on behalf of the Kitimat Airshed Data Review Committee

270 City Centre
Kitimat, BC, V8C 2H7



Ministry of
Environment and
Climate Change Strategy

Automated Data Summary for Kitimat Haisla Village 2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

This report is generated automatically and contains unvalidated data.

Kitimat Haisla Village

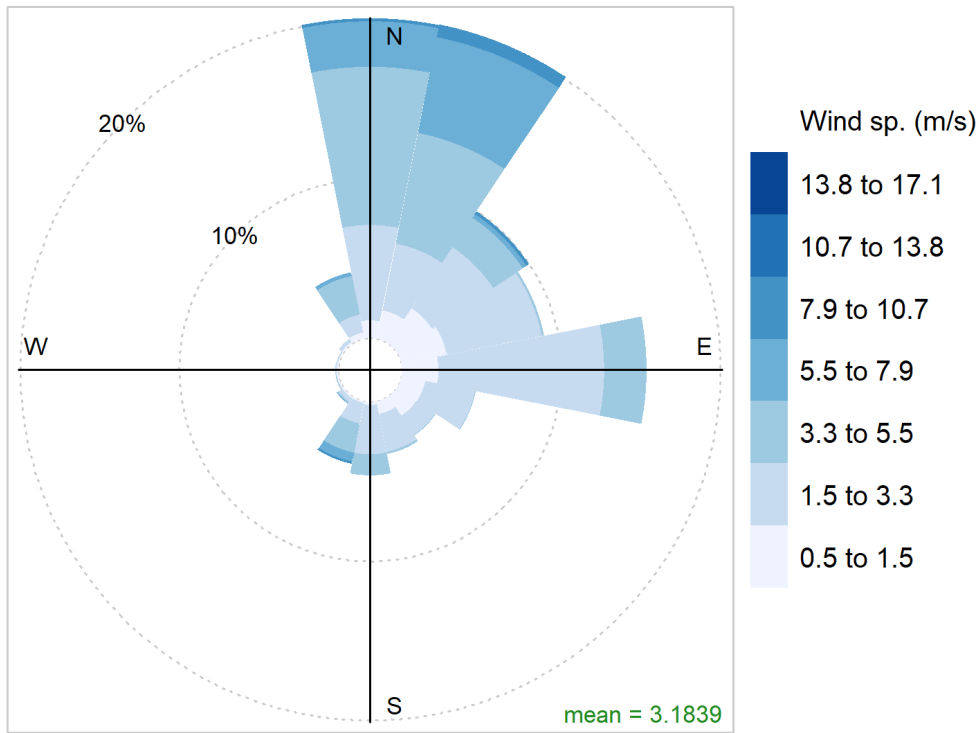
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
SO2	ppb	1 H	70	0	0.2	25.0	-0.7	27.7		89.3	Y
PM2.5	ug/m3	1 H			3.0	0.0	0	26	2024-01-09 23:00:00	97.5	Y
	ug/m3	24 H	25	0	3.0	0.0	0.3	6	2024-01-23 2024-02-03	97.8	Y
Wind spd	m/s	1 H			3.1	0.0	0	9.22	2024-01-12 06:00:00	99.7	Y
Temp	°C	1 H			1.2		-16.9	15.3	2024-03-23 17:00:00	98.6	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
Comp threshold is 60%

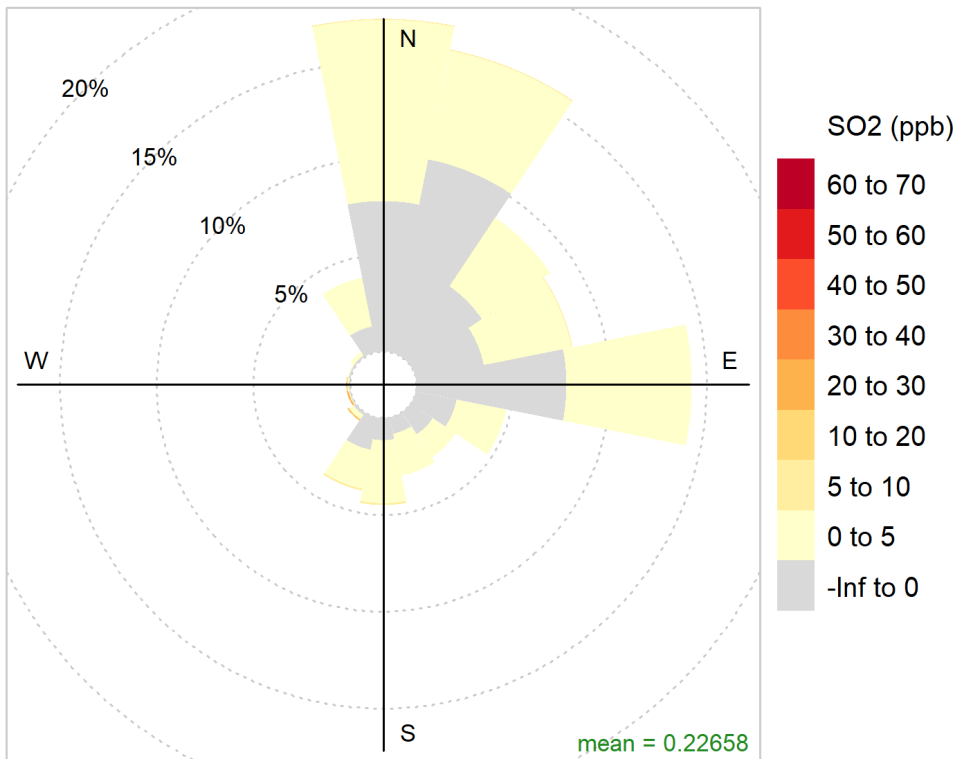
Parameter	Conversion	Unit	Notes
SO2	1 : 2.62	ppb : ug/m3	
PM2.5			
Wind spd			
Temp			

Windrose
Kitimat Haisla Village - 2024 Q1

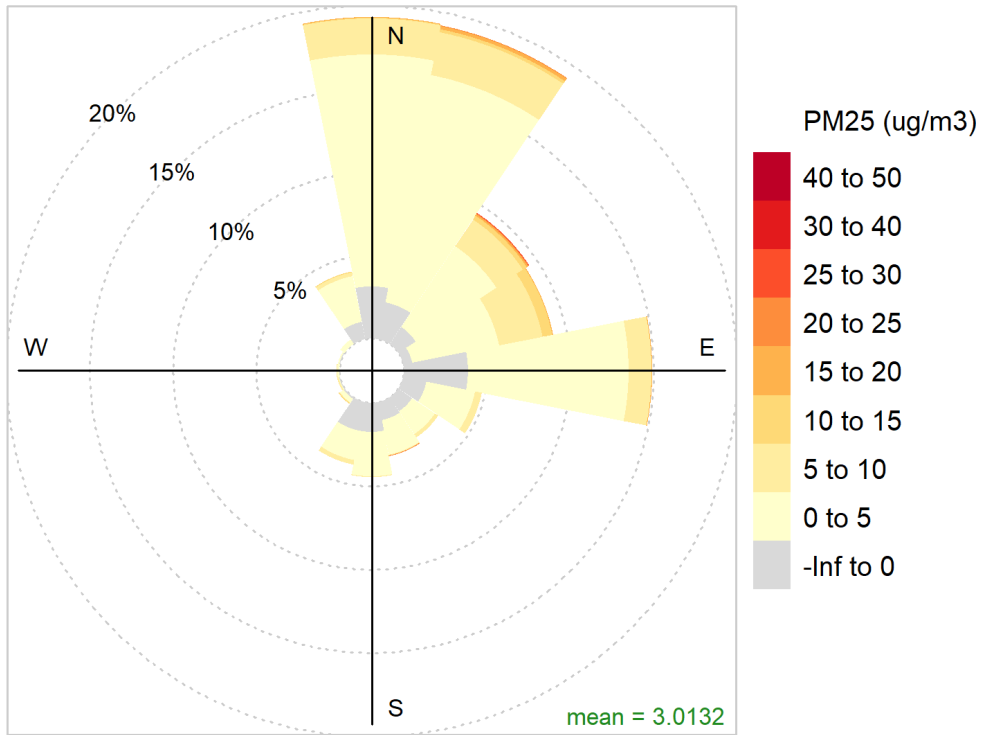


calms = 2.36%

SO2 pollution rose
Kitimat Haisla Village - 2024 Q1



PM2.5 pollution rose
Kitimat Haisla Village - 2024 Q1





Automated Data Summary for

Kitimat Haul Road 2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

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Kitimat Haul Road

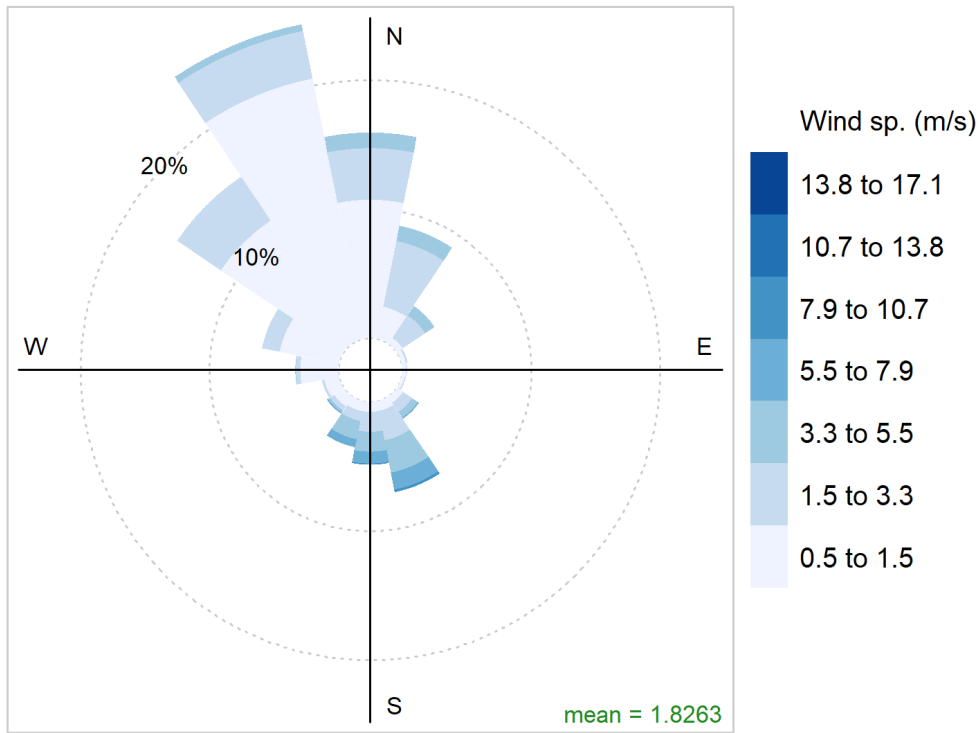
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
SO2	ppb	1 H	70	2	3.2	0.2	-0.2	89.2		93.4	Y
HF	ppb	1 H	63	0	0.1	0.0	0	0.5		95.2	Y
	ppb	24 H			0.1	0.0	0	0.2	More than 5 occurrences (n = 9)	100.0	Y
PM2.5	ug/m3	1 H			4.1	0.0	0	50	2024-03-18 15:00:00	99.2	Y
	ug/m3	24 H	25	0	4.1	0.0	0.9	15.3	2024-03-18	100.0	Y
Wind spd	m/s	1 H			1.7	0.0	0	9.93	2024-03-31 13:00:00	100.0	Y
Temp	°C	1 H			0.2		-18.2	16	2024-03-16 16:00:00	100.0	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
 Comp threshold is 60%

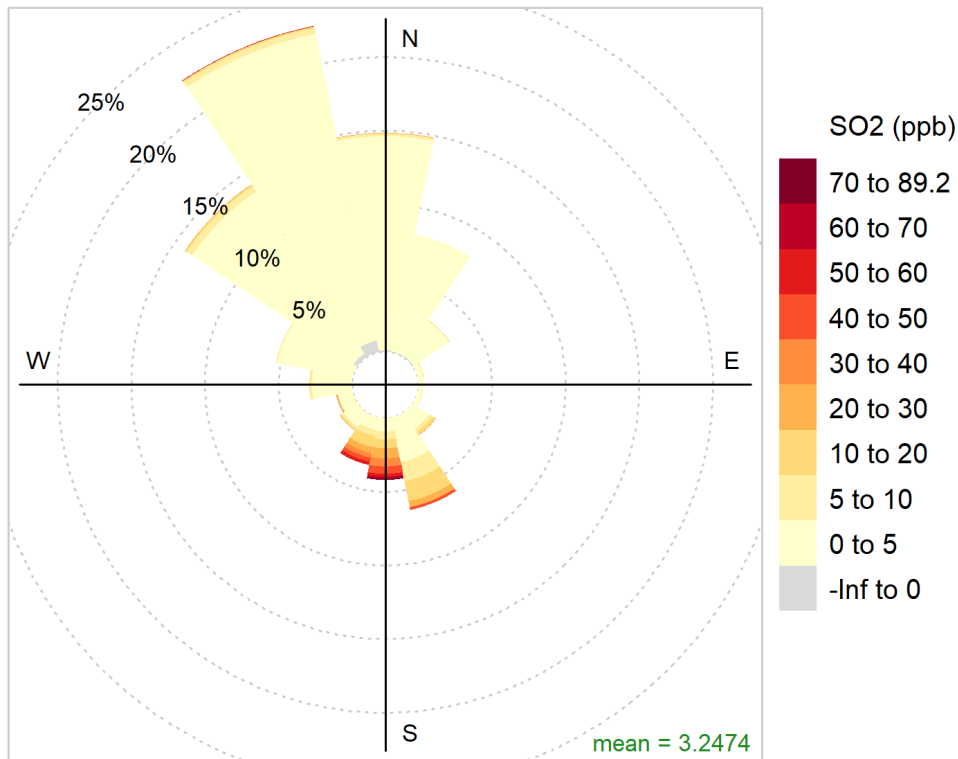
Parameter	Conversion	Unit	Notes
SO2	1 : 2.62	ppb : ug/m3	
HF	1 : 0.82	ppb : ug/m3	
PM2.5			
Wind spd			
Temp			

Windrose
Kitimat Haul Road - 2024 Q1

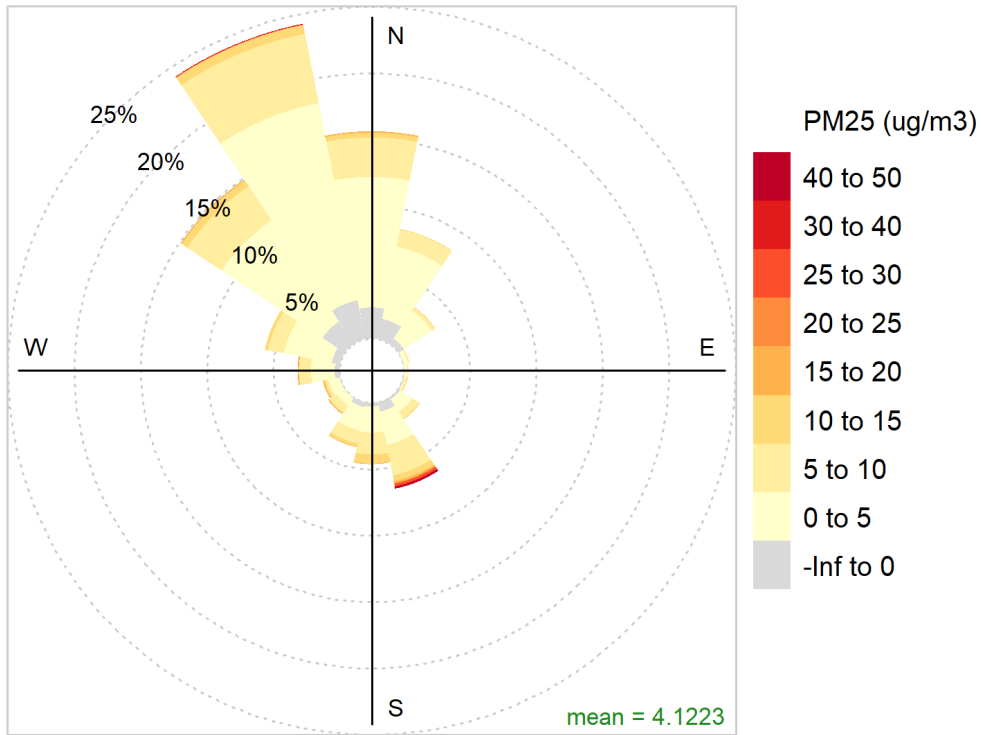


calms = 4.95%

SO2 pollution rose
Kitimat Haul Road - 2024 Q1



PM2.5 pollution rose
Kitimat Haul Road - 2024 Q1





Ministry of
Environment and
Climate Change Strategy

Automated Data Summary for Kitimat Industrial Ave 2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

This report is generated automatically and contains unvalidated data.

Kitimat Industrial Ave

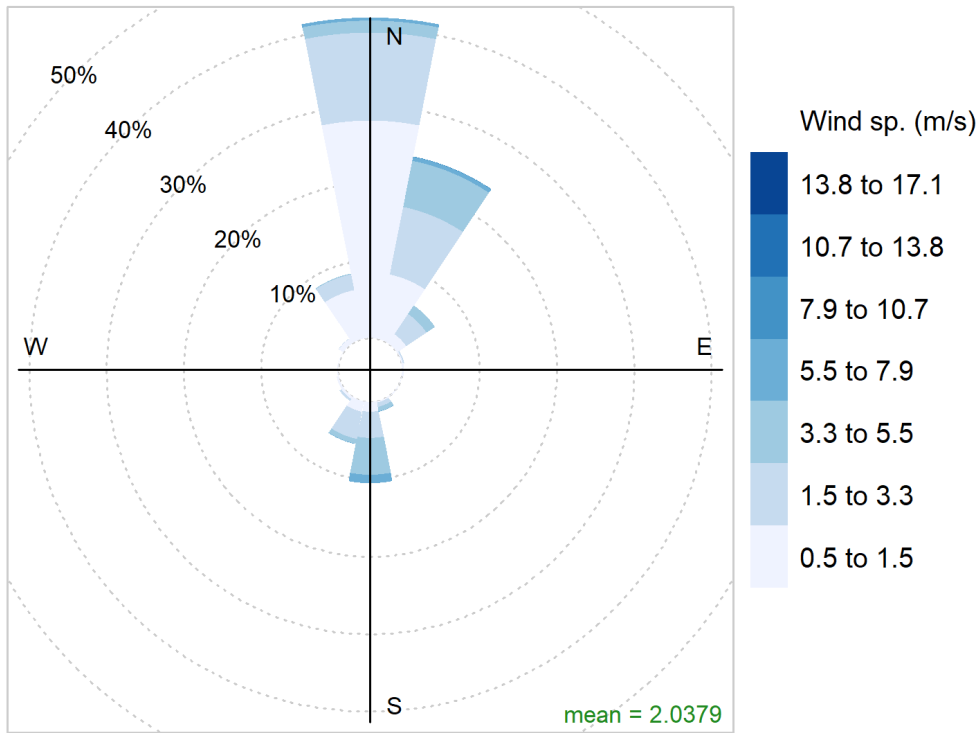
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
SO2	ppb	1 H	70	0	1.4	4.8	-0.3	44.8		92.8	Y
Wind spd	m/s	1 H			1.8	0.0	0	8.1		92.7	Y
Temp	°C	1 H			-0.8		-19	15.7	2024-03-22 16:00:00	93.9	Y
Humidity	% RH	1 H			80.0	0.0	21.4	96.2	2024-01-29 06:00:00	93.9	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
 Comp threshold is 60%

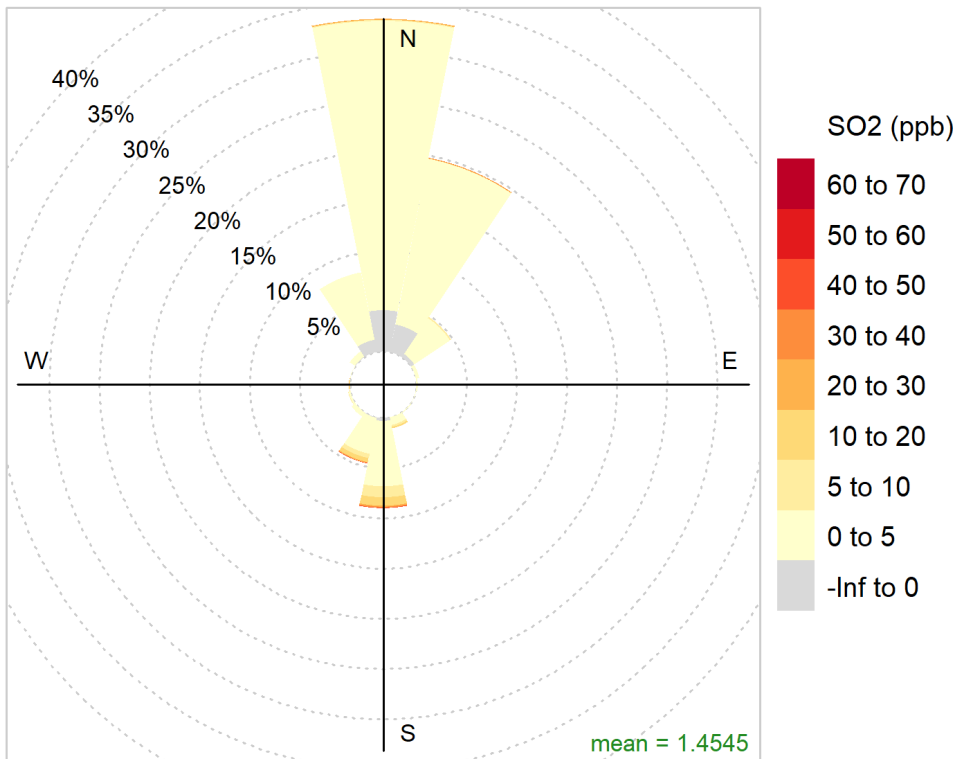
Parameter	Conversion	Unit	Notes
SO2	1 : 2.62	ppb : ug/m3	
Wind spd			
Temp			
Humidity			

Windrose
Kitimat Industrial Ave - 2024 Q1



calms = 0.50%

SO2 pollution rose
Kitimat Industrial Ave - 2024 Q1





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Climate Change Strategy

Automated Data Summary for

Kitimat Riverlodge 2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

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Kitimat Riverlodge

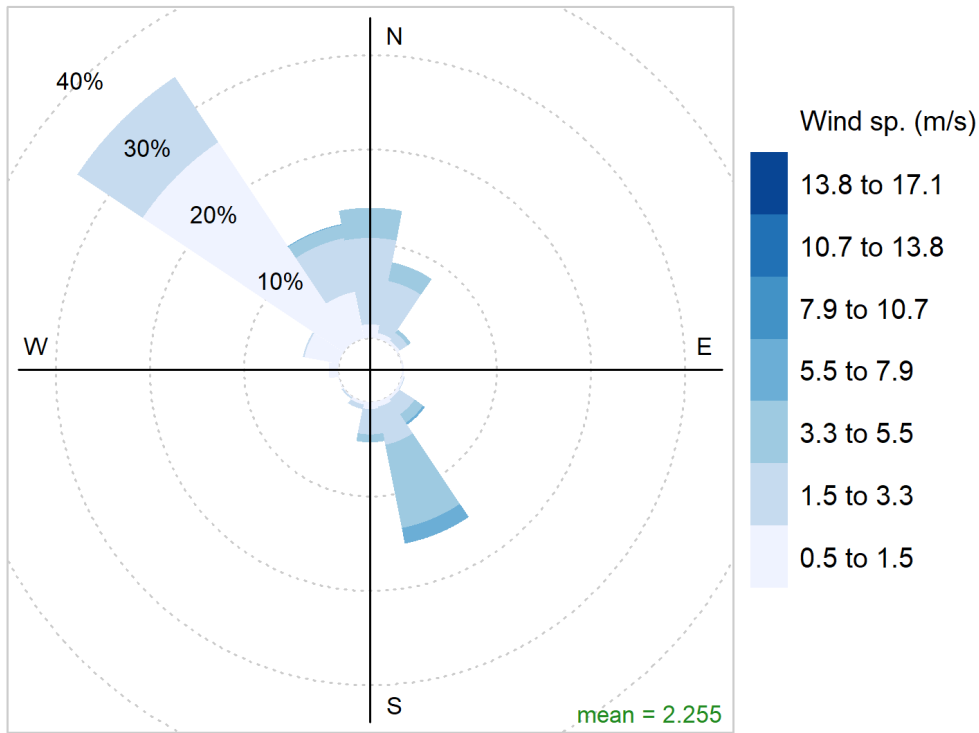
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
SO2	ppb	1 H	70	0	0.5	2.4	-0.1	17.6		95.3	Y
HF	ppb	1 H	63	0	0.1	0.0	0	0.1	More than 5 occurrences (n = 80)	95.3	Y
	ppb	24 H			0.1	0.0	0	0.1	More than 5 occurrences (n = 74)	100.0	Y
PM2.5	ug/m3	1 H			3.0	0.0	0	29	2024-03-05 01:00:00	94.4	Y
	ug/m3	24 H	25	0	3.0	0.0	0.8	6.1	2024-03-18	93.4	Y
PM10	ug/m3	1 H			7.4	0.0	0	985		98.9	Y
	ug/m3	24 H	50	0	7.4	0.0	1.4	48.5	2024-02-02	98.9	Y
Wind spd	m/s	1 H			2.0	0.0	0	7.67	2024-03-31 15:00:00	96.5	Y
Temp	°C	1 H			0.2		-18.6	16	2024-03-16 17:00:00	99.9	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
Comp threshold is 60%

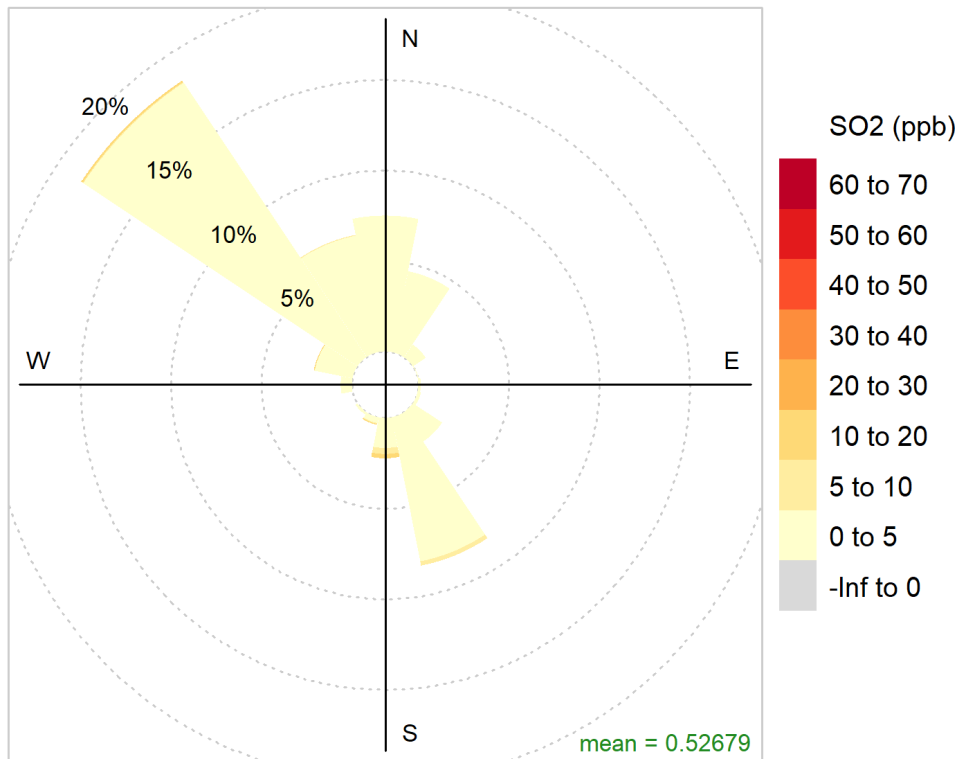
Parameter	Conversion	Unit	Notes
SO2	1 : 2.62	ppb : ug/m3	
HF	1 : 0.82	ppb : ug/m3	
PM2.5			
PM10			
Wind spd			
Temp			

Windrose
Kitimat Riverlodge - 2024 Q1

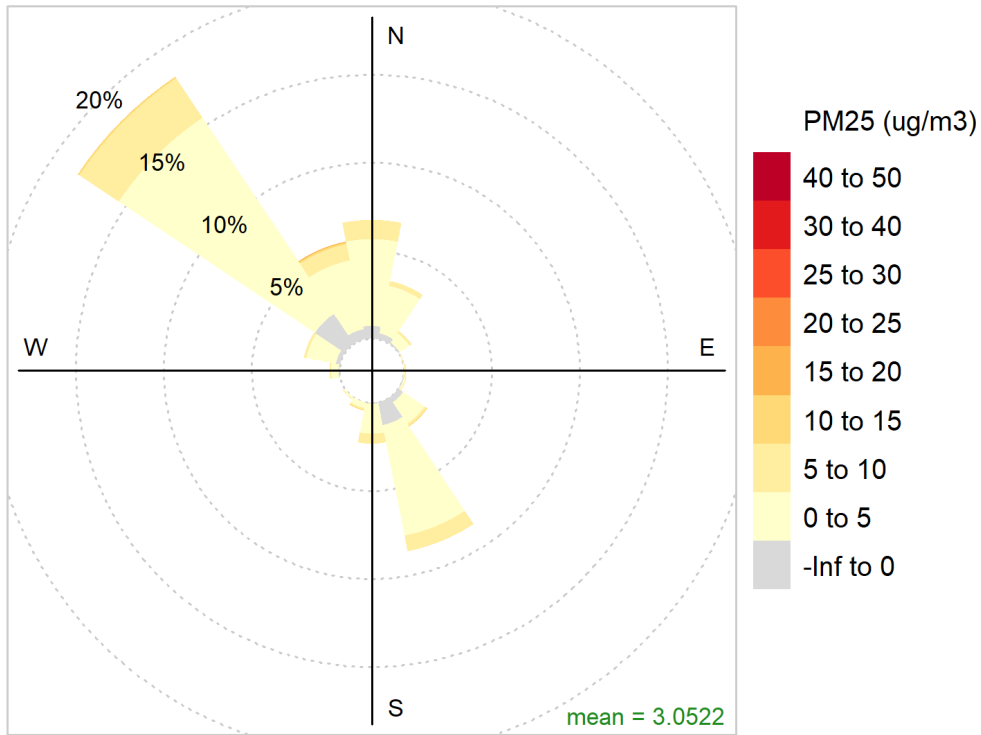


calms = 0.33%

SO2 pollution rose
Kitimat Riverlodge - 2024 Q1



PM2.5 pollution rose
Kitimat Riverlodge - 2024 Q1





Automated Data Summary for

Kitimat Whitesail 2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

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Kitimat Whitesail

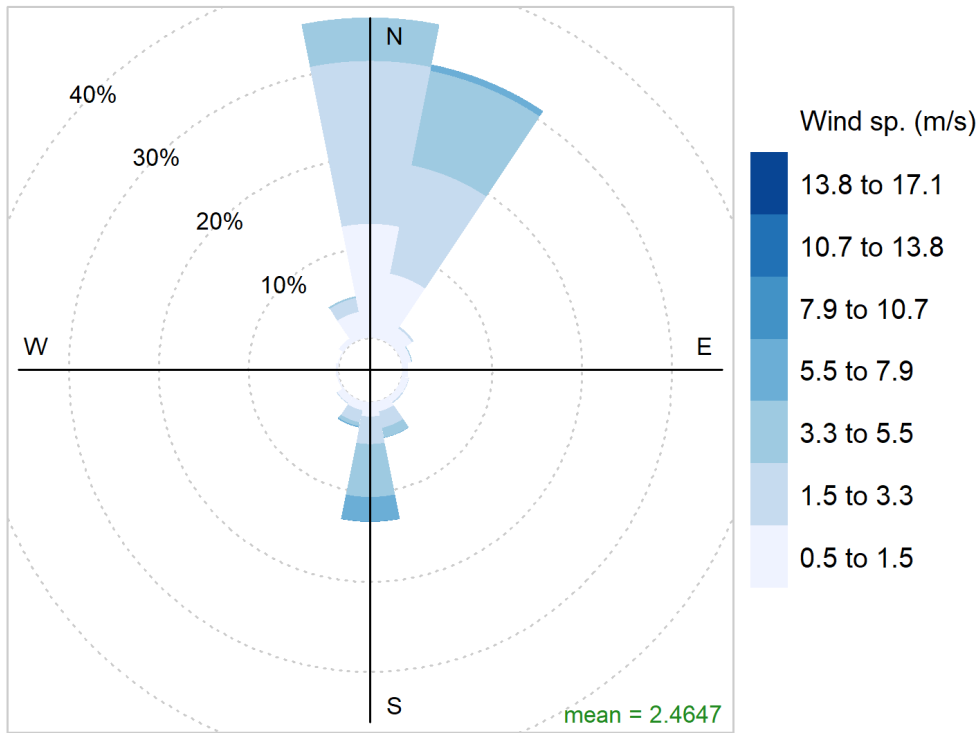
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
AQHI		1 H					1	4	2024-01-01 02:00:00 2024-01-01 03:00:00 2024-03-05 19:00:00	99.2	Y
NO2	ppb	1 H	60	0	1.6	0.0	0.3	13		94.8	Y
SO2	ppb	1 H	70	0	0.6	15.3	-0.7	7.3		94.7	Y
O3	ppb	1 H	82	0	22.4	0.0	0.6	44.4		94.7	Y
PM2.5	ug/m3	1 H			4.0	0.0	0	201	2024-01-01 01:00:00	98.8	Y
	ug/m3	24 H	25	0	4.0	0.0	1.6	13.2	2024-01-01	98.9	Y
Wind spd	m/s	1 H			2.4	0.0	0	7.91	2024-03-31 16:00:00	100.0	Y
Temp	°C	1 H			0.1		-18.9	16	2024-03-16 17:00:00	100.0	Y
Humidity	% RH	1 H			80.5	0.0	23.7	100	More than 5 occurrences (n = 173)	100.0	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
Comp threshold is 60%

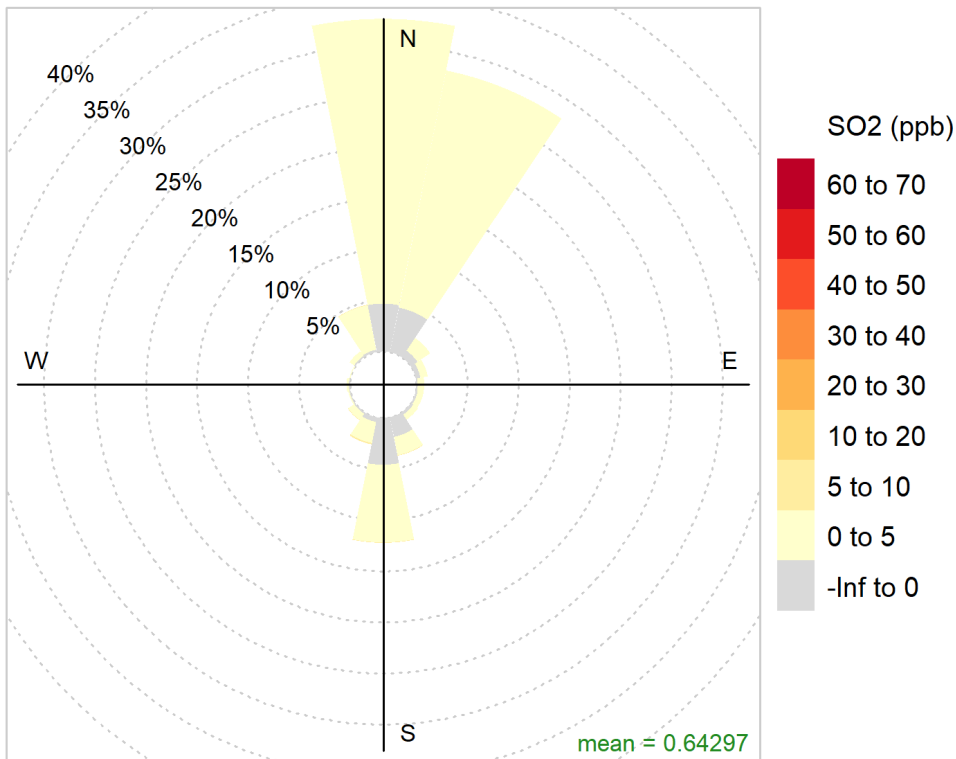
Parameter	Conversion	Unit	Notes
AQHI			
NO2	1 : 1.88	ppb : ug/m3	
SO2	1 : 2.62	ppb : ug/m3	
O3	1 : 1.96	ppb : ug/m3	
PM2.5			
Wind spd			
Temp			
Humidity			

Windrose
Kitimat Whitesail - 2024 Q1



calms = 3.94%

SO2 pollution rose
Kitimat Whitesail - 2024 Q1





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Climate Change Strategy

Automated Data Summary for

Kitimat Yacht Club 2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

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Kitimat Yacht Club

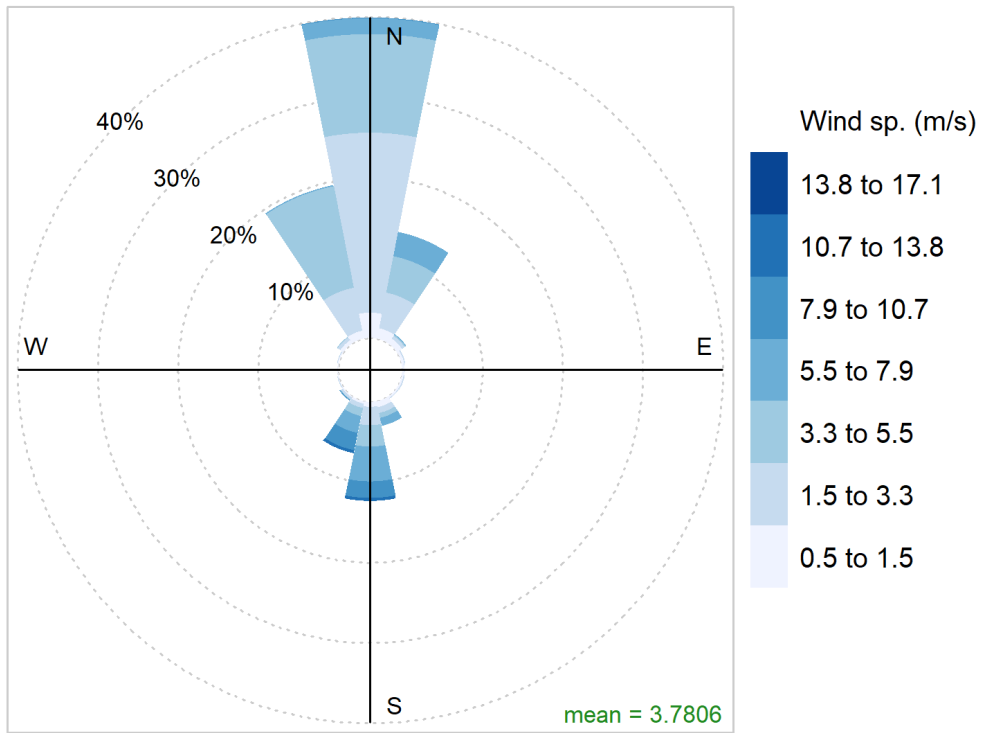
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
Wind spd	m/s	1 H			3.7	0.0	0	13.2	2024-03-31 14:00:00	100.0	Y
Temp	°C	1 H			0.9		-17.4	15.2	2024-03-22 16:00:00	100.0	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
 Comp threshold is 60%

Parameter	Conversion	Unit	Notes
Wind spd			
Temp			

Windrose
Kitimat Yacht Club - 2024 Q1



calms = 1.92%



Automated Data Summary for
Terrace Skeena Middle School
2024 Q1

Provided to the Kitimat Airshed Group by the
B.C. Ministry of Environment and Climate Change Strategy

Generated:
8 May 2024

Note

This report is generated automatically and contains unvalidated data.

Terrace Skeena Middle School

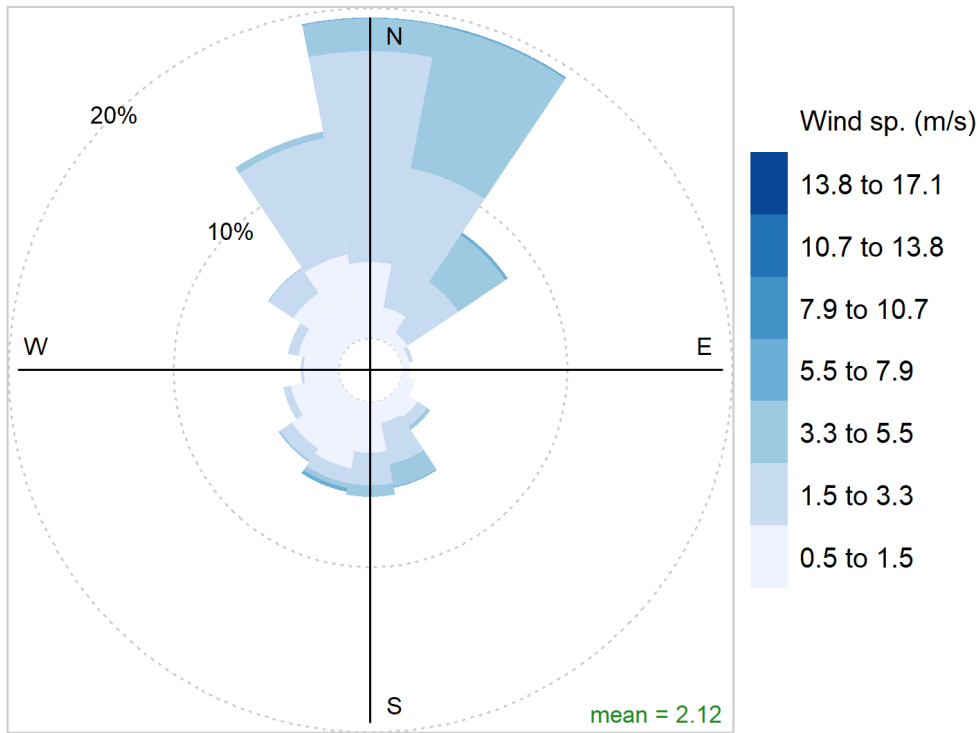
2024 Q1

Parameter	Unit	Avg Prd	Obj	Excd	Qtr Avg	% Neg	Min	Max	Prd of Max	% Comp	Comp
AQHI		1 H					1	9	2024-03-25 07:00:00	99.9	Y
NO2	ppb	1 H	60	0	1.2	56.0	-2	21.4		95.8	Y
SO2	ppb	1 H	70	0	1.1	0.0	0.2	8.4	2024-03-25 20:00:00	95.8	Y
O3	ppb	1 H	82	0	22.3	0.1	-0.2	48.8		95.8	Y
PM2.5	ug/m3	1 H			6.5	0.0	0	81.7	2024-03-25 07:00:00	99.9	Y
	ug/m3	24 H	25	0	6.5	0.0	2.2	21	2024-02-22	100.0	Y
Wind spd	m/s	1 H			1.7	0.0	0	6.43	2024-03-31 16:00:00	100.0	Y
Temp	°C	1 H			0.5		-17.6	17.2	2024-03-16 16:00:00 2024-03-16 17:00:00	100.0	Y
Humidity	% RH	1 H			72.0	0.0	16	99.4	More than 5 occurrences (n = 34)	100.0	Y

Avg = Average; Comp = Completeness; Excd = number of exceedances; Neg = negative data; Obj = Air quality objective; Prd = Period; Qtr = Quarter
Comp threshold is 60%

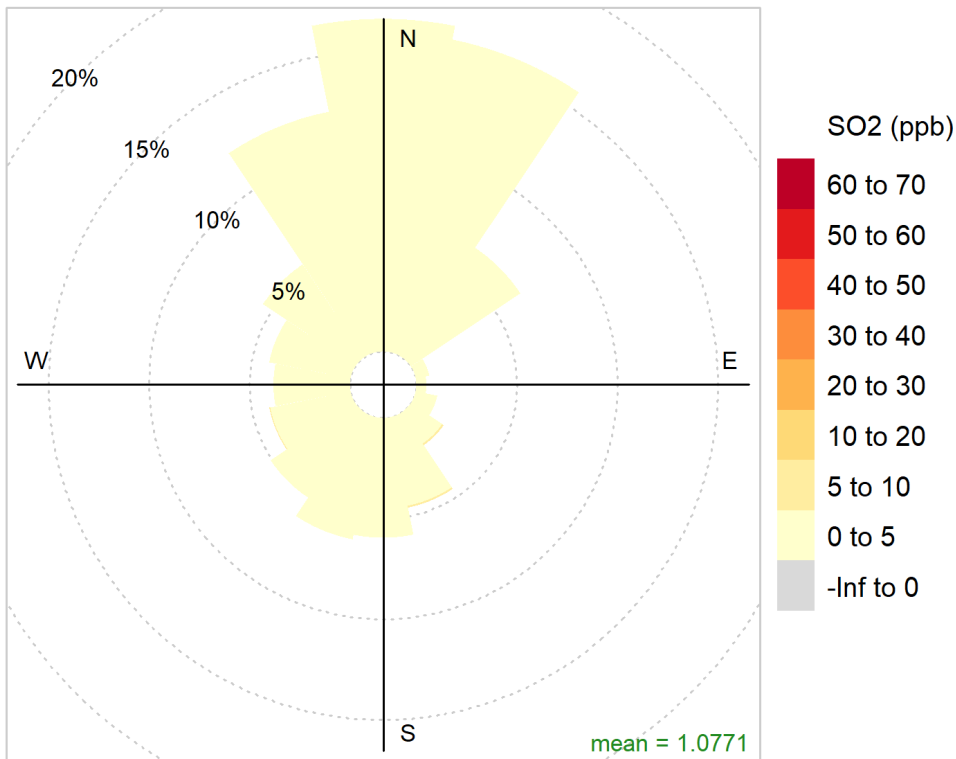
Parameter	Conversion	Unit	Notes
AQHI			
NO2	1 : 1.88	ppb : ug/m3	
SO2	1 : 2.62	ppb : ug/m3	
O3	1 : 1.96	ppb : ug/m3	
PM2.5			
Wind spd			
Temp			
Humidity			

Windrose
Terrace Skeena Middle School - 2024 Q1

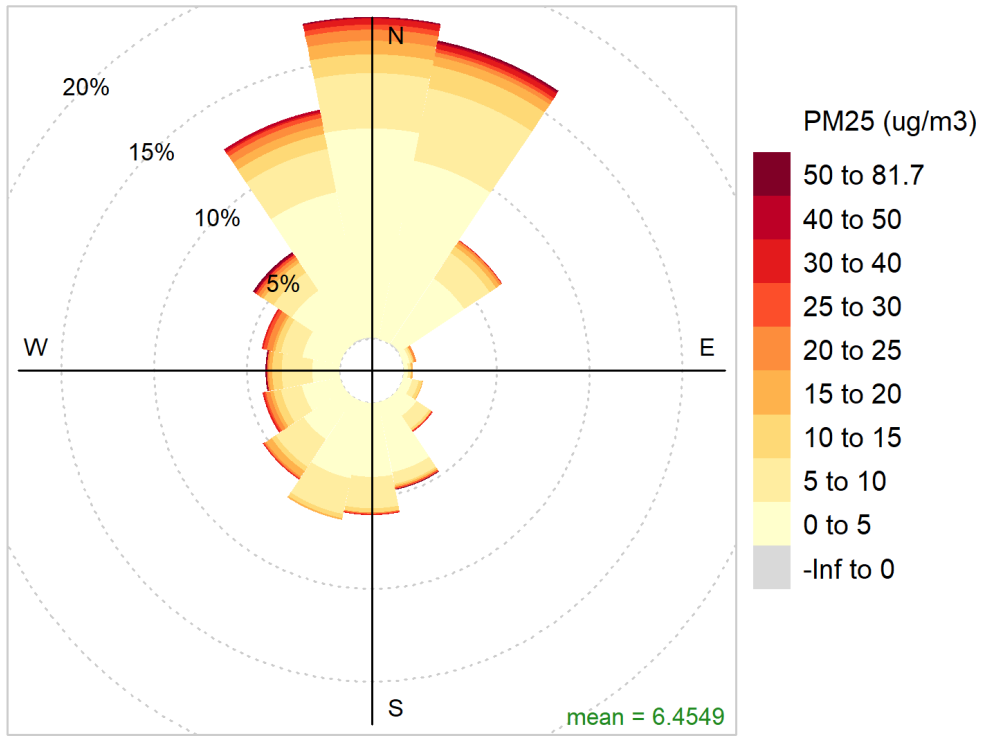


calms = 20.66%

SO2 pollution rose
Terrace Skeena Middle School - 2024 Q1



PM2.5 pollution rose
Terrace Skeena Middle School - 2024 Q1



Downtime and Maintenance Reports from Trinity Consultants

Significant Offline Periods						
<u>Station</u>	<u>Start Date</u>	<u>Start Hour</u>	<u>End Date</u>	<u>End Hour</u>	<u>Parameters</u>	<u>Description</u>
Riverlodge	2024-01-01	100	2024-02-02	1600	Wind	Reading Erroenously; Sensor Malfunctioning
Riverlodge	2024-02-11	2100	2024-02-13	1700	PM	Temp Sensor Malfunction
Riverlodge	2024-02-14	1700	2024-02-16	1400	PM	Temp Sensor Malfunction
Riverlodge	2024-03-31	800	2024-03-31	1300	PM10	Tape Malfunction
Haul Road	2024-01-27	1500	2024-01-29	1000	SO2	Analyzer Malfunction; Rebooted
Village	2024-01-07	0	2024-01-09	1600	SO2	Analyzer Malfunction; Rebooted
Village	2024-01-11	1500	2024-01-12	1400	SO2	Analyzer Malfunction; Rebooted
Village	2024-02-04	1500	2024-02-05	1200	SO2	Analyzer Malfunction; Rebooted
Village	2024-02-18	1900	2024-02-18	2100	SO2	Analyzer Malfunction; Rebooted
Village	2024-03-03	1200	2024-03-04	1000	Temp/SO2/PM	Remote Reboot Device Shutoff after Power Outage
Industrial	2024-01-20	1800	2024-01-22	1000	SO2	Analyzer Malfunction; Rebooted
Industrial	2024-03-11	1000	2024-03-12	1500	Temp/RH	Envidas Logger Offline
Industrial	2024-03-27	400	2024-03-27	1500	SO2	Envidas Logger Offline
Industrial	2024-03-27	400	2024-03-28	800	Temp/RH	Envidas Logger Offline
Industrial	2024-03-29	800	2024-04-01	0	Temp/RH	Envidas Logger Offline
Whitesail	2024-01-02	700	2024-01-02	1400	PM	Tape Shuttle Issue
Whitesail	2024-02-05	1400	2024-02-05	1400	NOx/O3/SO2	Filters Changed

Maintenance						
Station	Start Date	Start Hour	End Date	End Hour	Parameters	Description
Village	2024-01-18	1700	2024-01-18	1800	All	Envidas Logger Replaced
Village	2024-01-31	900	2024-01-31	1000	SO2	Audit
Village	2024-01-31	1000	2024-01-31	1100	PM	Audit
Village	2024-02-21	1200	2024-02-21	1500	Temp	Calibration Verification
Village	2024-02-22	1000	2024-02-22	1200	Wind	Calibration Verification; Sensor Replacement
Village	2024-02-22	1500	2024-02-22	1700	PM	Monthly BAM Maintenance
Village	2024-03-04	1200	2024-03-04	1200	SO2	Filter Change
Village	2024-03-20	1000	2024-03-20	1000	PM	Monthly BAM Maintenance
Haul Road	2024-01-02	1600	2024-01-02	1600	SO2/HF	Filters Changed
Haul Road	2024-01-30	1200	2024-01-30	1300	SO2/HF	Audit
Haul Road	2024-01-30	1300	2024-01-30	1400	PM	Audit
Haul Road	2024-02-27	1400	2024-02-27	1500	PM	Monthly BAM Maintenance
Haul Road	2024-03-07	1500	2024-03-07	1500	SO2/HF	SO2 Cylinder Replacement
Haul Road	2024-03-27	1500	2024-03-27	1600	PM	Monthly BAM Maintenance
Haul Road	2024-03-29	1200	2024-03-29	1400	SO2/HF	SO2 Calibration
Industrial	2024-01-09	1400	2024-01-09	1500	SO2	Filters Changed
Industrial	2024-01-30	1700	2024-01-30	1800	SO2	Audit
Industrial	2024-02-09	1400	2024-02-09	1400	SO2	Filters Changed
Industrial	2024-02-14	1100	2024-02-14	1300	SO2	Calibration
Riverlodge	2024-01-18	1200	2024-01-18	1200	All	Envidas Logger Replaced
Riverlodge	2024-01-30	1500	2024-01-30	1600	SO2/HF	Audit

Riverlodge	2024-01-30	1600	2024-01-30	1600	PM2.5/PM10	Audit
Riverlodge	2024-02-02	1200	2024-02-02	1600	Wind	WD Sensor Replaced
Riverlodge	2024-02-16	1400	2024-02-16	1500	PM2.5/PM10	Monthly BAM Maintenance
Riverlodge	2024-03-07	1000	2024-03-07	1000	SO2/HF	Filters Changed
Riverlodge	2024-03-07	1300	2024-03-07	1300	SO2/HF	HF MP Verification
Riverlodge	2024-03-27	1300	2024-03-27	1300	PM10	Monthly BAM Maintenance
Riverlodge	2024-03-27	1400	2024-03-27	1500	PM2.5	Monthly BAM Maintenance
Riverlodge	2024-03-28	1300	2024-03-28	1300	SO2/HF	SO2 As Found MP Verification
Whitesail	2024-01-02	1400	2024-01-02	1400	SO2/NOX/O3	Filters Changed
Whitesail	2024-01-10	1400	2024-01-10	1600	SO2/NOX/O3	O3 Pump Replaced
Whitesail	2024-01-19	1100	2024-01-19	1500	SO2/NOX/O3	O3 Calibration
Whitesail	2024-01-24	1200	2024-01-24	1300	SO2/NOX/O3	Ministry Approved NOx As Found Multi-point Verification
Whitesail	2024-01-30	900	2024-01-30	1100	SO2/NOX/O3/PM	Audit
Whitesail	2024-02-23	1500	2024-02-23	1600	PM	Monthly BAM Maintenance
Whitesail	2024-03-05	1400	2024-03-05	1600	SO2/NOX/O3	SO2 Calibration
Whitesail	2024-03-27	1100	2024-03-27	1100	PM	Monthly BAM Maintenance