

state
2022 of
the air

technical
appendix



2022 BC Lung State of the Air Report -- Technical Appendix

Data Source:

B.C. Ministry of Environment and Climate Change Strategy, Metro Vancouver, Prince Rupert Port Authority

Units:

All data presented in ppb except PM_{2.5}, which is presented in micrograms per cubic metre

Monitoring sites:

Monitoring is often conducted to address various objectives that may include measuring concentrations representative of: community exposure, industrial impacts, background concentrations, etc.

For the State of Air Report, monitoring sites immediately adjacent to industrial facilities were not included unless these sites were also near areas of high population density.

Data completeness:

Data completeness criteria have been relaxed relative to previous reports to enable reporting of data from more stations.

In this report, a valid day has data for at least 18 hours (75%).

A valid year has data for at least 60% of days in each quarter and 75% of hours over an entire year, with the following exceptions.

For peak (4th highest) 8-hour ozone levels, a valid 8-hour period has data for at least 6 hours, a valid day has data for at least 18 hours, and a valid year has at least 75% of days in the second and third quarters (April 1 to September 30).

For peak (1-hour) SO₂ and NO₂ levels, a valid daily maximum includes those days where less than 18 hours are available in a day but the maximum concentration exceeds the objective level.

Annual mean PM_{2.5} levels are based on the annual mean of daily PM_{2.5} concentrations.

Where data completeness requirements are not met, only number of hours per year, maximum value and number of exceedances are shown.

Collocated monitors:

Where more than one PM_{2.5} monitor is operating at a single site, data are shown for the monitor currently considered the primary reporting monitor and/or the monitor reporting a complete year of data.

Disclaimer:

While the information in these data summaries are believed to be accurate, the data summaries are provided as is without any warranty, and may be subject to change as changes to the underlying database occur.

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Summary of 2021 PM2.5 Data

Site	Year	No. Valid Hrs	Annual Avg	Percentiles (1h)					Max 1h	No. Valid Days	24h Average			No. of Days		% of Valid Days Per Quarter				CAAQS Metrics for PM2.5*		
				25th	50th	75th	98th	99th			Annual Avg	Annual 98th Percentile*	Annual Max	>27 µg/m³	>25 µg/m³	Q1	Q2	Q3	Q4	Annual	24-Hour	
				Abbotsford-Airport	2021	8696	4.8	2			3	6	17	25	158	362	4.7	12	87	3	3	100
Abbotsford-MillLake	2021	8702	5.0	2	4	6	16	22	148	363	4.9	11	97	3	3	100	98.9	98.9	100	5.3	14	
Agassiz	2021	8650	5.9	3	4	7	18	30	173	362	5.9	19	129	4	5	100	100	100	96.7	6	26	
Burnaby-Kensington	2021	8586	4.4	2	3	6	15	19	165	357	4.4	11	79	2	2	100	100	97.8	93.5	5	24	
Burnaby South	2021	8610	4.7	2	4	6	15	19	166	355	4.7	12	61	1	1	100	95.6	97.8	95.7	5.2	14	
Burns Lake	2021	8719	7.1	2	5	9	29	35	111	364	7.1	20	31	1	1	98.9	100	100	100	7.6	20	
Castlegar	2021	8696	19.3	3	7	12	221	322	1308	362	19.3	236	392	35	36	100	100	97.8	98.9	12.3	105	
Chilliwack	2021	8707	5.4	2	4	6	17	26	198	362	5.4	14	156	4	4	97.8	98.9	100	100	5.9	16	
Colwood	2021	8663	5.9	3	5	8	19	23	81	363	5.9	14	34	1	1	100	100	98.9	98.9	6.6	29	
Courtenay	2021	6897	7.0	3	5	8	32	39	100	285	7.0	22	28	1	2	34.4	94.5	92.4	90.2	8.3	26	
Cranbrook	2021	8619	9.5	2	5	11	55	76	156	357	9.6	56	77	15	19	97.8	95.6	97.8	100	6.9	29	
Crofton Elementary	2021	8566	3.5	1	3	5	13	17	57	361	3.4	10	26	0	1	97.8	100	97.8	100	4.4	34	
Crofton-Substation	2021	8576	4.4	2	4	6	14	18	77	362	4.3	10	26	0	1	100	100	96.7	100	5.4	22	
Duncan	2021	8563	6.7	3	6	9	23	28	111	361	6.7	19	28	1	2	100	100	95.7	100	7.4	25	
Duncan-Deykin	2021	8592	5.0	2	4	6	18	21	45	357	5.0	13	20	0	0	97.8	100	94.6	98.9	6.7	24	
Campbell River	2021	8367	6.3	3	5	8	23	29	172	349	6.3	15	23	0	0	97.8	95.6	95.7	93.5	6.9	20	
FortSt.John	2021	8515	5.4	2	3	6	32	41	99	359	5.4	28	46	8	9	100	98.9	94.6	100	5.2	21	
Golden	2021	8547	13.9	3	7	14	96	119	199	353	14.0	92	130	30	32	96.7	100	97.8	92.4	10.5	48	
Grand Forks	2021	8704	13.2	4	8	15	71	97	253	362	12.9	57	154	30	33	100	100	96.7	100	11.4	49	
Harmac	2021	8572	7.1	3	5	9	28	36	150	360	7.0	20	46	4	4	96.7	97.8	100	100	7.8	30	
Hope	2021	8536	5.9	2	4	6	19	54	202	352	5.9	16	160	6	6	95.6	97.8	96.7	95.7	5.6	15	
Horseshoe Bay	2021	7524	3.5	2	3	4	12	16	115	309	3.5	10	39	2	2	98.9	49.5	98.9	91.3	4.6	27	
Houston	2021	8747	7.9	2	4	9	46	58	189	365	7.9	29	42	10	16	100	100	100	100	8.9	30	
Hudson's Hope	2021	8632	5.2	1	3	6	34	41	97	360	5.2	26	45	7	8	98.9	100	97.8	97.8			
Kamloops	2021	8614	13.6	3	6	10	134	173	335	357	13.6	106	188	33	33	100	100	100	91.3	9.4	47	
Kelowna	2021	8736	11.5	3	5	10	115	174	296	365	11.5	100	213	24	25	100	100	100	100	9.6	62	
Kitimat-Haisla	2021	8529	2.6	0	2	4	10	12	35	356	2.7	7	16	0	0	100	100	91.3	98.9	3.5	9	
Kitimat-Riverlodge	2021	8663	2.6	0	2	4	9	12	230	365	2.6	7	18	0	0	100	100	100	100	3.5	9	
Kitimat-Whitesail	2021	8325	2.7	0	2	4	10	13	37	346	2.7	9	14	0	0	93.3	96.7	90.2	98.9	3.3	9	
Langdale (BAM1020)	2021	5486	6.0	3	5	8	21	25	94	232	6.0	18	47	1	1	95.6	100	59.8	0	5	31	
Langdale (T640)	2021	3891	5.2	3	4	6	16	30	71	162	5.2	16	35	2	2	0	0	76.1	100			
Langley	2021	8694	4.7	2	3	5	18	25	148	363	4.6	14	89	1	2	97.8	100	100	100	5.6	24	
Mission	2021	8702	5.6	2	4	7	21	31	151	361	5.6	14	127	3	3	100	98.9	97.8	98.9	6.3	28	
Nanaimo	2021	8716	5.7	3	5	8	16	20	58	365	5.7	12	30	1	2	100	100	100	100	5.4	22	
New Westminster	2021	8581	5.7	3	5	7	15	20	149	357	5.6	11	69	2	2	100	96.7	94.6	100	6.1	15	
North Delta	2021	6980	5.4	3	4	7	15	20	146	291	5.3	12	81	1	1	100	97.8	100	21.7	6.1	19	
N.Vancouver-Mahon Park	2021	8705	4.1	2	3	5	13	18	133	364	4.1	12	63	2	2	100	98.9	100	100	4.8	27	
N.Vancouver-2nd Narrows***	2021	8134	6.1	3	5	8	18	24	123	337	6.1	17	58	3	4	82.2	100	96.7	90.2			
Penticton Industrial Place	2021	5342	12.8	3	6	11	119	156	225	222	12.9	113	186	19	19	0	45.1	96.7	100			
Pitt Meadows	2021	8596	4.3	2	3	6	14	19	151	357	4.3	11	81	2	2	93.3	97.8	100	100	5.3	24	
Port Alberni-Elem.School	2021	8243	7.0	3	5	8	28	34	67	342	7.0	19	25	0	0	96.7	97.8	100	80.4	8.2	23	
Port Moody	2021	8493	4.6	2	4	6	14	18	112	353	4.6	11	63	2	2	100	95.6	92.4	98.9	5.4	25	
Powell River-J Thomson	2021	8595	5.0	3	4	6	20	28	78	358	5.0	11	42	3	3	100	100	92.4	100	5.7	20	
Prince George-Plaza 400	2021	8738	9.1	3	5	10	45	80	254	365	9.1	36	97	15	18	100	100	100	100			
Prince Rupert-Fairview	2021	8597	2.5	1	2	3	9	10	27	356	2.5	6	14	0	0	100	100	92.4	97.8	2.9	8	
Quesnel****	2021	8266	9.8	3	6	11	48	72	171	342	9.8	42	122	14	16	78.9	100	98.9	96.7	9.4	34	
Richmond South	2021	8655	4.7	2	4	6	14	18	124	358	4.7	12	45	1	1	98.9	98.9	94.6	100	5.9	19	
Smithers	2021	8595	6.3	2	4	8	28	34	66	355	6.3	18	31	1	2	100	97.8	96.7	94.6	7.2	20	
Sparwood	2021	729	6.7	2	5	9	27	32	64	31	6.7	18	18	0	0	0	0	33.7	100			
Squamish	2021	8648	5.3	2	4	7	18	24	80	360	5.2	17	36	2	2	100	96.7	100	97.8	5.8	25	
Surrey	2021	8678	4.8	2	4	6	15	19	135	360	4.8	11	81	1	1	97.8	100	96.7	100	5.9	22	
Terrace	2021	8637	4.3	1	3	5	22	29	78	358	4.2	12	17	0	0	100	95.6	96.7	100	4.9	14	
Tsawwassen	2021	8670	3.9	2	3	5	13	15	142	361	3.9	10	41	1	1	97.8	98.9	98.9	100	4.6	12	
Valemount	2021	6859	15.6	2	5	14	117	157	297	284	15.5	83	113	48	49	96.7	100	68.5	46.7	6.3	63	
Vancouver-ClarkDr	2021	8707	6.1	3	5	8	18	21	158	364	6.1	12	67	2	2	100	98.9	100	100	7.1	26	
Richmond-Airport	2021	8674	4.6	2	4	6	14	17	132	362	4.6	10	47	1	1	97.8	100	98.9	100	5.3	20	
Vanderhoof	2021	8093	9.9	5	8	12	34	43	193	335	9.9	27	67	7	7	81.1	96.7	92.4	96.7		29	
Vernon	2021	8678	15.4	4	7	13	148	210	365	361	15.3	159	254	28	29	98.9	100	96.7	100	10.8	69	
Victoria	2021	8732	6.5	4	6	8	21	28	55	365	6.5	15	30	2	2	100	100	100	100	7.1	27	
Whistler	2021	8380	4.6	1	3	6	24	31	80	360	4.6	15	39	4	5	100	94.5	100	100	5.5	22	
Williams Lake	2021	8465	7.4	2	4	7	46	86	289	350	7.4	38	131	11	12	100	100	97.8	85.9	6.5	25	

*CAAQS metrics for PM2.5 includes an annual metric based on the average of daily values and a 24-hour metric based on the 98th percentile of the daily concentrations, averaged over three consecutive years. Data are normally adjusted for transboundary flow and exceptional events (e.g., wildfires) for air zone management purposes under the national Air Quality Management System. Data in this table were NOT adjusted for transboundary flow and exceptional events. For details, visit: <https://gov.bc.ca/>.

**Based on incomplete data but included due to the 98th percentile exceeding the CAAQS 1-hour standard.

***Measurements were impacted by local activity (i.e., construction of the Second Narrows Water Supply Tunnel)

****Measurements were taken from two monitoring stations: Quesnel Kinchant St., and Quesnel Johnston Ave.

Summary of 2021 SO2 Data

Site	Year	No. Valid Hrs	Annual Avg	Percentiles (1h)					Max	Annual 99th Percentile of D1HM*	No. of Days			% of Valid Days Per Quarter				CAAQS SO2 Metrics*	
				25th	50th	75th	98th	99th			>65 ppb	>70 ppb	>75 ppb	Q1	Q2	Q3	Q4	Annual	1-Hour
Abbotsford-Airport	2021	8655	0.2	0.1	0.2	0.3	0.7	0.8	4.4	1.2	0	0	0	96.7	100	100	97.8	0.2	2.3
Abbotsford-MillLake	2021	8666	0.2	0.1	0.2	0.2	0.5	0.6	1.1	0.9	0	0	0	100	95.6	100	98.9	0.2	2.1
Bessborough	2021	7997	0.3	0.1	0.2	0.4	1.9	2.7	26.9	16.2	0	0	0	98.9	94.5	81.5	93.5	0.3	24.3
Birchbank Golf Course	2021	8308	4.1	0.2	0.5	4	30.5	38.6	100.4	80.4	6	5	5	98.9	100	100	100	4.1	87.1
Burnaby North Eton	2021	8624	0.6	0.1	0.3	0.6	3.4	4.2	52.5	17.8	0	0	0	100	100	98.9	96.7	0.6	12.2
Burnaby South	2021	8738	0.2	0.1	0.1	0.3	1.2	1.5	4.4	3.6	0	0	0	100	100	100	100	0.2	3.7
Burnaby-Kensington	2021	8675	0.3	0.1	0.2	0.4	1.2	1.7	16.7	5.4	0	0	0	100	100	97.8	100	0.3	5.5
Castlegar	2021	8212	1.2	0	0.1	0.6	12.7	16.1	61.4	30.2	0	0	0	90	100	100	100	1.2	35.4
Chilliwack	2021	8717	0.1	0	0.1	0.1	0.3	0.4	1.3	0.6	0	0	0	97.8	100	100	100	0.1	1.7
Crofton Elementary	2021	8145	0.6	0.2	0.4	0.7	2.6	3.6	15.2	10.1	0	0	0	98.9	100	100	89.1	0.6	
Farmington	2021	8185	0.5	0.2	0.3	0.6	1.6	2.1	16.7	8	0	0	0	98.9	86.8	98.9	96.7	0.5	8
FortSt.John	2021	6252	0.6	0.2	0.4	0.7	1.7	1.8	4.6	3.1	0	0	0	100	15.4	84.8	98.9		5.1
Hudson's Hope	2021	8634	0.4	0.1	0.3	0.5	1	1	1.2	1.1	0	0	0	98.9	100	100	100	0.4	
Kamloops	2021	8381	0.4	0.2	0.3	0.4	1.2	1.7	10.4	4.9	0	0	0	100	100	100	98.9	0.4	4.3
Kelowna	2021	8379	0.3	0.2	0.3	0.4	0.7	0.9	1.9	1.6	0	0	0	100	100	100	100	0.3	1.6
Kitimat-Haisla	2021	8392	0.2	0	0.1	0.1	1.2	2.1	23.7	9.1	0	0	0	100	100	98.9	97.8	0.2	15.6
Kitimat-Riverlodge	2021	8436	0.4	0.1	0.1	0.2	3.7	5.7	45.2	29.2	0	0	0	100	100	98.9	100	0.4	28.7
Kitimat-Whitesail	2021	8353	0.3	0.1	0.2	0.2	2.2	3.7	50.3	15.6	0	0	0	97.8	98.9	98.9	97.8	0.3	18.7
Langdale	2021	8190	0.8	0.2	0.3	0.7	5.4	7.2	22	18.1	0	0	0	90	100	100	100	0.8	14.3
Langley	2021	8701	0.1	0	0	0.1	0.4	0.5	1.6	0.9	0	0	0	97.8	100	100	100	0.1	2.3
N.Vancouver-2nd Narrows**	2021	8621	0.3	0.1	0.2	0.4	1	1.2	17.1	3.5	0	0	0	100	100	100	93.5		
N.Vancouver-Mahon Park	2021	8687	0.3	0.1	0.2	0.3	1	1.3	69.5	3.2	1	0	0	97.8	98.9	100	100	0.3	3.6
North Burnaby Capitol Hill	2021	8743	0.4	0.1	0.1	0.3	2.7	5.4	113.7	29.3	1	1	1	100	100	100	100	0.4	25
Pitt Meadows	2021	8681	0.1	0	0.1	0.2	0.7	0.8	1.7	1.5	0	0	0	98.9	98.9	100	100	0.1	3
Port Moody	2021	8719	0.2	0	0.1	0.2	1.9	2.5	44.7	5.1	0	0	0	100	100	100	100	0.2	5.1
Prince George-Jail	2021	8356	2.2	0.2	0.5	1.3	19.3	29.3	84.9	74.7	5	5	3	100	100	100	97.8	2.2	71.4
Prince George-Plaza 400	2021	8305	1.6	0.5	0.9	1.6	9.7	13.8	60.6	37.5	0	0	0	95.6	100	98.9	100	1.6	33.8
Prince Rupert-Fairview	2021	8312	0.1	0.1	0.1	0.2	0.4	0.5	2.3	1.1	0	0	0	100	96.7	97.8	97.8	0.1	1.6
Quesnel***	2021	8107	0.4	0.2	0.3	0.4	1.5	2.3	18.1	14.4	0	0	0	88.9	98.9	100	96.7	0.4	9.3
Richmond South	2021	8720	0.1	0	0.1	0.1	0.6	0.8	1.7	1.6	0	0	0	100	98.9	100	100	0.1	2.1
Richmond-Airport	2021	8734	0.2	0.1	0.1	0.3	0.9	1.1	9.6	5.9	0	0	0	100	100	100	100	0.2	4.8
Squamish	2021	8391	0.3	0.2	0.3	0.4	1.1	1.3	3.2	2.7	0	0	0	100	100	100	100	0.3	4
Taylor Townsite	2021	7843	0.5	0.1	0.2	0.4	4.7	7.1	52	23.2	0	0	0	100	86.8	88	100	0.5	37.6
Taylor-SouthHill	2021	8399	0.3	0.1	0.2	0.4	1.7	2.3	12.8	8.8	0	0	0	100	100	100	100	0.3	14.3
Terrace	2021	8318	0.5	0.2	0.4	0.6	2.2	2.6	4.6	4.4	0	0	0	100	96.7	100	97.8	0.5	4.5
Trail-Airport	2021	8371	3	0.5	0.9	3	19.1	24.3	73.9	62.1	2	2	0	100	100	100	100	3	58
Trail-Butler Park	2021	8296	5.4	0.5	1.5	4.9	40	54.6	434	170.1	39	32	30	97.8	98.9	98.9	98.9	5.4	174.6
Tsawwassen	2021	8738	0.2	0.1	0.1	0.2	0.4	0.6	1.6	1.3	0	0	0	100	100	100	100	0.2	2.6
Vancouver-Dwtn	2021	8694	0.4	0.1	0.2	0.5	1.6	2.1	28.9	4.8	0	0	0	100	98.9	100	97.8	0.4	4.8
Victoria	2021	8292	0.2	0.1	0.1	0.3	1.3	1.8	6.3	5.1	0	0	0	100	100	97.8	97.8	0.2	5.2

*CAAQS metrics for SO2 includes an annual metric based on the average of all 1-hour concentrations over the year, and a 1-hour metric based on the 99th percentile of the daily maximum 1-hour concentration averaged over three years.

**Measurements were impacted by local activity (i.e., construction of the Second Narrows Water Supply Tunnel)

***Measurements were taken from two monitoring stations: Quesnel Kinchant St., and Quesnel Johnston Ave.

Summary of 2021 O3 Data

Site	Year	No. Valid Hrs	Annual Avg.	Percentiles (1h)					Daily 8h Max		No. Days >62 ppb	% of Valid Days Per Quarter					CAAQS 8-Hr Metric*	
				25th	50th	75th	98th	99th	1h Max	Annual Max		Annual 4th Highest	Q1	Q2	Q3	Q4		Q2+Q3
Abbotsford-Airport	2021	8701	22.7	13.5	23.3	31.9	44.2	48.6	112.7	81.2	52.6	2	100	100	100	97.8	100	52
Abbotsford-MillLake	2021	8650	21.7	12.5	21.5	30.9	44.9	48.8	130	73.9	49.7	1	100	95.6	100	98.9	97.8	50
Agassiz	2021	8704	20.3	10	19.5	30	45.6	52.4	107.4	86.3	60.4	3	100	98.9	100	97.8	99.5	54
Burnaby South	2021	8737	19.2	11.6	19.5	26.5	38.5	41.1	69	46.6	44.6	0	100	100	100	100	100	44
Burnaby-Kensington	2021	8592	20.5	11.8	20.6	28.6	41.8	45	82.2	57.9	48.8	0	93.3	100	100	100	100	46
Burnaby-Mtn	2021	8718	29.8	23.9	30	35.4	48.3	51.6	105.2	77.5	59.3	2	100	100	100	98.9	100	53
Castlegar	2021	8146	21	10.4	18.8	29.9	49.3	54.4	109.4	75.5	61.7	3	88.9	100	96.7	100	98.4	52
Chilliwack	2021	8653	20.6	10	20.2	30	46.7	52.5	104.2	82.2	62.1	4	97.8	100	100	96.7	100	57
Colwood	2021	8283	24	14.9	24.3	33.6	44.2	47	68.7	60.2	53.7	0	100	100	100	95.7	100	51
Coquitlam	2021	8659	19	9.3	18.3	27.5	44.4	50.5	112.2	80.8	63.6	4	100	100	97.8	96.7	98.9	54
Courtenay	2021	6915	20.5	11.4	20.7	29.1	41.4	43.4	66.6	59.6	47.7	0	34.4	100	95.7	100	97.8	48
Cranbrook	2021	8358	24	16	23.6	30.6	51.4	56.5	71.3	67.8	60.9	3	100	100	97.8	100	98.9	53
Duncan	2021	8270	20.1	9.4	19.9	30.2	42.7	45.5	56.1	50.9	49.1	0	97.8	100	96.7	100	98.4	49
Farmington	2021	8201	26	19.3	27.4	34.2	44.1	45.9	69.6	64	48.1	1	98.9	86.8	98.9	98.9	92.9	50
FortSt.John	2021	7681	24.4	17.8	25.1	31.3	43.4	46.2	54.9	50.8	47.5	0	87.8	85.7	100	100	92.9	50
Hope	2021	8644	20	8.2	19.4	30.4	47.8	54.7	95.8	80.9	63.1	5	96.7	98.9	100	97.8	99.5	56
Kamloops	2021	8382	23.1	12.5	22.9	33.5	48.4	51.8	73.5	62.2	57.5	1	100	100	100	98.9	100	51
Kelowna	2021	8380	22.7	13.2	23	31.6	46.5	51.7	77.9	68	58.6	1	100	100	100	100	100	52
Kitimat-Whitesail	2021	7888	20.6	13.4	20.7	28.3	37.3	38.8	49.2	44.6	41.7	0	98.9	100	75	92.4	87.4	42
Langley	2021	8692	23.1	14.5	23.6	31.7	44.7	49.1	114.9	85.5	52.4	2	96.7	100	100	100	100	52
Maple Ridge	2021	8726	21.7	12.3	21.5	30.4	45.8	50.7	150.6	102.2	63.7	5	100	98.9	100	100	99.5	57
Mission	2021	8646	23.9	15.6	23.9	31.9	48.4	54.7	148.7	95.9	63.6	5	97.8	100	98.9	95.7	99.5	58
N.Vancouver-2nd Narrows**	2021	8645	14.4	13.5	21.7	29.8	41.2	43.8	81.1	51.1	35.9	0	100	100	100	95.7	100	
N Vancouver-Mahon Park	2021	8665	19.9	3.9	13.7	25.2	43.1	46.3	79.5	53.4	47.4	0	100	98.9	100	97.8	99.5	45
Nanaimo	2021	8258	24.4	7.1	13.9	20.8	32.7	34.5	51.1	41.9	45.1	0	94.4	100	98.9	100	99.5	45
New Westminster	2021	8714	15.7	11.4	20.1	27.8	41.4	43.9	79	57.4	51.1	0	100	98.9	98.9	100	98.9	47
North Delta	2021	6443	21.4	18.2	24.1	30.6	41.2	42.8	59.3	49.6	46	0	98.9	100	76.1	19.6	88	45
Pitt Meadows	2021	8658	19.9	9.5	20.7	29.5	42.9	47.8	132.5	88.3	55.9	3	96.7	100	100	100	100	50
Port Moody	2021	8717	15.7	5.4	14.5	24.5	39.1	42.6	84.4	60.3	53	0	100	100	100	100	100	48
Prince George-Plaza 400	2021	8090	21.3	11	22.5	31	43.1	45.3	62.5	50.1	47.7	0	100	100	78.3	96.7	89.1	49
Prince Rupert-Fairview	2021	7994	22.2	13.3	22.8	31.7	40	41.3	49.1	47.1	42.6	0	86.7	93.4	97.8	97.8	95.6	41
Quesnel***	2021	8337	18.3	8.9	17.5	26.8	39.7	41.5	76.9	62.5	43.7	1	100	98.9	100	96.7	99.5	46
Richmond South	2021	8647	19.5	9.9	20.1	28.9	41.1	42.9	53.7	45.8	45	0	94.4	98.9	100	100	99.5	45
Richmond-Airport	2021	8689	19.6	3.5	12.6	22.2	38.1	40.1	66.4	44.9	43.3	0	100	100	100	97.8	100	44
Smithers	2021	8285	15.7	8.7	20.1	29.8	42.3	44.2	56.5	48.7	42.3	0	98.9	100	98.9	94.6	99.5	44
Sparwood	2021	711	26.1	5.2	14.6	24.1	38.9	40.6	48.1	46.7	40.1	0	0	0	0	33.7	0	
Squamish	2021	8714	18.5	17.5	28.6	35.1	41.7	43.3	46.8	44.7	45.2	1	98.9	100	100	100	100	44
Surrey	2021	8712	22.4	9.3	18.3	27	39.7	42.8	76.9	64.7	51.3	2	97.8	100	100	100	100	50
Taylor Townsite	2021	8284	23.8	14.4	22.6	30.8	44.1	48.4	105.4	80.1	50.4	0	100	97.8	100	100	98.9	51
Terrace	2021	8211	21.1	14.6	24.2	32.6	46.1	48.3	68.3	55.3	46.6	0	91.1	98.9	100	100	99.5	44
Tsawwassen	2021	8699	24.8	12.9	21.4	29.3	41.7	43.6	51.7	48.2	45.3	0	98.9	98.9	100	100	99.5	46
Vancouver-ClarkDr	2021	8598	14	17.6	25.5	32.7	42.9	44.5	58.6	46.2	42.7	0	93.3	100	100	100	100	41
Vancouver-Dwtn	2021	8706	13.9	4.3	12.3	21.8	36.6	38.6	64	45.8	40.7	0	100	98.9	100	100	99.5	38
Vernon	2021	8386	21.2	8.9	20.3	32.7	47	50.7	70.6	65.6	57.1	1	100	100	100	100	100	52
Victoria	2021	8239	22.4	15.1	23	30.5	40.3	43.2	74.4	61.4	47	0	100	93.4	97.8	100	95.6	45
Whistler	2021	8722	22.1	12.3	22.1	31.3	45.4	48.1	59.5	52.3	49.7	0	100	100	100	100	100	49
Williams Lake	2021	7895	21.6	11.1	21.8	31.3	44.6	46.3	54.1	52.3	46.2	0	92.2	78	97.8	100	88	49

*CAAQS metrics for ozone is an 8-hour metric based on the annual 4th highest of the daily maximum 8-hour averaged concentration averaged over three years. Data are normally adjusted for transboundary flow and exceptional events (e.g., wildfires) for air zone management purposes under the national Air Quality Management System. Data in this table were NOT adjusted for transboundary flow and exceptional events. For details, visit: <https://gov.bc.ca/>.

**Measurements were impacted by local activity (i.e., construction of the Second Narrows Water Supply Tunnel)

***Measurements were taken from two monitoring stations: Quesnel Kinchant St., and Quesnel Johnston Ave.

Summary of 2021 NO2 Data

Site	Year	No. Valid Hrs	Annual Avg	Percentiles (1h)					Max 1h	Annual 98th Percentile of Daily 1-Hour Maximum	No. Days		% of Valid Days Per Quarter				CAAQS NO2 Metrics*	
				25th	50th	75th	98th	99th			>42 ppb	>60 ppb	Q1	Q2	Q3	Q4	Annual	1-Hour
Abbotsford-Airport	2021	8708	6.2	2.5	4.6	8.6	19.2	21.2	34.6	27.4	0	0	100	100	100	97.83	6.2	28.4
Abbotsford-MillLake	2021	8655	7.4	3.4	5.8	10	21.9	24.8	36.1	31.5	0	0	100	95.6	100	98.91	7.4	33.3
Agassiz	2021	8729	7.1	3.1	5.5	10	21	23	34.6	29.1	0	0	100	100	100	100	7.1	28.4
Burnaby South	2021	8665	10.6	5.5	9	14.1	28.3	31.2	40.1	37.5	0	0	100	100	100	100	10.6	38
Burnaby-Kensington	2021	8712	8.9	4.8	7.5	11.5	25.1	28.3	42.3	34.9	1	0	100	100	100	100	8.9	35.1
Burnaby-Mtn	2021	8725	6	3	5	8	18.4	21.5	38.4	29.3	0	0	100	100	100	98.91	6	31.6
Castlegar	2021	8319	5.9	2.4	4.5	8.1	18.7	21.2	48	26.7	3	0	97.78	100	100	97.83	5.9	25.7
Chilliwack	2021	8715	7.2	3.4	5.8	9.7	20.6	22.9	40.9	30.1	0	0	97.78	100	100	100	7.2	28.8
Colwood	2021	8334	3.8	1.1	2.6	5.1	14.9	17.2	25.6	22.1	0	0	98.89	100	98.91	98.91	3.8	23.3
Coquitlam	2021	8723	8.3	4.1	6.8	11.1	23.8	26	34.1	31.2	0	0	100	100	100	100	8.3	32.9
Courtenay	2021	8320	3.5	1.2	2.3	4.6	15	17.8	30.1	24.3	0	0	100	100	96.74	100	3.5	23.4
Cranbrook	2021	8348	4.3	1.4	2.6	5.7	18.5	20.9	33.3	26.4	0	0	100	100	97.83	97.83	4.3	28.2
Duncan	2021	8352	4.2	1.8	3.3	5.8	13.3	15.2	34.3	21.6	0	0	100	100	100	100	4.2	22.1
Farmington	2021	8200	2.6	0.7	1.6	3.5	10.8	13.1	24.2	19.5	0	0	98.89	86.81	98.91	100	2.6	19
Hope	2021	8636	6	2.8	4.8	8.2	17.4	19.5	27.5	24.2	0	0	96.67	98.9	100	96.74	6	23.5
Horseshoe Bay	2021	7331	9.4	3.6	7.5	13.4	29.3	33.9	57.1	45.8	12	0	37.78	100	96.74	97.83		
Hudson's Hope	2021	8480	2.3	0.4	1.1	2.8	12.8	15.4	30.3	21.6	0	0	93.33	100	100	100	2.3	
Kamloops	2021	8378	10.5	4.3	8.1	15	31.3	33.8	47.3	38.3	2	0	100	100	100	98.91	10.5	38.3
Kelowna	2021	8381	5.8	2.4	4.4	8.1	17.8	19.9	33	23.9	0	0	100	98.9	100	100	5.8	25.5
Kitimat-Whitesail	2021	8356	1.8	1	1.4	2	6.8	8.6	20.6	13.4	0	0	98.89	98.9	96.74	97.83	1.8	14.3
Langdale	2021	8154	4	1.8	3.1	5.3	12.8	15.5	33.4	23.5	0	0	90	98.9	93.48	100	4	21.8
Langley	2021	8636	5.3	2.5	4	6.9	16.2	18.2	27.5	22.4	0	0	94.44	100	100	100	5.3	23.3
Maple Ridge	2021	8722	6.5	3	5.1	8.5	20.2	22.4	38.4	26.5	0	0	100	98.9	100	100	6.5	30.7
Mission	2021	8713	5.5	2.5	4.1	7.1	18	20.3	27.2	25.3	0	0	100	100	98.91	98.91	5.5	28.8
N.Vancouver-2nd Narrows**	2021	8636	12.9	7	10.9	16.7	35.5	39.8	84.2	62.1	30	8	98.89	100	100	95.65		
N.Vancouver-Mahon Park	2021	8697	9.6	4.6	7.9	12.9	27.2	29.7	40.1	36.1	0	0	100	97.8	100	100	9.6	37.4
Nanaimo	2021	8023	4.9	1.8	3.8	6.7	17	19.7	36.2	28.1	0	0	84.44	100	98.91	97.83	4.9	26.4
New Westminster	2021	8712	13.9	8.1	13	18.8	29.9	31.8	48.9	36.9	1	0	100	98.9	98.91	100	13.9	40
North Delta	2021	8608	10.5	4.6	8.4	14.4	30.9	33.4	46.4	39.6	4	0	100	98.9	93.48	100	10.5	40.1
Pitt Meadows	2021	8718	7.3	2.7	5.9	10.3	24.1	26.3	41.1	33.1	0	0	100	100	100	100	7.3	36
Port Moody	2021	8716	10.8	5.9	9.6	14.6	26.6	29.3	43	35.2	1	0	100	100	100	100	10.8	36.5
Prince George-Plaza 400	2021	8379	8.3	2.6	5.6	11.5	31.8	35.5	55.3	41.1	6	0	100	100	100	100	8.3	43.4
Prince Rupert-Fairview	2021	8058	3.9	1.1	2.6	5.6	14.9	17.4	30.3	23.7	0	0	100	83.52	97.83	97.83	3.9	24.8
Quesnel***	2021	8150	8.1	3.4	6	10.5	27.2	29.7	43	34.7	1	0	90	100	100	96.74	8.1	38.1
Richmond South	2021	8717	10.1	3.3	7.7	15.4	29.3	31.5	45.1	35.7	1	0	100	98.9	100	100	10.1	37.1
Richmond-Airport	2021	8725	11.1	4.3	8.6	16.3	32	34.3	43.9	38	1	0	100	100	100	100	11.1	41.1
Smithers	2021	8329	6.3	2.8	4.7	8.4	20.5	22.5	33.7	28.2	0	0	98.89	100	98.91	94.57	6.3	29.4
Sparwood	2021	716	8.1	2.8	5.8	12.2	25.8	26.7	33.6	33.6	0	0	0	0	33.7			
Squamish	2021	8532	5.1	2.5	4.3	6.7	14.9	17.3	28.2	22.3	0	0	100	91.21	100	100	5.1	23
Surrey	2021	8703	7.3	3.3	5.7	9.8	22.6	25.5	38	31.1	0	0	97.78	100	100	100	7.3	33
Taylor Townsite	2021	8205	5.4	1.2	3.2	7.1	24.8	28.6	49.3	35.9	1	0	96.67	93.41	96.74	96.74	5.4	37.1
Terrace	2021	8377	2.7	0.7	1.3	3	14.3	17.1	28.1	22.5	0	0	100	98.9	100	100	2.7	23
Tsawwassen	2021	8742	5.4	1.9	3.5	7	21	23.6	34.6	29.9	0	0	100	100	100	100	5.4	29.6
Vancouver-ClarkDr	2021	8601	16.4	9.4	15.9	22.3	36.1	38.7	49.5	44.8	14	0	93.33	100	100	100	16.4	47.6
Vancouver-Dwtn	2021	8707	15.8	9.5	15.3	21.2	32.2	34.2	44.1	39.9	2	0	100	98.9	100	100	15.8	39.9
Vernon	2021	8384	10	4.4	7.9	13.9	28.8	31.2	41.4	36.7	0	0	100	100	100	100	10	35
Victoria	2021	8306	6.1	2.4	4.5	8.2	21.6	25	41.8	32.1	0	0	100	98.9	96.74	100	6.1	34.3
Whistler	2021	8407	2.7	0.9	1.8	3.3	11.8	13.7	26.5	19.6	0	0	84.44	98.9	100	100	2.7	21.1
Williams Lake	2021	8354	9.7	6.3	8.9	12.5	21.4	23.3	32.5	27.6	0	0	100	100	97.83	100	9.7	32.3

*CAAQS metrics for NO2 includes an annual metric based on the average of all 1-hour concentrations over the year, and a 1-hour metric based on the 98th percentile of the daily maximum 1-hour concentration averaged over three years.

**Measurements were impacted by local activity (i.e., construction of the Second Narrows Water Supply Tunnel)

***Measurements were taken from two monitoring stations: Quesnel Kinchant St., and Quesnel Johnston Ave.