

Environmental Assessment Report 2021

Air Quality In Montréal

Service de l'environnement





Air Quality Monitoring



Preamble

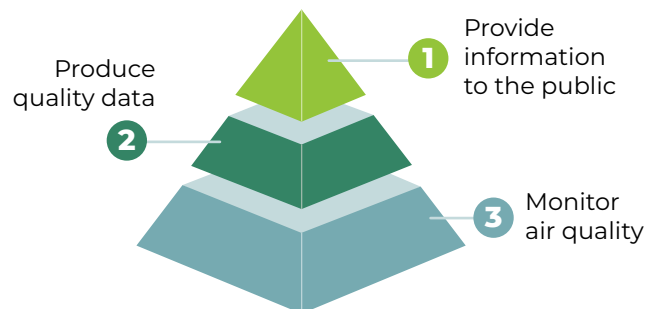
Ville de Montréal's Réseau de surveillance de la qualité de l'air (RSQA) is making progress in its acquisition of increasingly more efficient analyzers. In order to optimize the use of this equipment, the RSQA is developing its expertise on a daily basis.

In 1959, Montréal installed 22 gauges intended for the collection of dust emissions, thus laying the foundation for an air quality monitoring network on its territory. In 1970, upon the creation of the Communauté urbaine de Montréal, the air quality monitoring network covered all of the territory. An agreement concluded in 1981 with the Ministère de l'Environnement du Québec (now the ministère de l'Environnement et de la Lutte contre les changements climatiques) authorized the merger of the Montréal network with the network then managed by the Ministère. The exclusive mandate of controlling airborne emissions from industrial, commercial, residential and institutional sources on the territory of the Montréal agglomeration was then granted to the Communauté urbaine de Montréal (now the Communauté métropolitaine de Montréal). The execution of the mandate was delegated to Ville de Montréal.

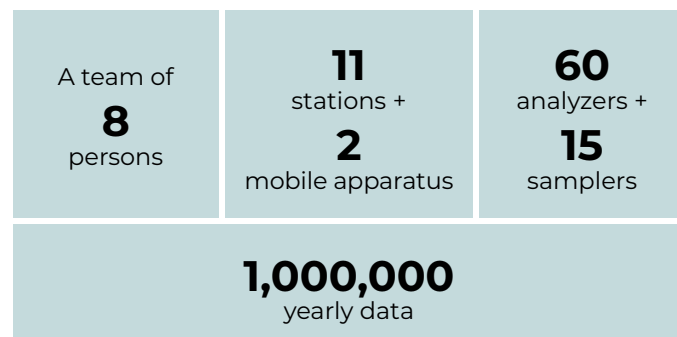
Ville de Montréal manages the RSQA, a partner of Environment and Climate Change Canada (ECCC). Montréal also participates in the Info-smog program since its inception in 1994.

Missions

The core mission of the RSQA is to maintain a register of reliable long term data on Montréal's air quality within the ECCC's National Air Pollution Surveillance (NAPS) program. This mission relies on three main objectives:



The network in numbers



Data Cycle

The data cycle revolves around 3 axes: measurement, metrology and validation. These steps are followed as part of the NAPS' quality assurance and quality control program. This program is used by all air quality surveillance networks in Canada and allows for a Canadawide standard response to the objectives that have been set.

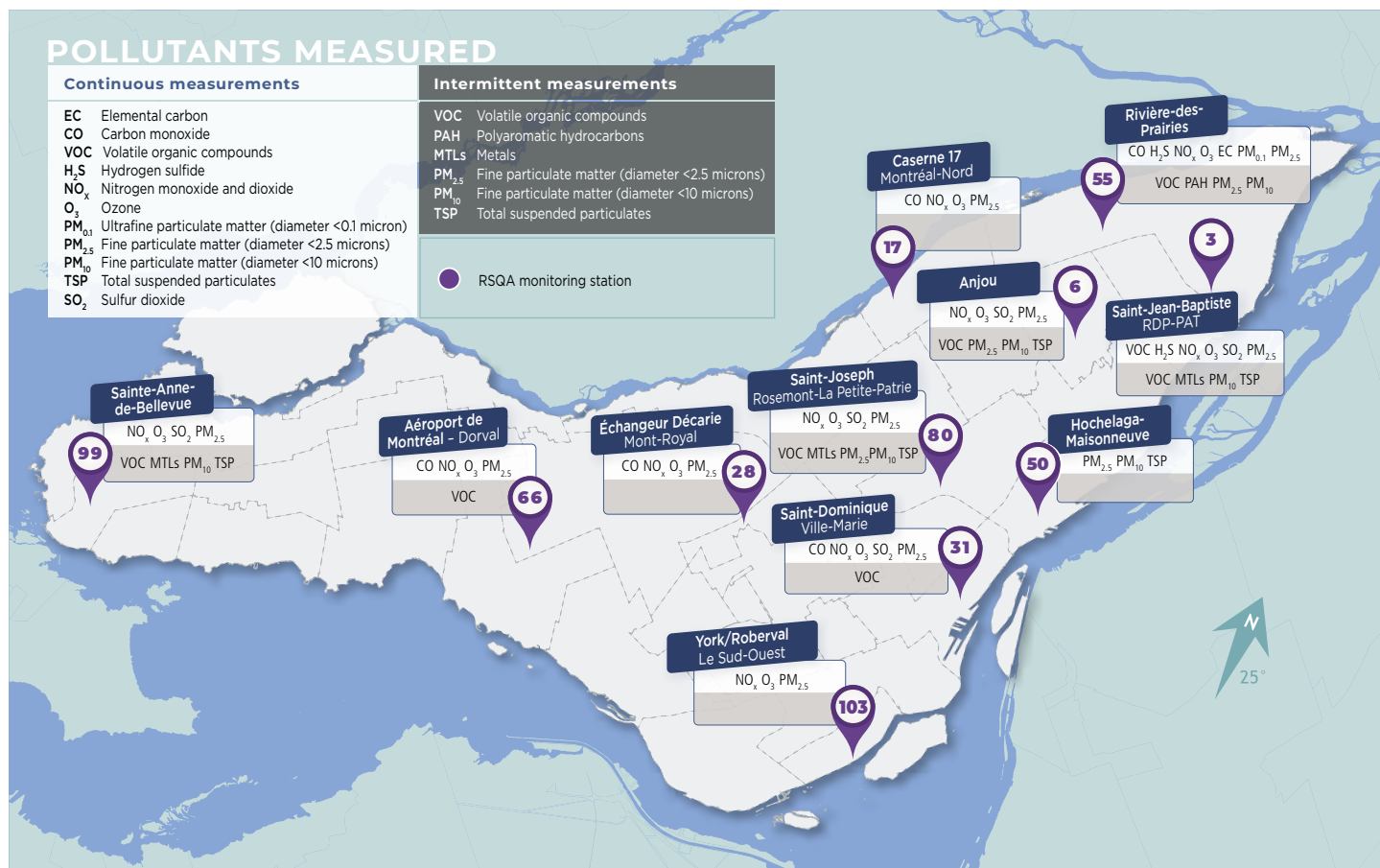
Continuous measurement allows us to obtain a value for the concentration of pollutants.

Metrology allows us to ensure the reliability and quality of the measurement.

Validation allows us to approve the measurement and then analyse the data.



Map of fixed stations





Portrait of Air Quality

Poor air quality days

In 2021, 27 days of poor air quality, of which 7 smog days, were recorded on the territory of Montréal. The pollutant responsible for all of these poor air quality days is fine particles. The monthly distribution of these days is illustrated in the graph below. April and November were exempt from any such days.

A day is deemed poor in terms of air quality as soon as the concentrations of fine particulate matter of a diameter less than 2.5 microns ($PM_{2.5}$) exceed $35 \mu g/m^3$ during at least 3 hours for a given station.

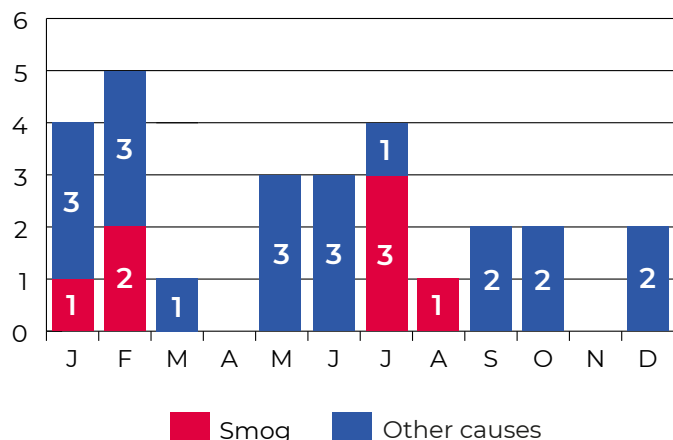
A day is characterized as a smog day when concentrations of $PM_{2.5}$ exceed $35 \mu g/m^3$ during at least 3 hours over more than 75% of the Montréal agglomeration territory. During a smog day, concentrations of fine particulate matter generally remain high for 24 hours and sometimes longer.

Despite a slight increase in the number of poor air quality days compared to 2020 (21), the 27 days recorded in 2021 are well below the 29 to 43 days observed in the most recent pre-pandemic years (2016 and 2019). Moreover, the number of smog days recorded in 2021 are three less than the number for 2020.

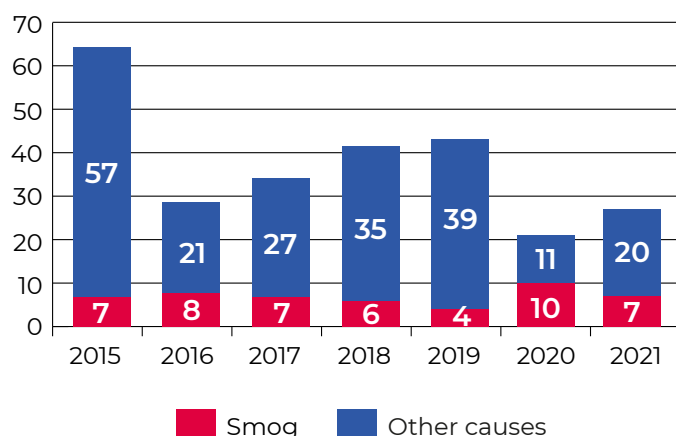


It is worthwhile mentioning that in 2021, the majority of smog days occurred in the summer (4) rather than during the winter (3). This is a rare occurrence when compared to recent years. Smog is usually caused by strong concentrations of fine particles emitted, among other sources, by wood heating in the winter and temperature inversions that keep these particles close to the ground.

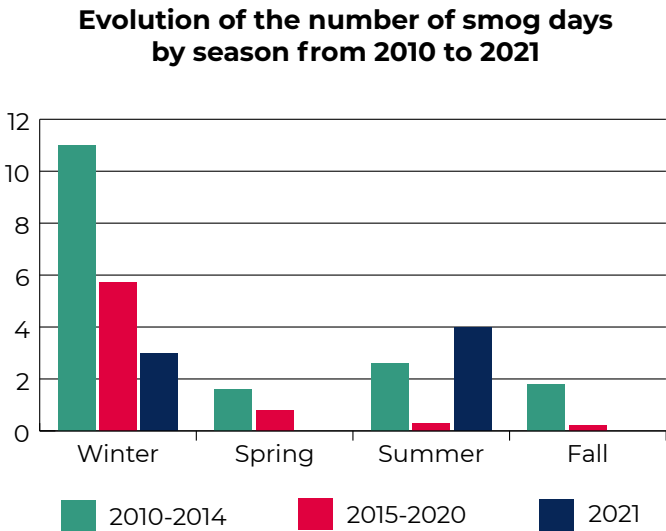
Poor air quality days per month in Montréal in 2021



Poor air quality days per year in Montréal since 2015



An analysis of the number of smog days by season since 2010 clearly shows a strong downward trend of winter smog, whereas summer smog has increased in 2021. The evolution of the number of smog days by season is illustrated in the graph below.



The average number of smog days in the winter decreased from 11 days in the 2010-2014 interval to about 6 days in 2015-2020 and just 3 days in 2021. The average number of smog days in the summertime was 2.6 days in the 2010-2014 interval and 0.3 days for 2015-2020. However, this value increased to 4 days in 2021. The 2 smog days observed in the 2015-2020 interval were due to peat fires (2020-Kamouraska) and forest fires (2019-Ontario). This was also the case for the 4 smog days recorded in the summer of 2021. The last were caused by fine particles emitted by forest fires in the northwestern sectors of Ontario and Manitoba.

The spring and fall seasons show a similar downward trend in the average number of smog days in the 2010-2014 interval compared to the 2015-2020 interval with no smog days recorded for these seasons in 2021.



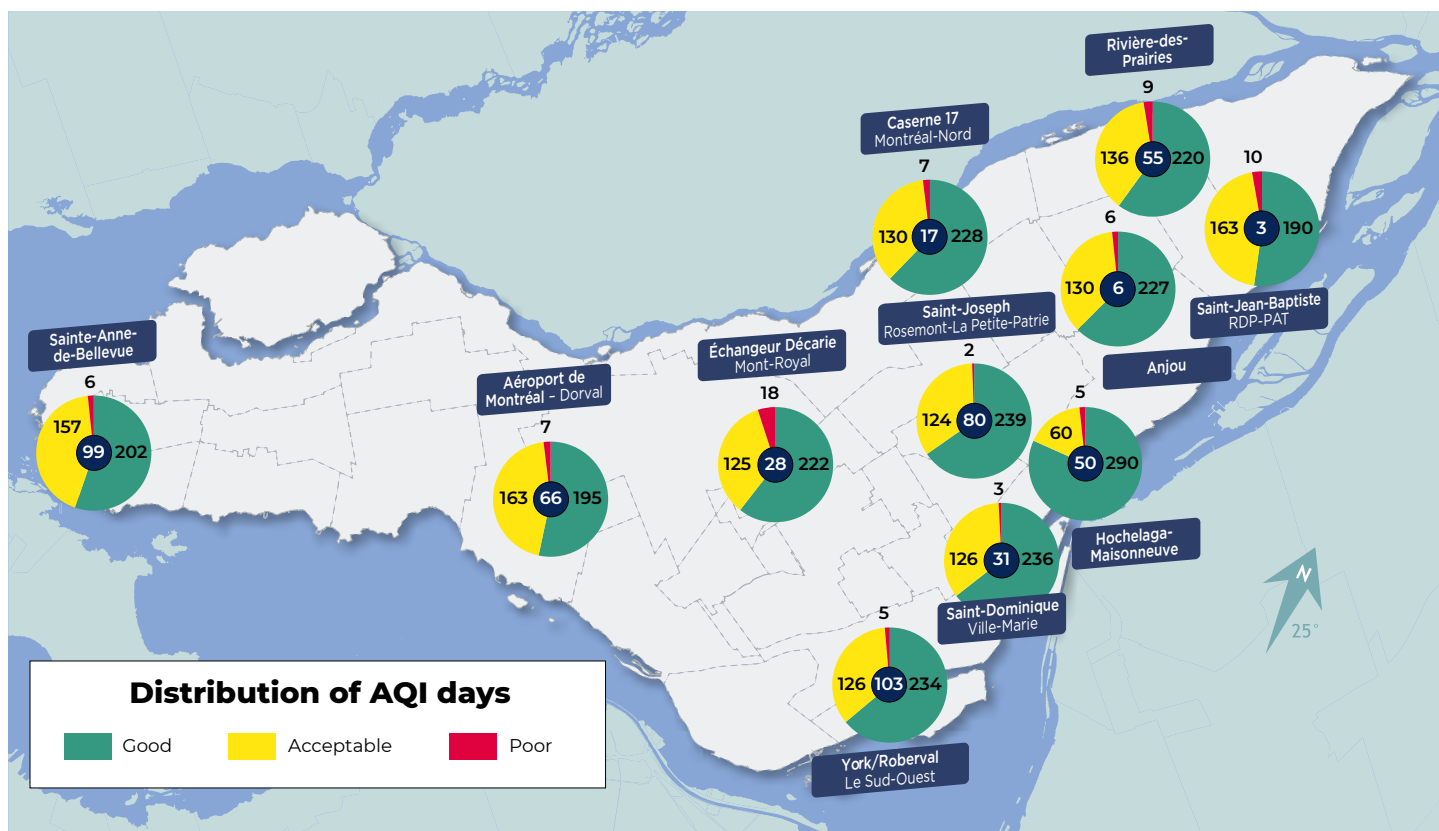
Air Quality Indices (AQI) by station

Did you know that the stations located nearest to sources of human activities are those that record the most poor air quality days? Here are a few examples of the events responsible for poor air quality days in Montréal in 2021:

- Station 3: the Montréal East-End industries
- Station 17: the Montréal-Nord transit yard workshops
- Stations 28 and 103: the traffic on autoroutes
- Station 50: the Port of Montréal activities and the traffic on Notre-Dame Est
- Station 55: wood heating in the winter
- All stations: other human activities local in scope



Air Quality Index (AQI) by Monitoring Station in 2021





Evolution of aldehydes-ketones in Montréal's ambient air



The RSQA has been monitoring 17 volatile organic compounds (VOC) of the aldehyde-ketone family since the beginning of the 1990s at five stations still in operation (3, 31, 55, 66, and 99) and two stations since closed (12 and 61). In an urban setting, these compounds are pervasive in the ambient air, since they are used in so many products: paints, solvents, insecticides, cosmetics, detergents, etc. They are also found in the emissions produced by wood combustion and road vehicles.

VOC can also react with other substances, such as nitrogen oxides (NO_x), present in the ambient air, to form ozone and secondary fine particles causing smog.

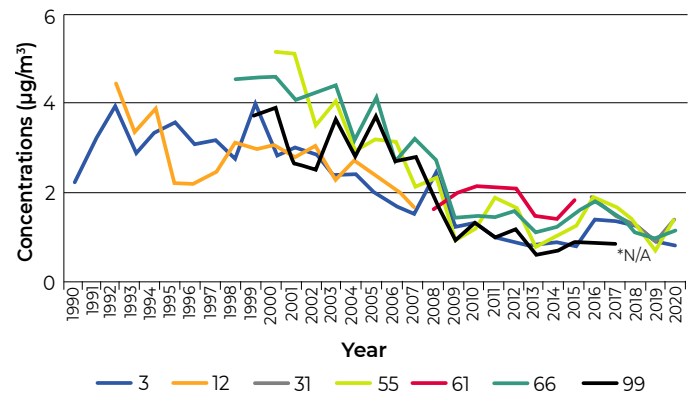
Among the compounds measured, formaldehyde (HCOH) and acetone (C₃H₆O) are the most common in the ambient air. The RSQA has been documenting the emissions of these pollutants over the past 30 years. A retrospective for the 1990-2020 period is thus presented in this report.

Formaldehyde

Formaldehyde is formed naturally in the troposphere by the oxidation of hydrocarbons emitted by plants. Forest fires, animal residues and the decomposition of plant residues in the soil also contribute to the formation of formaldehyde. However, the greater part of formaldehyde present in the environment is anthropic and is derived from vehicles without a catalytic converter. Despite the applicable regulations that require car manufacturers to install catalytic converters on all new petrol powered vehicles since the mid-1970s, there remains a fraction of exhaust fumes that are not catalyzed, given that converters are not 100% efficient.

As far as formaldehyde concentrations in Montréal are concerned, their annual values decreased from 3-4 $\mu\text{g}/\text{m}^3$ at the beginning of the 1990s to about 1 $\mu\text{g}/\text{m}^3$ in 2021, and this is the case for all stations, as shown in the adjacent graph.

Average annual values for formaldehyde from 1990 to 2020



The average annual values for formaldehyde are generally greater at stations 55 and 66. Station 55 is affected by wood heating, very popular in the neighborhood of Rivières-des-Prairies, whereas station 66 is affected by air traffic. Aldehydes- ketones have only been measured at these stations since the years 2000 and 1998 respectively, and their annual averages are among the highest on the island. The concentrations recorded at stations 3 and 31 are generally near the average. Station 3 is located upstream of the Montréal east end industries in Pointe-aux-Trembles whereas station 31 is located downtown on Ontario Street. From 2010 to 2015, it is station 61 downtown, greatly affected by road traffic, that recorded the greatest annual average.



Acetone

Acetone is one of the most used organic solvents in the industry as it dissolves gums, resins, cellulose derivatives, fats, oils and rubber. Moreover, it is one of the key intermediates in the synthesis of many materials and polymers. Stations 3 and 12 showed the greatest annual values for acetone up until 2007, as illustrated in the adjacent graph. Station 3 is greatly influenced by the chemical and petrochemical industries in east end Montréal which emit acetone. Station 12, located in the heart of downtown on Ontario Street may have been influenced by neighboring garages (paint and auto body shops, etc.). However, since 2009, their concentrations have decreased and now remain close to the average of all other stations.

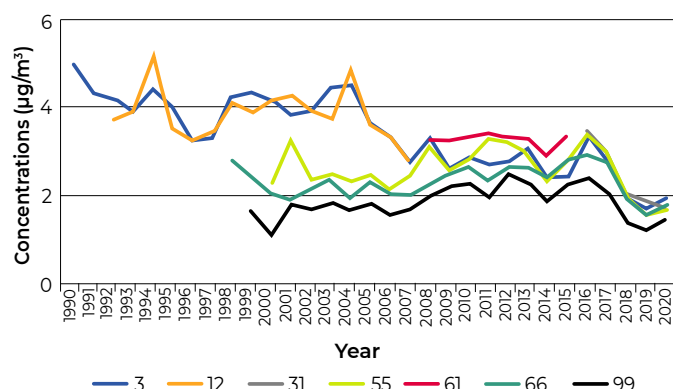
Station 61 recorded the highest annual acetone values during its last seven years of operation (2009-2015), although it was located downtown far from any factories. A literature review confirms that the exhaust fumes of vehicles are a source of acetone emissions, which explains the high values recorded at station 61 under the daily influence of road traffic.

The annual averages for acetone are rather low at stations 55 and 66, whereas station 99 outperforms all others with the lowest concentrations within the RSQA, the station being located at the western tip of the island and subject to westerly winds. Station 31 has the highest acetone annual averages for 2016-2019. The station located in a government building may be influenced by neighboring garages, as is the case for station 12.

Since 2017, there is a downward trend at all stations with a stable concentration level of around $2 \mu\text{g}/\text{m}^3$.



Average annual values for acetone from 1990 to 2020



Elsewhere in Canada

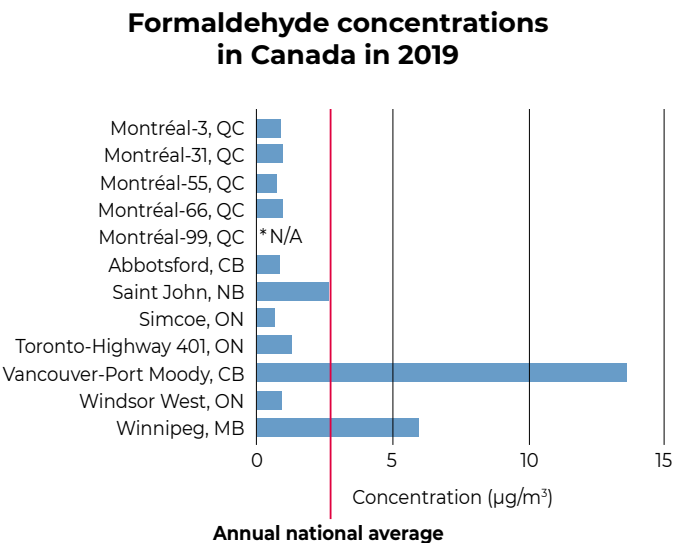
There are few cities in the rest of Canada that monitor and analyse aldehydes-ketones at many stations. The following graphs compare the annual concentrations of formaldehyde and acetone for the RSQA stations with those of the rest of Canada for the year 2019 (the most recent data available).

The formaldehyde results for the RSQA stations are less than the annual national average of $2.6 \mu\text{g}/\text{m}^3$. The station with the highest values in Canada is found in Vancouver in the neighborhood of Port Moody (British Columbia). This station is located near a waterside park; the boat traffic and the emissions from this maritime sector are the likely cause of these results. Also, an industry manufacturing resin products for claddings and compound materials is located less than 2 km from the monitoring station.

The City of Winnipeg (Manitoba) station shows the highest values despite its location in a residential setting ($6.0\text{ }\mu\text{g}/\text{m}^3$). The most likely explanation refers to the presence of printing companies that can impact concentrations of formaldehyde found in the composition of dyes and inks.

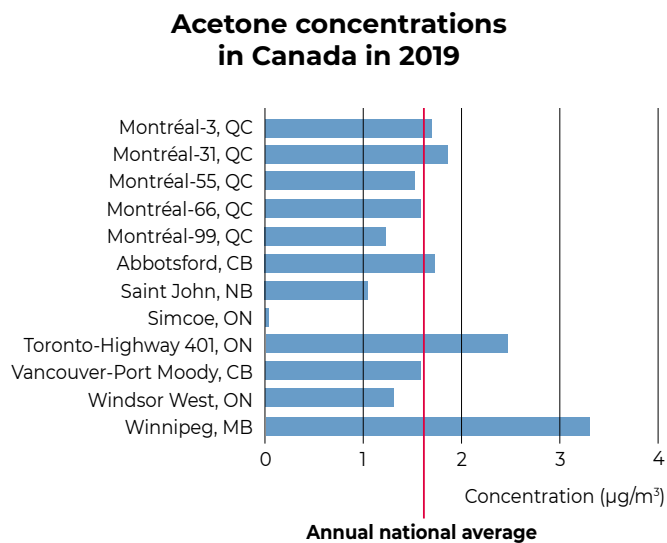
Acetone at the Winnipeg station shows the highest values in Canada ($3.3\text{ }\mu\text{g}/\text{m}^3$), a likely indication of the impact of the neighboring printing industries.

The stations with the second and third highest values in Canada are both impacted by traffic, namely automobile traffic at the Toronto (Ontario) station near Autoroute 401, with a value of around 3.25, and air traffic at the Abbotsford Airport (British Columbia) station with a value of around 1.75. All other stations have similar annual averages varying from 1 to $2\text{ }\mu\text{g}/\text{m}^3$.



Data derived from the data base of the National Air Pollution Surveillance (NAPS) compiled by Environment and Climate Change Canada (ECCC).³

The results for acetone at the RSQA stations are quite similar to the annual national average of $1.6\text{ }\mu\text{g}/\text{m}^3$ and two stations slightly exceeded this average, namely station 3 ($1.7\text{ }\mu\text{g}/\text{m}^3$) and station 31 ($1.9\text{ }\mu\text{g}/\text{m}^3$). The Simcoe (Ontario) station outperformed all other stations with a very low annual concentration of $0.1\text{ }\mu\text{g}/\text{m}^3$. This station is located in a rural (500-9999 persons within a radius of 4 km) and agricultural setting far from any formaldehyde sources.



Data derived from the data base of the National Air Pollution Surveillance (NAPS) compiled by Environment and Climate Change Canada (ECCC).³

To conclude, the aldehyde-ketone data of the Montréal stations are comparable to those of other Canadian cities in 2019. A retrospective of the 1990-2020 data for formaldehyde and acetone allows us to observe annual fluctuations and identify local issues such as transportation and wood heating. This monitoring is essential given that some of these compounds may cause air quality problems.

³ <https://data.ec.gc.ca/data/air/monitor/national-air-pollution-surveillance-naps-program/Data-Donnees/?lang=fr>



Analysis of ultrafine particle measures in Montréal

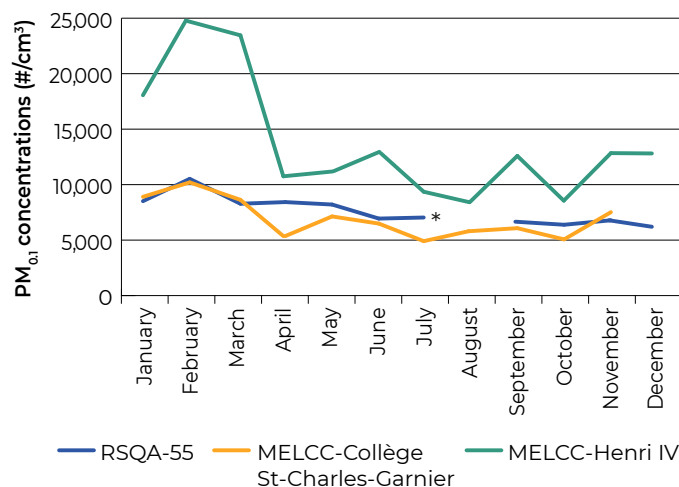
The new continuous analyzer of ultrafine particles ($PM_{0.1}$) was installed at station 55 (12400, rue Wilfrid-Ouellette, Rivière-des-Prairies Pointe-aux-Trembles) in October 2020. The year 2021 was thus the first complete year of $PM_{0.1}$ measures in Montréal.

Ultrafine particles have a diameter smaller than 0.1 micrometer (μm) and their unit of measurement is expressed as the number of particles per cubic centimeter ($\#/cm^3$) compared to larger particles that are expressed in micrograms per cubic meter ($\mu g/m^3$). The sources of emissions of ultrafine particles and their health effects were detailed in last year's report and can be consulted on the City's open data site⁴.

Presently, there are no regulations for this emerging pollutant. However, the RSQA is actively involved in collecting information and furthering its knowledge regarding this pollutant in order to contribute to the drafting of future regulations.

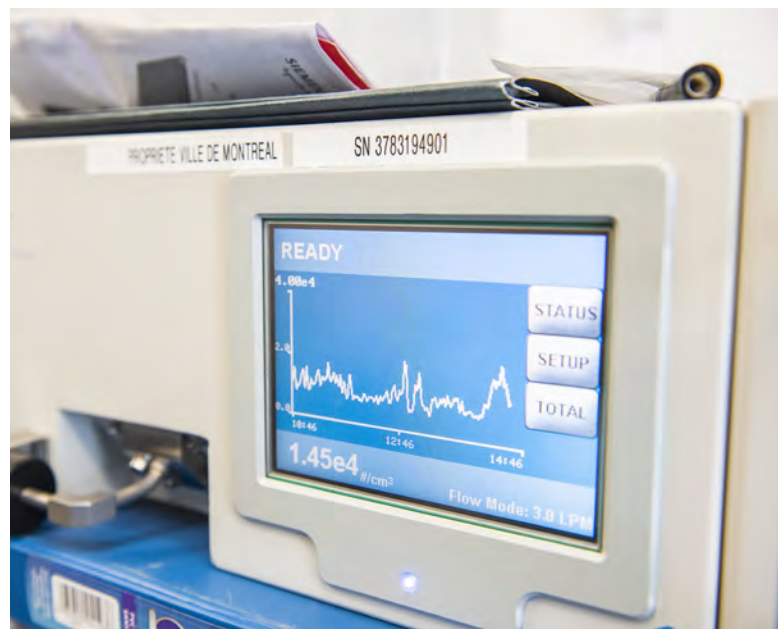
A comparison of monthly concentrations at station 55 in Montréal with those in the City of Québec, collected by the ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC), was done for the year 2021. The data of the RSQA station are similar to those of Collège St-Charles-Garnier, both being located in a residential neighborhood, whereas the Henri IV station's data show greater concentrations. This station is located near Autoroute Henri-IV in Québec City, one of the 20 most traveled autoroutes in Canada, according to a study sponsored in 2017 by the Canadian Automobile Association (CAA)⁵.

Monthly concentrations of ultrafine particles in Montréal and Québec City in 2021



* Only 69% of the monthly data

Data derived from the MELCC's Réseau de surveillance de la qualité de l'air du Québec (RSQAQ)⁶.



⁴ <https://donnees.montreal.ca/ville-de-montreal/rsqa-bilans-annuels-qualite-air>

⁵ <https://www.caaquebec.com/fr/actualite/communiqués-de-presse/article/etude-pancanadienne-sur-la-congestion-routiere/>

⁶ <https://www.environnement.gouv.qc.ca/air/reseau-surveillance/Carte.asp>

The monthly concentrations during the winter are greater than those in the summer, and this is the case for all three stations where ultrafine particles are measured. The difference between the Henri-IV station and the two others is even greater in the wintertime, the January, February and March concentrations being up to three times higher.

It is worthwhile mentioning that the quantities of ultrafine particles are influenced by the emissions from home heating and the traffic, and this even at low temperatures, with cold starts and unnecessary engine idling.⁷

It should be noted that no monthly concentration data are available for August at station 55 and for December at station Collège St-Charles, given that various interventions, problems or benchmarking issues had an impact on the number of valid data.



⁷ <http://www.atmo-grandest.eu/sites/prod/files/2021-03/Rapport%20bibliographique%20sur%20les%20particules%20ultrafines%20%28PUF%29-1%20%281%29.pdf>

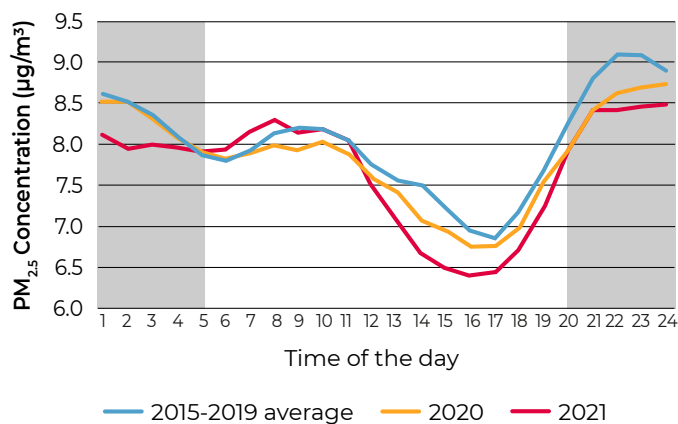


The curfew's impact on air quality

In January 2021, the Government of Québec imposed a curfew on the population to limit the spread of the COVID-19. This sanitary measure was implemented from January 9 to May 28, 2021. But what was the curfew's impact on the quality of the ambient air during this period?

The fine particle averages at all RSQA stations were calculated for each hour of the day between January 9 and May 28, 2021. These were then compared to the concentrations for the same period in 2020 (pandemic) and the average for the years 2015-2019 (pre-pandemic). The curfew hours, from 8 p.m. to 5 a.m., are highlighted in grey in the graph shown below.

Hourly variation of the $PM_{2.5}$ concentrations during the 2021 curfew (9/01-28/05) relative to the 2015-2019 years and 2020 for the same period



The variation in hourly concentrations of $PM_{2.5}$ indicates a similar trend for all years. One can observe a reduction in fine particles around noon with a minimum around 4 p.m. and a surge in fine particles in the evening with a maximum hourly measure recorded around 11 p.m. Wood heating is the most likely cause of this increase in the evening given the prevailing residential heating habits in Québec.

Hourly concentrations during the curfew hours of 2021 were the lowest ever measured. Consequently, the curfew had a positive impact on air quality between 8 p.m. and 5 a.m. compared to previous years. The curtailing of human activities and especially the restricted movements and travel during these hours likely explain the decrease in concentrations of approximately $0.5 \mu\text{g}/\text{m}^3$ relative to 2020 and 2015-2019.





Canadian Ambient Air Quality Standards (CAAQS)

As part of the following comparative exercise, the averages were obtained by using the data of all RSQA stations. The Canadian ambient air quality standards (CAAQS) are used for reference purposes only. Since 2017, the CAAQS deal with fine particulate matter (PM_{2.5}), ozone (O₃), sulfur dioxide (SO₂) and nitrogen dioxide (NO₂).

These standards are the core of the Air Quality Management System (AQMS) promoted by the Canadian Council of Ministers of the Environment (CCME). These data are presented in micrograms per cubic meter (µg/m³) or parts per billion (ppb).

Since 2015, the 3-year average annual concentrations of PM_{2.5} have stabilized at 20 µg/m³. However, a slight improvement in PM_{2.5} concentrations is observed in Montréal's ambient air, the 3-year average of average annual concentrations showing a decrease of 7.5 to 7.2 µg/m³. For these two standards, the situation is similar to that of recent years and the results are below the standards that had been set for 2020. The 2025 standards for fine particulate matter have not yet been set and should be announced by the CCME in 2022.



The trend for ozone is rather stable with 3-year averages fluctuating between 54 and 58 ppb from 2015 to 2021. The concentrations of O₃ are compliant with both the standards for 2020 (62 ppb) and 2025 (60 ppb). The increase of 1 ppb recorded in 2019-2021 relative to 2018-2020 is due to the increase in ozone concentrations observed in 2021. Ozone is a secondary pollutant formed under warm and sunny conditions due to complex chemical reactions between nitrogen oxides (NO_x) and volatile organic compounds (VOC). When the concentrations of NO_x show a decrease as witnessed since the beginning of the pandemic, ozone concentrations increase slightly in a chemical regimen saturated with NO_x⁸.

Fine Particulate Matter (PM_{2.5}) Concentrations Expressed in µg/m³

3-year average of the annual 98 th percentile of the daily 24-hour average concentrations Canadian standard = 28 in 2015 and 27 in 2020				
2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
20	20	20	20	20

3-year average of the annual average concentrations Canadian standard = 10 in 2015 and 8.8 in 2020				
2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
7.5	7.4	7.4	7.3	7.2

Ozone (O₃) Concentrations Expressed in ppb

3-year average of the annual 4 th highest daily maximum 8-hour average concentrations Canadian standard = 63 in 2015 and 62 in 2020				
2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
58	57	55	54	55

⁸ <https://www.academie-sciences.fr/pdf/rapport/ozone0615.pdf>

The results for SO₂ show a slight improvement since 2015 and are well below the 2020 and 2025 standards. Indeed, in recent years, the fluctuations in CAAQS values for SO₂ have been minimal.

**Sulfur Dioxide (SO₂) Concentrations
Expressed in ppb**

3-year average of the annual 99 th percentile of the daily maximum 1-hour average concentrations Canadian standard = 70 in 2020 and 65 in 2025				
2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
18	17	17	16	16

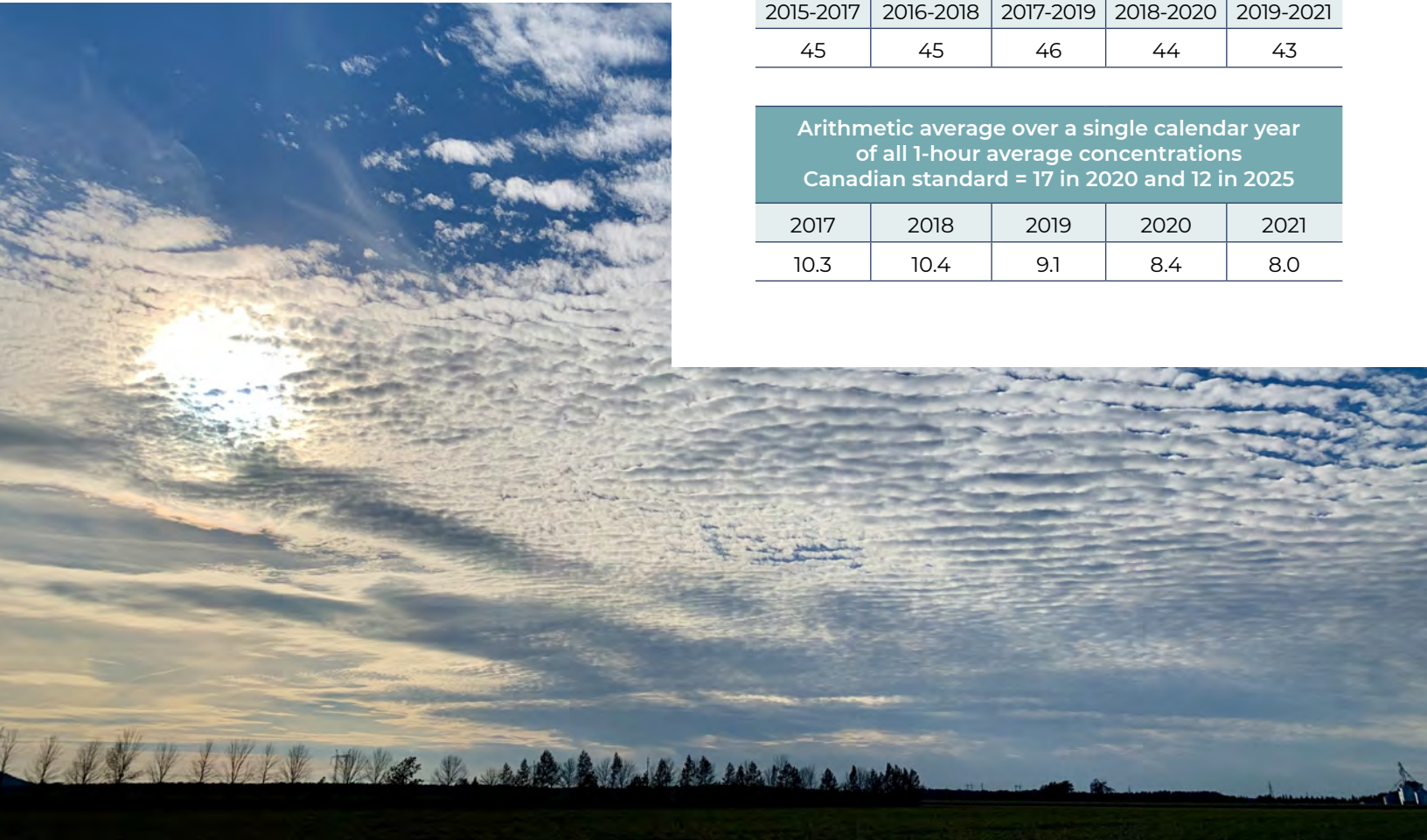
Arithmetic average over a single calendar year of all 1-hour average concentrations Canadian standard = 5 in 2020 and 4 in 2025				
2017	2018	2019	2020	2021
0.8	0.6	0.5	0.4	0.4

The 3-year averages for NO₂ remained stable between 2015 and 2021. The 3-year average of 43 ppb recorded in 2019-2021 is well below the 60 ppb 2020 standard but just above the 2025 standard of 42 ppb. The use of fossil fuels in automobiles and in home heating systems is the main source of NO₂. This explains why Ville de Montréal has set itself an objective of increasing the percentage of electric vehicles registered in the territory of Montréal to 47% by 2030. The annual average of NO₂ in 2021 complies with both the 2020 and 2025 standards. A downward trend has been observed since 2018 and the 2021 average is the lowest since the gradual resumption of activities during this second year of the pandemic.

**Nitrogen dioxide (NO₂) Concentrations
Expressed in ppb**

3-year average of the annual 98 th percentile of the daily maximum 1-hour average concentrations Canadian standard = 60 in 2020 and 42 in 2025				
2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
45	45	46	44	43

Arithmetic average over a single calendar year of all 1-hour average concentrations Canadian standard = 17 in 2020 and 12 in 2025				
2017	2018	2019	2020	2021
10.3	10.4	9.1	8.4	8.0





Monitoring of hydrogen sulphide

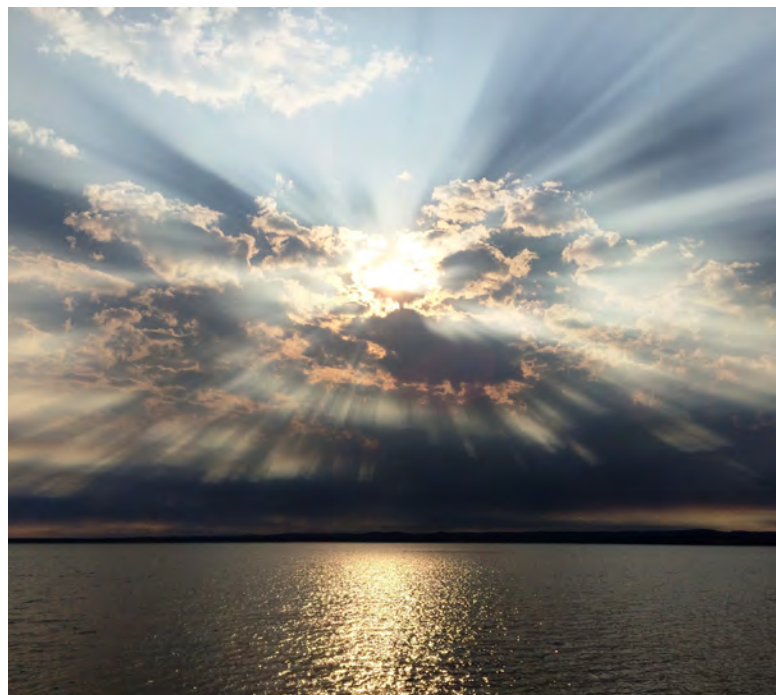


The year 2021 was the first complete year of monitoring hydrogen sulphide (H_2S) with analyzers whose detection limit is 1 ppb. This monitoring was conducted at stations 3 in the neighborhood of Pointe-aux-Trembles and 55 in the neighborhood of Rivière-des-Prairies. The H_2S concentrations recorded at both stations were below the thresholds set in By-Law 90 (By-Law 2001-10 of the Communauté métropolitaine de Montréal) for a 1-hour and 24-hour period.

H_2S Concentrations ($\mu\text{g}/\text{m}^3$) measured in Montréal in 2021

Station	3	55	Standard
Annual average	0.53	0.32	N/A
Maximum 1 hr	7.9	6.5	11
Maximum 24 hrs	2.1	1.4	5

N/A: Not applicable





Committee work to improve air quality monitoring

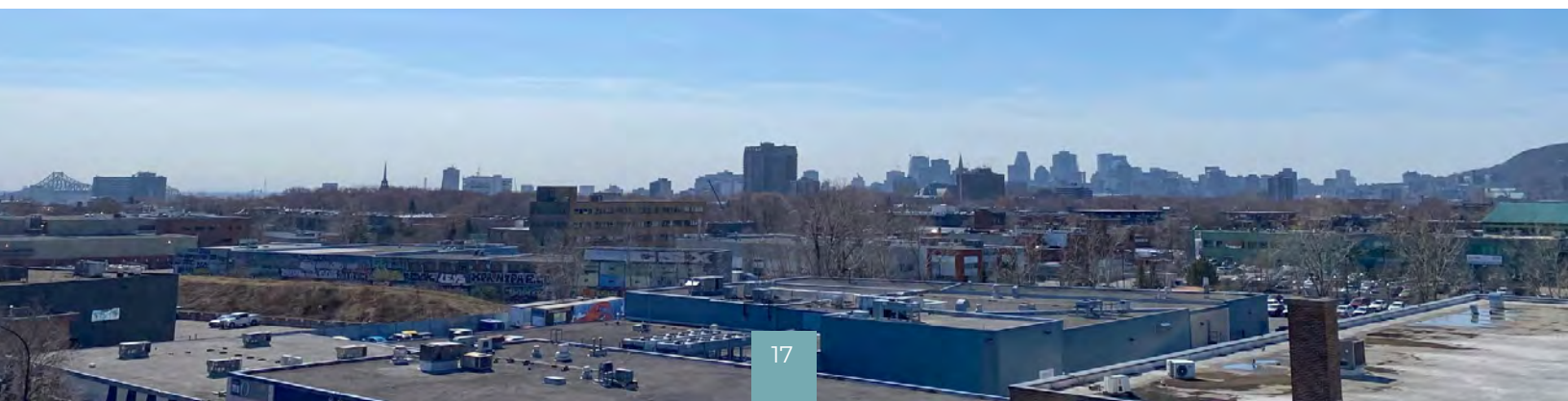
Over the past several years, the air quality in Montréal has been a key preoccupation for the City and its citizens. To address these preoccupations and in line with the City's firm commitment to improve the air quality of the Montréal agglomeration, City Council, on March 26, 2019, unanimously adopted the following resolution: "Motion supporting the updating of studies on respiratory health in the east end of Montréal and the implementation of penal provisions relative to the non-observance of the prevailing standards".

With the participation of the Institut national de santé publique du Québec (INSPQ), a committee

formed by the MELCC, the Direction régionale de santé publique (DRSP) and the City was established to review the needs of the RSQA. This committee published its recommendations, which led the City to plan for investments aiming to improve its air quality monitoring infrastructures, particularly through the replacement and purchase of new monitoring stations and instrumentation for the monitoring of airborne emissions. These investments will allow the City to maximize its interventions and ensure better monitoring to improve the health and safety of its population.

The following is a list of the capital investments planned for the end of 2022.

Equipment	Location
Mobile station - Station 26	Jardins collectifs Montréal - Est (rue Victoria / avenue Marien)
TSP fraction metal sampler	Station 26
PM ₁₀ fraction metal sampler	Station 26
Two sulphur dioxide analyzers	Station 25 - Station 26
Ozone analyzer	Station 26
Carbon monoxide analyzer	Station 26
Nitrogen dioxide analyzer	Station 26
Two ultrafine particulate analyzers	Station 26 - Station 66
Elemental carbon (Black carbon) analyzer	Station 26
Traffic camera	Station 25
Multipollutant air quality station	Upstream of station 25



And what about metals?

In recent years, arsenic and nickel have been the focus of many articles in the media. The measurement of metals is done on particles of a size less than 10 μm sampled on filters during a time span of 24 hours. The samples collected are then dried, weighed and sent to a laboratory for analysis. Thereafter, the results are then processed and validated, which explains the delays in obtaining final results.

The sources of arsenic and nickel in the ambient air are similar, both deriving from industrial activities, the combustion of fossil fuels and waste incineration. However, arsenic and nickel are naturally occurring inorganic chemicals in the environment.

Starting in 2020, metal sampling has been done at stations 3, 80 and 99. Historical data, since 1998, are also available but only for station 3. The annual averages for arsenic and nickel are presented in the table below.

Arsenic and nickel have been on a downward trend at station 3 since 2003. Arsenic concentrations at the three stations were very low in 2020 and below the standard of 0.25 ng/m^3 . Since 2018, the annual averages

recorded for nickel are below 2 ng/m^3 despite a slight fluctuation in 2020 (1.73 ng/m^3) compared to 2019 (1.53 ng/m^3). Station 3 shows slightly greater metal concentrations due to its proximity to industrial activities. Station 99, located at the western tip of the island and greatly influenced by the prevailing westerly winds, recorded the lowest results. As far as station 80 is concerned, it is located halfway between these two stations in a setting that is both residential and commercial.

Given that these metals are measured in PM_{10} over 24-hour periods at the RSQA stations, the results obtained for nickel in the ambient air are comparable to the standards set for nickel in the *Règlement sur l'assainissement de l'atmosphère (RAA)* of the *Loi sur la qualité de l'environnement* (provincial). These standards are set at 70 ng/m^3 (24 hrs) and 20 ng/m^3 (annual average). Consequently, in light of the results available for nickel in PM_{10} , the concentrations measured on the territory of Ville de Montréal are well below the RAA standards. To follow the evolution of metals in Montréal, a visualization tool of the results may be consulted on the open data site at <https://donnees.montreal.ca/ville-de-montreal/rsqa-polluants-metaux>.

Annual averages of metals on PM_{10} 24 hr (ng/m^3)

Year	Station 3		Station 80		Station 99	
	Arsenic	Nickel	Arsenic	Nickel	Arsenic	Nickel
1998	1.59	6.25	-	-	-	-
2003	3.22	10.63	-	-	-	-
2008	1.16	3.48	-	-	-	-
2013	1.34	2.44	-	-	-	-
2018	0.45	1.76	-	-	-	-
2019	0.50	1.53	-	-	-	-
2020	0.24	1.73	0.16	1.32	0.08	0.99



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Since 2021, the RSQA has transferred all of its information from its [old site](#) vers deux sites:

[Montreal.ca](#): articles on air quality

[donnees.montreal.ca](#): all of the RSQA data.

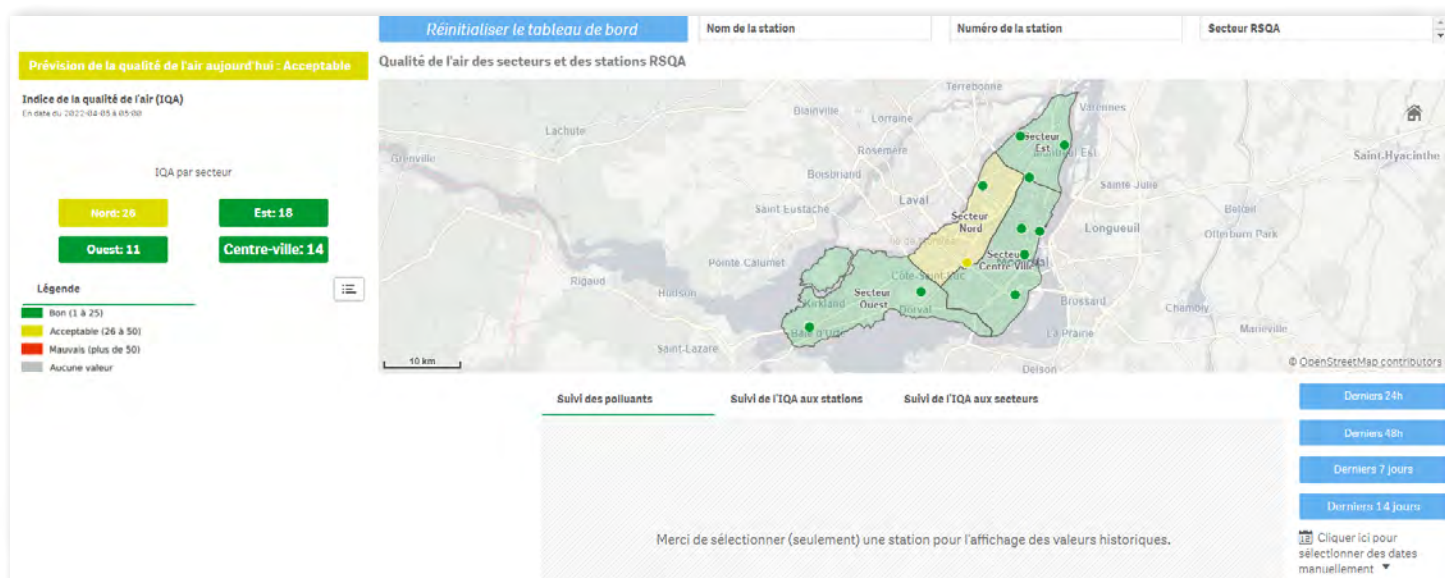
! ATTENTION

The old site will definitely be obsolete in the summer of 2022.

In order to improve the interactive visualization experience of the AQI data, a new application was developed on the open data site which relies on the QlikSense display.

The application's homepage breaks down into 5 parts :

1. An air quality forecast
2. The AQI by sector
3. The filters for the interactive map
4. A map
5. The AQI graph with buttons to choose a time



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