

NEWS RELEASE

January 15, 2025

Air Quality Remains Low Risk in Fourth Quarter of 2024 Despite Isolated High Risk Air Quality Events

From October through December 2024, Heartland Air Monitoring Partnership (HAMP) Airshed maintained predominantly low risk [Air Quality Health Index \(AQHI\)](#) hourly ratings, with only a few isolated high risk events mostly attributed to wintertime temperature inversions.

In winter, a temperature inversion occurs when cold air is trapped near the ground by a layer of warm air, which acts like a lid holding emissions down. This warm inversion layer temporarily elevated levels of fine particulate matter (PM_{2.5}) throughout the entire Edmonton Metropolitan Area, including the HAMP region.

HAMP recorded 15,015 hours of air monitoring data for calculating the AQHI:

- 14,736 (98.14%) of the hours were low risk AQHI
- 275 (1.83%) of the hours were moderate risk AQHI
- 4 (0.03%) of the hours were high risk AQHI
- No hours were recorded at very high risk AQHI

There were two fine particulate matter (PM_{2.5}) exceedances of the 1-hr [Alberta Ambient Air Quality Objectives \(AAQOs\)](#) and two exceedances of the 24-hour objectives, on December 16 and 22. These exceedances were directly related to wintertime inversion conditions, except for one exceedance caused by industry operations. Other than wildfire smoke, common sources of fine particulate matter include industrial emissions, home heating, fireplaces and barbecues.

One-Hour Exceedances Summary for the Four Quarters of 2024				
Parameter	Q1	Q2	Q3	Q4
PM _{2.5}	5	9	618	2

Three-Year AQHI Rating Comparison in Fourth Quarters:

	Low Risk	Moderate Risk	High Risk	Very High Risk
Q4 2022	11,387	1,179	20	11
Q4 2023	14,752	99	0	0
Q4 2024	14,736	275	4	0

Note: New in 2024, Alberta implemented a revised AQHI to provide earlier health risk warnings to Albertans during exceptional or rapidly changing wildfire events. Due to this change, an increased number of high and very high AQHI ratings is likely during air quality events compared to previous years, some of which the source may be undetermined.

For an online version of this news release, click [here](#).

For more details: [October to December 2024 air monitoring report](#).

HAMP has 10 continuous air monitoring stations in and around Alberta's Industrial Heartland. The AQHI and near real-time data for every substance at every station are available at heartlandairmonitoring.org. Information about HAMP is also available by calling 1-800-718-0471. HAMP's monitoring and reporting on substances that affect air quality is transparent, guided by a scientific advisory group and driven by national and provincial standards.

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