

CONTINUOUS AIR MONITORING STATIONS

These stations use complex equipment to monitor real-time air quality by continuously measuring and analyzing pollutants in the air.

How it Works

1 Air Pollution Sources

Pollution is emitted into the air from a variety of human-made and natural sources.



2 Continuous Monitoring Stations

Measure air pollutants, including fine particulate matter (PM_{2.5}), nitrogen oxides (NO_x), sulfur dioxide (SO₂), ozone (O₃), carbon monoxide (CO), hydrogen sulphide (H₂S), methane (CH₄), non-methane hydrocarbons (NMHC), and total hydrocarbons (THC). They also measure air temperature, relative humidity, and wind speed and direction.



3 Public Information

The real-time data is streamed on WCAS' website (wcas.ca). Data collected also informs the Air Quality Health Index, available through the WeatherCAN mobile app.



Quick Facts

- Continuous monitoring of air pollution tells us how good or bad our air quality is, identifies pollution sources, compares pollutant levels to laws and regulations, and evaluates pollution control measures.
- Monitoring the weather at continuous monitoring stations helps us understand how pollutants move through the air and in the earth's atmosphere.
- Continuous monitoring stations are located throughout the province, often placed in urban areas, industrial zones, or near pollution sources.
 - These sites require power, year-round access, and a securely fenced area.
 - Ideally, they are located in public places to promote awareness of air quality monitoring.
 - Specific criteria for choosing station locations are outlined in the Alberta Air Monitoring Directive. These include air flow (trees and buildings), dust (gravel roads), and other factors that can impact air monitoring.
 - Microsensors can provide valuable information for less populated centres that do not have continuous monitoring stations.
- A continuous monitoring station costs \$300,000+ to setup.
- Continuous air monitoring equipment requires careful adjustments and maintenance by skilled technicians to ensure accurate and reliable measurements.
- Data from continuous monitoring stations is collected in real-time. This allows for timely alerts for pollution events, and quick responses to protect public health and the environment.
- This data is publicly available on our website at wcas.ca/monitoring-data/live-air-data-map and is used to calculate the Canadian Air Quality Health Index (AQHI).
- AQHI helps individuals make informed decisions to protect their health during air quality events across Alberta.

For more information on AQHI and answers to Frequently Asked Questions, visit our website wcas.ca