



# Status of Fine Particulate Matter in B.C. (2019-2021)

British Columbia operates a network of air monitoring stations that measure fine particulate matter and other air pollutants. This indicator reports on the concentration of fine particulate matter from 2019-2021 and compares it to the Canadian Ambient Air Quality Standards established by the Canadian Council of Ministers of the Environment.

## Fine Particulate Matter (PM2.5): Canadian Ambient Air Quality Standard

 $PM_{2.5}$  levels are calculated using **two** statistical forms called the annual and the 24-hour metrics. The Canadian Ambient Air Quality Standard value for  $PM_{2.5}$  annual is **8.8 micrograms per cubic metre** and the standard value for  $PM_{2.5}$  24-hour is **27 micrograms per cubic metre** ( $\mu g/m^3$ ).

 $PM_{2.5}$  standards are achieved when annual levels are  $\leq 8.8 \,\mu\text{g/m}^3$  and 24-hour levels are  $\leq 27 \,\mu\text{g/m}^3$ .

## What is an Air Zone?

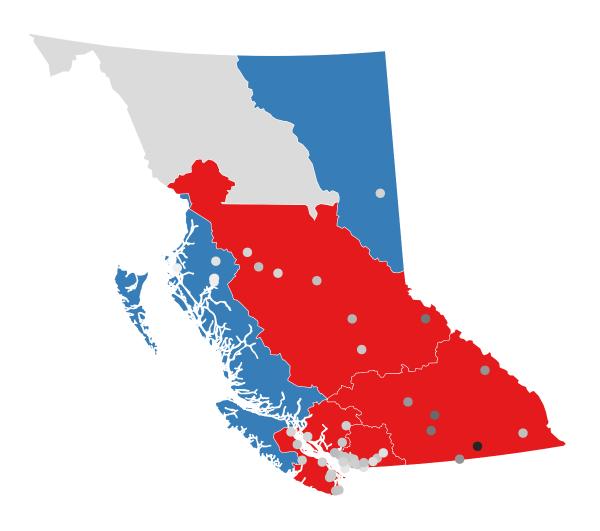
British Columbia is divided up into seven air zones, which are areas that typically exhibit similar air quality characteristics, issues, and trends.

- Fine particulate matter is an air pollutant. Solid or liquid particles floating in the air are called particulate matter. The smallest of these particles—those that are 2.5 microns or less in diameter, or less than 1/20th the width of a human hair—are called fine particulate matter (PM<sub>2.5</sub>). Fine particulate matter comes from many natural and human activities, including wildfires and emissions from prescribed burning, forestry operations, residential woodstoves, and transportation.<sup>1</sup>
- Fine particulate matter can be harmful to humans. Exposure to fine particulate matter has been associated with several serious health effects including heart and lung disease. Both short-term (24-hour) and longer-term (a year or more) exposure to fine particulate matter can have negative effects on human health.
- Fine particulate matter levels met the Canadian Ambient Air Quality Standards at 72 percent of assessed monitoring stations in B.C. There are two standards for PM<sub>2.5</sub>—an annual standard and a 24-hour standard (see sidebar). The annual standard was met at 44 of the 52 stations (85%) for which valid data was obtained, while the 24-hour standard was met at 39 of the 54 stations (72%) with sufficient data for analysis.
- Fine particulate matter levels met both of the Canadian Ambient Air Quality Standards in two of B.C.'s seven air zones. The Coastal, Northeast, Georgia Strait, and Lower Fraser Valley air zones met the PM<sub>2.5</sub> annual standard, while the Central Interior and Southern Interior air zones exceeded it. The Coastal and Northeast air zones met the PM<sub>2.5</sub> 24-hour standard, while the Central Interior, Southern Interior, Lower Fraser Valley, and Georgia Strait air zones exceeded it. Currently, there are no air monitoring stations in the Northwest air zone.
- Fine particulate matter levels are used to set management levels for each air zone. Four management levels (green, yellow, orange, and red) are each associated with a suite of actions that become more rigorous as fine particulate matter levels approach the Canadian Ambient Air Quality Standards.



The maps and chart below summarise the Canadian Ambient Air Quality Standard achievement status for fine particulate matter in B.C. air zones, as well as both the annual and 24-hour  $PM_{2.5}$  levels at individual monitoring stations. Summaries are given for each monitoring station where sufficient data was available for the 2019-2021 reporting period.

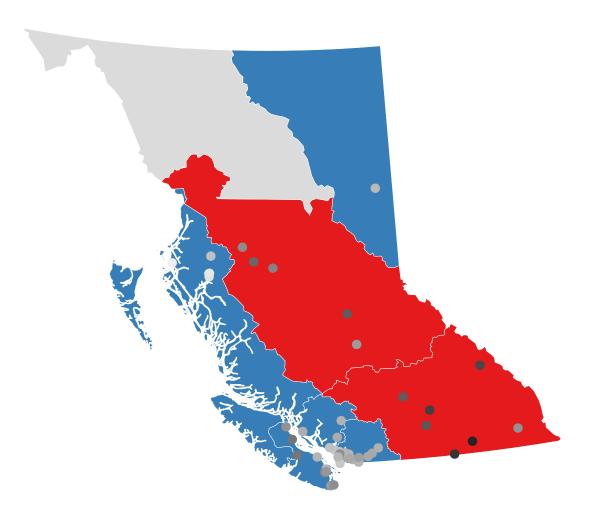
## Status of 24-hour PM<sub>2.5</sub> Levels in B.C. Air Zones (2019-2021)







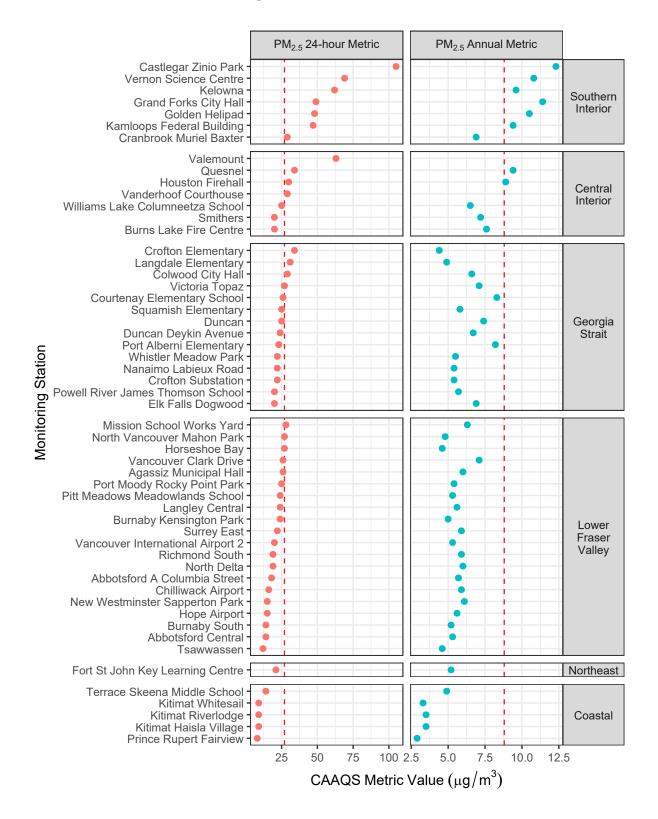
# Status of Annual PM<sub>2.5</sub> Levels in B.C. Air Zones (2019-2021)







## PM<sub>2.5</sub> Metrics for Air Monitoring Stations within B.C. Air Zones (2019-2021)





## More about the Canadian Ambient Air Quality Standard fine particulate matter metrics:

- There are two Canadian Ambient Air Quality Standards for fine particulate matter (PM<sub>2.5</sub>). The statistical form of the PM<sub>2.5</sub> annual metric is the 3-year average of the annual average concentration of PM<sub>2.5</sub>. The statistical form of the PM<sub>2.5</sub> 24-hour metric is the 3-year average of the annual 98th percentile of the daily average concentrations of PM<sub>2.5</sub>.
- The PM<sub>2.5</sub> metric for an air zone is the highest PM<sub>2.5</sub> metric value reported from monitoring stations within the air zone. Air zone metric values are only taken from stations reporting on two years of data when there are no available three-year reporting stations in the air zone.
- Only air monitoring stations with sufficient data on fine particulate matter concentrations for the 2019-2021 reporting period were included in this indicator. Visit Current Air Quality Data for a complete list of air monitoring stations across B.C.
- Data completeness and sufficiency criteria for the two PM<sub>2.5</sub> metrics are described in the Guidance Document on Achievement Determination: Canadian Ambient Air Quality Standards for Fine Particulate Matter and Ozone (2012).

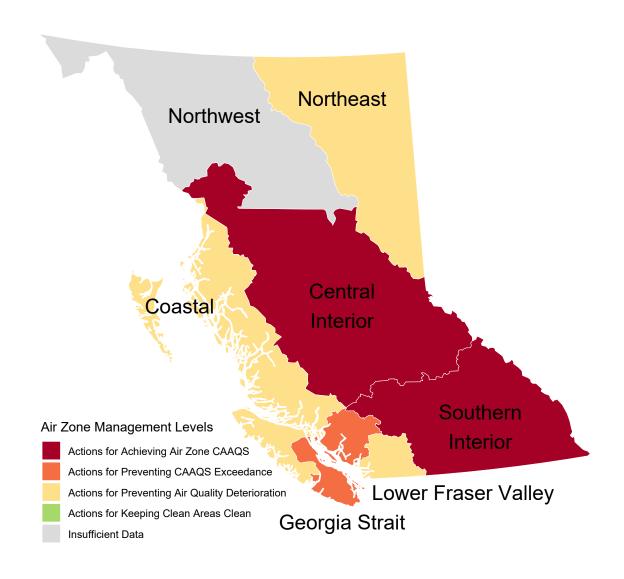
## **Canada-wide Air Quality Management System**

The Air Quality Management System is Canada's approach for protecting air quality. Under the Air Quality Management System, provinces and territories monitor, report and manage local air quality within air zones, with the goal of continuously improving air quality and keeping pollutants below the Canadian Ambient Air Quality Standards.

- There are seven air zones in British Columbia: Coastal, Georgia Strait, Lower Fraser Valley, Southern Interior, Central Interior, Northeast and Northwest.
- The Air Zone Management Framework defines air zone management levels for fine particulate matter based on the higher of the annual and 24-hour fine particulate matter levels reported from monitoring stations within the air zone.
- The four management levels are (1) green (actions for keeping clean areas clean); (2) yellow (actions for preventing air quality deterioration); (3) orange (actions for preventing Canadian Ambient Air Quality Standard exceedance); and (4) red (actions for achieving air zone Canadian Ambient Air Quality Standard). Each management level is associated with a suite of actions that become more rigorous as fine particulate matter levels approach the standard. Actions for each management level are detailed in the Guidance Document on Air Zone Management (2019) (PDF).
- The Central Interior and Southern Interior air zone was assigned to a red management level, the Georgia Strait air zone to an orange management level, and the Coastal, Lower Fraser Valley, and Northeast air zones were assigned to a yellow management level. There are currently no air monitoring stations in the Northwest air zone.

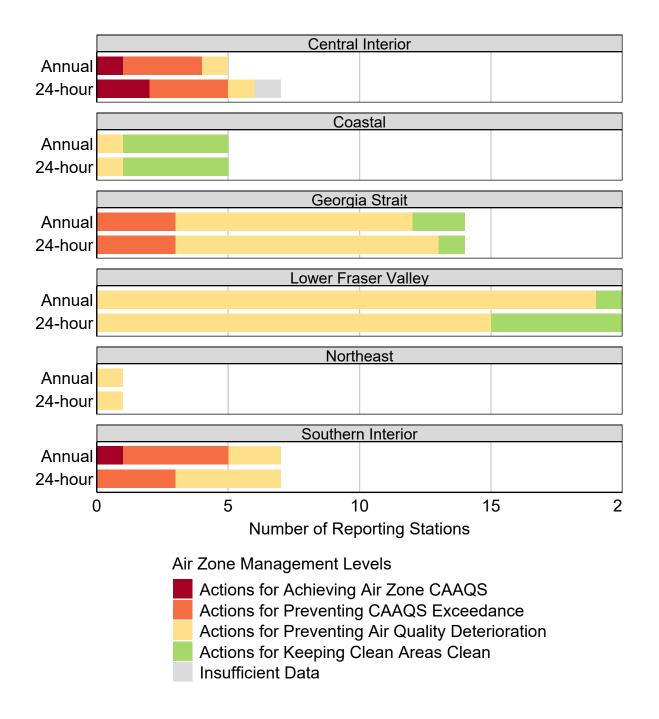


# Air Quality Management Levels in B.C. Air Zones





## Station-Level Air Quality Management Levels Within Air Zones



## More about the Air Quality Management System management levels:

- There can be cases when an air zone does not achieve a given Canadian Ambient Air Quality Standard because of sources over which jurisdictions have little or no control, such as those related to transboundary flows and exceptional events, like forest fires.
- Prior to determining management levels, jurisdictions have the option of adjusting their air zone metric values to remove such external influences. These arrangements aim to ensure that jurisdictions are responsible for managing only the emissions sources they can control.



• Wildfires are generally the largest contributor to transboundary flows and exceptional events in B.C. Over the 2019-2021 reporting period, 48 stations had one or more days during the wildfire season (May-October) where the daily fine particulate matter concentration was determined to be influenced by smoke from wildfires and exceeded the 24-hour standard of 27 µg/m³. Those daily concentrations were removed from the calculations of management levels, resulting in a change from red to orange for the Georgia Strait air zone and from red to yellow for the Lower Fraser Valley air zone.

#### Methods

The methods used to develop this indicator—including procedures, data requirements, and calculation of the Canadian Ambient Air Quality Standard fine particulate matter metrics—are detailed in the Guidance Document on Achievement Determination: Canadian Ambient Air Quality Standards for Fine Particulate Matter and Ozone (2012) published by the Canadian Council of Ministers of the Environment.

**R package and code:** We have developed an **R** package to facilitate the calculation of air quality metrics according to the Canadian Ambient Air Quality Standards. Download the 'rcaaqs' package from GitHub. The source code for repeating the analysis presented on this page is also available on GitHub.

#### **References and Other Useful Links**

- Read individual Air Zone reports on the achievement of the Canadian Ambient Air Quality Standards for ground-level ozone and fine particulate matter in B.C.
- Learn more about the implementation of the Air Quality Management System in British Columbia
- Access B.C.'s real-time data on air pollutants and find locations of all provincial air monitoring stations in B.C.
- BC Lung Association's BC State of the Air Reports
- Canadian Environmental Sustainability Indicators: Air Indicators
- ¹Canadian Smog Science Assessment: Highlights and Key Messages

## Data

\*By accessing these datasets, you agree to the licence associated with each file, as indicated in parentheses below.

- Indicator data: BC Fine Particulate Matter Canadian Ambient Air Quality Standards 2019-2021 (Open Government Licence British Columbia)
- BC PM<sub>2.5</sub> Hourly Data & Air Monitoring Station locations (Open Government Licence British Columbia)
- BC Air Zones (Open Government Licence British Columbia)

Published and Available On-Line at Environmental Reporting BC: http://www.env.gov.bc.ca/soe/indicators/air/fine\_pm.html

Email correspondence to: envreportbc@gov.bc.ca

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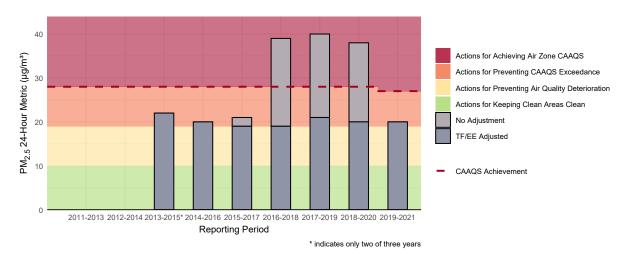


# Appendix: Detailed fine particulate matter Candadian Ambient Air Quality Standard results for each monitoring station within air zones in B.C.

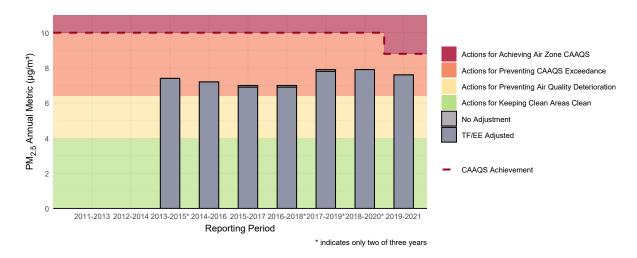
Air Zone: Central Interior

Monitoring Station: Burns Lake Fire Centre

 $PM_{2.5}$  **24-hour Air Quality Standard:** Achieved  $PM_{2.5}$  **24-hour Metric:** 20  $\mu$ g/m³ (3 year average)



PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 7.6 μg/m³ (3 year average)

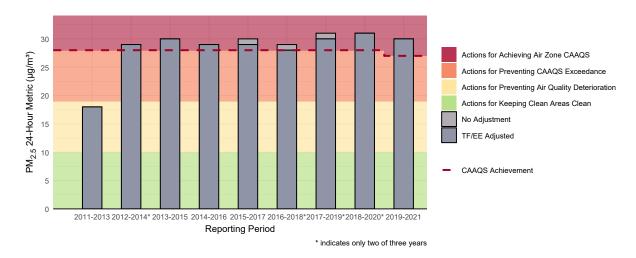




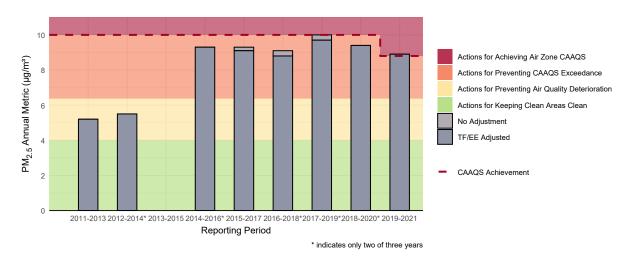
Air Zone: Central Interior

Monitoring Station: Houston Firehall

 $PM_{2.5}$  24-hour Air Quality Standard: Not Achieved  $PM_{2.5}$  24-hour Metric: 30 µg/m³ (3 year average)



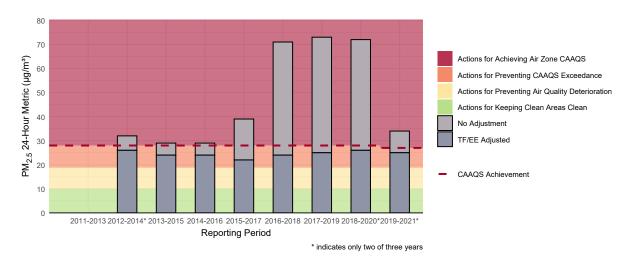
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 8.9 µg/m³ (3 year average)



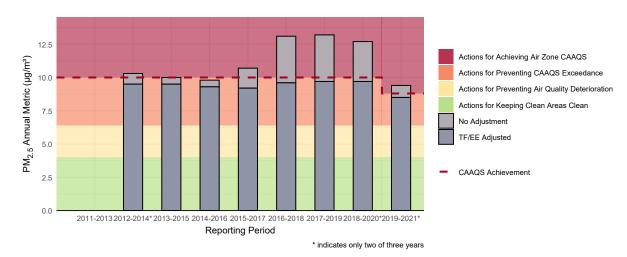


**Air Zone:** Central Interior **Monitoring Station:** Quesnel

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 34 µg/m³ (2 year average)



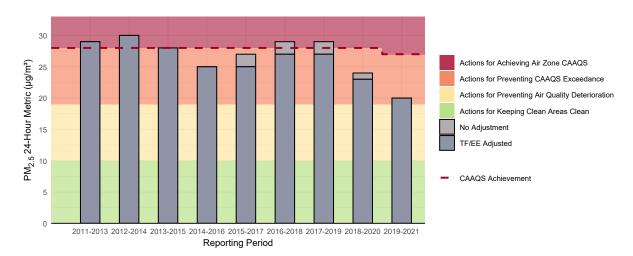
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 9.4 µg/m³ (2 year average)



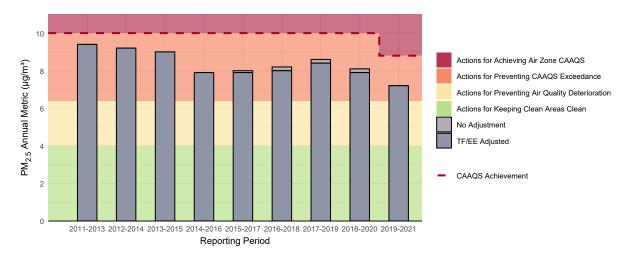


**Air Zone:** Central Interior **Monitoring Station:** Smithers

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $20 \mu g/m^3$  (3 year average)



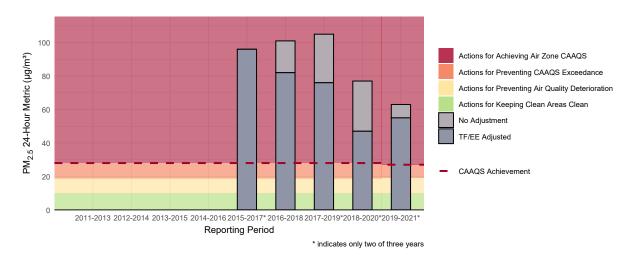
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric:  $7.2\,\mu\text{g/m}^3$  (3 year average)



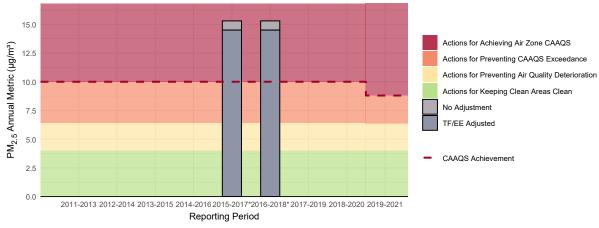


**Air Zone:** Central Interior **Monitoring Station:** Valemount

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Not Achieved PM<sub>2.5</sub> **24-hour Metric:** 63 μg/m³ (2 year average)



PM<sub>2.5</sub> Annual Air Quality Standard: PM<sub>2.5</sub> Annual Metric: μg/m³ ( year average)

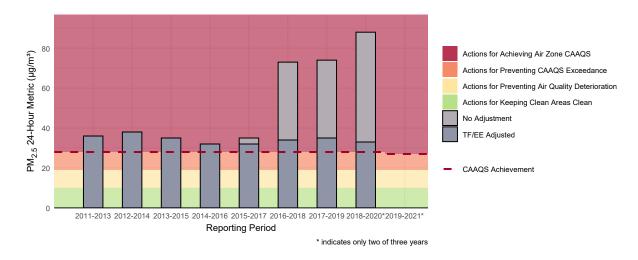




Air Zone: Central Interior

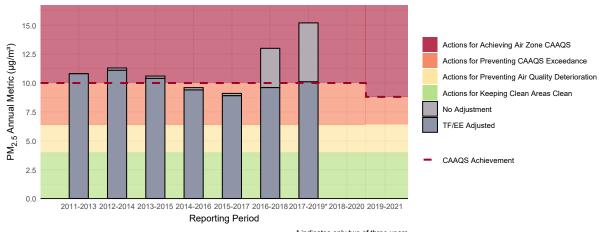
Monitoring Station: Vanderhoof Courthouse

PM<sub>2.5</sub> 24-hour Air Quality Standard: Not Achieved PM<sub>2.5</sub> 24-hour Metric: 29 μg/m³ (2 year average)



PM<sub>2.5</sub> Annual Air Quality Standard:

PM<sub>2.5</sub> Annual Metric: μg/m³ ( year average)

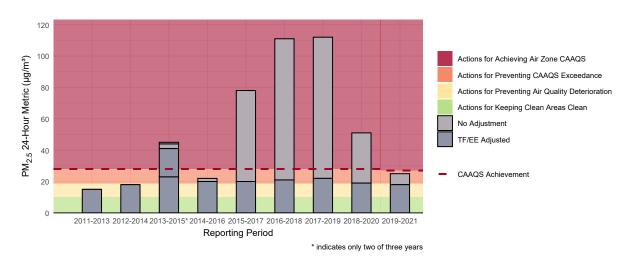




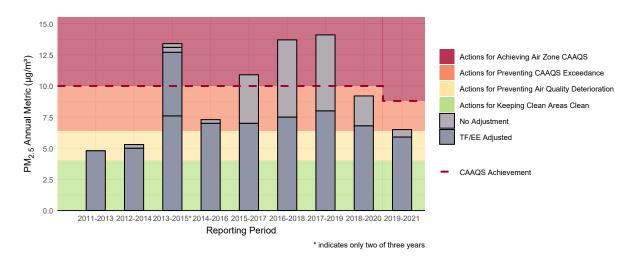
Air Zone: Central Interior

Monitoring Station: Williams Lake Columneetza School

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $25 \mu g/m^3$  (3 year average)



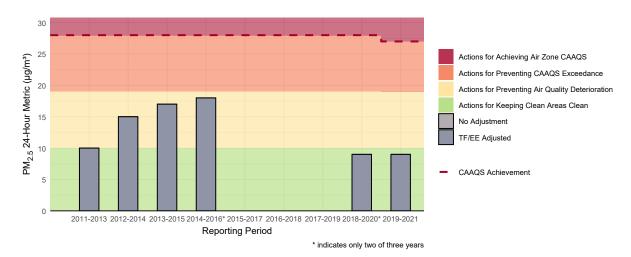
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.5 μg/m³ (3 year average)



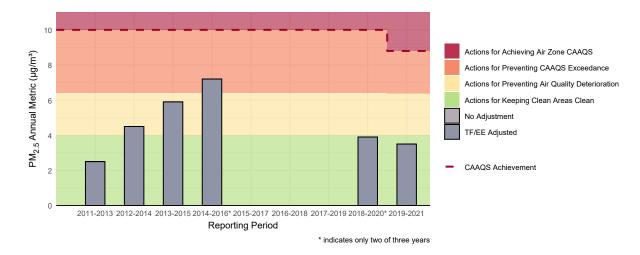


Monitoring Station: Kitimat Haisla Village

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $9 \mu g/m^3$  (3 year average)



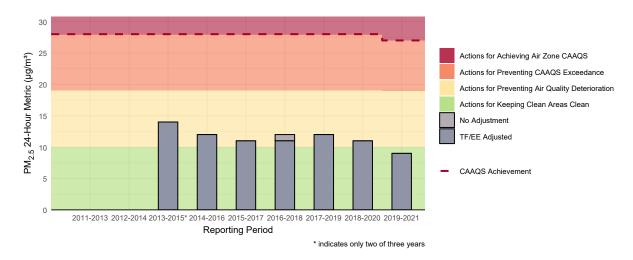
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 3.5  $\mu$ g/m³ (3 year average)



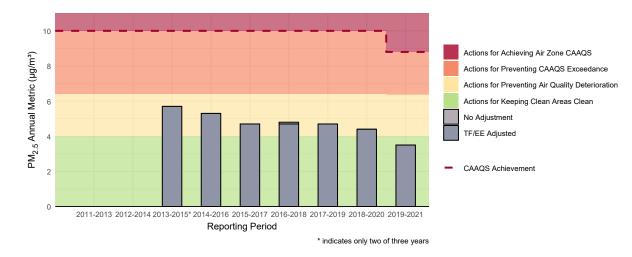


Monitoring Station: Kitimat Riverlodge

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $9 \mu g/m^3$  (3 year average)



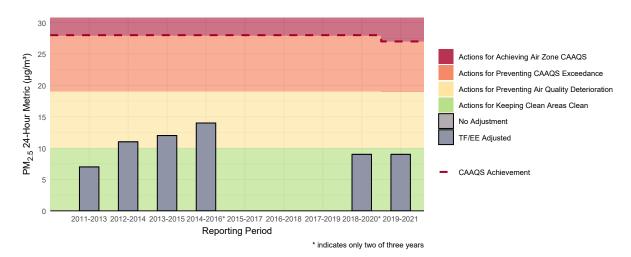
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 3.5  $\mu$ g/m³ (3 year average)



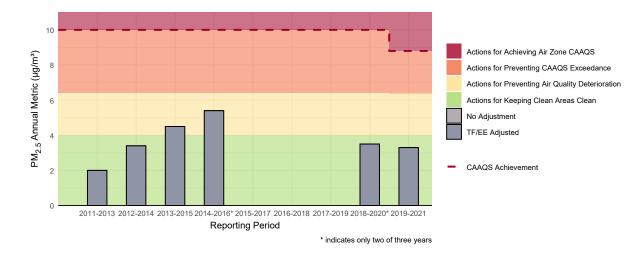


Monitoring Station: Kitimat Whitesail

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $9 \mu g/m^3$  (3 year average)



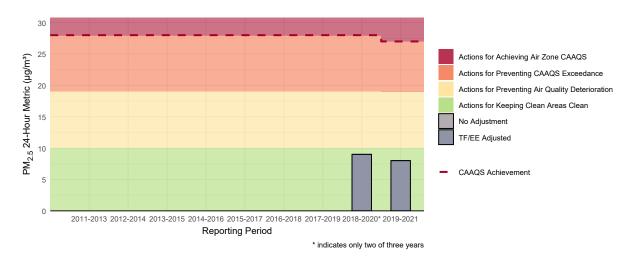
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 3.3 μg/m³ (3 year average)



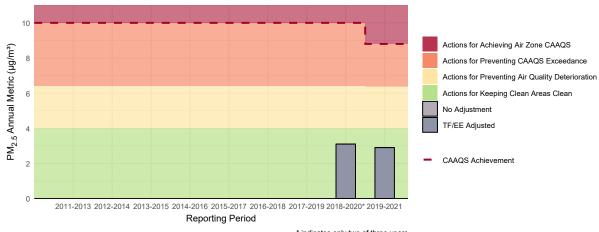


Monitoring Station: Prince Rupert Fairview

PM<sub>2.5</sub> 24-hour Air Quality Standard: Achieved PM<sub>2.5</sub> 24-hour Metric: 8 μg/m³ (3 year average)



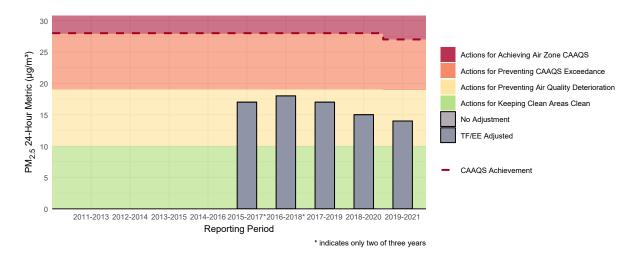
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 2.9 μg/m³ (3 year average)



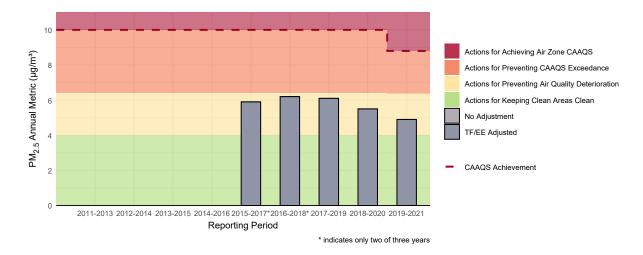


Monitoring Station: Terrace Skeena Middle School

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $14 \mu g/m^3$  (3 year average)



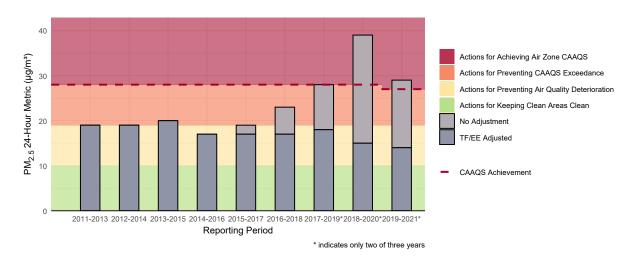
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 4.9 μg/m³ (3 year average)



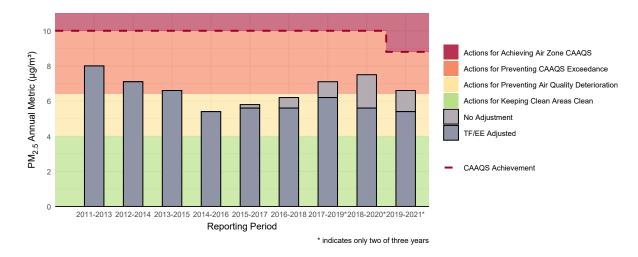


Monitoring Station: Colwood City Hall

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 29  $\mu$ g/m³ (2 year average)



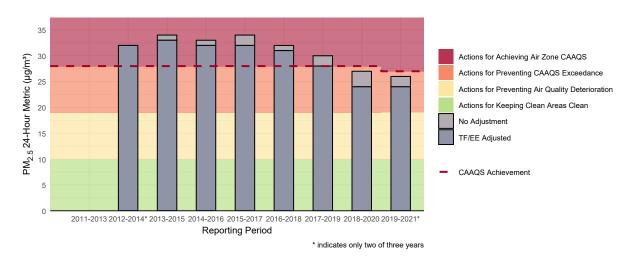
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.6 μg/m³ (2 year average)



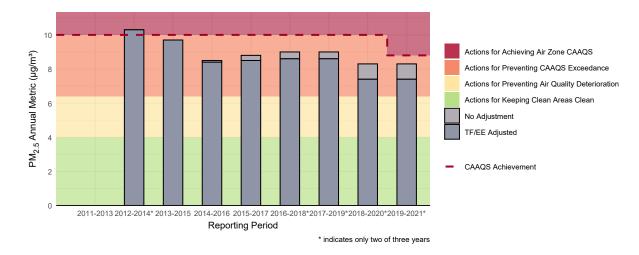


Monitoring Station: Courtenay Elementary School

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 26 μg/m³ (2 year average)



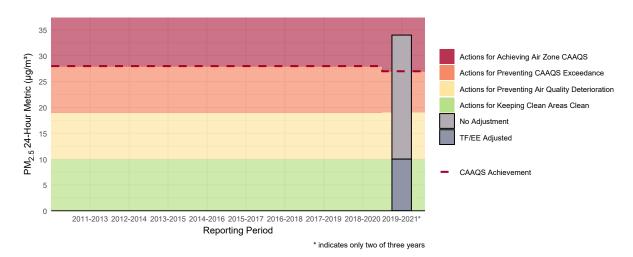
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 8.3 μg/m³ (2 year average)



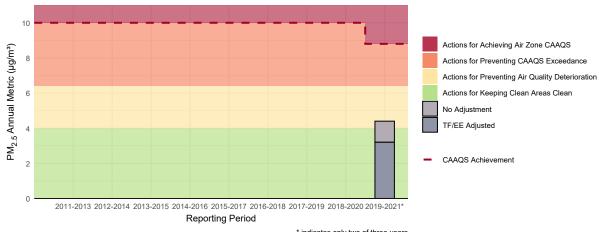


Monitoring Station: Crofton Elementary

PM<sub>2.5</sub> 24-hour Air Quality Standard: Not Achieved  $PM_{2.5}$  24-hour Metric:  $34 \mu g/m^3$  (2 year average)



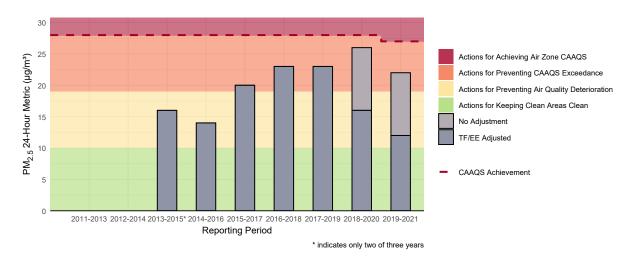
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 4.4 μg/m³ (2 year average)



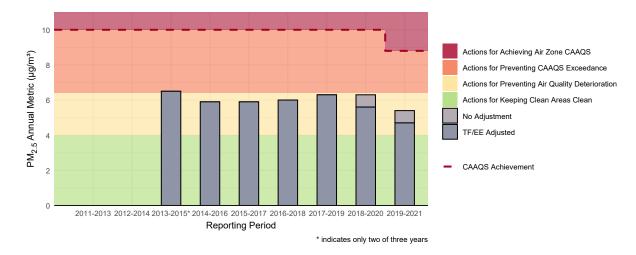


Monitoring Station: Crofton Substation

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 22 μg/m³ (3 year average)



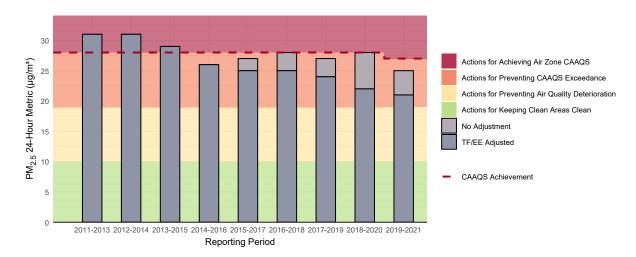
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.4 μg/m³ (3 year average)



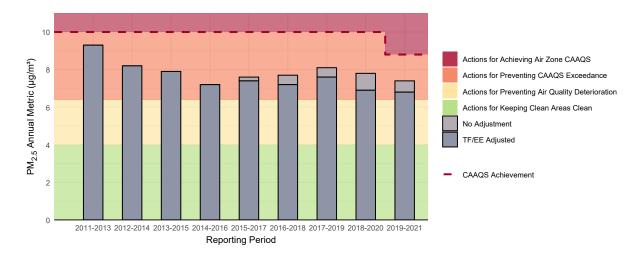


**Air Zone:** Georgia Strait **Monitoring Station:** Duncan

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $25 \mu g/m^3$  (3 year average)



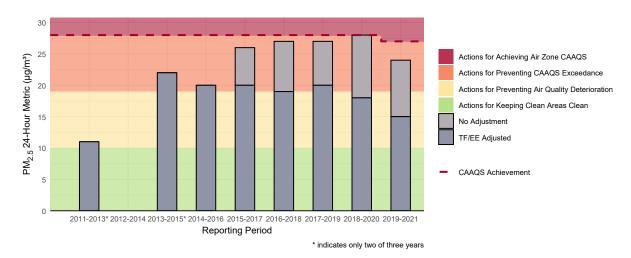
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 7.4 μg/m³ (3 year average)



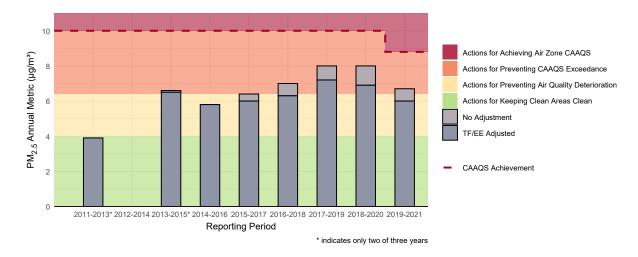


Monitoring Station: Duncan Deykin Avenue

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 24 μg/m³ (3 year average)



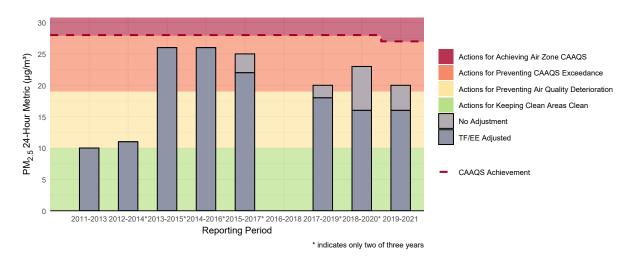
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.7 μg/m³ (3 year average)



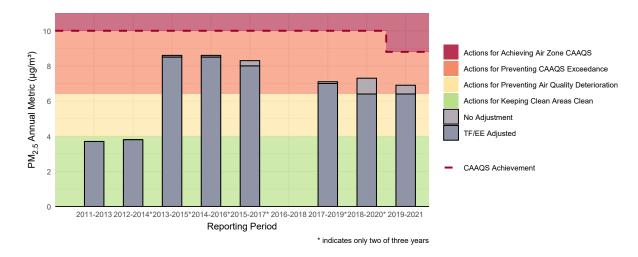


Monitoring Station: Elk Falls Dogwood

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 20 μg/m³ (3 year average)



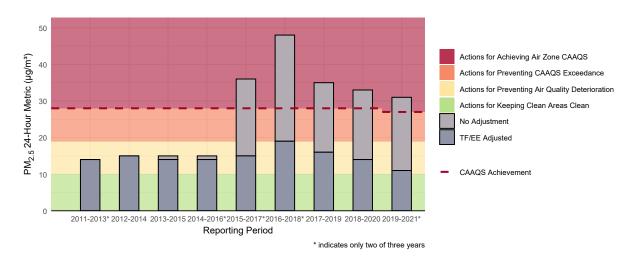
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.9 μg/m³ (3 year average)



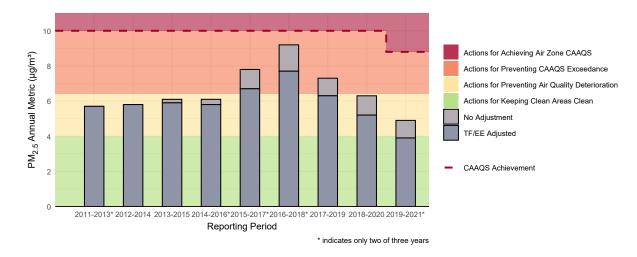


Monitoring Station: Langdale Elementary

 $PM_{2.5}$  24-hour Air Quality Standard: Not Achieved  $PM_{2.5}$  24-hour Metric: 31  $\mu$ g/m³ (2 year average)



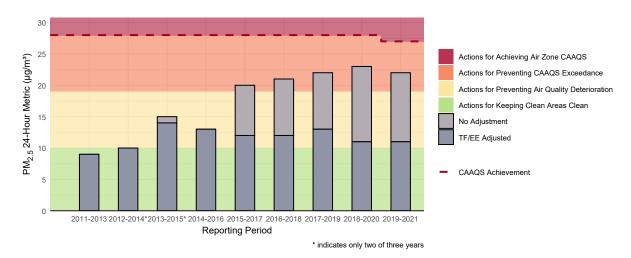
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 4.9  $\mu$ g/m³ (2 year average)



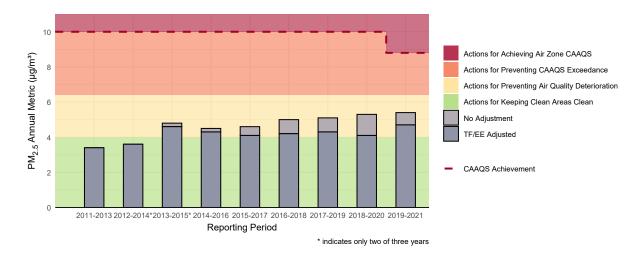


Monitoring Station: Nanaimo Labieux Road

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 22 μg/m³ (3 year average)



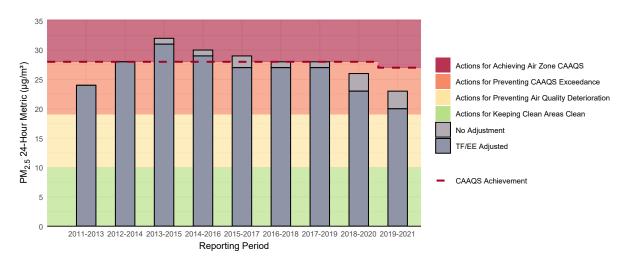
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.4 μg/m³ (3 year average)



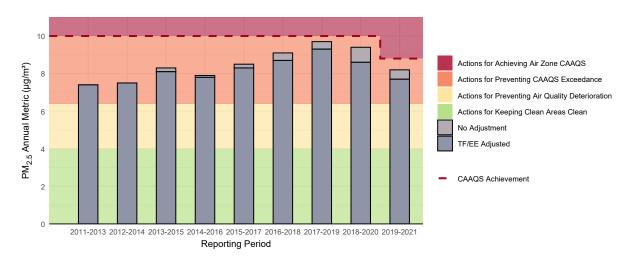


Monitoring Station: Port Alberni Elementary

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 23 μg/m³ (3 year average)



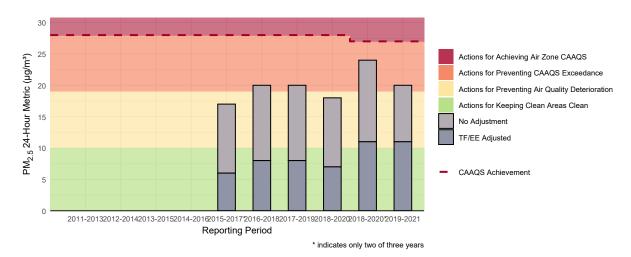
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 8.2 μg/m³ (3 year average)



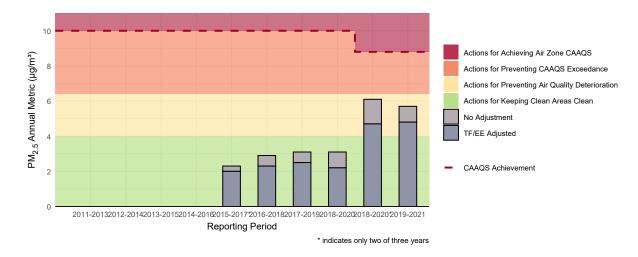


Monitoring Station: Powell River James Thomson School

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 20 μg/m³ (3 year average)



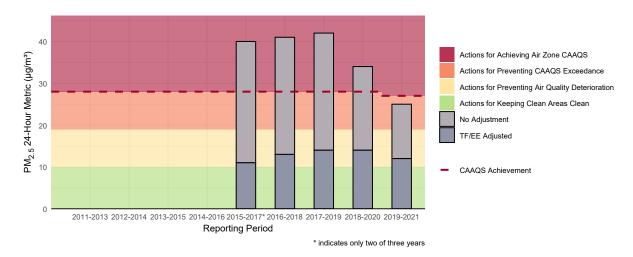
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 5.7  $\mu$ g/m³ (3 year average)



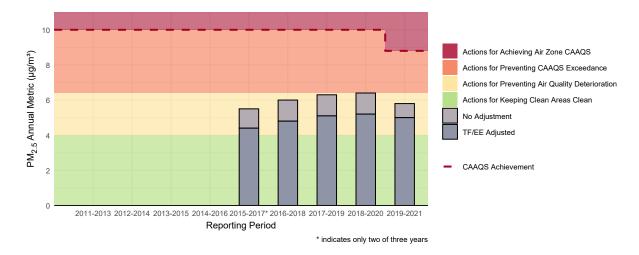


Monitoring Station: Squamish Elementary

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $25 \mu g/m^3$  (3 year average)



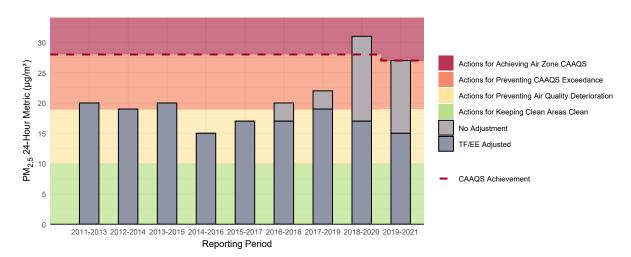
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.8 μg/m³ (3 year average)



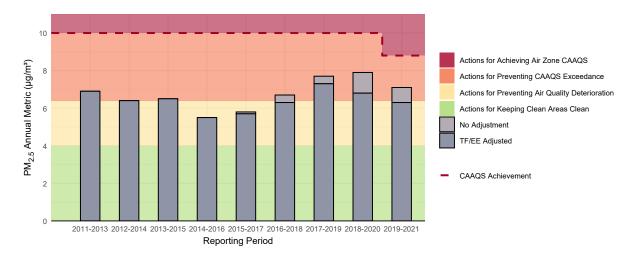


Monitoring Station: Victoria Topaz

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 27 μg/m³ (3 year average)



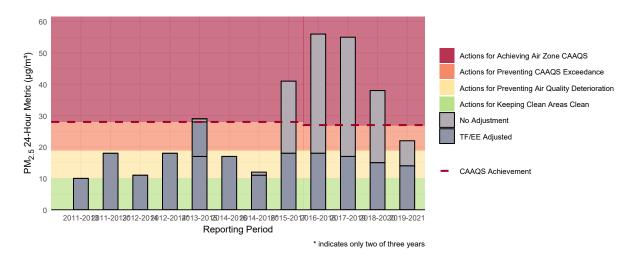
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 7.1  $\mu$ g/m³ (3 year average)



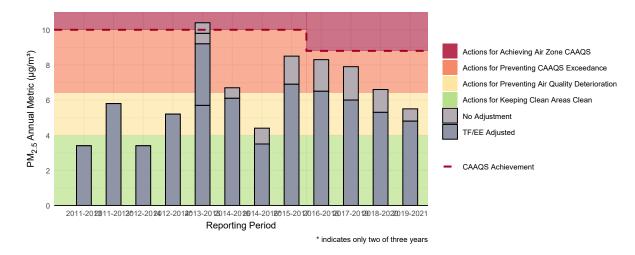


Monitoring Station: Whistler Meadow Park

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $22 \mu g/m^3$  (3 year average)



 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 5.5  $\mu$ g/m³ (3 year average)

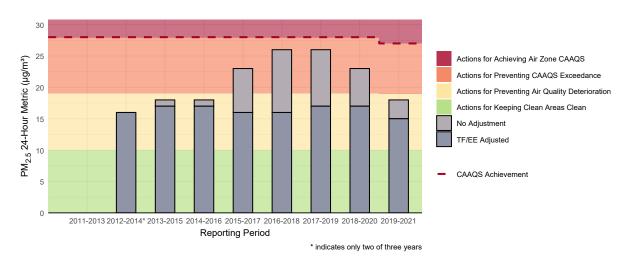




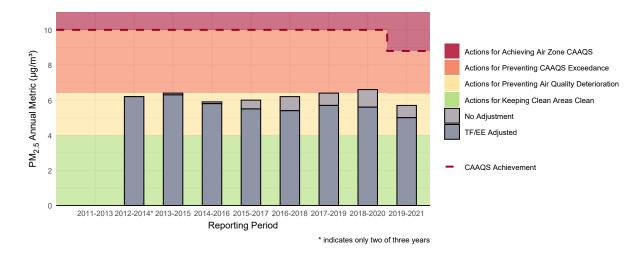
Air Zone: Lower Fraser Valley

Monitoring Station: Abbotsford A Columbia Street

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 18 μg/m³ (3 year average)



 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric: 5.7  $\mu$ g/m³ (3 year average)

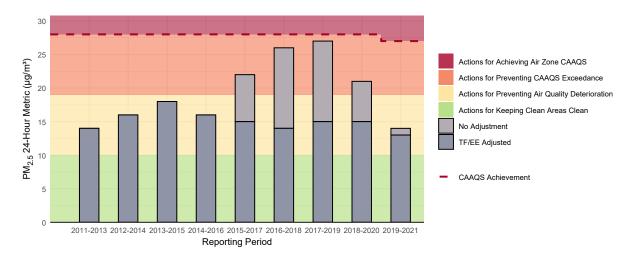




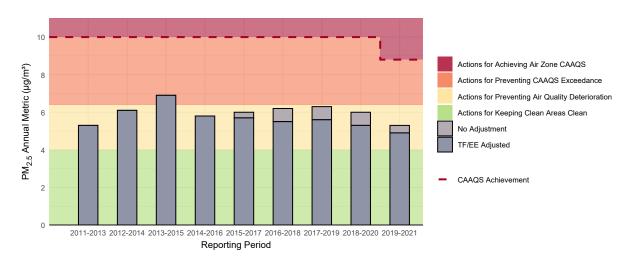
Air Zone: Lower Fraser Valley

Monitoring Station: Abbotsford Central

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 14 μg/m³ (3 year average)



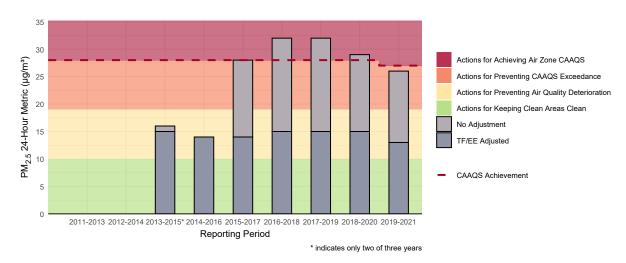
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.3 μg/m³ (3 year average)



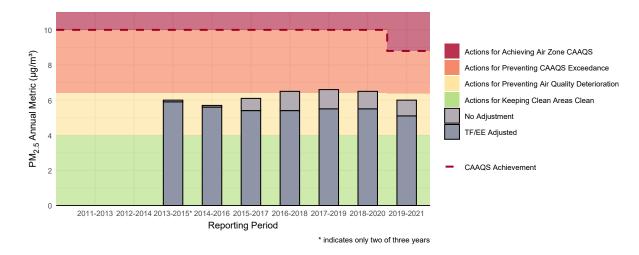


Monitoring Station: Agassiz Municipal Hall

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 26 μg/m³ (3 year average)



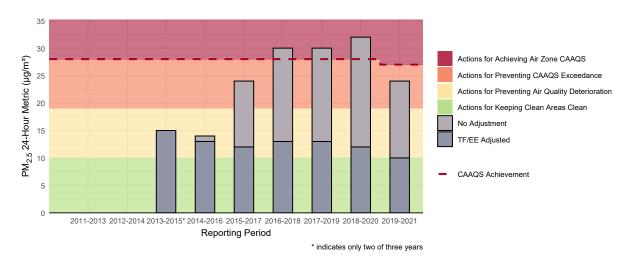
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric:  $6 \mu g/m^3$  (3 year average)



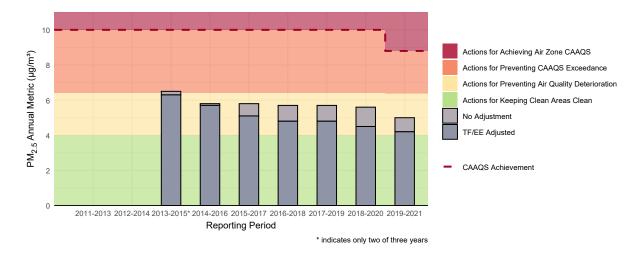


Monitoring Station: Burnaby Kensington Park

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 24 μg/m³ (3 year average)



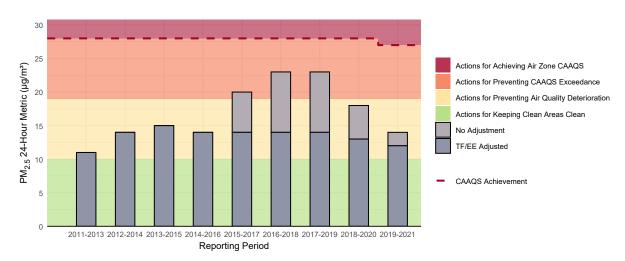
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric:  $5 \mu g/m^3$  (3 year average)



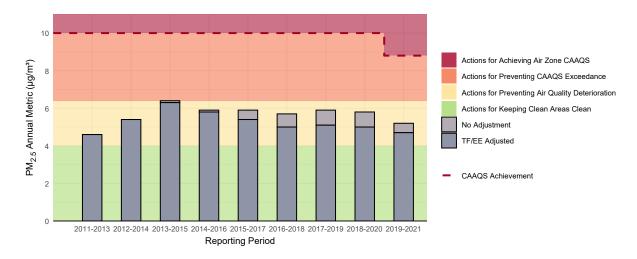


**Air Zone:** Lower Fraser Valley **Monitoring Station:** Burnaby South

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $14 \mu g/m^3$  (3 year average)



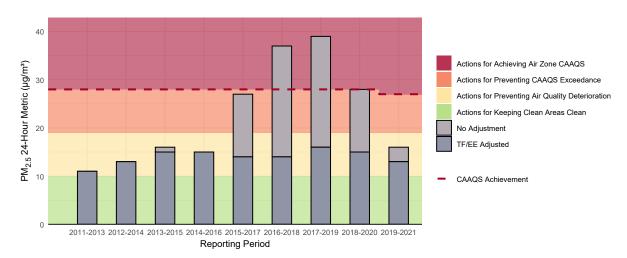
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric:  $5.2 \mu g/m^3$  (3 year average)



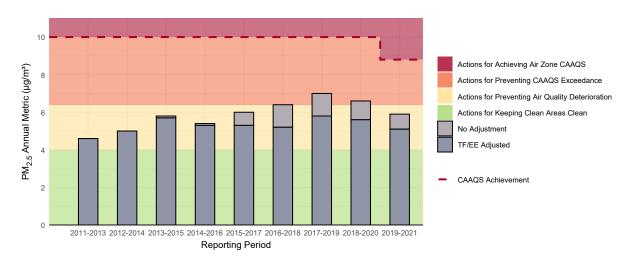


Monitoring Station: Chilliwack Airport

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 16 μg/m³ (3 year average)



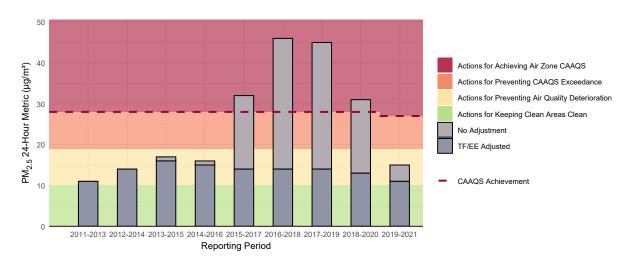
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.9 μg/m³ (3 year average)



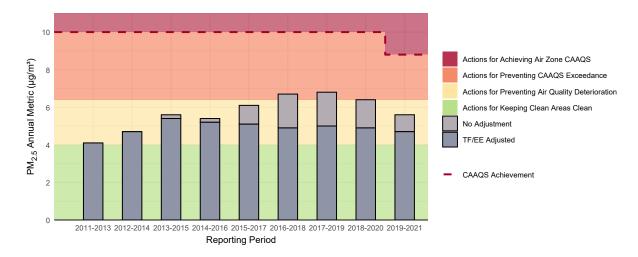


**Air Zone:** Lower Fraser Valley **Monitoring Station:** Hope Airport

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $15 \mu g/m^3$  (3 year average)



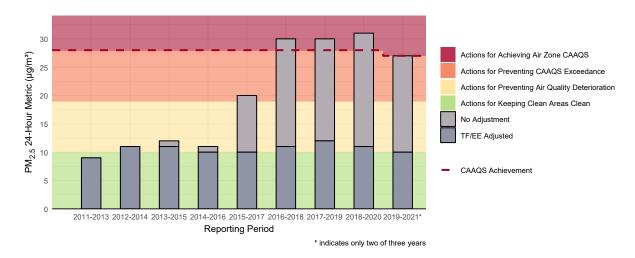
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.6 μg/m³ (3 year average)



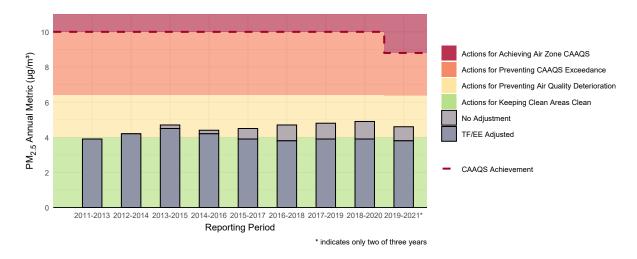


**Air Zone:** Lower Fraser Valley **Monitoring Station:** Horseshoe Bay

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 27 µg/m³ (2 year average)



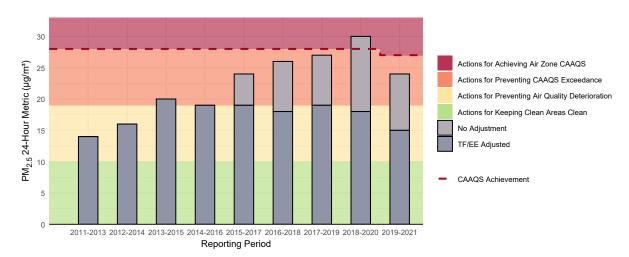
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 4.6 μg/m³ (2 year average)



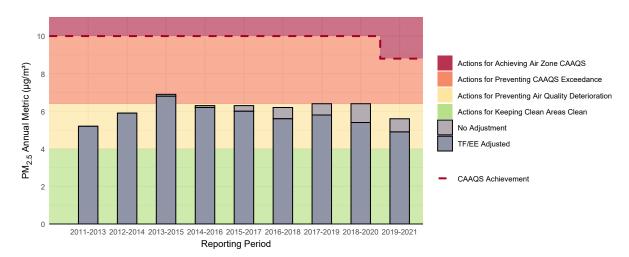


**Air Zone:** Lower Fraser Valley **Monitoring Station:** Langley Central

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 24 μg/m³ (3 year average)



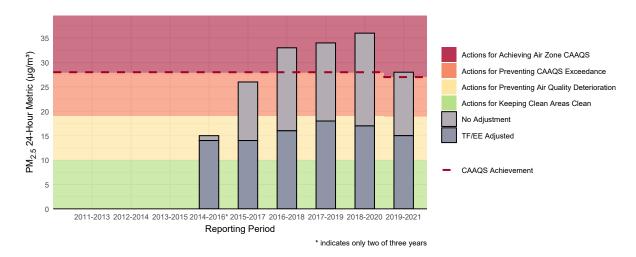
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.6 μg/m³ (3 year average)



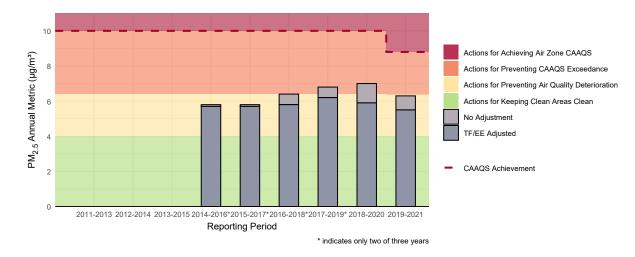


Monitoring Station: Mission School Works Yard

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 28 µg/m³ (3 year average)



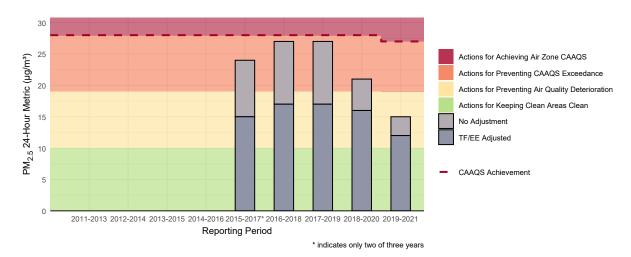
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.3 μg/m³ (3 year average)



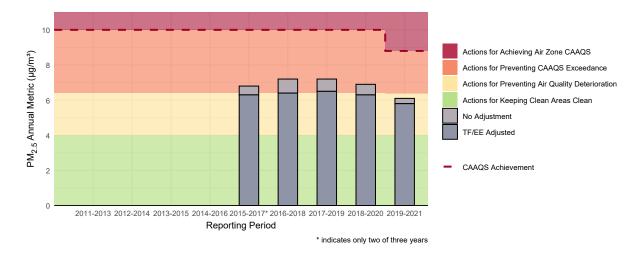


Monitoring Station: New Westminster Sapperton Park

PM<sub>2.5</sub> 24-hour Air Quality Standard: Achieved PM<sub>2.5</sub> 24-hour Metric:  $15 \mu g/m^3$  (3 year average)



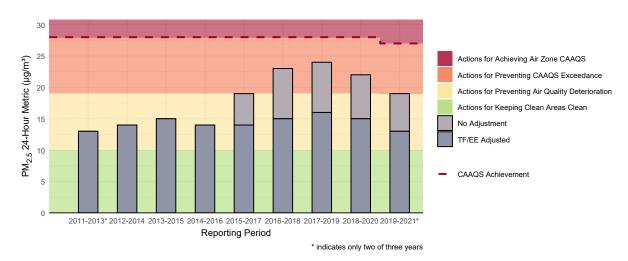
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.1 μg/m³ (3 year average)



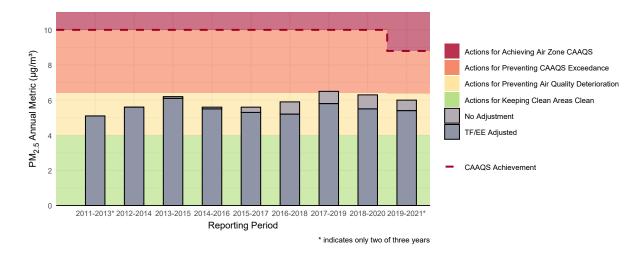


**Air Zone:** Lower Fraser Valley **Monitoring Station:** North Delta

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $19 \mu g/m^3$  (2 year average)



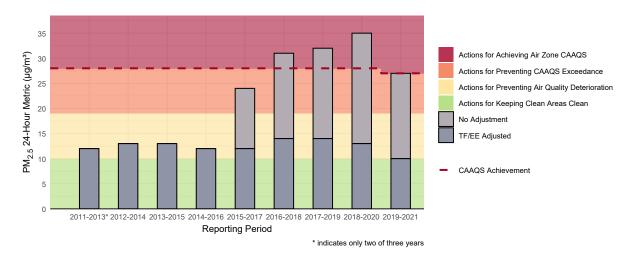
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric:  $6 \mu g/m^3$  (2 year average)



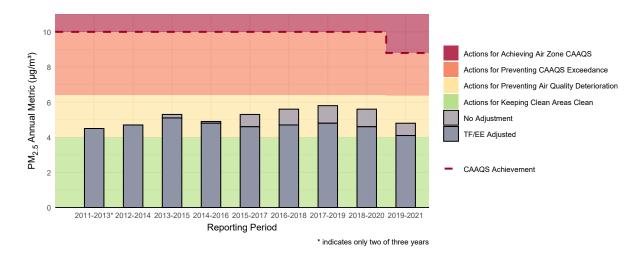


Monitoring Station: North Vancouver Mahon Park

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 27 μg/m³ (3 year average)



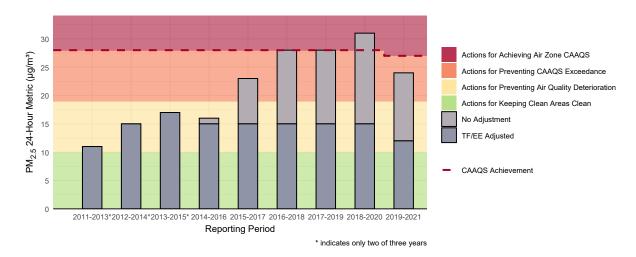
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 4.8 μg/m³ (3 year average)



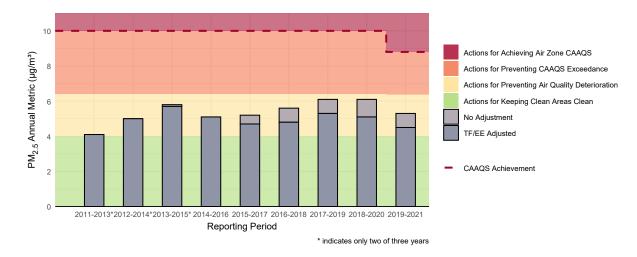


Monitoring Station: Pitt Meadows Meadowlands School

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 24 μg/m³ (3 year average)



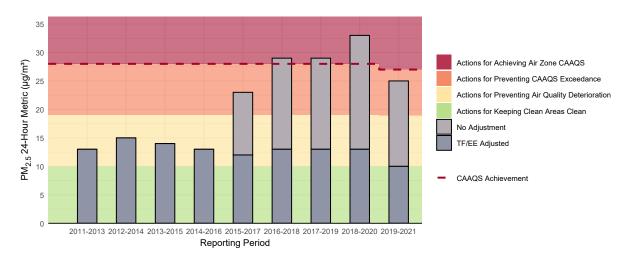
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.3 μg/m³ (3 year average)



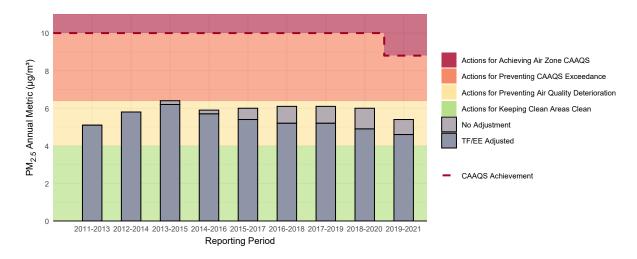


Monitoring Station: Port Moody Rocky Point Park

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $25 \mu g/m^3$  (3 year average)



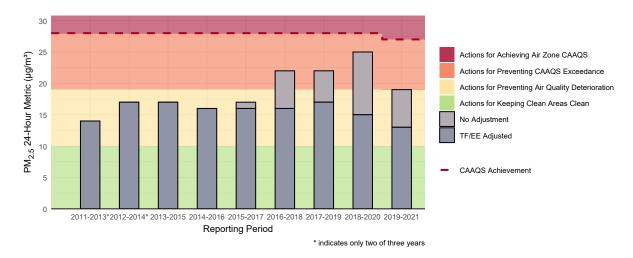
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.4 μg/m³ (3 year average)



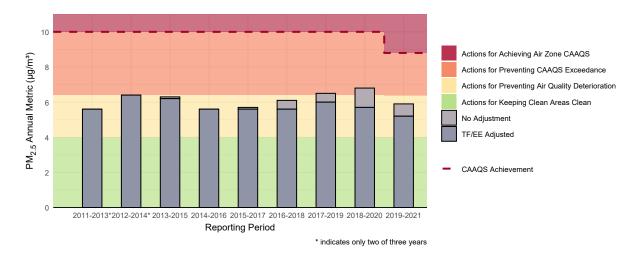


Monitoring Station: Richmond South

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 19 µg/m³ (3 year average)



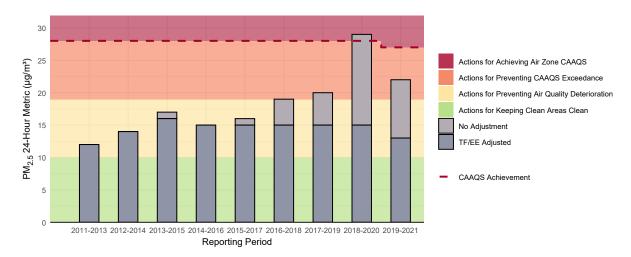
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.9 μg/m³ (3 year average)



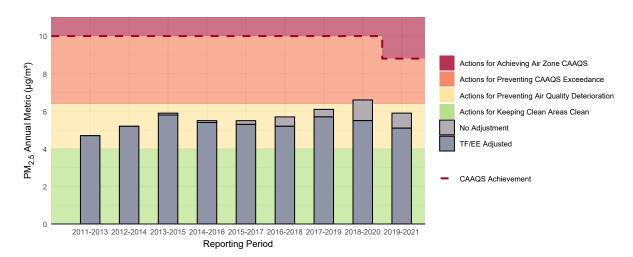


**Air Zone:** Lower Fraser Valley **Monitoring Station:** Surrey East

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $22 \mu g/m^3$  (3 year average)



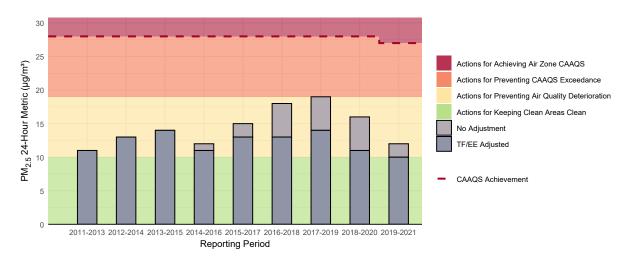
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.9 μg/m³ (3 year average)



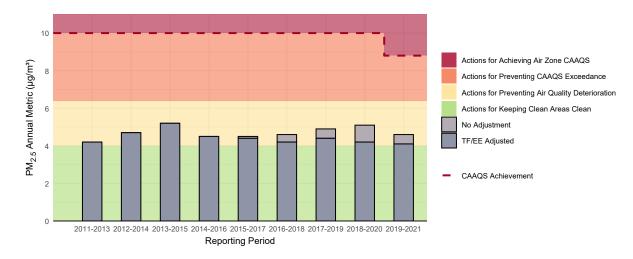


**Air Zone:** Lower Fraser Valley **Monitoring Station:** Tsawwassen

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:**  $12 \mu g/m^3$  (3 year average)



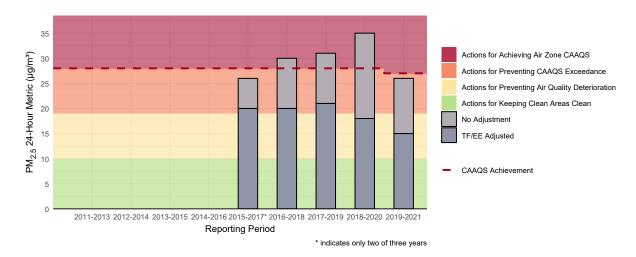
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 4.6 μg/m³ (3 year average)



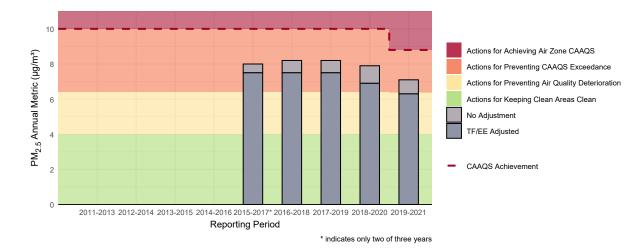


Monitoring Station: Vancouver Clark Drive

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 26 μg/m³ (3 year average)



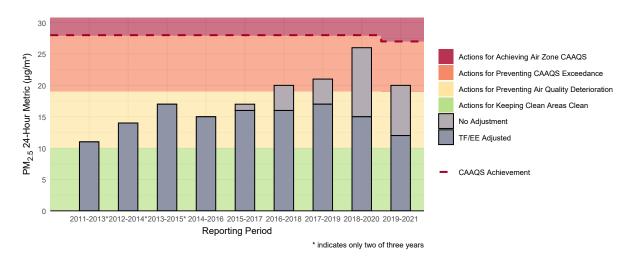
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 7.1 μg/m³ (3 year average)



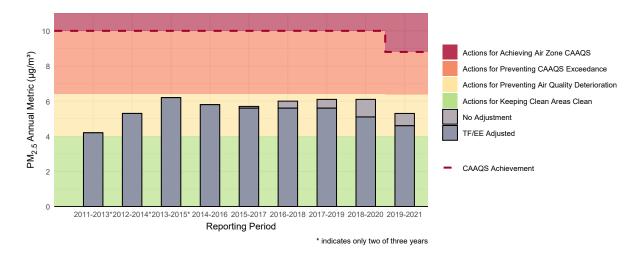


Monitoring Station: Vancouver International Airport 2

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 20 μg/m³ (3 year average)



PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 5.3 μg/m³ (3 year average)

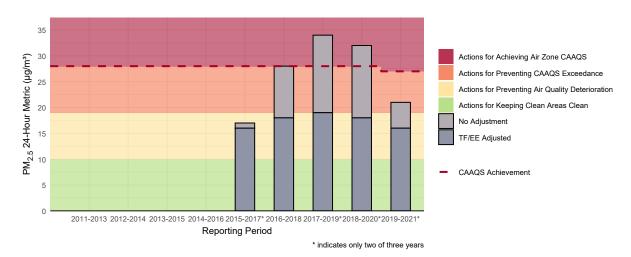




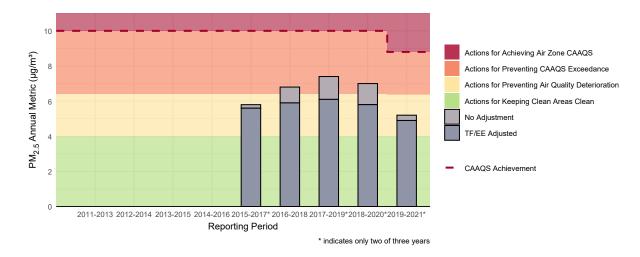
Air Zone: Northeast

Monitoring Station: Fort St John Key Learning Centre

PM<sub>2.5</sub> **24-hour Air Quality Standard:** Achieved PM<sub>2.5</sub> **24-hour Metric:** 21 μg/m³ (2 year average)



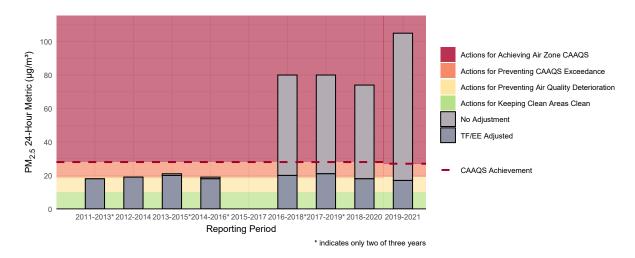
 $PM_{2.5}$  Annual Air Quality Standard: Achieved  $PM_{2.5}$  Annual Metric:  $5.2 \mu g/m^3$  (2 year average)



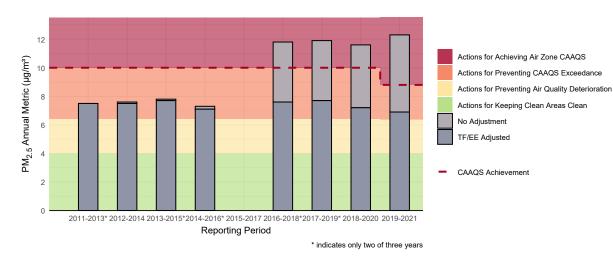


Monitoring Station: Castlegar Zinio Park

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 105 µg/m³ (3 year average)



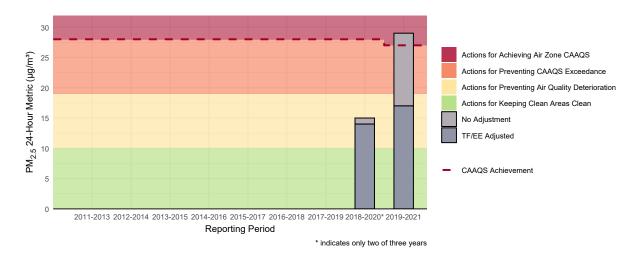
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 12.3 μg/m³ (3 year average)



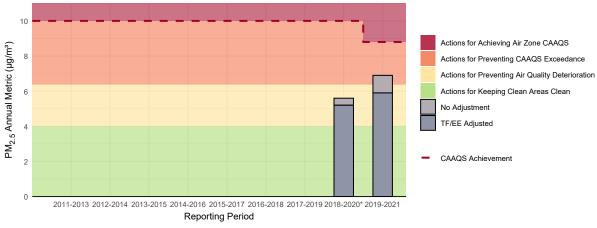


Monitoring Station: Cranbrook Muriel Baxter

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 29 µg/m³ (3 year average)



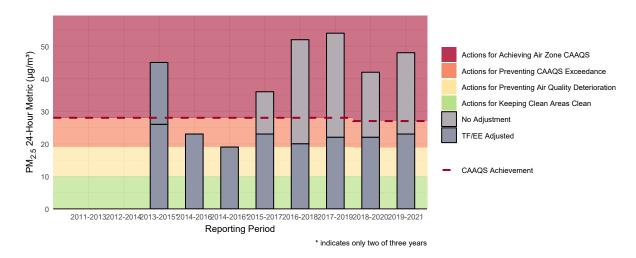
PM<sub>2.5</sub> Annual Air Quality Standard: Achieved PM<sub>2.5</sub> Annual Metric: 6.9 μg/m³ (3 year average)



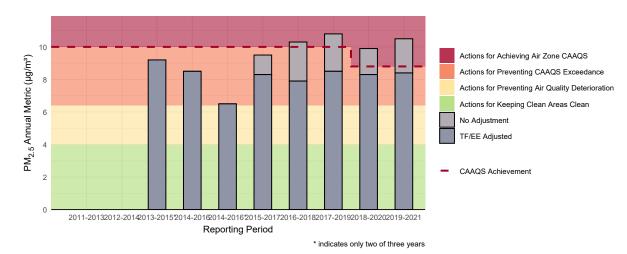


Monitoring Station: Golden Helipad

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 48 µg/m³ (3 year average)



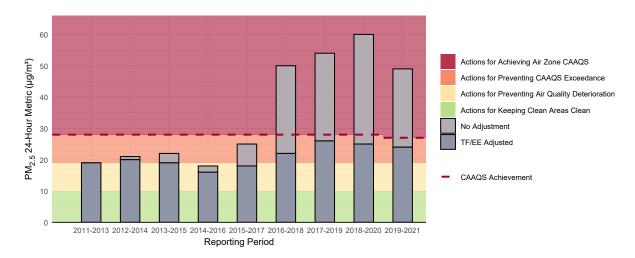
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 10.5 μg/m³ (3 year average)



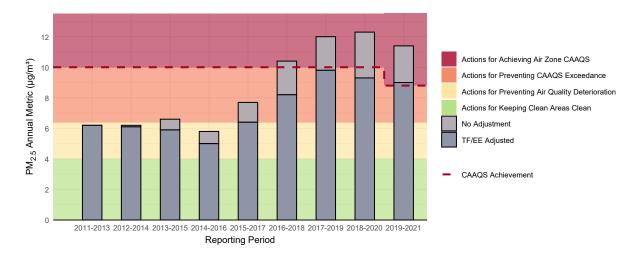


Monitoring Station: Grand Forks City Hall

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 49 µg/m³ (3 year average)



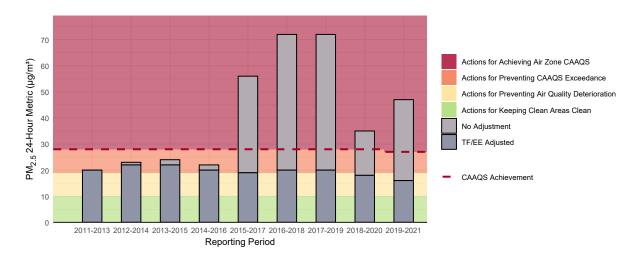
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 11.4 μg/m³ (3 year average)



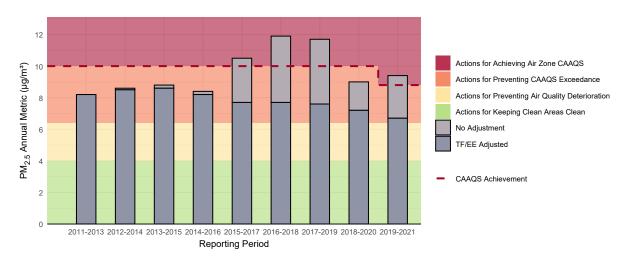


Monitoring Station: Kamloops Federal Building

 $PM_{2.5}$  **24-hour Air Quality Standard:** Not Achieved  $PM_{2.5}$  **24-hour Metric:** 47 µg/m³ (3 year average)



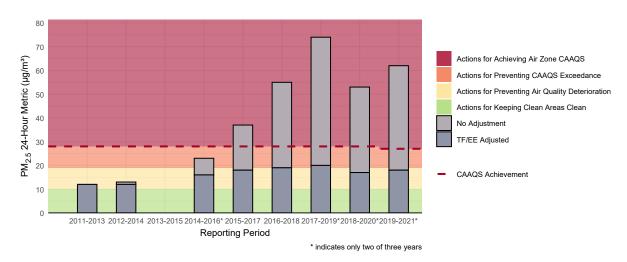
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 9.4 µg/m³ (3 year average)



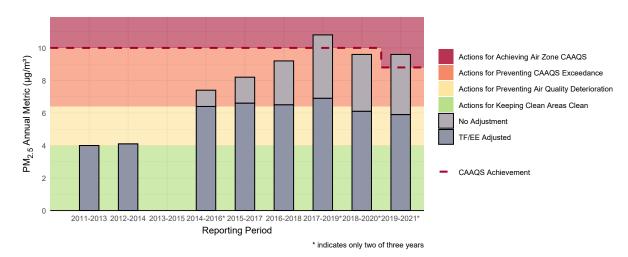


**Air Zone:** Southern Interior **Monitoring Station:** Kelowna

 $PM_{2.5}$  24-hour Air Quality Standard: Not Achieved  $PM_{2.5}$  24-hour Metric: 62 µg/m³ (2 year average)



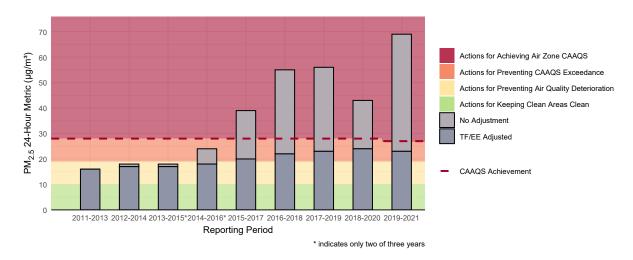
PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 9.6 µg/m³ (2 year average)





Monitoring Station: Vernon Science Centre

 $PM_{2.5}$  24-hour Air Quality Standard: Not Achieved  $PM_{2.5}$  24-hour Metric: 69  $\mu$ g/m³ (3 year average)



PM<sub>2.5</sub> Annual Air Quality Standard: Not Achieved PM<sub>2.5</sub> Annual Metric: 10.8 μg/m³ (3 year average)

