



Air Quality Report – September 2024

The THEC Air Quality Report provides an update on levels Pb and SO₂ in community air based on THEP’s current priorities related to ambient air.

1. Lead in Air:

Figure 1 presents the 3-month rolling average for lead in air measured at the Butler Park station compared to the US EPA standard of 0.15 µg/m³. Federal and BC Provincial governments do not have ambient air quality objectives or standards for lead; however, it is reasonable to rely on standards from other jurisdictions when this is the case.

Lead in air levels measured at Butler Park and Birchbank meet the US EPA standard of 0.15 µg/m³ on a 3-month average. The intra-annual variability in the data reflects the influence of weather including dominant wind direction and precipitation. Read THEP’s Lead (Pb) [Fact Sheet](#) to learn more.

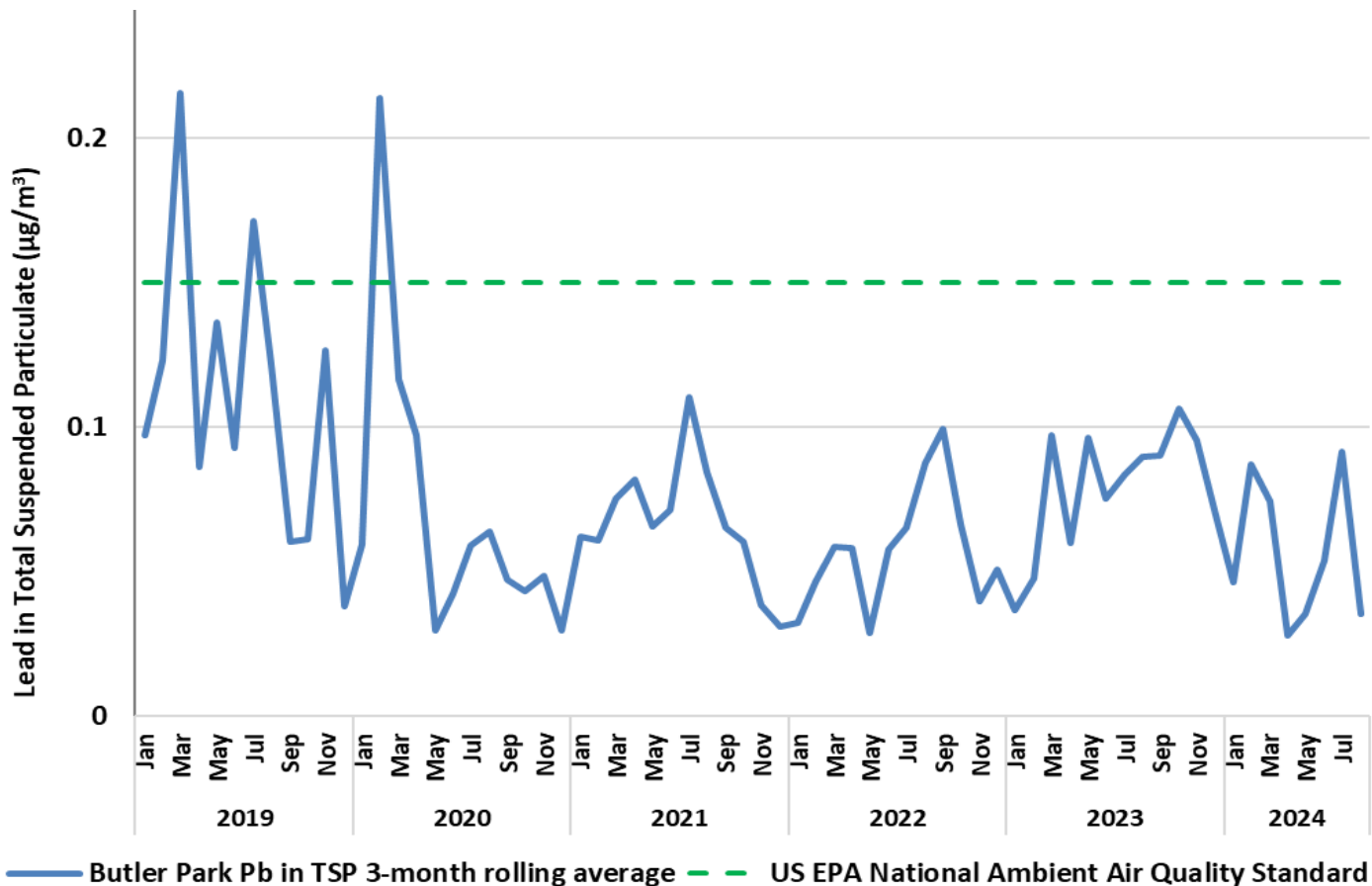


Figure 1: 3-month rolling average lead in air at Butler Park station (as total suspended particulate measured bi-daily)

The chart in Figure 1 shows the 3-month rolling average for lead in air for Butler Park (blue line), in comparison to the US EPA standard (green dashed line).

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2. Sulphur Dioxide (SO₂):

SO₂ is emitted by Teck Trail Operations as a by-product of processing mine concentrates, which contain sulphur, into metal and chemical products. Teck Trail Operations currently captures more than 99% of the sulphur and converts it to by-products, such as fertilizer and sulphuric acid. About 1% leaves the operation through emissions to air. With environmental improvements, SO₂ emissions continue to decline. However, the dispersion of air emissions from the smelter is constrained due to the location of the smelter, weather and the surrounding topography.

SO₂ is monitored by Teck at four locations throughout Trail and the surrounding areas – Birchbank, Butler Park, Columbia Gardens and Warfield. These stations operate continuously, with near real-time data publicly available at <https://www.env.gov.bc.ca/epd/bcairquality/readings/find-stations-map-SO2.html> SO₂ levels fluctuate throughout the day, month and year.

THEP's SO₂ [Fact Sheet](#) provides guidance for actions to take when SO₂ levels are elevated. The chart below provides SO₂ hourly data from Butler Park and Birchbank stations for 2014 – 2024 year-to-date, categorized by the health guidance levels. As Teck Trail Operations continues to implement emissions reductions measures, the percentage of hours within the yellow (35-185 ppb) and red (>185 ppb) categories is decreasing.

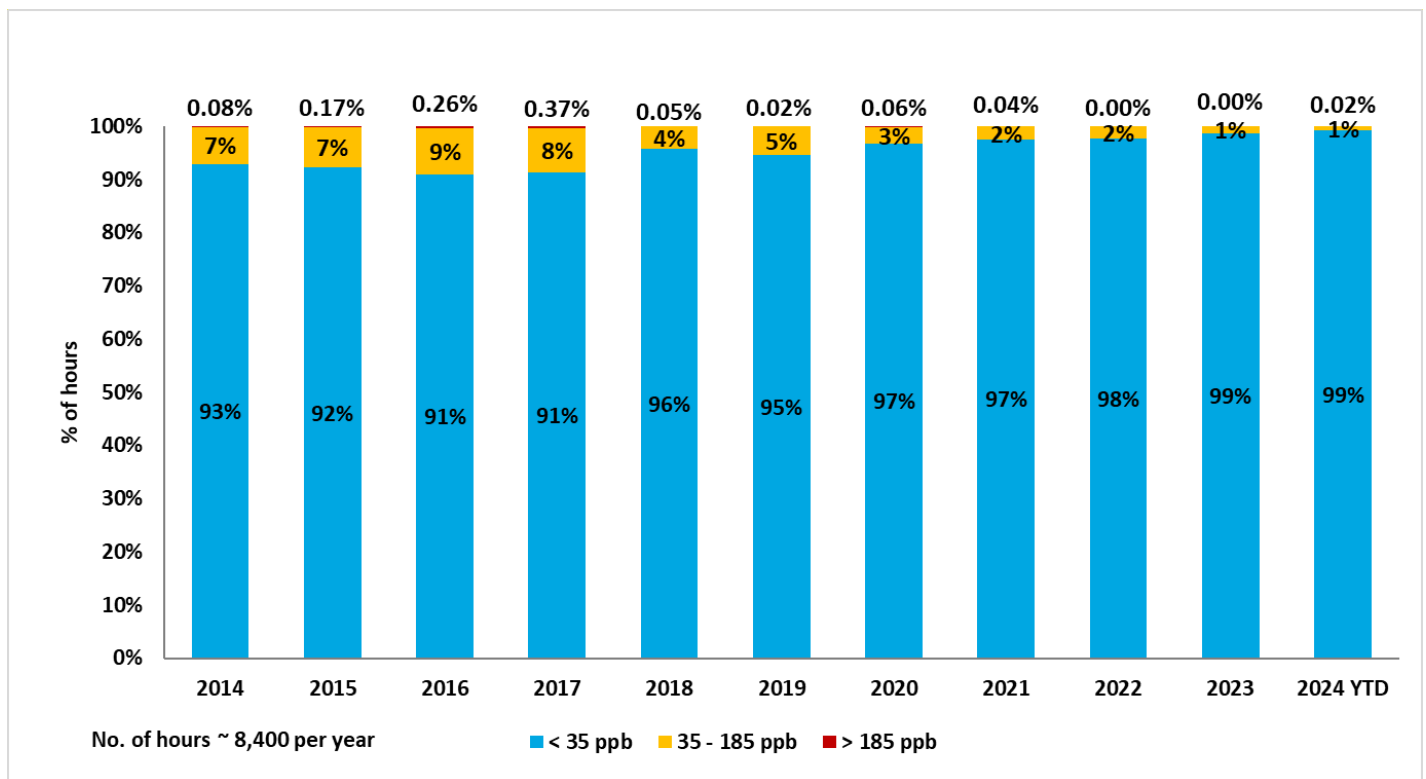


Figure 2: Distribution of Hourly SO₂ Levels at Butler Park

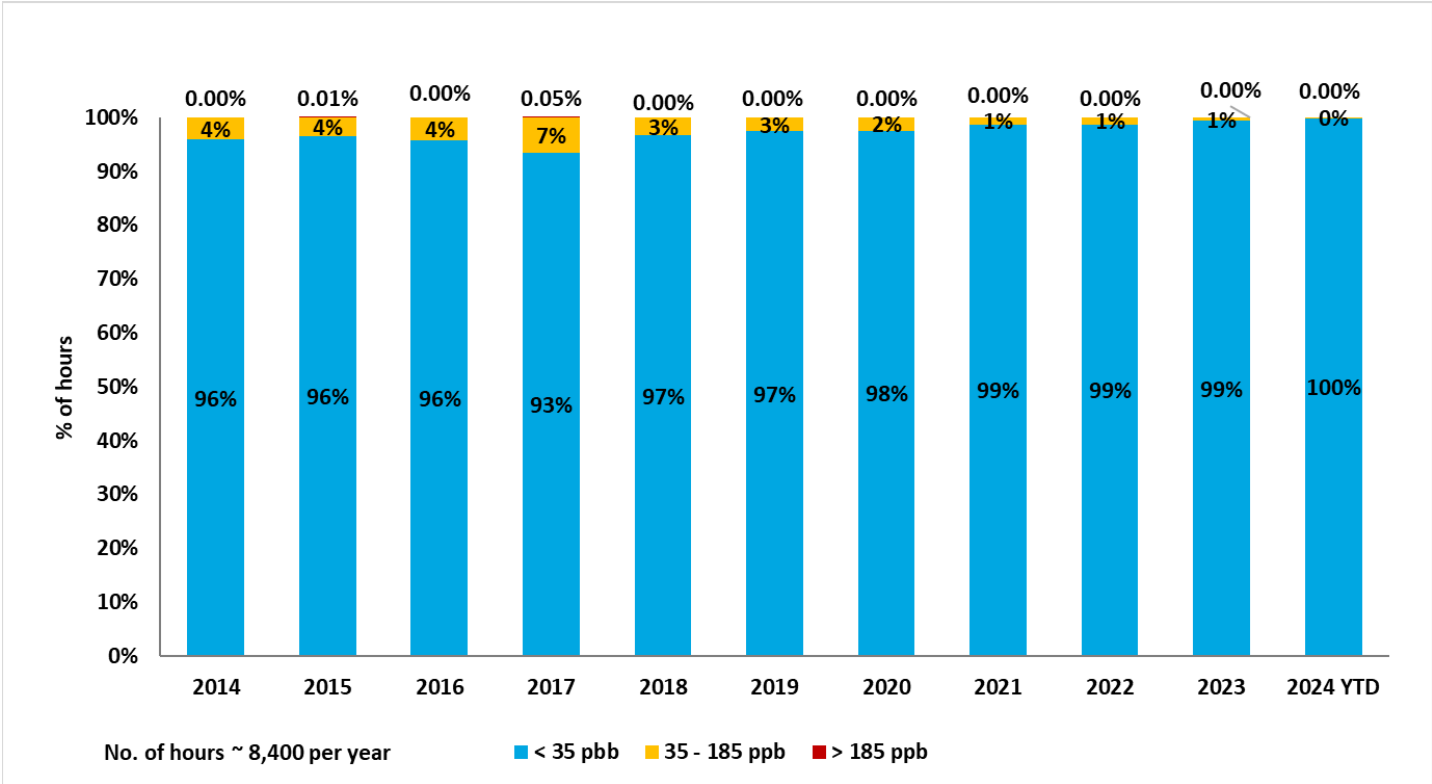


Figure 3: Distribution of Hourly SO₂ Levels at Birchbank

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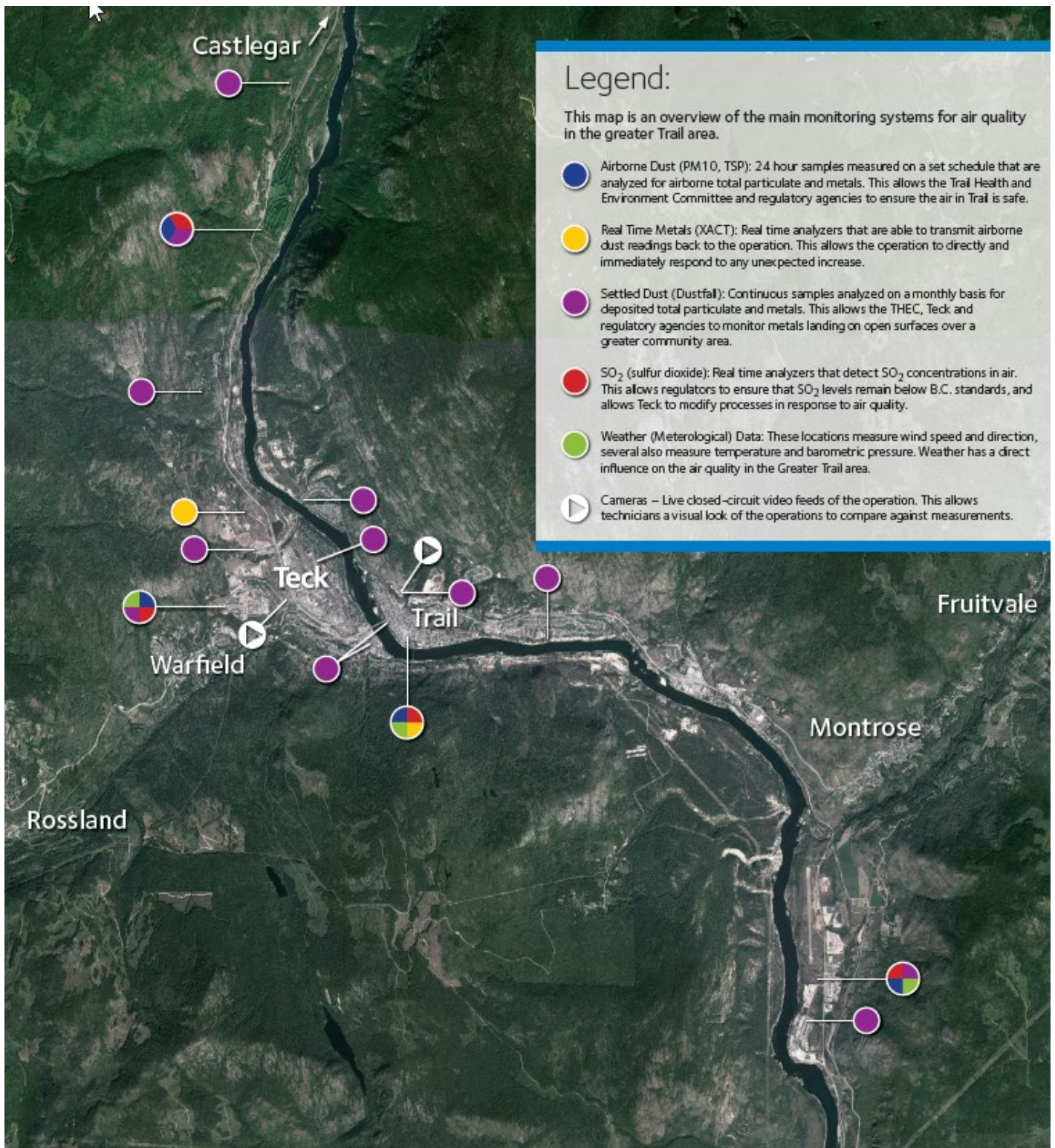


Figure 4: Teck Community Air Monitoring Stations

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