



## Air Quality Report – December 2023

### 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/m<sup>3</sup>. 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/m<sup>3</sup> 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.

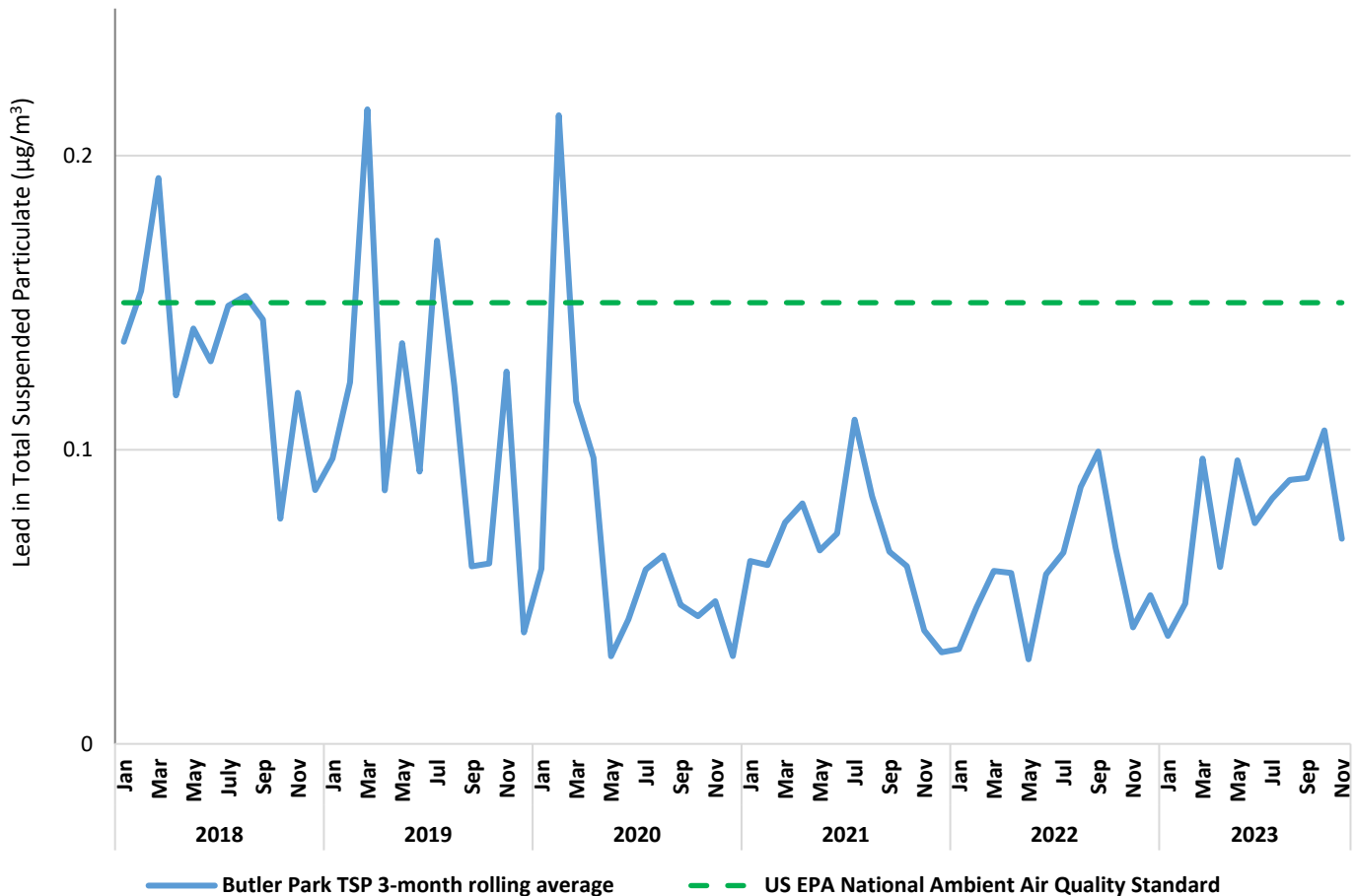


Figure 1: 3-month rolling average lead in air at Butler Park station (as total suspended particulate measured bi-daily)

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 (SO<sub>2</sub>):

SO<sub>2</sub> 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, SO<sub>2</sub> 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.

SO<sub>2</sub> 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> SO<sub>2</sub> levels fluctuate throughout the day, month and year.

THEP's SO<sub>2</sub> [Fact Sheet](#) provides guidance for actions to take when SO<sub>2</sub> levels are elevated. The chart below provides SO<sub>2</sub> hourly data from Butler Park and Birchbank stations for the last 10 years 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. In 2022 and 2023 year-to-date, there were no hours in the red (>185 ppb) category at Butler Park or Birchbank stations.

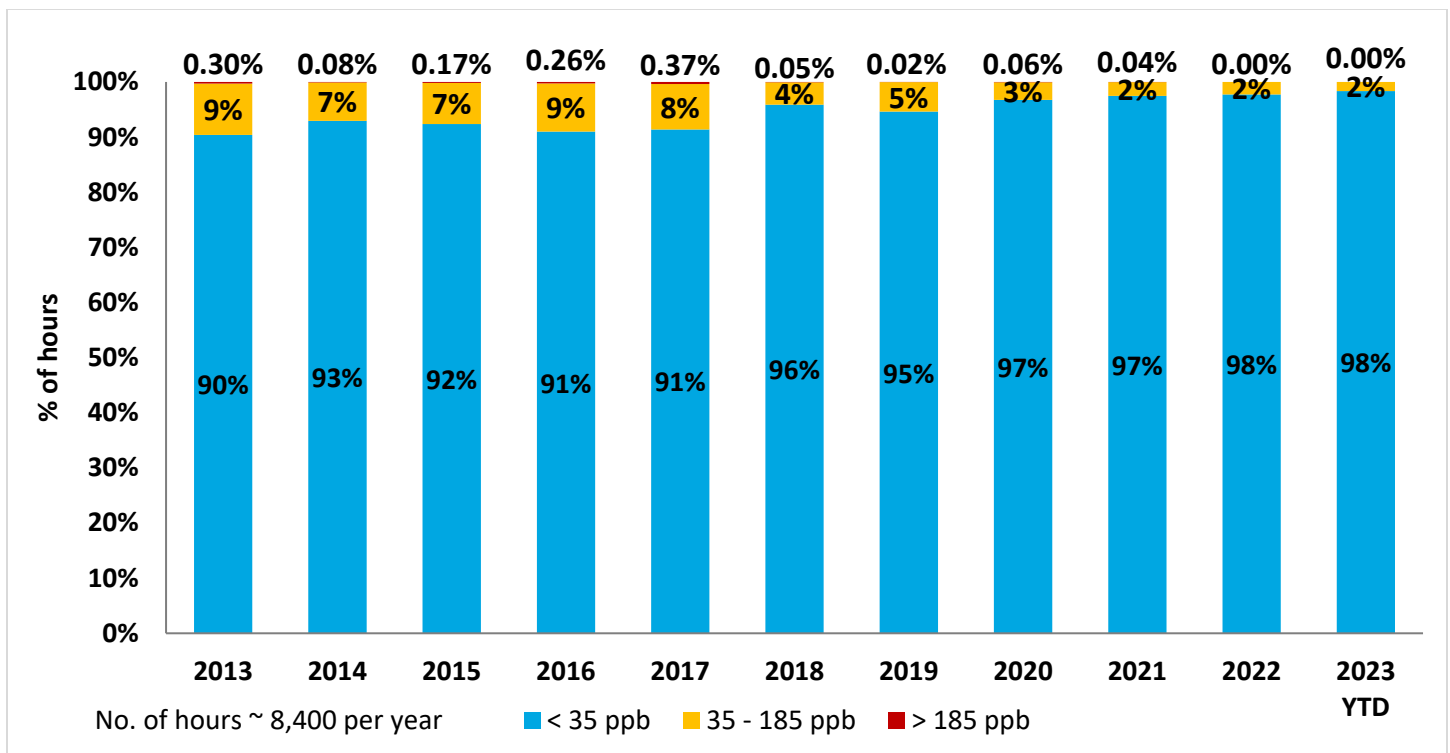


Figure 2: Distribution of Hourly SO<sub>2</sub> Levels at Butler Park

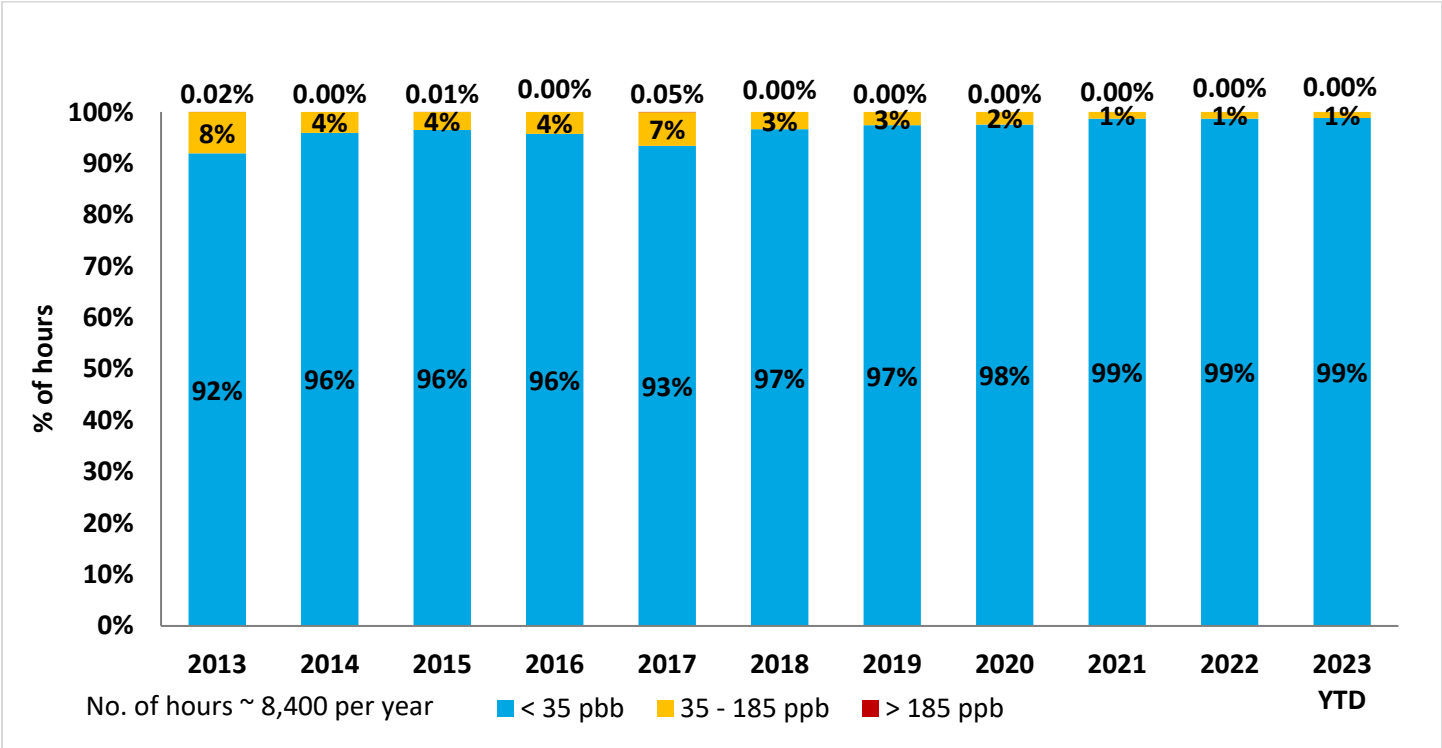


Figure 3: Distribution of Hourly SO<sub>2</sub> Levels at Birchbank

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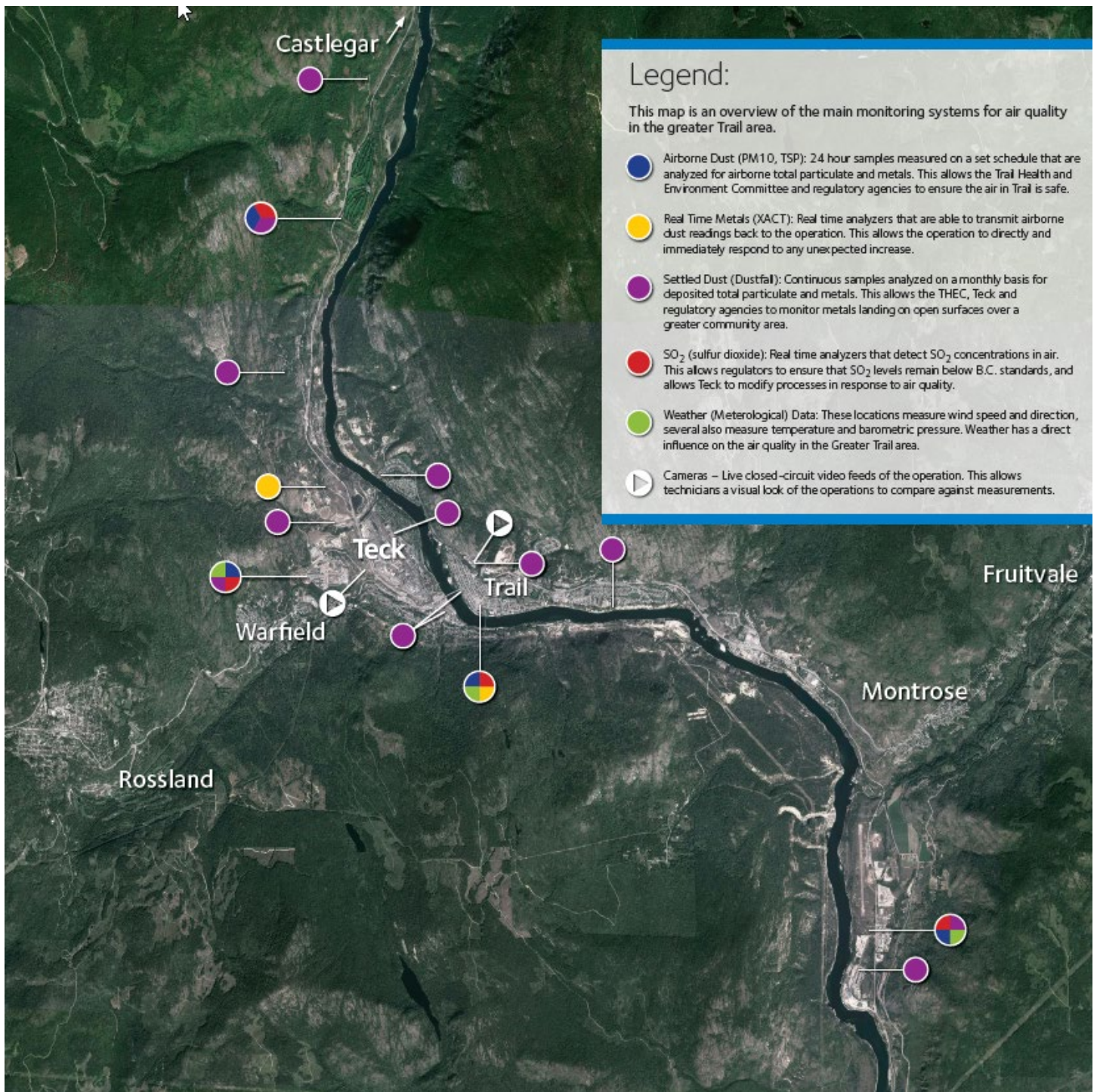


Figure 4: Teck Community Air Monitoring Stations

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