

Department of Environmental Conservation's Air Monitoring Program Community-Based Air Monitoring Project

2024-25 Winter Season Air Quality Report for Kenaitze Tribe, Kenai Alaska

The QuantAQ MODULAIR[™] sensor in Kenai (508 Upland Drive, Kenai, AK 99611) was installed on 11/19/2024.

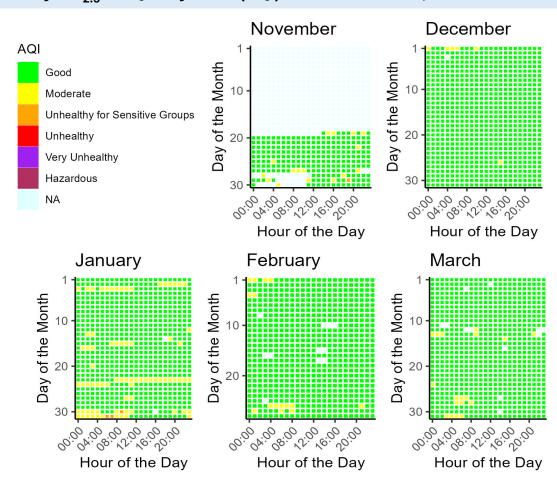
The sensor measures for carbon monoxide (CO), ozone (O_3) , nitrogen oxide (NO), nitrogen dioxide (NO₂), particulate matter (PM_{2.5} and PM₁₀), temperature (°C), and relative humidity (RH). Data is collected every minute and is then processed into hourly averages.

The sensor in Kenai has run well since its installation in November of 2024; there have been no physical issues with the sensor.

This data report covers the date range of November 19, 2024, to March 31, 2025.



Daily PM_{2.5} Air Quality Index (AQI) for November 19, 2024 – March 31, 2025

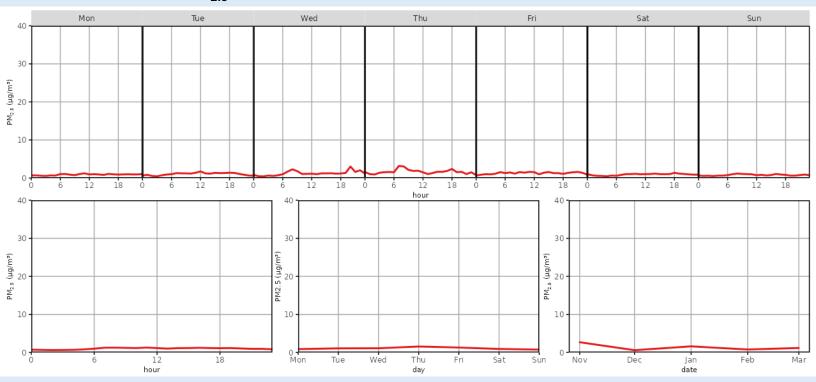




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Median PM_{2.5} Concentrations for November 19, 2024 – March 31, 2025



Descriptive Statistics of Air Pollutants*

| Parameter | 1-hr PM _{2.5} (µg/m³) | 24-hr PM _{2.5} (μg/m³) | 1-hr PM ₁₀ (µg/m³)** | 24-hr PM ₁₀ (μg/m³)** | 1-hr O ₃ (ppb) | 1-hr NO ₂ (ppb) | 1-hr NO (ppb) | 1-hr CO (ppb) |
|---------------------|-----------------------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------|----------------------------|------------------|------------------|
| Min | | | | | | | | |
| | 0.02 | 0.17 | 0.00 | 0.92 | 1.00 | 7.29 | 1.37 | 0.30 |
| Mean | | | | | | | | |
| | 2.19 | 2.02 | 19.50 | 15.62 | 29.36 | 21.98 | 3.43 | 0.53 |
| 1 st Max | | | | | | | | |
| | 47.52 | 14.19 | 928.00 | 96.50 | 44.50 | 31.99 | 27.12 | 1.30 |
| 2 nd Max | | | | | | | | |
| | 44.67 | 13.91 | 779.00 | 73.17 | 44.40 | 31.45 | 12.64 | 1.30 |

Data Discussion

Kenai's $PM_{2.5}$ ambient air quality for the winter 2024-25 season fell mostly in the "good" range of the Air Quality Index (AQI; more information about AQI is provided on page 3), with January experiencing several days in the "moderate" AQI range, and two days in the "hazardous for sensitive groups" range. Diurnal patterns show little variability of $PM_{2.5}$ concentrations across different times of day or days of the week.

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^{*} These statistics are based on preliminary data readings and are intended to provide a brief overview of sensor activity. Finalized data may be obtained upon request and through our annual statistical reports. Data from the community sensor network is non-regulatory and not comparable to the EPA's National Ambient Air Quality Standards (NAAQS; more information about the EPA NAAQS is provided on page 3).

^{**} PM₁₀ particle sensors are influenced by weather events such as fog and snow due to hygroscopic effects, creating false maximum values that do not pose health risks.

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Resources



Alaska Department of Environmental Conservation





EPA NAAQS Information





Air Quality Index (AQI) Basics





Real-Time AQI Data



Data Access

To access historical data for your community's sensor, please email a request to: AMQA-Data-Request@alaska.gov . Data will be provided in Excel or .csv format.

Questions or Comments?

Please contact us!

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