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

2024 Summer Season Air Quality Report for NPS – Denali National Park and Preserve

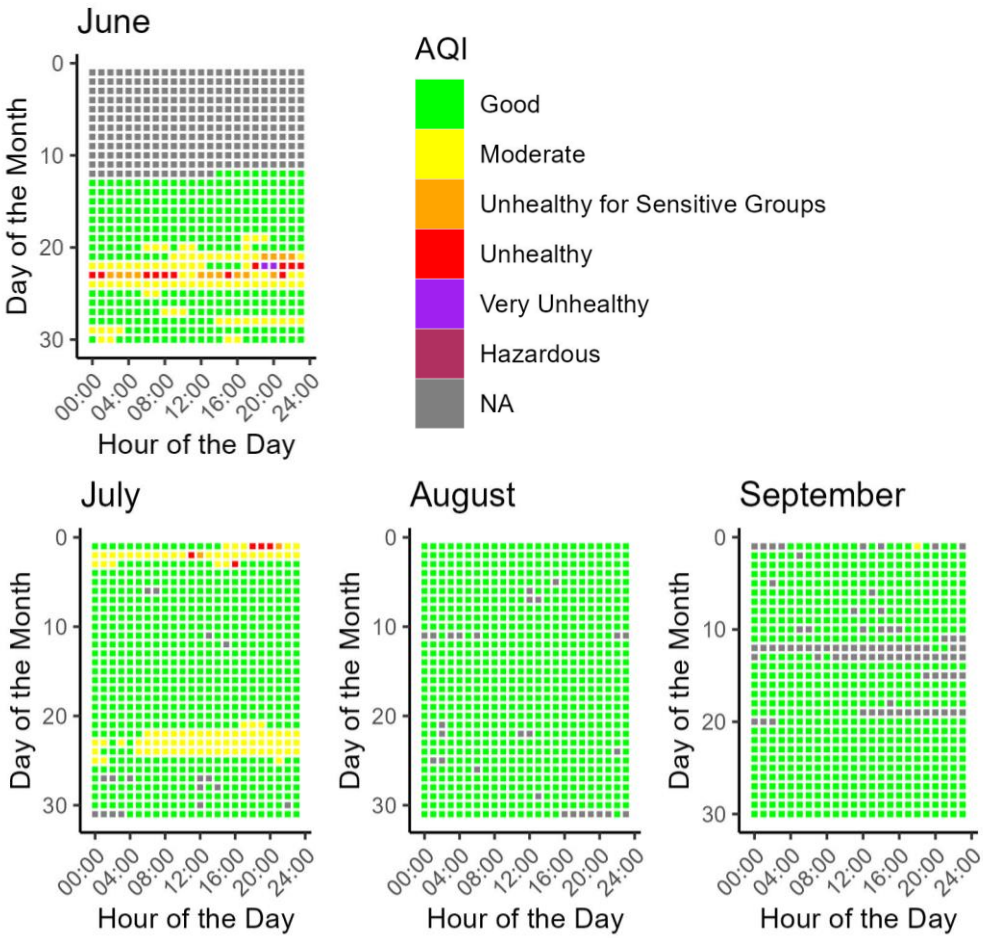
The QuantAQ MODULAIR sensor in Denali (63.7216 ° N, 148.9671 ° W) was installed on 06/12/2024.

The sensor measures for carbon monoxide (CO), ozone (O_3), nitrogen oxide (NO), nitrogen dioxide (NO_2), particulate matter ($PM_{2.5}$ and PM_{10}), temperature (°C), and relative humidity (RH).

Data is collected every minute and is then processed into hourly averages. The sensor in Denali has run well since its installation in June of 2024; there have been no physical issues with the sensor.

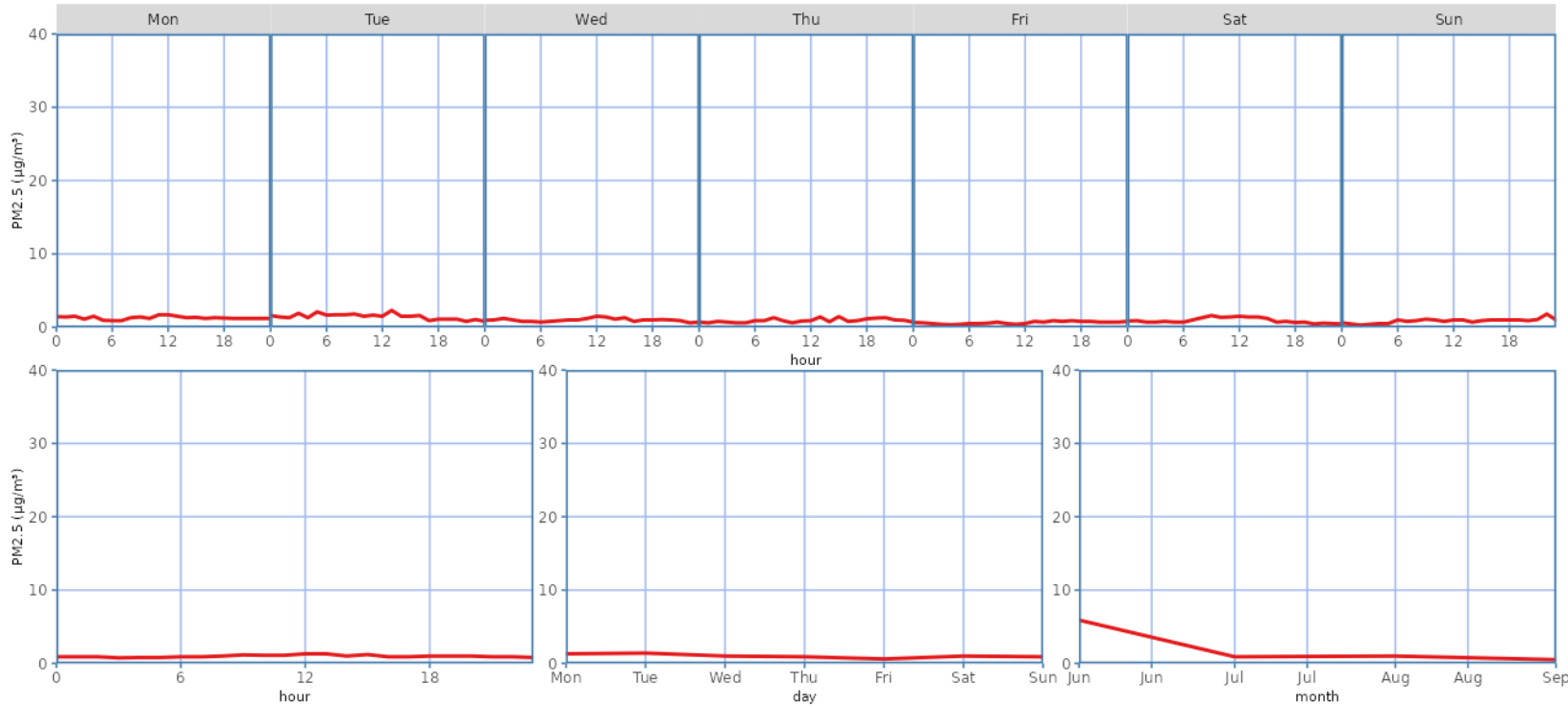
This data report covers the date range of June 12, 2024, to September 30, 2024.

Daily $PM_{2.5}$ Air Quality Index (AQI) for June 12, 2024 - September 30, 2024



2024 Summer Season Air Quality Report for Denali NP

Median $PM_{2.5}$ Concentrations for June 12, 2024 - September 30, 2024



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	0.10	0.10	0.00	0.10	5.93	2.57	1.44	389.48
Mean	3.67	3.65	7.71 **	7.68 **	25.86	14.24	2.39	457.06
1st Max	163.60	48.30	450 **	51 **	63.92	37.09	8.35	839.74
2nd Max	146.30	41.00	287 **	44 **	59.56	31.61	7.44	738.21

Data Discussion

Denali's $PM_{2.5}$ ambient air quality for the summer 2024 season fell mostly in the "good" range of the Air Quality Index (AQI; more information about AQI is provided on page 3), with several periods in June and July that reached into the "unhealthy" AQI range. AQI levels reached into the "very unhealthy" range for several hours in June. Elevated $PM_{2.5}$ levels throughout the summer months are caused by smoke from wildfires across Interior Alaska, as well as smoke from localized prescribed burns. Diurnal patterns show little variability of $PM_{2.5}$ concentrations across different times of day or days of the week, with June showing the most elevated $PM_{2.5}$ levels relative to other summer months.

* 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.

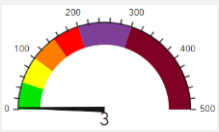
2024 Summer Season Air Quality Report for Denali NP

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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