

Spokane Regional Clean Air Agency Air Quality Report – October 2021

Figure 1: Air quality Index values for October 2021. The data represent the maximum AQI values across all monitoring stations within Spokane county.

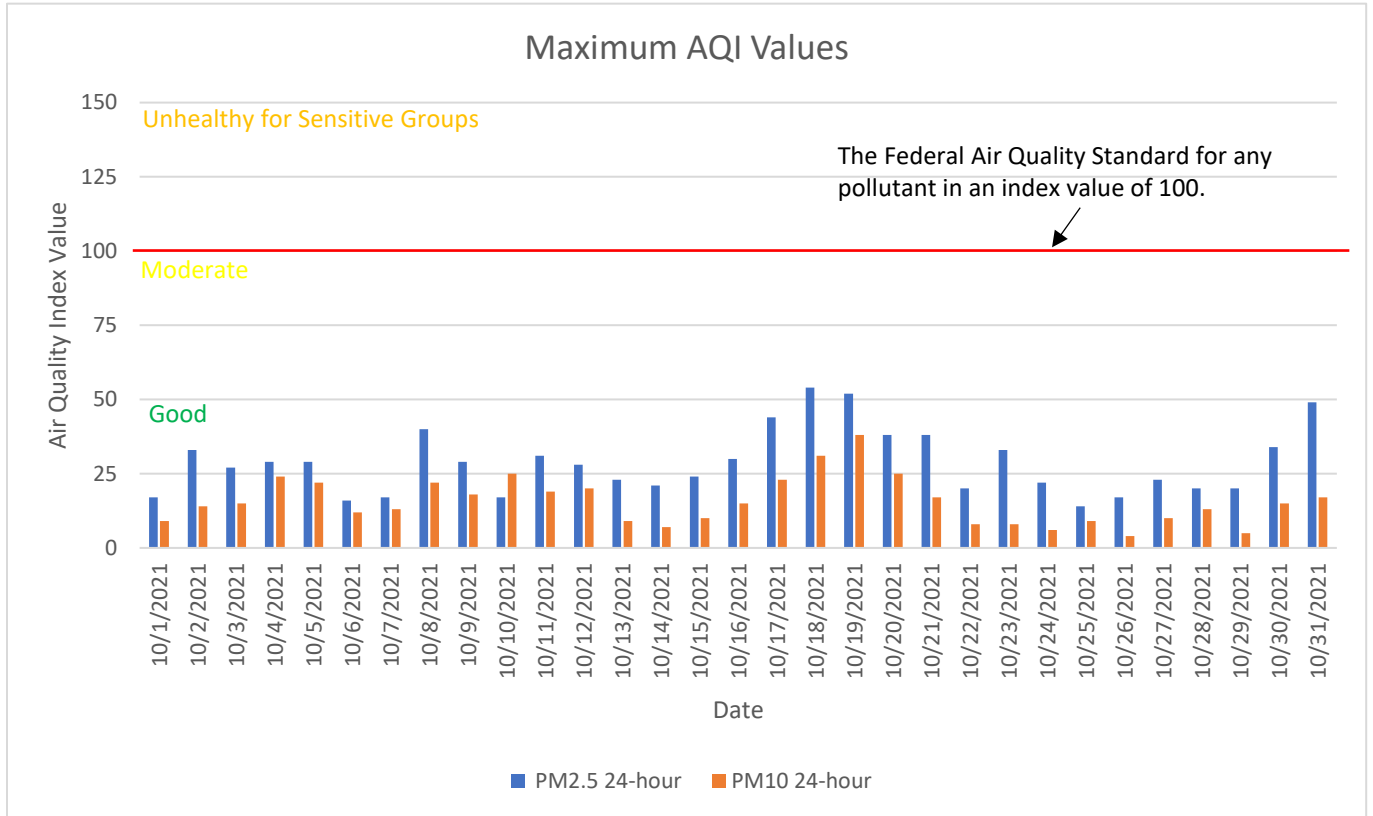


Figure 2: Multi-station 24-hour average PM2.5 for October 2021. PM2.5 24-hour federal standard = 35 $\mu\text{g m}^{-3}$;Highest concentration in October 2021, 13.5 $\mu\text{g m}^{-3}$

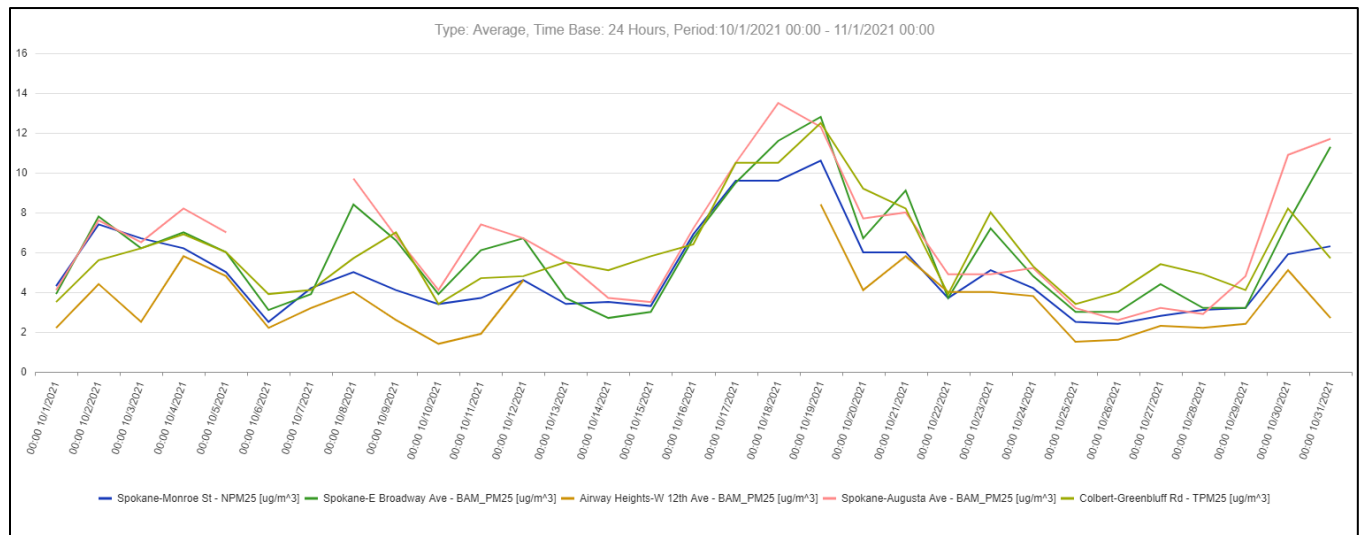


Figure 3: Multi-station 24-hour average PM10 for October 2021. PM10 24-hour federal standard = 150 $\mu\text{g m}^3$; Highest concentration in October 2021, 42 $\mu\text{g m}^3$

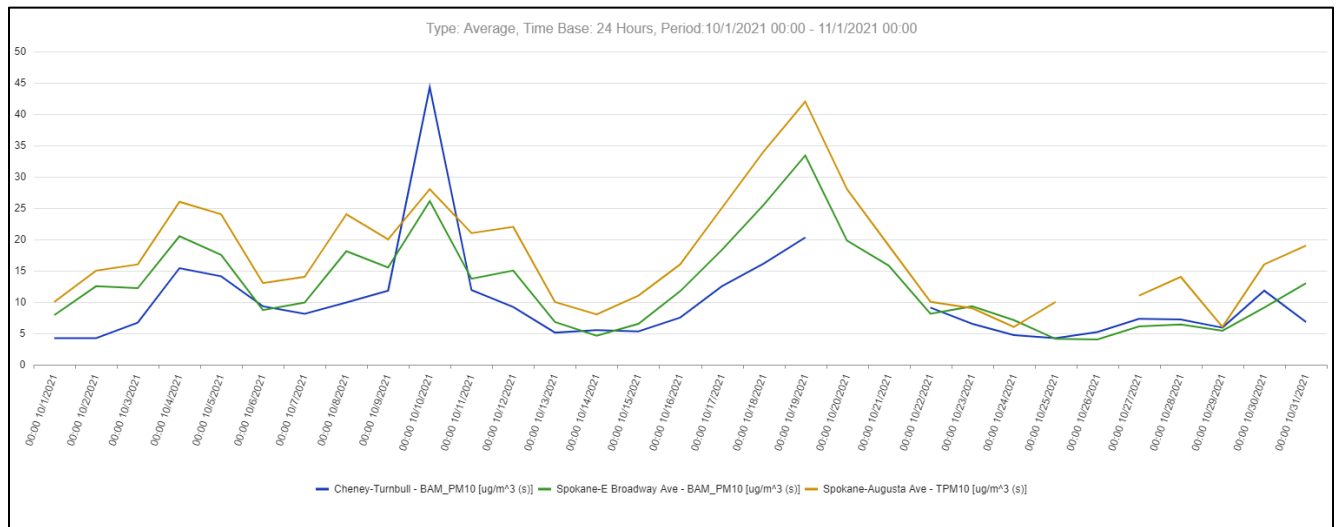


Table 1: AQI summary as of 10/31/21

Category	Number of days in October	Number of days this year to date
Good (0-50)	29	230
Moderate (51-100)	2	63
Unhealthy for Sensitive Groups (101-150)	0	5
Unhealthy (151-200)	0	6
Very Unhealthy (201-300)	0	0
Hazardous (301+)	0	0

Table 2: Maximum AQI values and pollutant concentrations for this reporting period.

Pollutant	Concentration	AQI	Location	Date
PM10	42 $\mu\text{g m}^3$	38 - Good	Augusta	10/19/21
PM2.5	13.5 $\mu\text{g m}^3$	54 - Moderate	Augusta	10/18/21

Table 3: Maximum AQI values and pollutant concentrations for this year to date.

Pollutant	Concentration	AQI	Location	Date
O ₃	0.076 ppm	119 – USG	Greenbluff	7/13/21
PM ₁₀	150 $\mu\text{g m}^3$	98 – Moderate	Turnbull	8/13/21
PM _{2.5}	117.7 $\mu\text{g m}^3$	183 - Unhealthy	Spokane Valley - Broadway	8/13/21

National Ambient Air Quality Standards (NAAQS)

The Clean Air Act requires EPA to set NAAQS for six common air pollutants: carbon monoxide, lead, nitrogen dioxide, particulate matter (2.5 and 10) and ground-level ozone. Particulate matter and ozone are measured in Spokane County.

Pollutant [links to historical tables of NAAQS reviews]	Primary/ Secondary	Averaging Time	Level	Form	
Carbon Monoxide (CO)	primary	8 hours	9 ppm	Not to be exceeded more than once per year	
		1 hour	35 ppm		
Lead (Pb)	primary and secondary	Rolling 3 month average	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded	
Nitrogen Dioxide (NO₂)	primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	primary and secondary	1 year	53 ppb ⁽²⁾	Annual Mean	
Ozone (O₃)	primary and secondary	8 hours	0.070 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years	
Particle Pollution (PM)	PM _{2.5}	primary	1 year	12.0 µg/m ³	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m ³	annual mean, averaged over 3 years
	PM ₁₀	primary and secondary	24 hours	35 µg/m ³	98th percentile, averaged over 3 years
		primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO₂)	primary	1 hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years	
	secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year	

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m³ as a calendar quarter average) also remain in effect.

(2) The level of the annual NO₂ standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O₃ standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O₃ standards.

(4) The previous SO₂ standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO₂ standards or is not meeting the requirements of a SIP call under the previous SO₂ standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Air Quality Index (AQI)

The AQI is EPA's color-coded tool for communicating daily air quality to the public and can be calculated for any of the criteria pollutants except lead. An index value above 100 indicates that the concentration of the pollutant exceeds the limit in the NAAQS. The table below shows the AQI breakpoints for particulate matter and ozone, the pollutants that are monitored in Spokane County.

Daily AQI Color	Level of Concern	Value of Index	Breakpoints O ₃ (ppm); 8-hr	Breakpoints PM _{2.5} (µg/m ³); 24-hr	Breakpoints PM ₁₀ (µg/m ³); 24-hr	Description of Air Quality
Green	Good	0 to 50	0.00-0.054	0.0-12.0	0-54	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	0.055-0.070	12.1-35.4	55-154	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	0.071-0.085	35.5-55.4	150-254	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	0.086-0.105	55.5-150.4	255-354	Some members of the general public may experience some health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	0.106-0.200	150.5-250.4	355-424	Health alert: everyone may experience more serious health effects.
Maroon	Hazardous	301+	0.201+	250.5+	425+	Health warnings of emergency conditions. The entire population is more likely to be affected.