Environmental Health

Air quality: Air Quality Index

The Air Quality Index is a daily index of air quality that reports how clean the air is and provides information on potential health risks. Oregon's index is based on three pollutants regulated by the federal Clean Air Act: ground-level ozone, particle pollution and nitrogen dioxide. The highest of the AQI values for the individual pollutant becomes the AQI value for that day.

The purpose of the AQI is to help you understand what local air quality means to your health. Each category is assigned a specific color and corresponds to a different level of health concern. 'Good' is considered satisfactory and air pollution poses little to no risk. 'Moderate' is acceptable, however there may be a moderate health concern for a very small number of people. 'Unhealthy for Sensitive Groups' likely does not affect the general public but can affect persons with heart and lung disease, older adults and children. 'Unhealthy' is when everyone may begin to experience some adverse health affects and members of the sensitive groups may experience more serious effects. 'Very Unhealthy' would trigger a health alert signifying that everyone may experience more serious health effects. 'Hazardous' would trigger health warnings of emergency conditions and the entire population is more likely to be affected.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects.
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

In 2018 16 counties out of 23 where pollutant measurements were available had "Good" AQI for 80% or more days (Figure 1). The statewide average is 83% "Good" AQI days, 13% "Moderate" days and 2% for both "Unhealthy for Sensitive Groups" and "Unhealthy".

High ground-level ozone formed by fossil fuel combustion increases in the summertime with high temperatures. Wildfire smoke increases particle pollution and can also contribute to higher ozone levels due to gases that are in the smoke.

For additional information about local and regional air quality trends in Oregon see the Oregon Air Quality Annual Report published by Oregon Department of Environmental Quality.

FIGURE 1

Number of Days by Air Quality Index Level, 2018

County*	#Days with AQI	#Days Good	#Days Moderate	#Days Unhealthy for Sensitive Groups	#Days Unhealthy	#Days Very Unhealthy
Baker	257	226	29	1	1	.
Benton	269	261	6	2	.	.
Clackamas	212	181	25	5	1	.
Columbia	271	260	7	4	.	.
Crook	302	246	50	4	2	.
Deschutes	271	223	34	9	5	.
Douglas	246	233	11	2	.	.
Grant	269	215	51	1	2	.
Harney	296	226	64	4	2	.
Jackson	303	195	66	11	27	4
Jefferson	92	67	19	5	1	.
Josephine	300	208	58	12	22	.
Klamath	299	184	75	12	25	3
Lake	294	226	47	12	9	.
Lane	365	266	91	7	1	.
Linn	273	243	25	5	.	.
Marion	271	244	23	4	.	.
Multnomah	365	324	34	6	1	.
Umatilla	254	221	25	5	2	1
Union	301	273	22	5	1	.
Wallowa	264	234	28	2	.	.
Wasco	267	242	20	4	1	.
Washington	365	313	46	6	.	.
All Counties	**6406**	**5311**	**856**	**128**	**103**	**8**

* Pollutant monitors are not located in Clatsop, Coos, Curry, Gilliam, Hood River, Lincoln, Malheur, Morrow, Polk, Sherman, Tillamook, Wheeler or Yamhill counties.

Additional Resources:

Centers for Disease Control and Prevention - Air Quality

Environmental Protection Agency – AirNow

Environmental Protection Agency - Particulate Matter Pollution

National Institute of Environmental Health Sciences – Air Pollution

Oregon Department of Environmental Quality – Particulate Matter

Oregon Department of Environmental Quality—Oregon Air Quality Annual Report

Oregon Smoke Information

About the Data: Data source is EPA Air Quality System Monitoring Data, State Air Monitoring Data. County data is only available when there are air quality monitors. Although AQI includes all available pollutant measurements, not all monitoring stations include all of the pollutants. For instance, ozone is not monitored year-round (except for 2 monitors in the Portland area) because ozone increases with hot temperatures and low winds in combination with pollution sources. The EPA's established ozone season for Orgon is May 1 – October 1.

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Date Updated: September 23, 2019

Oregon State Health Profile

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