

How Is Air Quality Measured?

- The particulate matter (also called “PM”) in wildfire smoke poses the biggest risk to the public’s health. The potential health effects vary based on the type of plants burning, atmospheric conditions and, most importantly, the size of the particles. Particles larger than 10 micrometers usually irritate only the eyes, nose and throat. Fine particles 2.5 micrometers or smaller (PM2.5) can be inhaled into the deepest part of the lungs, and *may* cause greater health concern.



Air Quality Monitoring Station

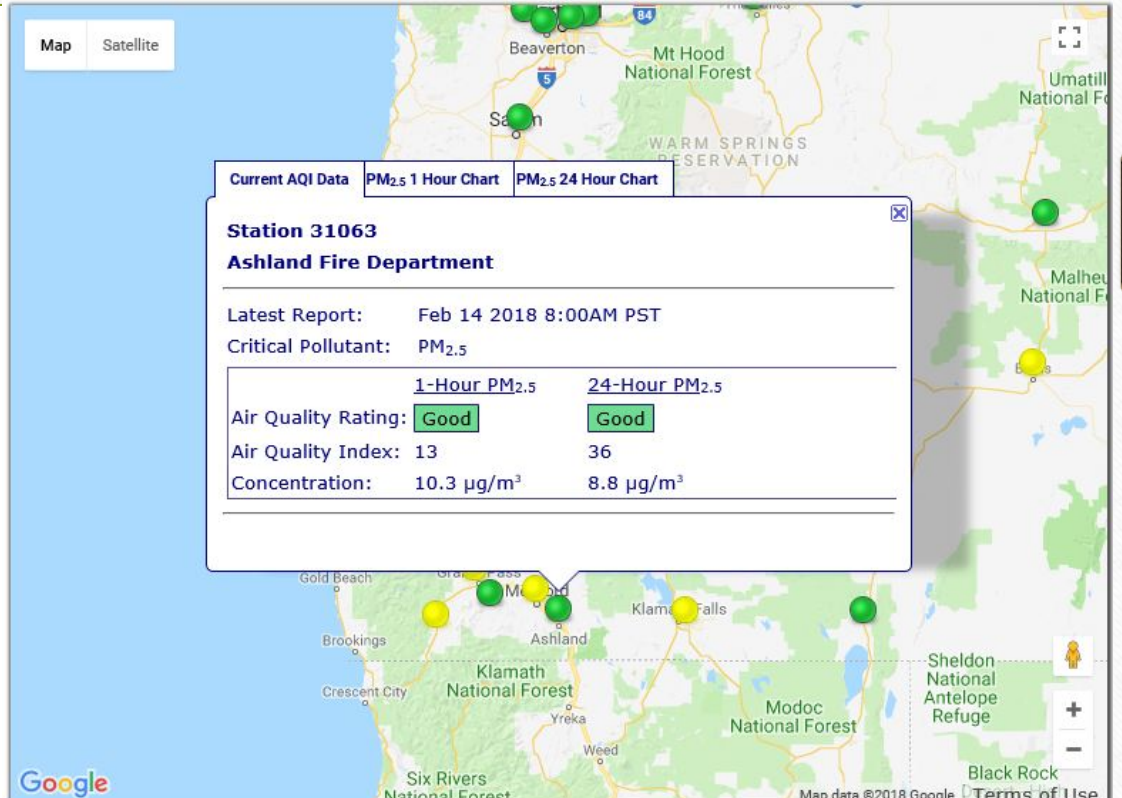
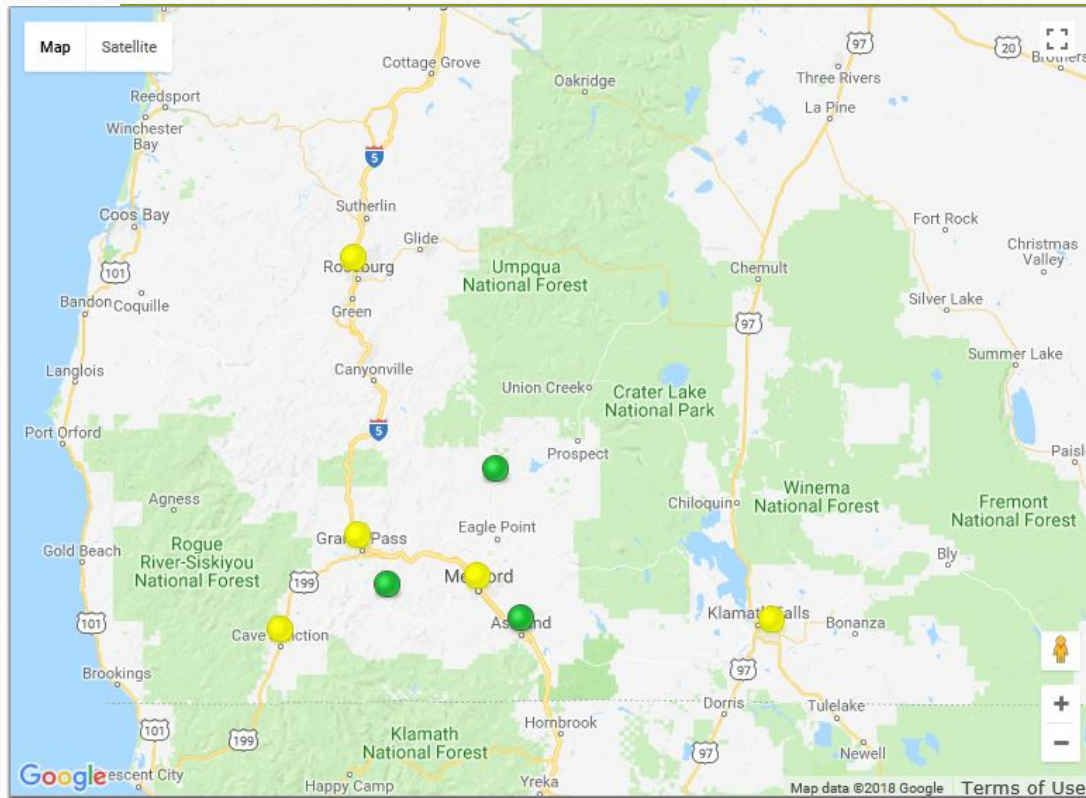
Location is strategically determined by elevation and proximity to urban and commercial land use.



Nephelometer

Oregon Department of Environmental Quality (DEQ) Air Quality Index (AQI)

<http://www.deq.state.or.us/aqi/>



What does the AQI tell us?

The Environmental Protection Agency has created a general guide for exposure to air particulates

- The units *ppm* and $\mu\text{g}/\text{m}^3$ stand for *parts per million* and *micrograms per cubic meter*, respectively. Both are used in the measurement of air pollutant concentration.

Air Quality Rating	Air Quality Index (AQI)	PM _{2.5} 1-hour Average ($\mu\text{g}/\text{m}^3$)	PM _{2.5} 24-hour Average ($\mu\text{g}/\text{m}^3$)	Ozone 8-hour Average (ppm)
GOOD	0 - 50	0 - 38	0.0 - 12.0	0.000 - 0.054
MODERATE	51 - 100	39 - 88	12.1 - 35.4	0.055 - 0.070
UNHEALTHY FOR SENSITIVE GROUPS	101 - 150	89 - 138	35.5 - 55.4	0.071 - 0.085
UNHEALTHY	151 - 200	138 - 351	55.5 - 150.4	0.086 - 0.105
VERY UNHEALTHY	201 - 300	352 - 526	150.5 - 250.4	0.106 - 0.200
HAZARDOUS	>300	>526	>250.5	>0.200

Table 1. The Air Quality Index is the EPA's scale for rating air quality

Public Health Impacts

- Know if you are at risk
- Recommendations for people with chronic diseases
- Recommendations for everyone
- Business continuity

Know Your Risk

- Heart or lung disease
- Older adults
- Children

Recommendations- Chronic Disease

- Have adequate medication supply
- Asthma management plan
- Talk with provider
 - Plan ahead
 - If condition worsen
- Portable air cleaner

Recommendations- Everyone

- Pay attention to local air quality reports
- Follow recommendations
- Do not add to pollution
- Do not rely on masks

Business Continuity

- Keep staff informed
- Alternate schedules
- Alternate work areas
- Office filters/ air conditioning
- Encourage staff to talk with provider

Resources

- Oregon Health Authority:
<http://www.oregon.gov/oha/PH/Preparedness/Prepare/Pages/PrepareForWildfire.aspx>
- For Schools: <https://apps.state.or.us/Forms/Served/1e8815h.pdf>
- Oregon OSHA: <http://osha.oregon.gov/Pages/index.aspx>