

## Interpreting Big Lake Road Digital Sign: Air Quality Messages

If you're reading this, perhaps you were intrigued by the Air Quality status you saw on the electronic sign on the corner of Big Lake Road and Brevator Road, or maybe you're just hearing about it and now you'll keep an eye out for these notices as you pass by!

The FDL Air Program is coordinating with FDL IT to manage the Air Quality display on this sign. Since we manually update this sign, there may be delay and some days the index on the sign may not reflect the true hourly index. Due to this, **this sign is set based on forecasts**, and air can be tricky to predict! But we're doing the best we can with the tools we've got!

Air can fluctuate *by the hour*, and I try my best to check forecasts and provide an adequate forecast from the resources available, but since hourly and daily values can vary, this sign will approximate the values over a period of time, as I am unable to update the sign every hour if I need to. Further in this document I'll break down these values, but let's touch on Air Indexes.

Air Quality indexes are measured in a few different ways, but a primary method is through Particulate Matter (PM) values. PM is basically particles in the air, and there are 2 primary size groupings, PM2.5 and PM10. These particles are tiny and can contribute to health issues, and these index values are a good thing to keep an eye on in maintaining strong health or mitigating existing health problems. To learn more about PM, check out the EPA's website <https://www.epa.gov/pm-pollution> or under the "Criteria Air Pollutants" list on the "Air Monitoring" tab on the FDL Air Program Website: <http://www.fdlrez.com/RM/airmonitor.htm>



Fond du Lac hosts a continuous PM monitor, and provides hourly data to the MPCA and it is available to view online, there are resources on page 2 of this document— one quick site to view these hourly monitor values are <https://www.airnow.gov/>

The alerts we post on the sign outside are typically based on index values observed and forecasted for PM. The values are ranked by concentration and the impacts those levels can have on populations: i.e. Green being the "Healthy" air with values of (0-50), all the way to Maroon being "Hazardous" air with values of (301-500):

AQI Basics for Ozone and Particle Pollution			
Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	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	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Any further questions or comments? Please reach out:

Paige Huhta, FDL Air Program Coordinator | Office: (218) 878-7108 | Email: [paigehuhta@fdlrez.com](mailto:paigehuhta@fdlrez.com)

## Accessing Additional Air Quality Alerts

- **Mobile Apps:**

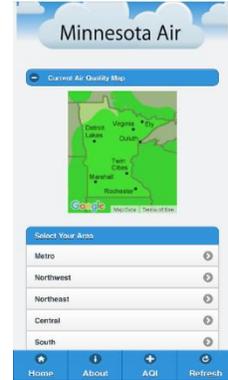
- **Minnesota Air**
  - Via MPCA
  - Apple or Android
- **AirNow**
  - Via EPA
  - Apple or Android



**Minnesota Air** <sup>12+</sup>  
State of Minnesota  
★★★★☆ 3.3 + 11 Ratings  
Free



**EPA AIRNow** <sup>12+</sup>  
United States Environmental Protection Agency (USEPA)  
Designed for iPad  
★76 in Weather  
★★★★☆ 3.0 + 343 Ratings  
Free



- **Twitter**

- Follow @mpca\_aqi

- **Air quality recorded forecasts**

- Twin Cities: 651-297-1630
- Greater Minnesota: 800-657-3694
- Air quality information: 612-251-5703

- **Alerts via Email**

- <https://www.enviroflash.info/signup.cfm>

- **Online Resources (scan QR Codes**

**with mobile device or enter address)**

- [www.airnow.gov/](http://www.airnow.gov/)

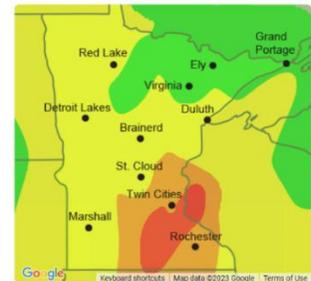


- <https://fire.airnow.gov/>



- <https://www.pca.state.mn.us/air-water-land-climate/current-air-quality-conditions>

**Current air quality conditions**



- <http://www.smogwatch.com/minn/realtimedata.cfm>

- **Minneapolis-St. Paul Real-time Air Quality Reporting Page**

[Forecast](#) | [Real-time Data](#) | [Air Quality Maps](#) | [Monitoring Site Map](#) | [Air Quality This Year](#)

Real-time Data: January 10, 2023 3PM (CST)

Site Name	County	Current PM2.5 AQI	Max PM2.5 AQI (CST)
<a href="#">Apple Valley</a>	Dakota	155	160 at 11AM
<a href="#">Blaine</a>	Anoka	98	100 at 1PM



Sign Presentation	Values	Meanings Behind the Sign
<b>Air Quality Today: Good (Healthy)</b>	Good Index 0 to 50	The Air Quality Index is indicating values of <b>Good</b> air quality today. If you don't smell smoke, you should be safe to spend as much time outside as you need.
<b>Air Quality Today: Good/Moderate</b>	Good— Moderate Index 0 to 100	The Air Quality Index is forecasted to be between the <b>Good and Moderate</b> levels. This range is acceptable, but advises at the <b>higher range</b> of values that unusually sensitive individuals should <b>limit prolonged</b> outdoor activities until air quality values improve.
<b>Air Quality Today: Moderate</b>	Moderate Index 51-100	The Air Quality Index is indicating values of <b>Moderate</b> air quality today (the yellow zone). This range is acceptable, but advises unusually sensitive individuals should <b>limit prolonged</b> outdoor activities until air quality values improve.
<b>Air Quality Today: Moderate/Unhealthy for Sensitive Groups</b>	Moderate— Unhealthy for Sensitive Groups Index 51-150	The Air Quality Index is forecasted to be between the <b>Moderate and Unhealthy for Sensitive Groups</b> . The <b>lower end</b> of these values advise unusually sensitive individuals should <b>limit prolonged</b> outdoor activities until air quality values improve. The <b>higher end</b> of these this range indicates that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>limit prolonged</b> outdoor activities until air quality values improve, as those affected may experience health effects. Keep an eye on air quality to see when values improve in order to gauge when to resume regular outdoor activity.
<b>Air Quality Today: Unhealthy for Sensitive Groups</b>	Unhealthy for Sensitive Groups Index 101-150	The Air Quality Index is indicating air quality values that are <b>Unhealthy for Sensitive Groups</b> (the orange zone). This range indicates that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>limit prolonged</b> outdoor activities until air quality values improve, as those affected may experience health effects. Keep an eye on air quality to see when values improve in order to gauge when to resume regular outdoor activity.
<b>Air Quality Today: Unhealthy/Unhealthy for Sensitive Groups</b>	Unhealthy— Unhealthy for Sensitive Groups Index 151-200	The Air Quality Index is forecasted to be between the <b>Unhealthy for Sensitive Groups and Unhealthy values</b> . The <b>lower end</b> of this range indicates that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>limit prolonged</b> outdoor activities until air quality values improve, as those affected may experience health effects. The <b>higher end</b> of this range indicates particularly that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>avoid prolonged</b> outdoor activities, as they may experience serious health effects. Everyone outside of those categories should <b>limit prolonged</b> outdoor activity, as some may experience health effects. Keep an eye on air quality to see when values improve in order to gauge when to resume regular outdoor activity.

Sign Presentation	Values	Meanings Behind the Sign
<p style="text-align: center;"><b>Air Quality Today: Unhealthy</b></p>	<p style="text-align: center;">Unhealthy Index 151-200</p>	<p>The Air Quality Index is indicating values of <b>Unhealthy</b> air quality (the red zone). This range indicates particularly that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>avoid prolonged</b> outdoor activities, as they may experience serious health effects. Everyone outside of those categories should <b>limit prolonged</b> outdoor activity, as some may experience health effects. Keep an eye on air quality values to see when air quality values improve to resume regular outdoor activity.</p>
<p style="text-align: center;"><b>Air Quality Today: Very Unhealthy/ Unhealthy</b> <i>(reduce outdoor activity)</i></p>	<p style="text-align: center;">Very Unhealthy— Unhealthy Index 151-300</p>	<p>The Air Quality Index is forecasted to be between <b>Unhealthy and Very Unhealthy</b> values. The <b>lower end</b> of these values indicates particularly that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>avoid prolonged</b> outdoor activities, as they may experience serious health effects. Everyone outside of those categories should <b>limit prolonged</b> outdoor activity, as some may experience health effects. The <b>higher range</b> of these values indicates particularly that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>avoid</b> outdoor activities. Everyone outside of those categories should <b>limit</b> outdoor activity. <b>The risk of health effects is increased for everyone.</b> Keep an eye on air quality values to see when air quality values improve to resume regular outdoor activity.</p>
<p style="text-align: center;"><b>Air Quality Today: Very Unhealthy</b> <i>(reduce outdoor activity)</i></p>	<p style="text-align: center;">Very Unhealthy Index 201-300</p>	<p>The Air Quality Index is indicating values of <b>Very Unhealthy air quality</b> (the purple zone). This range indicates particularly that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>avoid</b> outdoor activities. Everyone outside of those categories should <b>limit</b> outdoor activity. <b>The risk of health effects is increased for everyone.</b> Keep an eye on air quality values to see when air quality values improve to resume regular outdoor activity.</p>
<p style="text-align: center;"><b>Air Quality Today: Very Unhealthy/ Hazardous</b> <i>(reduce/avoid outdoor activity)</i></p>	<p style="text-align: center;">Very Unhealthy— Hazardous Index 201-301+</p>	<p>The Air Quality Index is forecasted to be between <b>Very Unhealthy and Hazardous</b> values. The <b>lower range</b> of these values indicates particularly that children, active adults, and people with respiratory disease (i.e. COPD or asthma) should <b>avoid</b> outdoor activities. Everyone outside of those categories should <b>limit</b> outdoor activity. <b>The risk of health effects is increased for everyone.</b> The <b>higher range</b> of these values indicate that <b>everyone should avoid all outdoor activity</b> until air quality improves, as <b>everyone can be affected by these values.</b> Keep an eye on air quality values/forecasts to see when air quality values improve and outdoor activities are safe to resume.</p>
<p style="text-align: center;"><b>Air Quality Today: Hazardous</b> <i>(avoid outdoor activity)</i></p>	<p style="text-align: center;">Hazardous 301 and higher</p>	<p>The Air Quality Index is indicating values of <b>hazardous</b> air quality (the maroon zone; <b>the worst air quality index zone</b>). These extreme range values indicate that <b>everyone should avoid all outdoor activity</b> until air quality improves, as <b>everyone can be affected</b> by these values. Keep an eye on air quality values/forecasts to see when air quality values improve and outdoor activities are safe to resume.</p>