Overview of 2021 Air Quality Monitoring Data for the Austin-Round Rock-Georgetown MSA

Clean Air Force of Central Texas' Air Quality Professional's Forum

January 13, 2022



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Ten – county service area; State of Texas planning region 12





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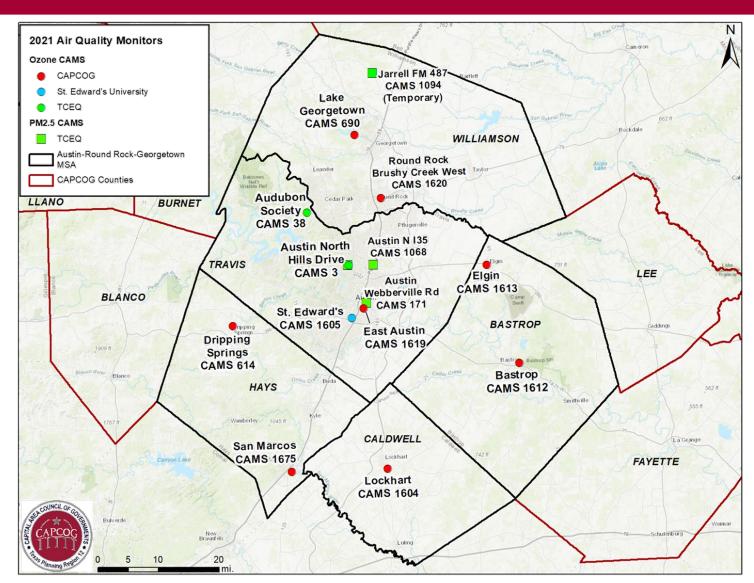
State Representative Erin Zwiener

Overview

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- Focus on Ozone (O₃) and Fine Particulate Matter (PM_{2.5}) as those are the two pollutants of concern to the Austin-Round Rock-Georgetown MSA for the National Ambient Air Quality Standards (NAAQS)
 - Map of 2021 O_3 and $PM_{2.5}$ Monitors in the MSA
 - Overview of the Air Quality Index (AQI)
 - 2021 AQI Days by Month, Pollutant, and Monitor
 - Preliminary 2019-2021 Design Values for O_3 and $PM_{2.5}$

O_3 and $PM_{2.5}$ 2021 Monitoring Locations



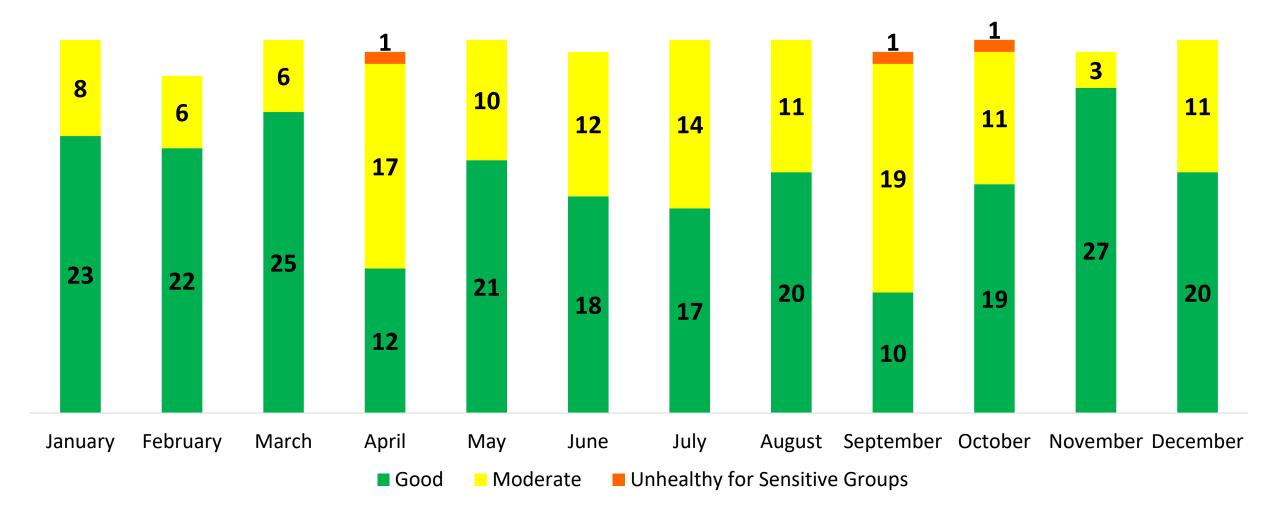


Air Quality Index (AQI)



| 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. |

2021 AQI Days by Month



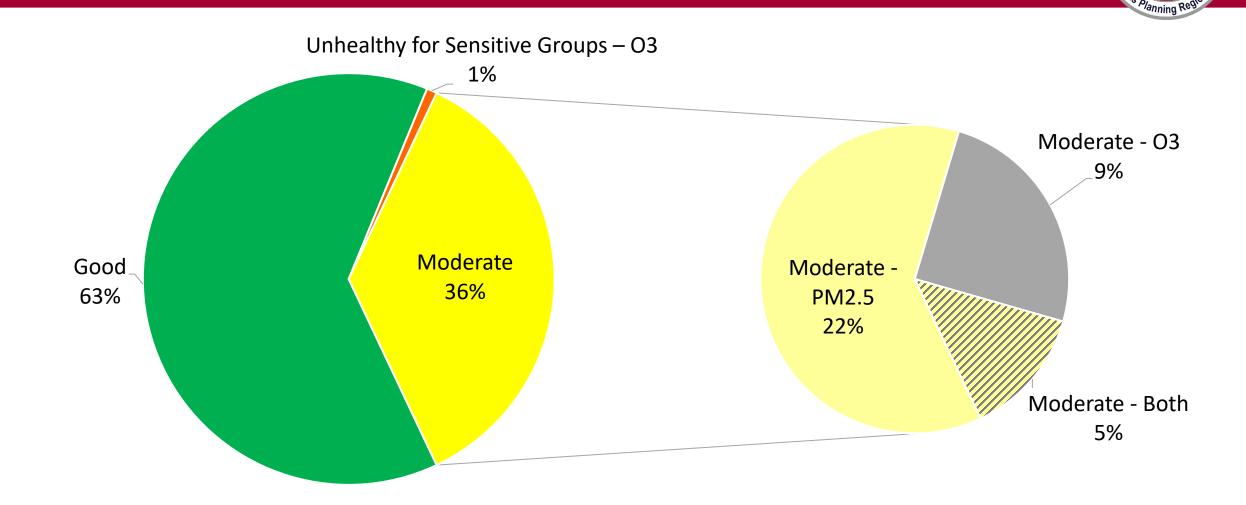
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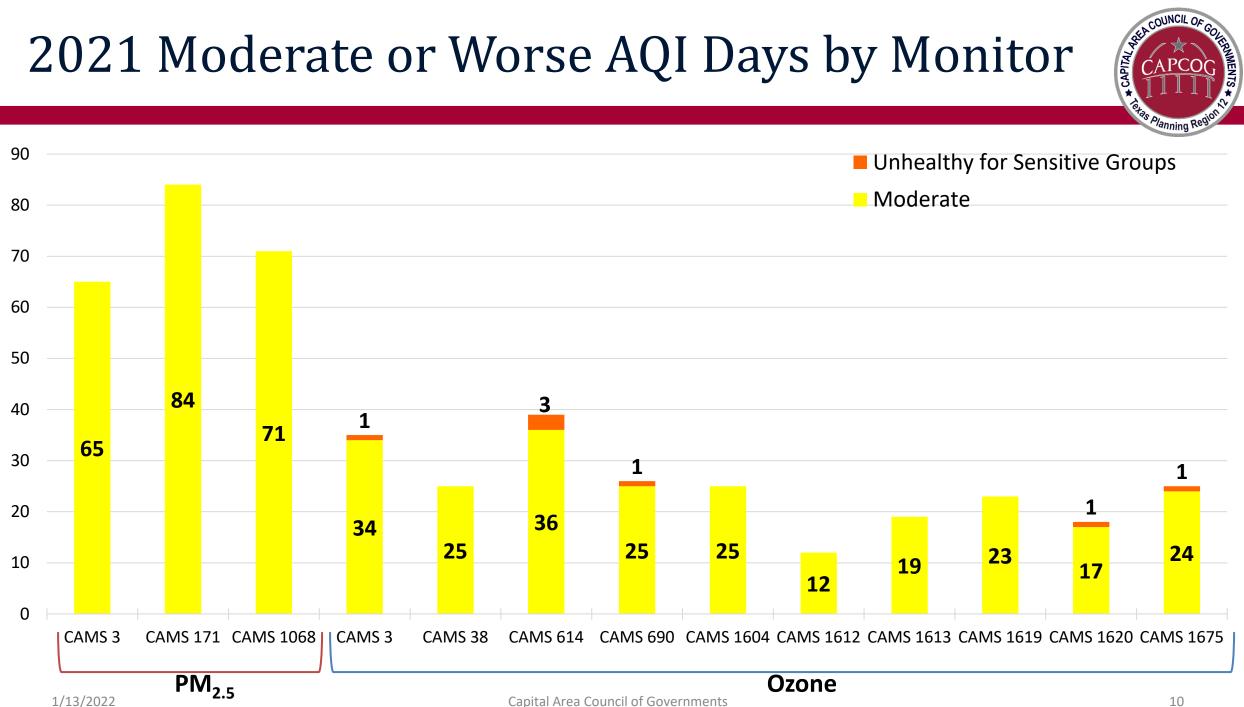
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2021 AQI Days Percentage by Pollutant



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Preliminary* O₃ Design Value for 2019-2021



| TCEQ Monitor | 2019 4 th High MDA8 O ₃ (ppb) | 2020 4 th High MDA8 O ₃ (ppb) | 2021 4 th High MDA8 O ₃ (ppb) | Preliminary 2019-2021 O ₃ Design Value (ppb) |
|-------------------------------------|--|--|--|--|
| CAMS 3 (Austin North Hills Dr.) | 65 | Not Valid | 66 | Not Valid |
| CAMS 38 (Austin Audubon Society) | 63 | 63 | 65 | <mark>63</mark> |

- *EPA determines the final 2019-2021 design values in the spring.
- The O_3 NAAQS is 70 parts per billion (ppb).
 - For now There is a reconsideration of the 2015 O_3 NAAQS underway by EPA.
- Since CAMS 3 was not operational for the majority of 2020, the region will be using CAMS 38's data to determine compliance with the O₃ NAAQS until 2023.

Preliminary* Annual PM_{2.5} Design Value for 2019-2021



| TCEQ Monitor | 2019 Annual Mean (µg/m³) | 2020 Annual Mean (µg/m³) | 2021 Annual Mean (µg/m³) | Preliminary 2019-2021 PM _{2.5} Design Value (μg/m ³) |
|------------------------------------|-----------------------------|-----------------------------|-----------------------------|---|
| CAMS 3 (Austin North Hills Dr.) | N/A | Not Valid | 8.29 | Not Valid |
| CAMS 171 (Webberville Rd.) | 9.40 | 9.53 | 9.46 | <mark>9.5</mark> |
| CAMS 1068 (Austin N 135) | 9.48 | 9.39 | 8.89 | 9.3 |

- *EPA determines the final 2019-2021 design values in the spring.
- The annual $PM_{2.5}$ NAAQS is 12 micrograms per cubic meter ($\mu g/m^3$).
 - For now There is a reconsideration of the 2012 annual PM_{2.5} NAAQS underway by EPA.
- Since CAMS 3 was not operational for the majority of 2020, the region will be using CAMS 171 or CAMS 1068 data to determine compliance with the annual PM_{2.5} NAAQS until 2023.





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