Highest AQI Days For March 2020

72 $PM_{2.5}$	March 28	New Orleans
67 Ozone	March 25	New Orleans
65 $PM_{2.5}$	March 25	Lake Charles
63 $PM_{2.5}$	March 8	New Orleans

Louisiana Air Quality Summary | March 2020

Sonoma Technology, Inc. (STI) meteorologists provide same-day, next-day, and two-day Air Quality Index (AQI) forecasts for ozone and particulate matter ($PM_{2.5}$) in eight Louisiana cities. The graphs and charts shown below and on pages 2 and 3 summarize next-day AQI forecasts and observed AQI levels for March 2020. A monthly meteorological summary is shown on page 4, the year-to-date count of days in each AQI category by city is shown on pages 5 and 6, and forecast accuracy statistics are shown on page 7.

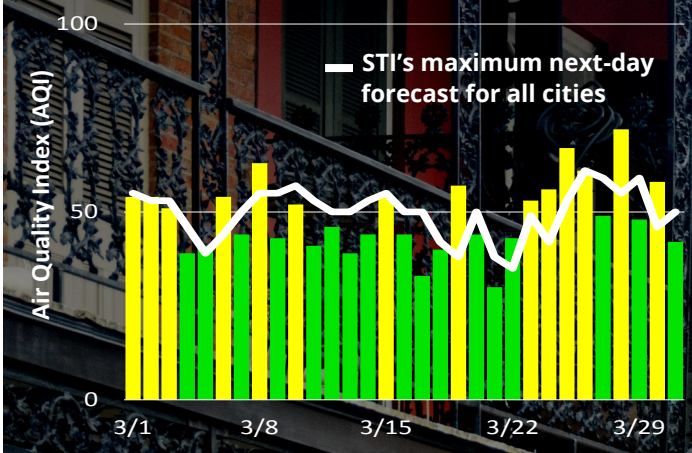
In March 2020, AQI levels in Louisiana were Good on 17 days and Moderate on 14 days. No Unhealthy for Sensitive Groups days were recorded, and no Action Days were issued.

Particle pollution was the main contributor to Moderate AQI days during the month. On these Moderate AQI days, light winds inhibited pollutant dispersion, local burns and transport from burns in Mexico increased particle concentrations, and morning fog enhanced particle production.

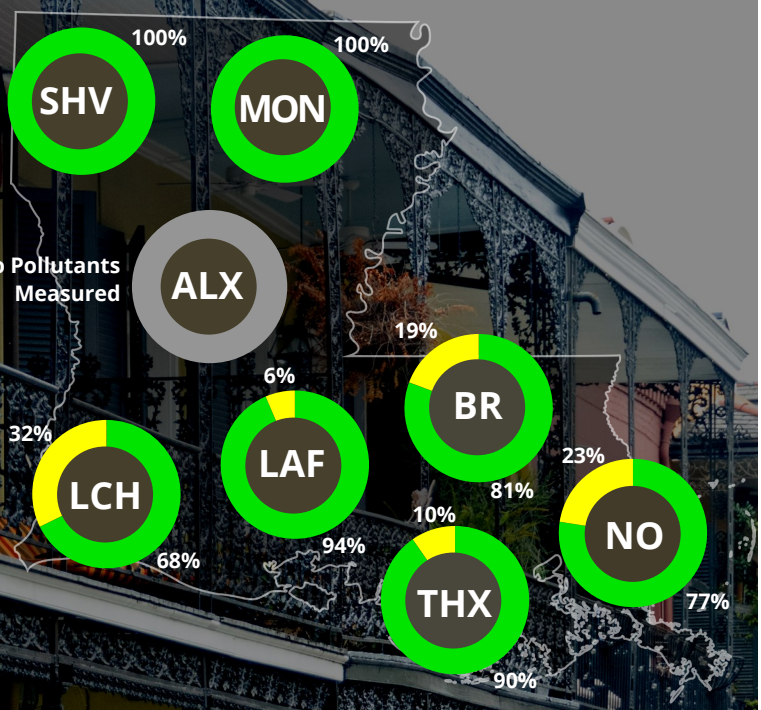
The highest AQI day of the month occurred on March 28. While moderate southerly winds typically aid mixing in the atmosphere, the winds on March 28 transported smoke from agricultural burns in southern Mexico and the Yucatan Peninsula into Louisiana. These conditions led to an increase in particle levels and resulted in an observed AQI of 72.

Statewide Maximum AQI for March 2020

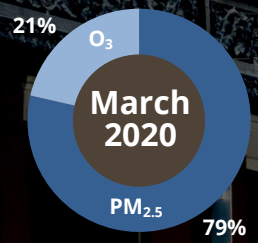
In March 2020, AQI levels in Louisiana were Good on 17 days and Moderate on 14 days. No Unhealthy for Sensitive Groups days were recorded, and no Action Days were issued this month.

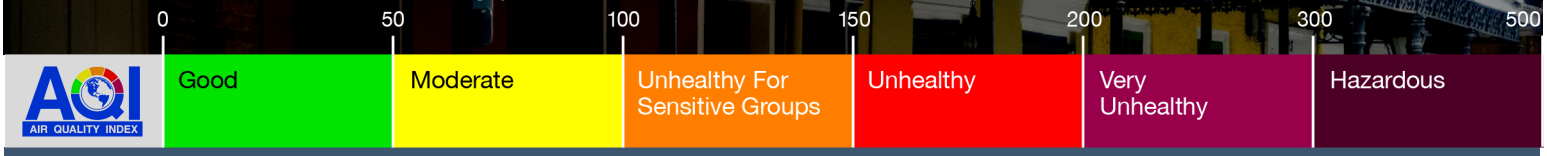


Daily Maximum AQI for March 2020 by Category and City*



Highest Pollutant on Moderate or higher AQI Days





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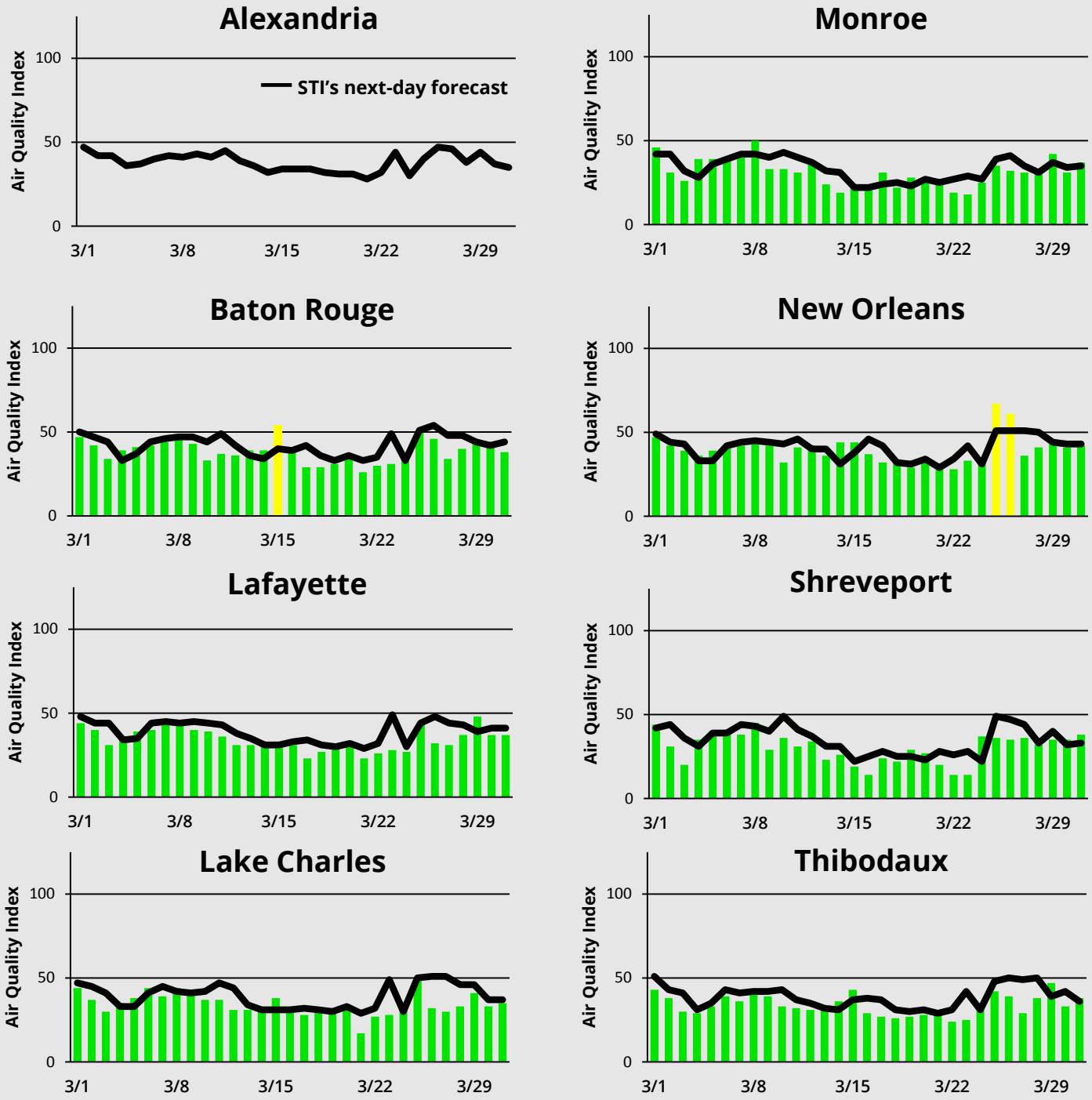
*BR – Baton Rouge
NO – New Orleans
SHV – Shreveport
LCH – Lake Charles
LAF – Lafayette
THX – Thibodaux
MON – Monroe
ALX – Alexandria

Highest AQI Days For Ozone								
67 Ozone	March 25 New Orleans	61 Ozone	March 26 New Orleans	54 Ozone	March 15 Baton Rouge	50 Ozone	March 8 Monroe

Ozone Forecasts and Observations, March 2020



Observational ozone data are not measured for Alexandria. No bars are shown for monitors or dates for which data were not available.

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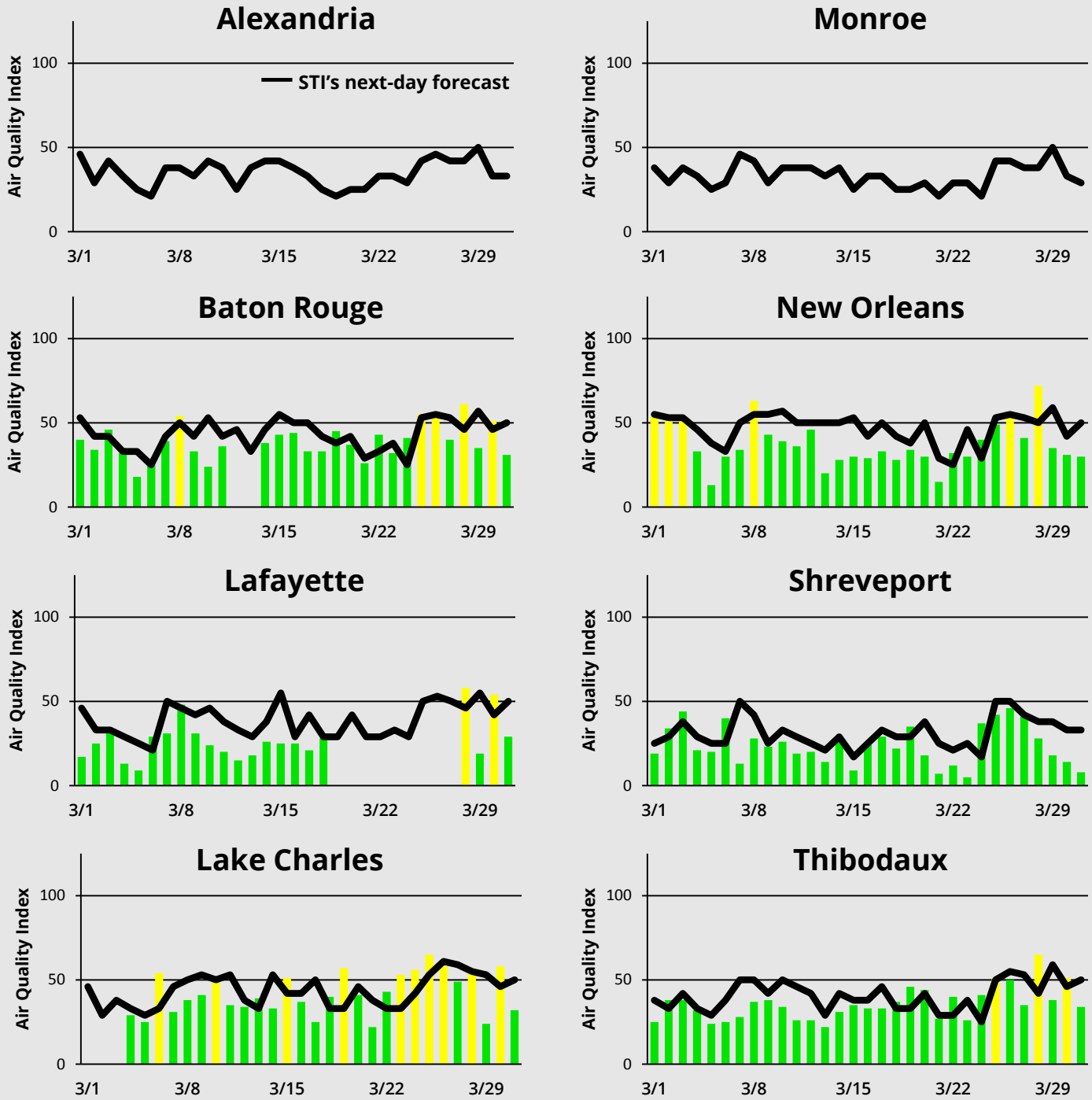
Highest AQI Days For $PM_{2.5}$							
72 $PM_{2.5}$	**March 28** New Orleans	65 $PM_{2.5}$	**March 25** Lake Charles	63 $PM_{2.5}$	**March 8** New Orleans	58 $PM_{2.5}$	**March 26 & 30** Lake Charles

$PM_{2.5}$ Forecasts and Observations, March 2020



Observational $PM_{2.5}$ data are not measured for Monroe or Alexandria. No bars are shown for monitors or dates for which data were not available.

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Meteorological and Air Quality Summary

Temperatures were significantly above average in all eight Louisiana forecast cities during March 2020. Precipitation was above average in the northern portion of the state, and below average in the southern portion. Of the 14 Moderate AQI days during the month, particle pollution was the primary contributor on 8 days. This was mainly driven by emissions from local agricultural burns and southerly winds transporting smoke from agricultural burns in Mexico. Cloud cover on most days this past month limited ozone formation. Furthermore, while moderate winds transported pollutants into the region, the winds also helped to disperse local concentrations of ozone. As a result, despite the above-normal temperatures, ozone was in the Good AQI category on most days.

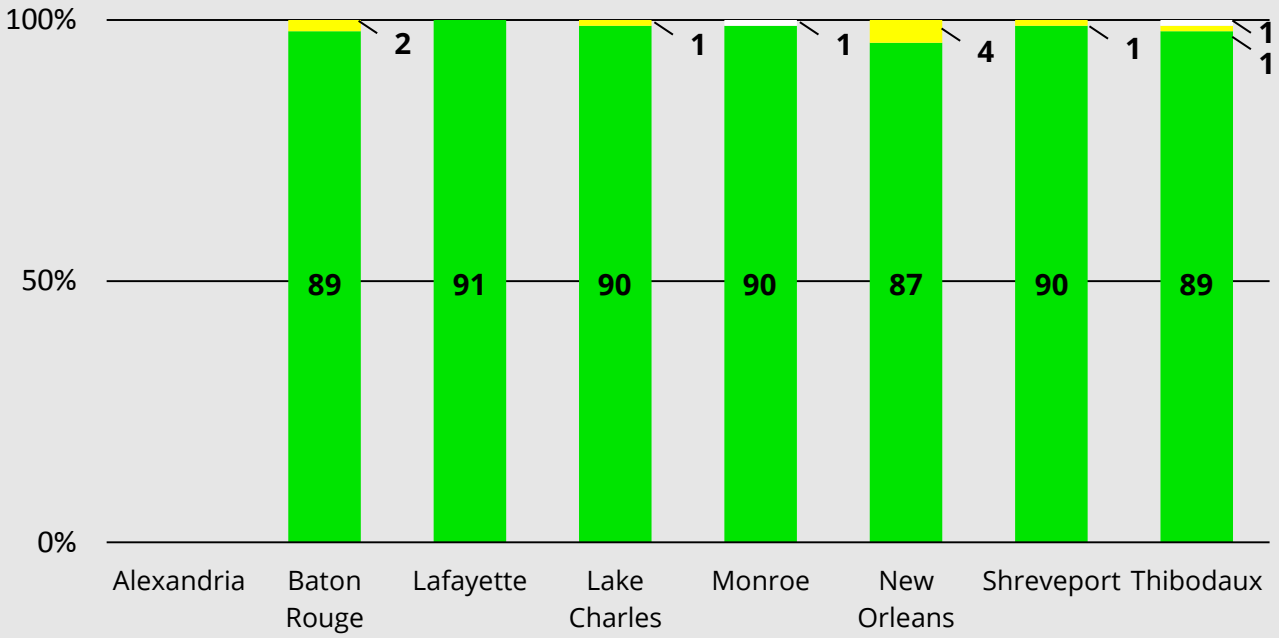
March 2020	Alexandria	Baton Rouge	Lafayette	Lake Charles	Monroe	New Orleans	Shreveport
Average temperature (Average temperature departure from normal) (°F)	66.6 (+7.3)	70.3 (+8.8)	70.0 (+7.8)	70.7 (+9.3)	65.3 (+7.3)	73.1 (+10.5)	64.7 (+6.8)
Highest Temperature (°F) (Day)	87 (26, 27)	89 (28)	86 (25)	85 (25, 27)	91 (27)	89 (25)	90 (27)
Lowest Temperature (°F) (Day)	38 (7)	41 (7)	41 (7)	42 (7)	38 (7)	45 (1)	37 (7)
Precipitation (Precipitation departure from normal) (inches)	4.65 (-0.40)	2.20 (-2.21)	3.09 (-0.70)	1.67 (-1.99)	5.70 (+0.98)	1.06 (-3.49)	5.90 (+1.76)
Number of days with 0.5 inches of precipitation or more	3	1	1	2	3	1	5
Number of clear days (as defined by the National Weather Service)	6	7	4	4	7	0	1
Average wind speed (mph)	7.7	8.2	7.5	8.9	7.5	8.8	8.2

Red: warmer-than-normal temperatures. Blue: colder-than-normal temperatures.
Green: wetter-than-normal conditions. Brown: drier-than-normal conditions.

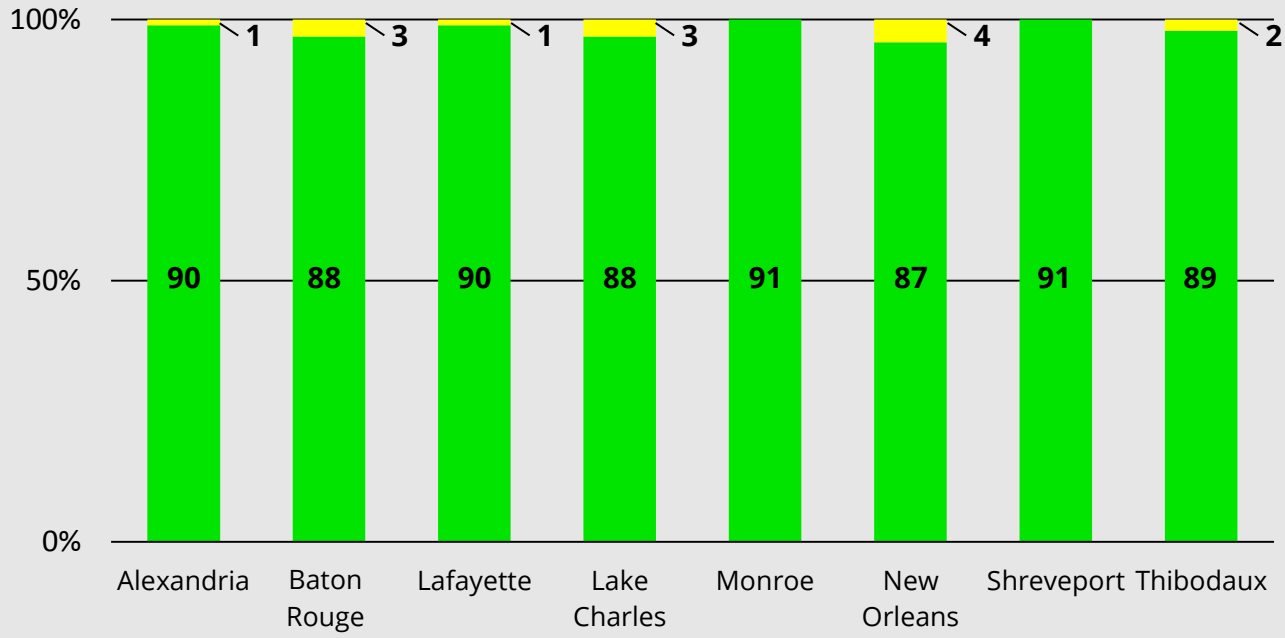
Meteorological data courtesy of the National Weather Service, w2.weather.gov/climate/index.php.
The National Weather Service does not report preliminary monthly climate data for Thibodaux.

Year-to-Date Ozone

Count of Ozone Observations in Each AQI Category



Count of Ozone Forecasts in Each AQI Category



Observational ozone data are not measured for Alexandria.

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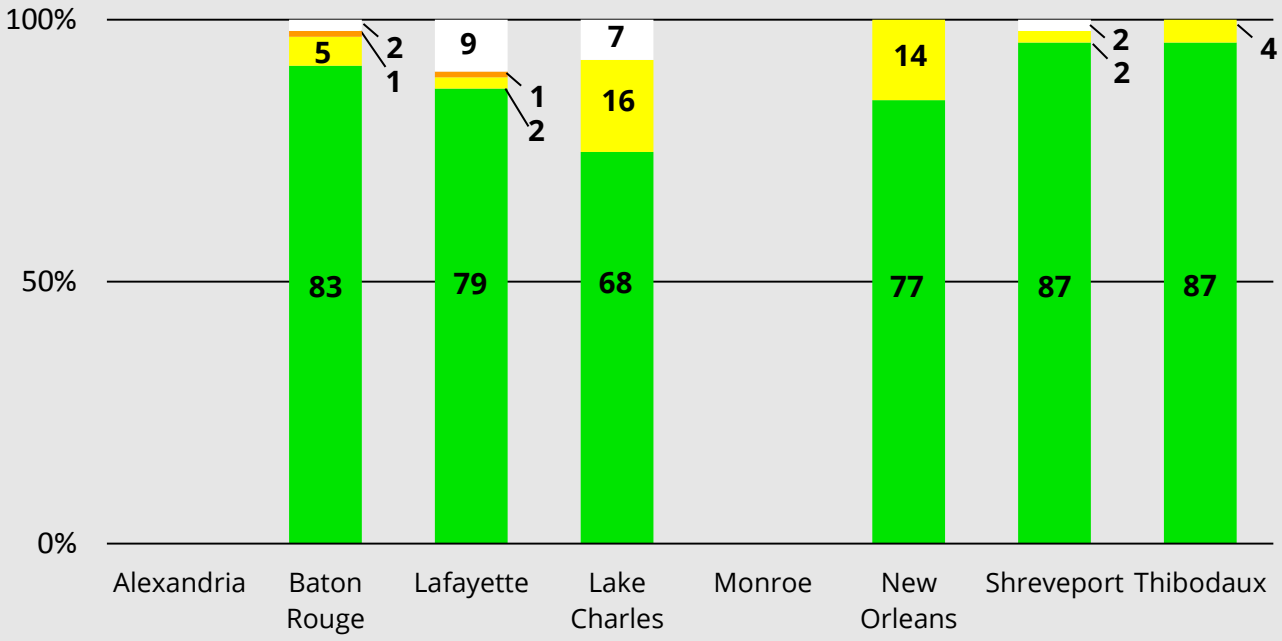
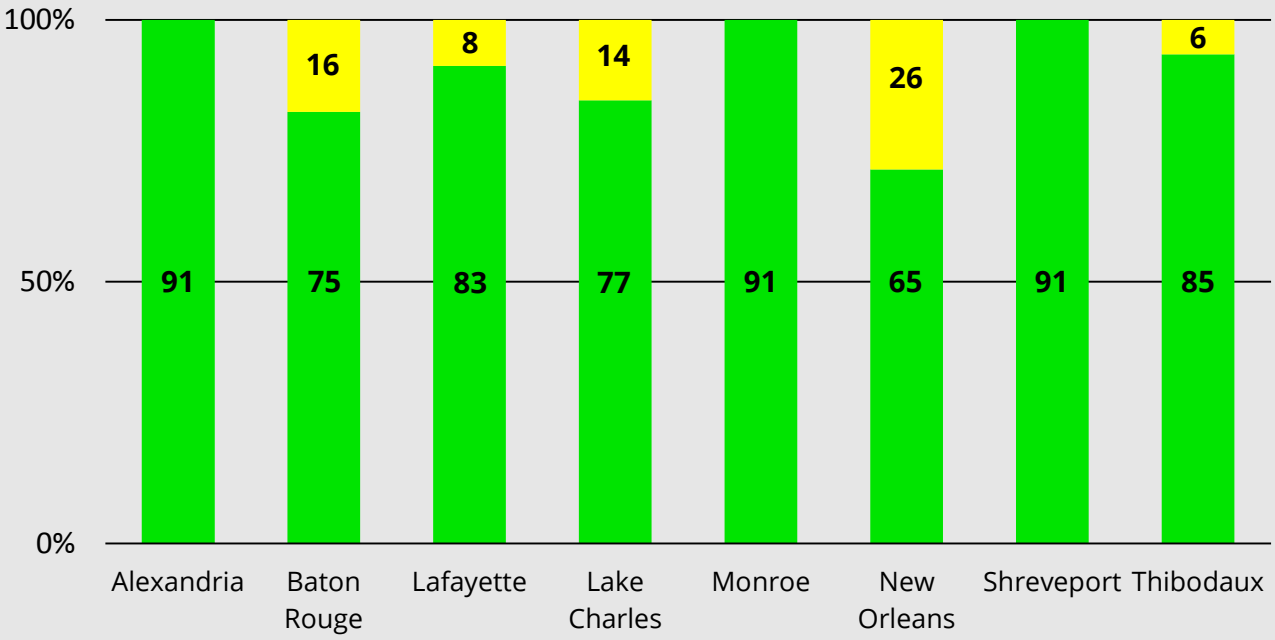
Year-to-Date $PM_{2.5}$

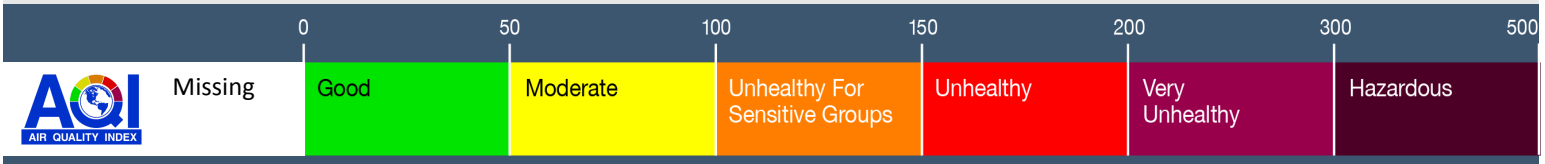
Count of $PM_{2.5}$ Observations in Each AQI Category



Count of $PM_{2.5}$ Forecasts in Each AQI Category



Observational $PM_{2.5}$ data are not measured for Monroe or Alexandria.



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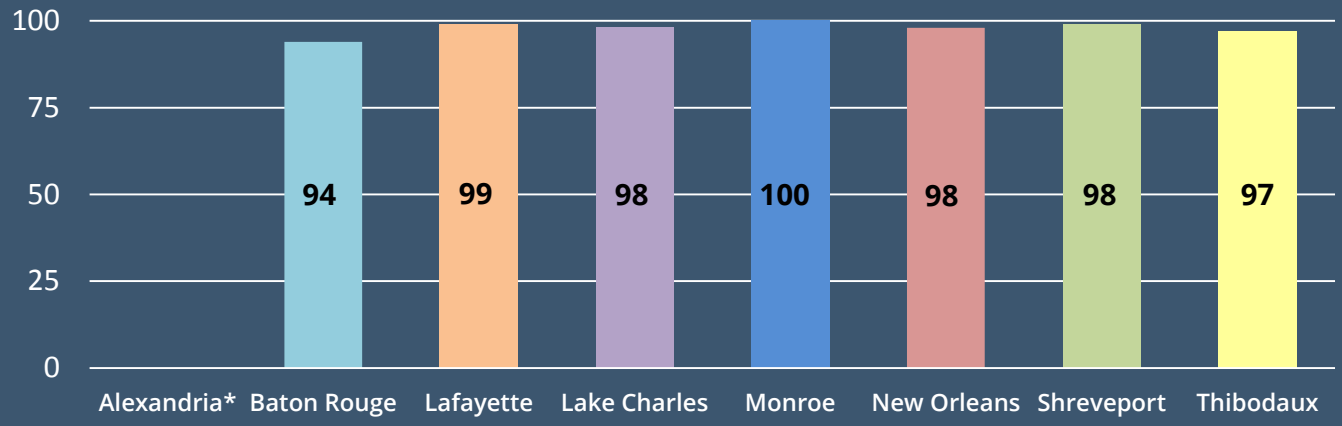
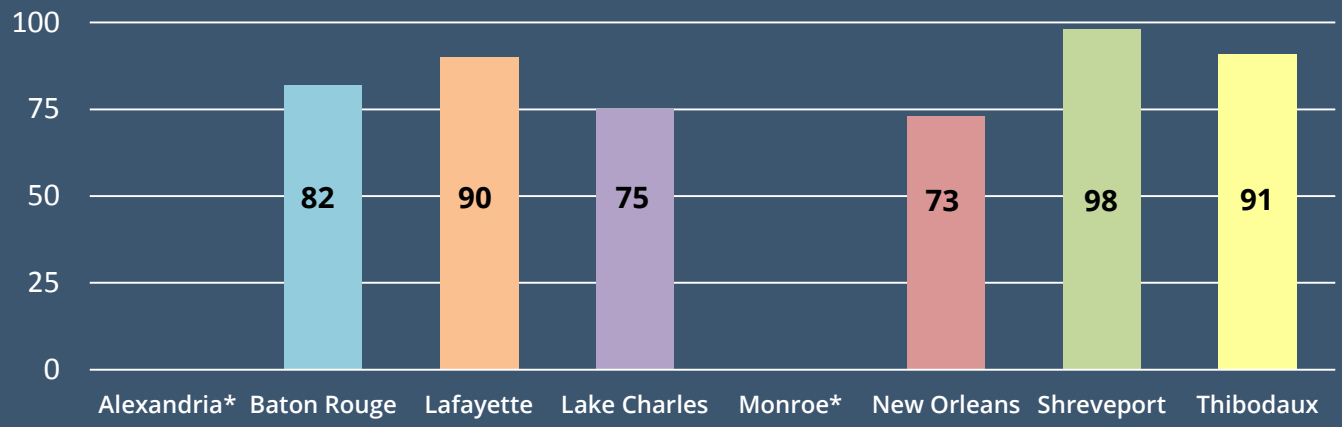
2020 Next-Day Forecast Statistics at the Good-to-Moderate Threshold

Next-day forecasting performance statistics for 2020 are presented in the charts below. The statistics are calculated by comparing forecasted and observed AQI levels for the Good-to-Moderate threshold. Percent Correct indicates the percentage of forecasts that correctly predicted whether observations would be above or below a certain threshold. Because few USG days were predicted or observed in the Louisiana forecast cities in 2020, Moderate-to-USG forecast statistics are not shown.

Percent Correct—Ozone



Percent Correct—$PM_{2.5}$



**Observational $PM_{2.5}$ data are not measured for Monroe, and ozone and $PM_{2.5}$ data are not measured for Alexandria.*

Although Sonoma Technology, Inc., prepares air quality forecasts using the highest professional standards, forecasting is an inexact science. Therefore, Sonoma Technology, Inc., cannot assume any liability or responsibility for any consequences that might arise due to the accuracy or inaccuracy of forecasts delivered under this contract, or for any decisions or actions taken based on the forecasts provided.

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