

2020 Ozone Season Summary for the Kansas City Region

Summary

There were no Ozone Alerts issued in the Kansas City region during the 2020 season from March 1 – October 31, 2020. However, the eight-hour ozone concentrations *did* exceed the 70 part-per-billion (ppb) standard on July 7 at two monitors - JFK (75) and Rocky Creek (71). Table 1 shows the number of each type of daily forecast compared to the actual number of days observed within each category.

Table 1. Forecast and Monitor Results

	Green	Yellow	Orange	Red
Actual	203	41	1	0
Forecasted	199	46	0	0

2015 Ozone National Ambient Air Quality Standard

On October 1, 2015, the U.S. Environmental Protection Agency issued the current national standard for ground-level ozone: 70 ppb averaged over eight hours. To promote public awareness, EPA has created the Air Quality Index (AQI); a tool that associates colors and health messages with ranges of various air pollutant concentrations. Table 2 shows the ozone concentrations associated with each AQI color.

Table 2. Air Quality Index under the 2015 Ozone Standard

Category	AQI Value	2015 8-hour ozone (ppb)
Good (Green)	0 – 50	0 – 54
Moderate (Yellow)	51 – 100	55 – 70
Unhealthy for Sensitive Groups (Orange)	101 – 150	71 – 85
Unhealthy (Red)	151 – 200	86 – 105
Very Unhealthy (Purple)	201 – 300	106 – 200
Hazardous (Maroon)	301 – 500	> 200

2020 Monitor Map

Ozone measurements defining the air quality for the Greater Kansas City Air Quality Maintenance area are made at six monitors. Two additional nearby monitors at Trimble and Leavenworth provide useful forecasting information, and two distant monitors at Chanute and El Dorado offer some forecasting guidance on how pollution is moving into and out of our region. Map 1, on the next page, shows the location of all nearby monitors and their current design value.

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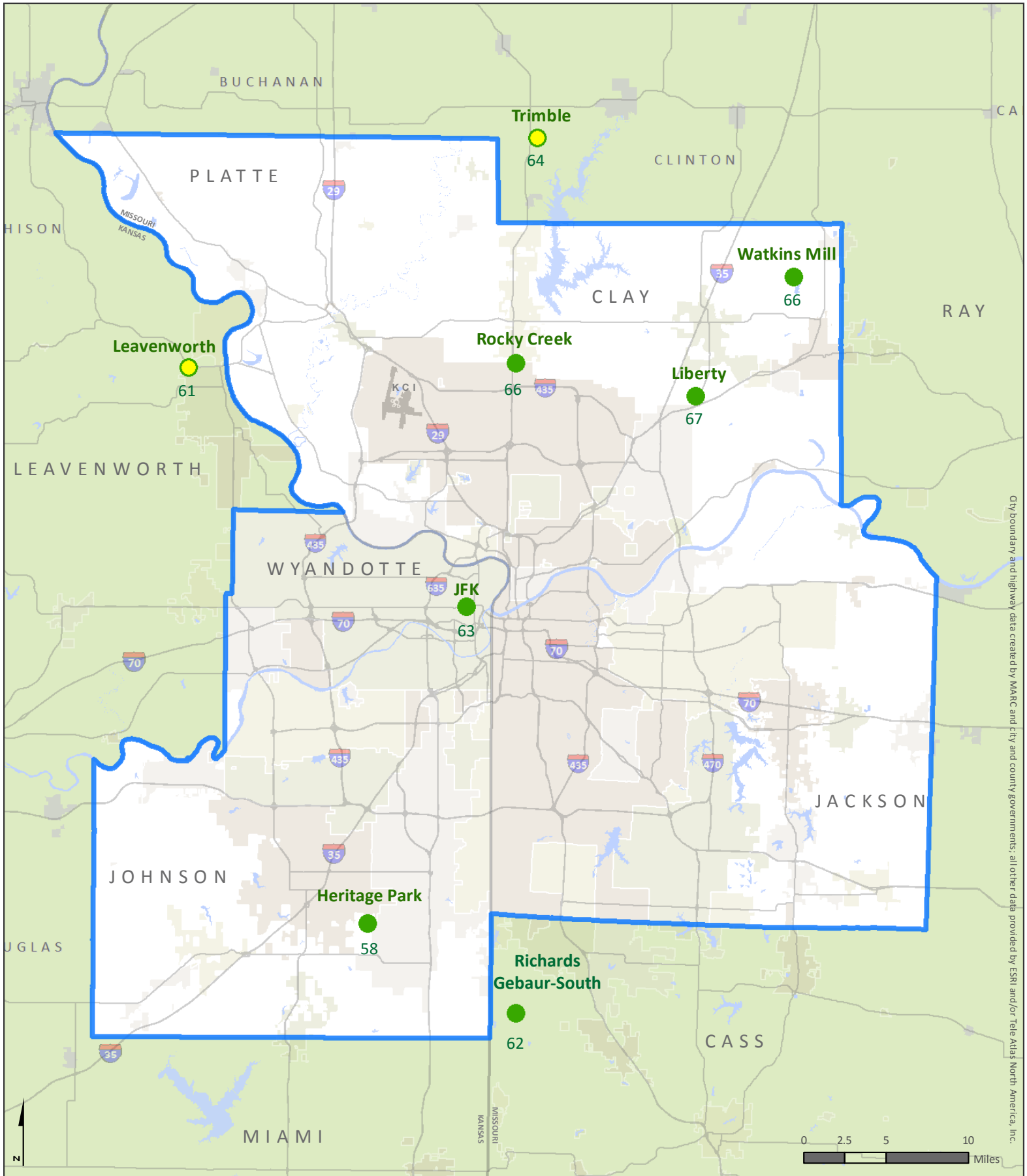
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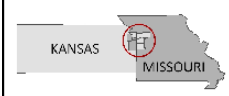
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Air Quality Monitoring Stations



City boundary and highway data created by MARC and city and county governments; all other data provided by ESRI and/or Tele Atlas North America, Inc.



- in area monitor
- out of area monitor
- Number = current Design Value.

 Air Quality Maintenance Area

Note: Monitor stations not shown above - El Dorado Springs & Chanute



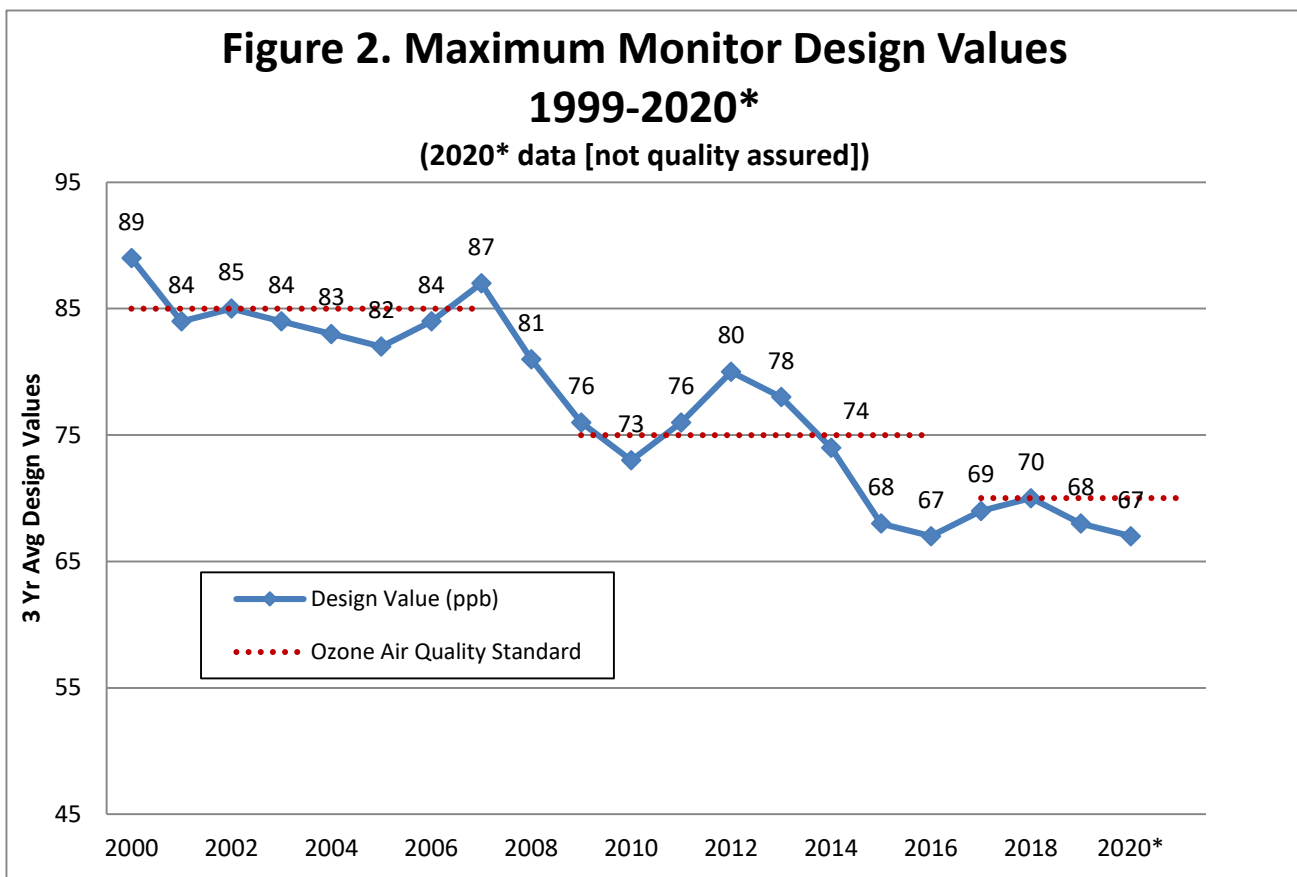
2020 Ozone Data & SkyCasts

Appendix A, at the end of this report, summarizes the SkyCasts and highest daily eight-hour monitor ozone readings for the 2020 ozone season. It includes all days that were forecasted to be a yellow or Ozone Alert day *or* had a maximum eight-hour ozone reading greater than or equal to 55 ppb. *Green SkyCast days with maximum eight-hour ozone values less than 55 ppb—days that were accurately forecasted to be green—will not be listed.*

Kansas City Ozone Design Values, 2012 – 2020

An exceedance of the eight-hour ozone standard at a monitored location does not necessarily result in a violating monitor. Compliance with the eight-hour ozone standard is based on the *three-year average of the fourth-highest ozone reading* from each monitor. Given the nature of its importance, this critical value – called the “Design Value,” is shown with the region’s ozone monitors on Map 1. Figure 2 below, shows the trendline of design values from 1999 to 2020.

Additional information about individual monitors are summarized in Appendix B including their fourth-high eight-hour readings as well as the design values for 2012 – 2020.



Appendix A. Summary of 2020 SkyCasts and Daily Maximum Eight-hour Ozone Values

Date	Daily Max 8-Hr Value (ppb)*	Monitor(s) Recording Max Value	SkyCast	Date	Daily Max 8-Hr Value (ppb)*	Monitor(s) Recording Max Value	SkyCast
April				July			
4/1	56	Watkins Mill, Rocky Creek	Green	7/1	47	JFK	Yellow
4/7	56	Rocky Creek	Yellow	7/2	51	JFK	Yellow
4/8	70	Richards Gebauer	Green	7/3	45	Richards Gebauer	Yellow
4/25	62	JFK	Green	7/4	46	Rocky Creek	Yellow
May				7/5	56	Rocky Creek	Yellow
5/1	59	Rocky Creek	Green	7/6	61	JFK	Yellow
5/2	62	Richards Gebauer	Yellow	7/7	75	JFK	Yellow
5/23	51	Rocky Creek	Yellow	7/8	59	Rocky Creek	Yellow
June				7/9	55	JFK	Green
6/2	59	Watkins Mill	Yellow	7/10	66	JFK	Yellow
6/3	48	Watkins Mill	Yellow	7/11	52	Watkins Mill	Yellow
6/4	68	Rocky Creek, Liberty	Yellow	7/13	55	Rocky Creek	Yellow
6/5	65	Liberty	Yellow	7/14	41	Rocky Creek	Yellow
6/6	53	Rocky Creek	Yellow	7/16	45	Rocky Creek, JFK	Yellow
6/7	55	Rocky Creek	Green	7/17	59	Rocky Creek	Yellow
6/8	60	Rocky Creek	Yellow	7/19	41	Richards Gebauer	Yellow
6/9	53	JFK	Yellow	7/22	54	Richards Gebauer, JFK	Yellow
6/12	68	Liberty	Yellow	7/23	57	JFK	Yellow
6/13	59	Rocky Creek, JFK	Yellow	7/24	50	Rocky Creek	Yellow
6/14	58	Rocky Creek	Yellow	7/25	41	Rocky Creek	Yellow
6/15	64	Rocky Creek	Yellow	August			
6/16	59	Rocky Creek	Yellow	8/16	53	Rocky Creek	Yellow
6/17	61	Rocky Creek	Yellow	8/20	61	Rocky Creek	Yellow
6/18	61	Rocky Creek	Yellow	8/21	68	Watkins Mill, Liberty	Yellow
6/20	57	JFK	Green	8/22	57	JFK	Yellow
6/21	59	Rocky Creek	Yellow	8/23	59	JFK	Yellow
6/24	62	Richards Gebauer	Green	8/24	65	Watkins Mill, Liberty	Yellow
6/25	65	Rocky Creek	Green	8/25	65	Watkins Mill, Liberty	Yellow
6/26	50	Rocky Creek	Yellow	8/26	57	Watkins Mill	Yellow
6/27	49	Rocky Creek	Yellow	8/27	45	Rocky Creek	Yellow
6/28	36	Rocky Creek	Yellow	8/28	54	Richards Gebauer	Yellow

*The 2020 eight-hour monitored ozone readings have not been quality assured and may contain errors.

**Questionable monitor reading – last reading before known malfunction.

Readings in **bold** represent a day with an eight-hour peak concentration above the 70ppb standard.

**Appendix A. Summary of 2020 SkyCasts and Daily Maximum Eight-hour Ozone Values
(Continued)**

Date	Daily Max 8-Hr Value (ppb)*	Monitor(s) Recording Max Value	SkyCast	Date	Daily Max 8-Hr Value (ppb)*	Monitor(s) Recording Max Value	SkyCast
September				October			
9/2	57	JFK	Green	10/7	62	Watkins Mill	Yellow
9/5	55	Watkins Mill	Yellow	10/8	60	Rocky Creek	Yellow
9/16	52	Heritage Park	Yellow	10/14	55	Watkins Mill	Green

*The 2020 eight-hour monitored ozone readings have not been quality assured and may contain errors.

Appendix B. Fourth-High Readings and Design Values, 2012-2020

	<u>Fourth-High Eight-Hour Values</u>								<u>Design Values</u>					
	13	14	15	16	17	18	19	20	13-15	14-16	15-17	16-18	17-19	18-20
<i>Missouri</i>														
Liberty	67	65	62	66	69	74	63	65	64	64	65	69	68	67
Watkins Mill	67	67	64	66	69	72	63	65	66	65	66	69	68	66
Rocky Creek	71	66	68	69	70	72	61	65	68	67	69	70	68	66
Richards Gebauer	64	65	65	61	63	66	64	58	64	63	63	63	64	62
Trimble	71	64	67	69	66	69	62	63	67	66	67	68	65	64
<i>Kansas</i>														
JFK (KCK)	66	63	63	64	61	69	58	63	64	63	62	64	62	63
Heritage Park	64	62	62	58	59	66	59	55	62	60	59	61	61	58
Leavenworth	66	68	59	62	59	64	61	59	64	63	60	61	61	61

*The 2020 eight-hour monitored ozone readings have not been quality assured and may contain errors. Readings in **bold** represent design values above the 70ppb standard.