



## **Air Quality Analysis for Ozone**

The following information is for the ambient air monitors operated by the state. This information is reported to the U.S. Environmental Protection Agency's Air Quality System database. The monitoring information provided in the chart below includes the preliminary design values for the ozone National Ambient Air Quality Standard, or NAAQS.

In March 2008, EPA strengthened the ozone NAAQS by setting it at a level of 0.075 parts per million (ppm) measured over 8 hours. Based on 2008-2010 monitoring data, the department recommended the St. Louis area as the only nonattainment area in the state with a boundary encompassing St. Louis City and St. Louis, St. Charles, Jefferson, and Franklin counties. In April 2012, the EPA finalized St. Louis as a nonattainment area for the 2008 ozone standard. In April 2016, EPA determined that the area has until July 20, 2016, to attain the standard. Missouri is following up that action by requesting that EPA review 2013 to 2015 ozone monitoring data to verify the area met the standard, and Missouri is working on plans so that EPA can formally redesignate the area back to attainment.

In October 2015 (effective in December 2015), EPA further strengthened the ozone NAAQS by setting it at a level of 0.070 ppm measured over 8 hours. Based on 2015 to 2017 monitoring data, only the West Alton site in the St. Louis area exceeds the standard.

More information on ozone health effects, the ozone standard and the designation process appears online at <http://dnr.mo.gov/env/apcp/ozone.htm>



# Eight-Hour Ozone Design Values<sup>a</sup>

Annual summary through March 18, 2018

Site	County	Fourth Highest Eight-Hour Ozone Averages					Critical Values	Exceedances > 70 ppb (2015 Std)	Design Values		
		Parts per billion (ppb) Year-to-date							Year-to-date		
		2014	2015	2016	2017 <sup>b</sup>	2018 <sup>cd</sup>	CV - 70	2018 <sup>^</sup>	14-16	15-17 <sup>b</sup>	16-18 <sup>c</sup>
<b>St. Louis</b>											
Arnold West	Jefferson	72	69	70	66	46	77	0	70	68	60
Blair Street*	St. Louis City	66	63	68	68	44	77	0	65	66	60
Foley West <sup>^</sup>	Lincoln	67	65	65	66	46	82	0	65	65	59
Maryland Heights	St. Louis	72	69	73	67	46	73	0	71	69	62
Orchard Farm	St. Charles	72	66	76	68	43	69	0	71	70	62
Pacific	St. Louis	65	65	67	62	47	84	0	65	64	58
West Alton	St. Charles	72	70	75	72	45	66	0	72	72	64
<b>Ste. Genevieve</b>											
Bonne Terre	Ste. Genevieve	69	63	67	65	48	81	0	66	65	60
<b>Southeast</b>											
Farrar	Perry	67	67	69	67	48	77	0	67	67	61
<b>Kansas City</b>											
Liberty	Clay	65	62	66	69	49	78	0	64	65	61
RG South	Cass	65	65	61	63	50	89	0	63	63	58
Rocky Creek	Clay	66	68	69	70	50	74	0	67	69	63
Trimble	Clinton	64	68	69	66	48	78	0	67	67	61
Watkins Mill	Clay	67	64	66	69	46	78	0	65	66	60
<b>Springfield</b>											
Fellows Lake	Greene	60	61	59	62	52	92	0	60	60	57
Hillcrest H.S.	Greene	60	61	58	61	49	94	0	59	60	56
<b>Outstate</b>											
Alba	Jasper	65	61	59	60	53	94	0	61	60	57
Bransont†	Taney	58	59	56	58	†	N/A	0	57	57	†
El Dorado Springs	Cedar	65	60	60	60	52	93	0	61	60	57
Finger Lakes	Boone	64	63	65	61	49	87	0	64	63	58
Mark Twain*	Monroe	60	58	59	60	46	94	0	59	59	55
New Bloomfield	Callaway	64	65	64	58	48	91	0	64	62	56
Savannah	Andrew	64	64	62	62	48	89	0	63	62	57

0

<sup>a</sup>Quality assured data through Dec. 31, 2016.

<sup>b</sup>Preliminary data through Dec. 31, 2017. Do not cite or quote.

<sup>c</sup>Year-to-date preliminary data. Do not cite or quote.

<sup>d</sup>Fourth highest concentration measured year-to-date. Concentrations may change as more data is collected over the year.

\*Year-round ozone monitoring.

<sup>^</sup>Monitor relocated less than a mile east of the previous site (within the same neighborhood scale of representativeness). Monitoring began on March 1, 2017.

Design values in red and bold are violations of 2015 standard.

†Monitoring discontinued on Oct. 31, 2017.



## Four Highest Eight-Hour Ozone Values

Through March 18, 2018

2018<sup>c</sup>

Year-to-date in parts per billion (ppb)

	1 <sup>st</sup> High	2 <sup>nd</sup> High	3 <sup>rd</sup> High	4 <sup>th</sup> High	CV - 70
<b>St. Louis</b>					
Arnold West	60	49	47	46	77
Blair Street*	64	47	45	44	77
Foley West <sup>^</sup>	65	49	47	46	82
Maryland Heights	64	47	47	46	73
Orchard Farm	61	45	44	43	69
Pacific	63	48	48	47	84
West Alton	61	46	45	45	66
<b>Ste. Genevieve</b>					
Bonne Terre	69	49	48	48	81
<b>Southeast</b>					
Farrar	60	50	48	48	77
<b>Kansas City</b>					
Liberty	65	51	49	49	78
RG South	65	53	51	50	89
Rocky Creek	65	50	50	50	74
Trimble	69	51	48	48	78
Watkins Mill	64	49	46	46	78
<b>Springfield</b>					
Fellows Lake	63	56	55	52	92
Hillcrest H.S.	61	53	52	49	94
<b>Outstate</b>					
Alba	66	57	54	53	94
Branson†	-	-	-	-	N/A
El Dorado Springs	65	57	53	52	93
Finger Lakes	64	49	49	49	87
Mark Twain*	60	48	46	46	94
New Bloomfield	64	51	49	48	91
Savannah	63	53	50	48	89

**CV - 70:** The critical value (CV) is the current year's fourth-highest value, which, if monitored, could yield a violation of the ozone standard for the most current three year period. (CV = 213 ppb – last year's fourth-highest value – previous year's fourth-highest value).

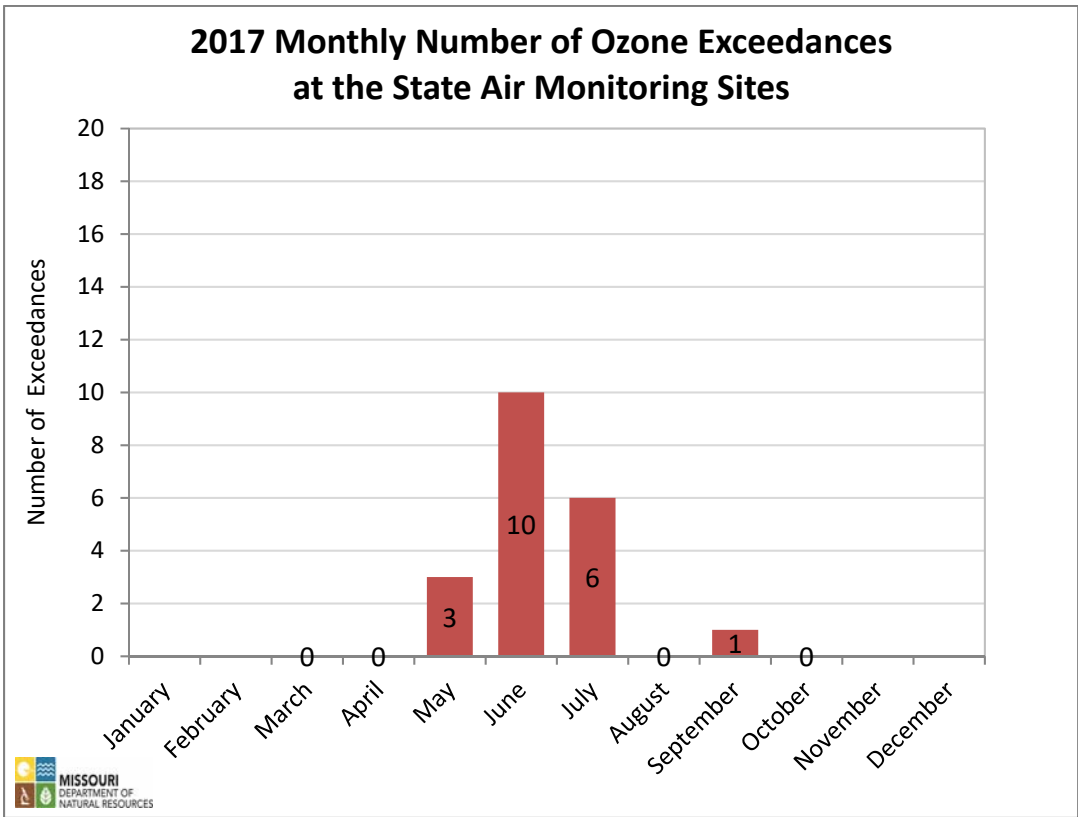
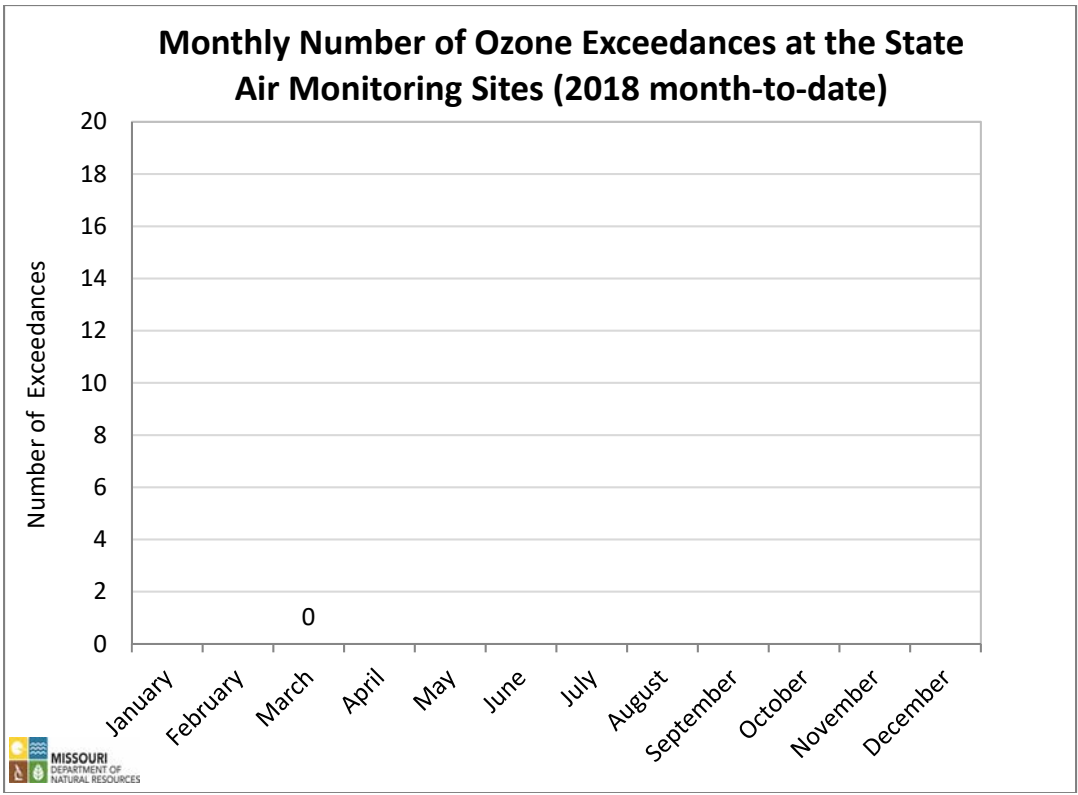
<sup>c</sup>Year-to-date preliminary data. Do not cite or quote.

\*Year-round ozone monitoring.

<sup>^</sup>Monitor relocated less than a mile east of the previous site (within the same neighborhood scale of representativeness). Monitoring began on March 1, 2017.

†Monitoring discontinued on Oct. 31, 2017.







**Daily 2018 Maximum Average Eight-Hour Concentration  
of Ground-Level Ozone in Parts per Million**

(Since March 1, 2018, beginning of ozone season)<sup>^</sup>

	Area's Maximum	Site's Maximum	1-Mar	2-Mar	3-Mar	4-Mar	5-Mar	6-Mar	7-Mar	8-Mar
<i>St. Louis</i>	0.065									
Arnold West		0.060	0.041	0.043	0.046	0.046	0.035	0.039	0.040	0.042
Blair Street*		0.064	0.042	0.038	0.042	0.041	0.031	0.038	0.040	0.042
Foley West <sup>^</sup>		0.065	0.044	0.042	0.045	0.046	0.035	0.037	0.042	0.043
Maryland Heights		0.064	0.042	0.041	0.045	0.046	0.036	0.038	0.041	0.043
Orchard Farm		0.061	0.043	0.041	0.043	0.043	0.034	0.036	0.040	0.040
Pacific		0.063	0.042	0.043	0.047	0.046	0.034	0.040	0.043	0.043
West Alton		0.061	0.042	0.043	0.045	0.045	0.035	0.039	0.042	0.042
<i>Ste. Genevieve</i>	0.069									
Bonne Terre		0.069	0.042	0.042	0.048	0.048	0.040	0.041	0.043	0.045
<i>Southeast</i>	0.060									
Farrar		0.060	0.040	0.045	0.047	0.050	0.039	0.042	0.043	0.043
<i>Kansas City</i>	0.069									
Liberty		0.065	0.043	0.044	0.049	0.042	0.042	0.041	0.040	0.042
RG South		0.065	0.041	0.045	0.050	0.042	0.041	0.042	0.041	0.044
Rocky Creek		0.065	0.042	0.045	0.050	0.043	0.042	0.041	0.040	0.041
Trimble		0.069	0.041	0.044	0.048	0.042	0.040	0.041	0.041	0.042
Watkins Mill		0.064	0.040	0.043	0.046	0.040	0.039	0.040	0.040	0.042
<i>Springfield</i>	0.063									
Fellows Lake		0.063	0.046	0.046	0.052	0.044	0.043	0.041	0.045	0.045
Hillcrest H.S.		0.061	0.046	0.044	0.049	0.042	0.042	0.041	0.045	0.047
<i>Outstate</i>	0.066									
Alba		0.066	0.044	0.047	0.052	0.043	0.043	0.042	0.044	0.047
Branson†		0.000	-	-	-	-	-	-	-	-
El Dorado Springs		0.065	0.045	0.046	0.050	0.042	0.043	0.042	0.044	0.048
Finger Lakes		0.064	0.042	0.045	0.049	0.046	0.039	0.039	0.043	0.044
Mark Twain*		0.060	0.043	0.043	0.044	0.046	0.034	0.037	0.041	0.042
New Bloomfield		0.064	0.043	0.044	0.049	0.045	0.039	0.039	0.042	0.046
Savannah		0.063	0.042	0.046	0.050	0.043	0.041	0.041	0.040	0.044

<sup>^</sup>All the 2018 data have not been quality assured and the values are preliminary. Do not cite or quote.

\*Year-round ozone monitoring.

<sup>^</sup>Monitor relocated less than a mile east of the previous site (within the same neighborhood scale of representativeness). Monitoring began on March 1, 2017.

Averages in red or bold exceed the 2015 standard.

Ozone season is from March 1 to October 31.

†Monitoring discontinued on Oct. 31, 2017.

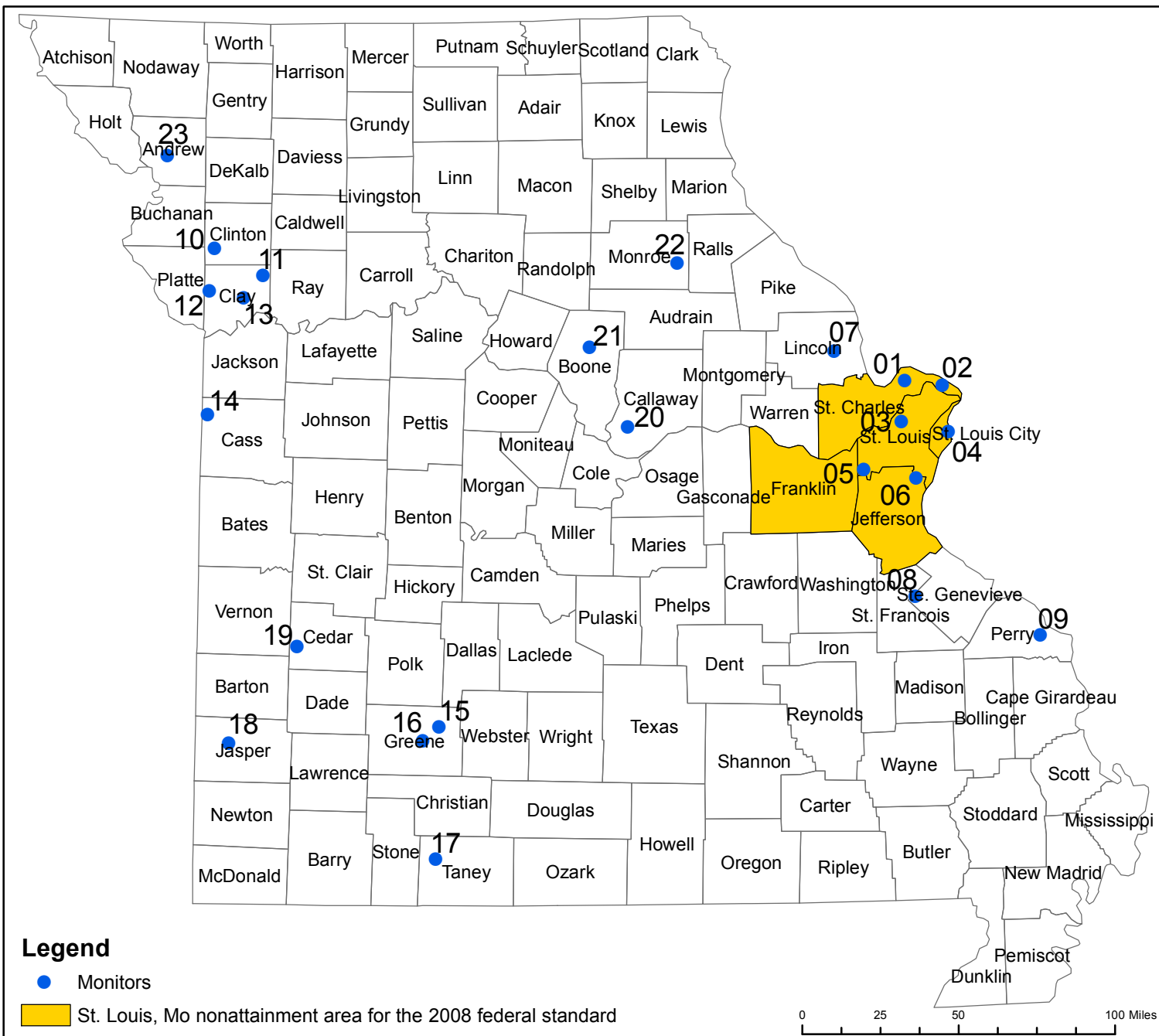
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**Daily 2018 Maximum Average Eight-Hour Concentration  
of Ground-Level Ozone in Parts per Million**

(Since March 1, 2018, beginning of ozone season)

	9-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
<i>St. Louis</i>											
Arnold West	0.044	0.047	0.034	0.040	0.046	0.049	0.060	0.042	0.023	0.035	
Blair Street*	0.038	0.045	0.030	0.038	0.047	0.044	0.064	0.037	0.025	0.035	
Foley West ^	0.043	0.047	0.038	0.045	0.046	0.049	0.065	0.041	0.023	0.039	
Maryland Heights	0.043	0.045	0.036	0.040	0.047	0.047	0.064	0.040	0.024	0.035	
Orchard Farm	0.043	0.042	0.033	0.043	0.045	0.044	0.061	0.039	0.023	0.038	
Pacific	0.045	0.047	0.036	0.039	0.048	0.048	0.063	0.043	0.024	0.032	
West Alton	0.044	0.046	0.035	0.041	0.045	0.045	0.061	0.041	0.028	0.039	
<i>Ste. Genevieve</i>											
Bonne Terre	0.042	0.045	0.038	0.037	0.049	0.048	0.069	0.042	0.027	0.029	
<i>Southeast</i>											
Farrar	0.037	0.045	0.038	0.035	0.048	0.048	0.060	0.043	0.031	0.032	
<i>Kansas City</i>											
Liberty	0.049	0.043	0.033	0.049	0.045	0.051	0.065	0.040	0.027	0.030	
RG South	0.053	0.043	0.033	0.046	0.044	0.051	0.065	0.041	0.028	0.032	
Rocky Creek	0.050	0.044	0.035	0.049	0.045	0.050	0.065	0.042	0.029	0.030	
Trimble	0.048	0.043	0.035	0.047	0.045	0.051	0.069	0.041	0.026	0.030	
Watkins Mill	0.045	0.041	0.034	0.046	0.042	0.049	0.064	0.040	0.025	0.029	
<i>Springfield</i>											
Fellows Lake	0.056	0.041	0.037	0.037	0.049	0.052	0.063	0.055	0.030	0.039	
Hillcrest H.S.	0.053	0.040	0.038	0.037	0.049	0.048	0.061	0.052	0.031	0.038	
<i>Outstate</i>											
Alba	0.057	0.047	0.034	0.038	0.053	0.054	0.066	0.052	0.037	0.035	
Branson†	-	-	-	-	-	-	-	-	-	-	
El Dorado Springs	0.057	0.044	0.036	0.041	0.047	0.053	0.065	0.052	0.030	0.037	
Finger Lakes	0.045	0.046	0.038	0.049	0.046	0.049	0.064	0.044	0.027	0.034	
Mark Twain*	0.042	0.044	0.039	0.046	0.044	0.048	0.060	0.040	0.024	0.038	
New Bloomfield	0.046	0.046	0.039	0.045	0.048	0.051	0.064	0.043	0.026	0.033	
Savannah	0.047	0.043	0.038	0.048	0.044	0.053	0.063	0.041	0.027	0.031	

# Missouri Statewide Ozone (O<sub>3</sub>) Monitoring Network, 2018



## Legend

● Monitors

■ St. Louis, Mo nonattainment area for the 2008 federal standard

0 25 50 100 Miles

### St. Louis Area

- 01 Orchard Farm
- 02 West Alton
- 03 Maryland Heights
- 04 Blair Street\*\*
- 05 Pacific
- 06 Arnold West
- 07 Foley West

### Ste. Genenieve Area

- 08 Bonne Terre

### Southeast Area

- 09 Farrar

### Kansas City Area

- 10 Trimble
- 11 Watkins Mill
- 12 Rocky Creek
- 13 Liberty
- 14 Richards Gebaur-South

### Springfield Area

- 15 Fellows Lake
- 16 Hillcrest High School

### Outstate Area

- 17 Branson^
- 18 Alba
- 19 El Dorado Springs
- 20 New Bloomfield
- 21 Finger Lakes
- 22 Mark Twain\*\*
- 23 Savannah

^The Branson monitor was discontinued on Oct. 31, 2017

\*\*Year round ozone monitoring

Ozone Season: March 1st to October 31st

