



2018 Ozone Season

Air Monitoring Agencies Meeting

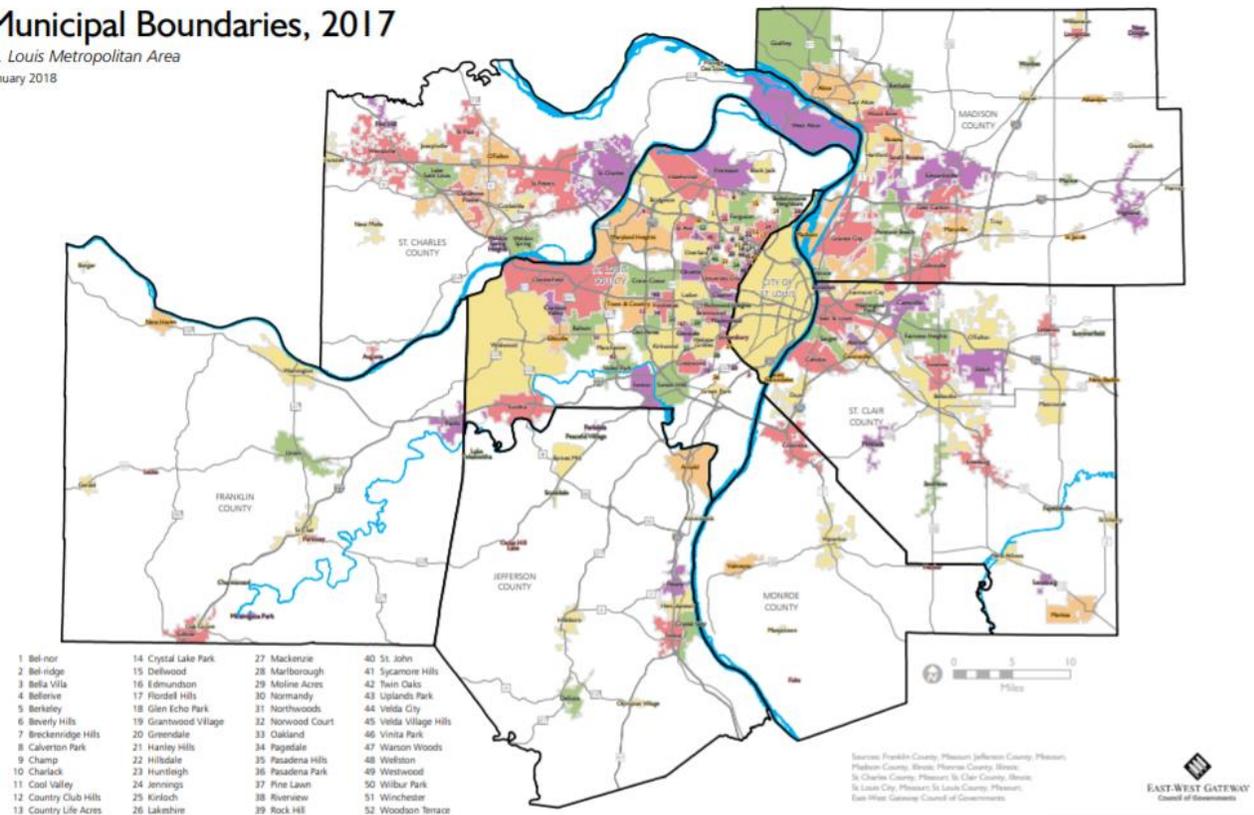
May 21, 2019

East-West Gateway Council of Governments

- ▶ EWG provides a forum where local governments in the bi-state St. Louis region can coordinate and work together to address and solve problems that cross jurisdictional boundaries.
- ▶ Lead transportation and transportation-related air quality planning agency for the region.
- ▶ Works with Missouri and Illinois on air quality issues.

Municipal Boundaries, 2017

St. Louis Metropolitan Area
January 2018



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Creating Solutions Across Jurisdictional Boundaries

Ozone Data Sharing Project

- ▶ Ozone Season - March 1 to October 31
- ▶ East-West Gateway acts as a clearinghouse for ozone data
- ▶ Twelve hour period from 9 AM – 9 PM
- ▶ Initial quality assurance screening
- ▶ Prepare weekly and monthly reports



2015 Ozone Standard

- ▶ Standard is 70 parts per billion (ppb)
- ▶ Exceedance is when an 8-hour average for a monitor is >70 ppb
- ▶ Violation is when 3-year average of 4th highest annual average for a monitor is > 70 ppb



2018 Ozone Season



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2018 Ozone Season

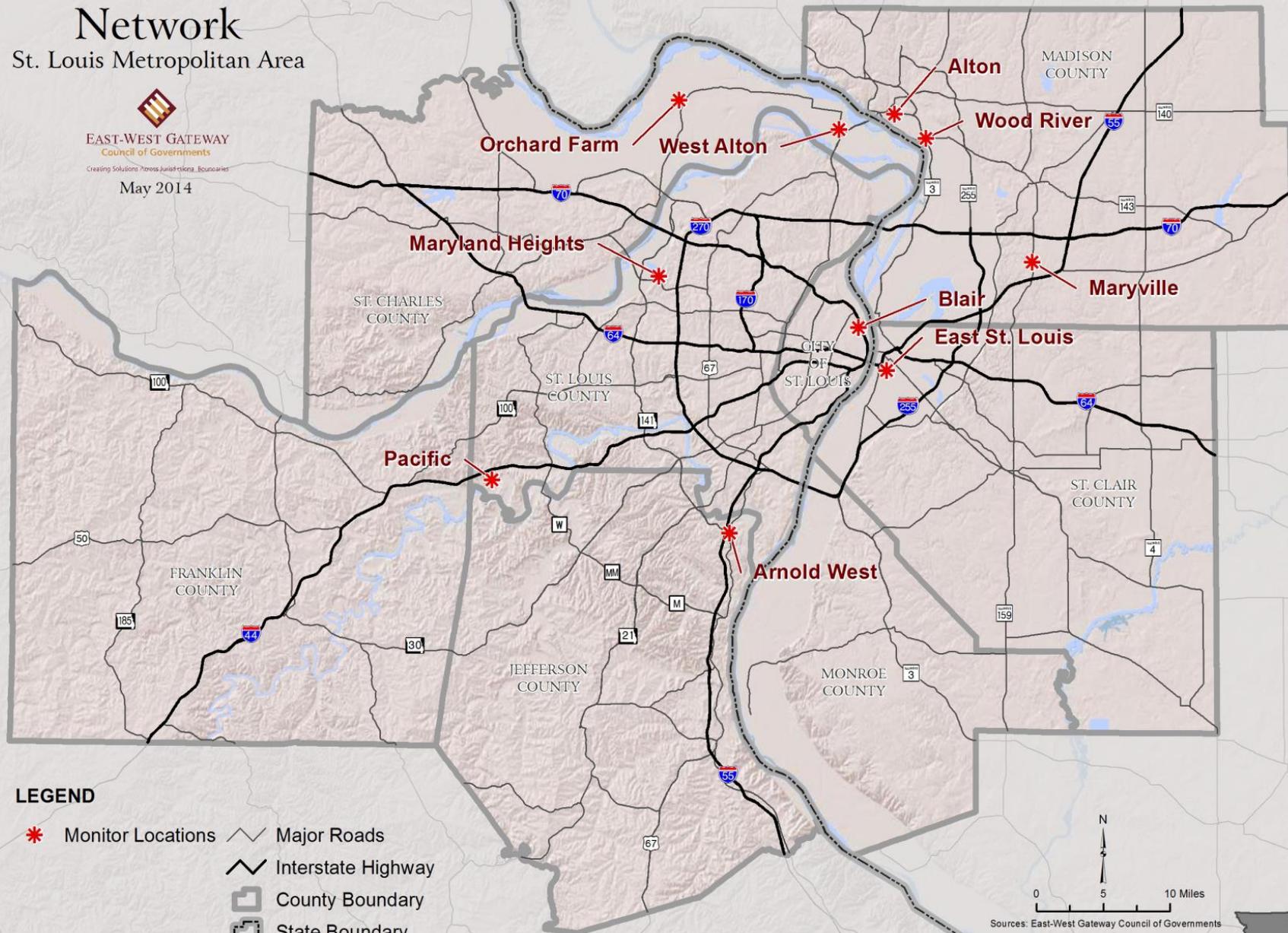
- ▶ St. Louis (MO-IL) Eight County Region
 - ▶ 14 days
 - ▶ 53 exceedances
 - ▶ All ten monitors recorded exceedances
- ▶ Transport/Tracking Monitors
 - ▶ 7 days
 - ▶ 10 exceedances
 - ▶ Four of five monitors have a recorded exceedance



Ozone Monitor Network

St. Louis Metropolitan Area


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Creating Solutions Across Jurisdictional Boundaries
May 2014



LEGEND

-  Monitor Locations
-  Major Roads
-  Interstate Highway
-  County Boundary
-  State Boundary
-  River or Lake



2018 Exceedances – Monitors Located in the Eight Counties

March 1 - October 31, 2018

Monitors with Exceedances of the 2015 Eight-Hour Ozone Standard

Based on Information Received by East-West Gateway Council of Governments

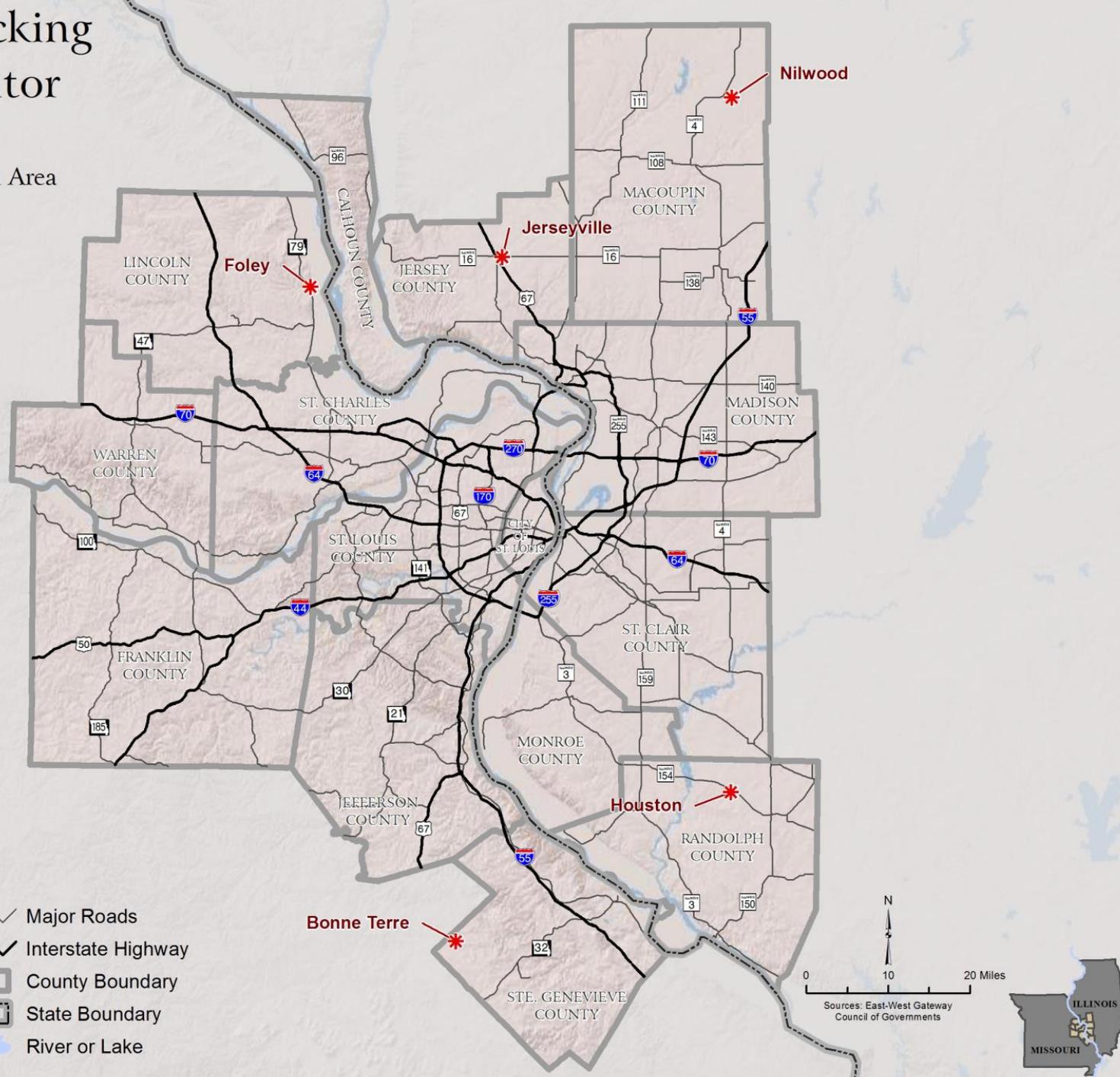
Date	Days with Exceedances														Total Days 14
	5-23	5-24	5-28	6-1	6-5	6-6	6-8	6-15	7-11	7-12	7-13	8-1	8-3	9-14	
Monitors															Total Exceedances by Monitor
Missouri	Ozone Values in ppb														
Arnold West									71		74	71		76	4
West Alton		76	75			84		72			79				5
Orchard Farm		80	73			72				71	73		72		6
Maryland Heights			73			73				76					3
Pacific	71	73	71						76	73					5
Blair Street		73	75	84	75	98	73			71	74	77	81		10
Illinois															
Wood River						80	72				74		75		4
Maryville			75	85	87	82	72						75		6
Alton		71	72			87	75				75				5
East St. Louis		72	73	78	81	95									5
Total by Day	1	6	8	3	3	8	4	1	2	4	6	2	4	1	53

ppb - parts per billion



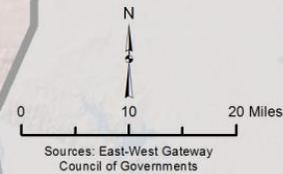
Transport Tracking Ozone Monitor Network

St. Louis Metropolitan Area



LEGEND

- * Monitor Locations
- Major Roads
- Interstate Highway
- County Boundary
- State Boundary
- River or Lake



2018 Exceedances – Transport/Tracking Monitors

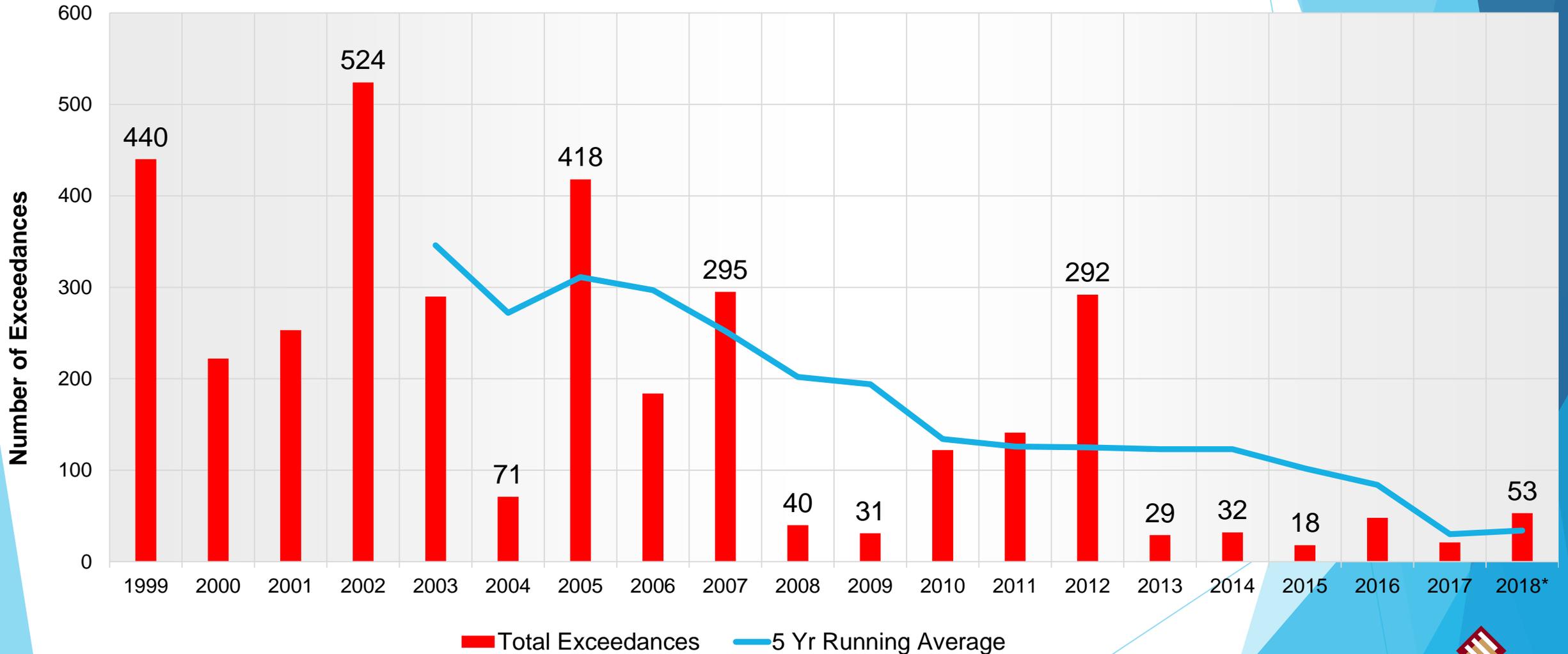
Transport/Tracking Monitors								
March 1 - October 31, 2018								
Monitors with Exceedances of the Eight-Hour Ozone Standard								
Based on Information Received by East-West Gateway Council of Governments								
Date	Days with Exceedances							Total Days
	5-24	5-28	6-5	6-8	7-12	7-13	9-13	7
Monitors	Ozone Values in ppb							Total Exceedances by Monitor
Missouri								
Foley West	77				83		71	3
Bonne Terre								
Illinois								
Jerseyville	74	72				77		3
Nilwood	71	72		75				3
Houston			79					1
Total by Day	3	2	1	1	1	1	1	10

ppb - parts per billion



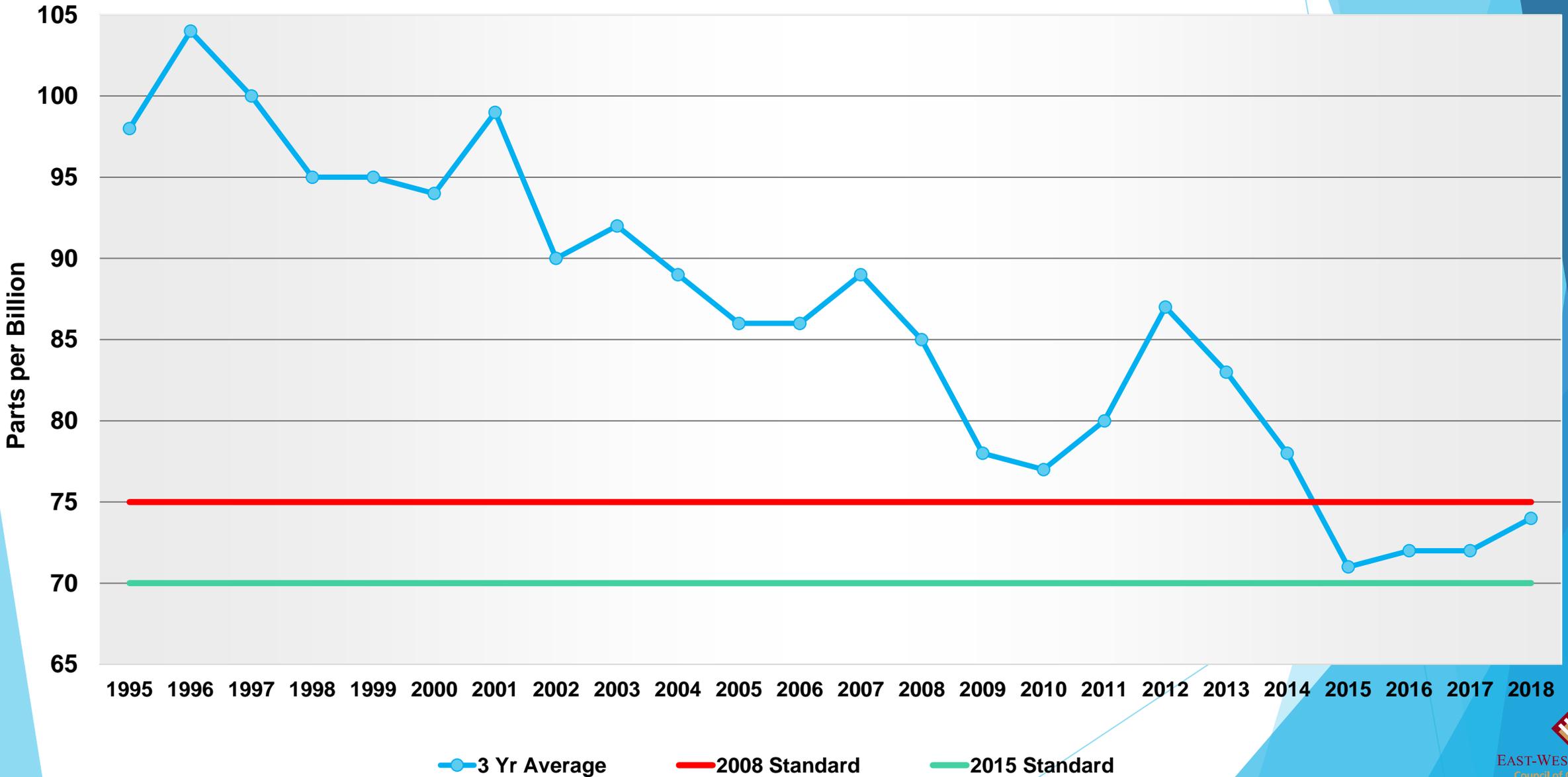
1999-2018 Exceedances

Based on 2015 Standard



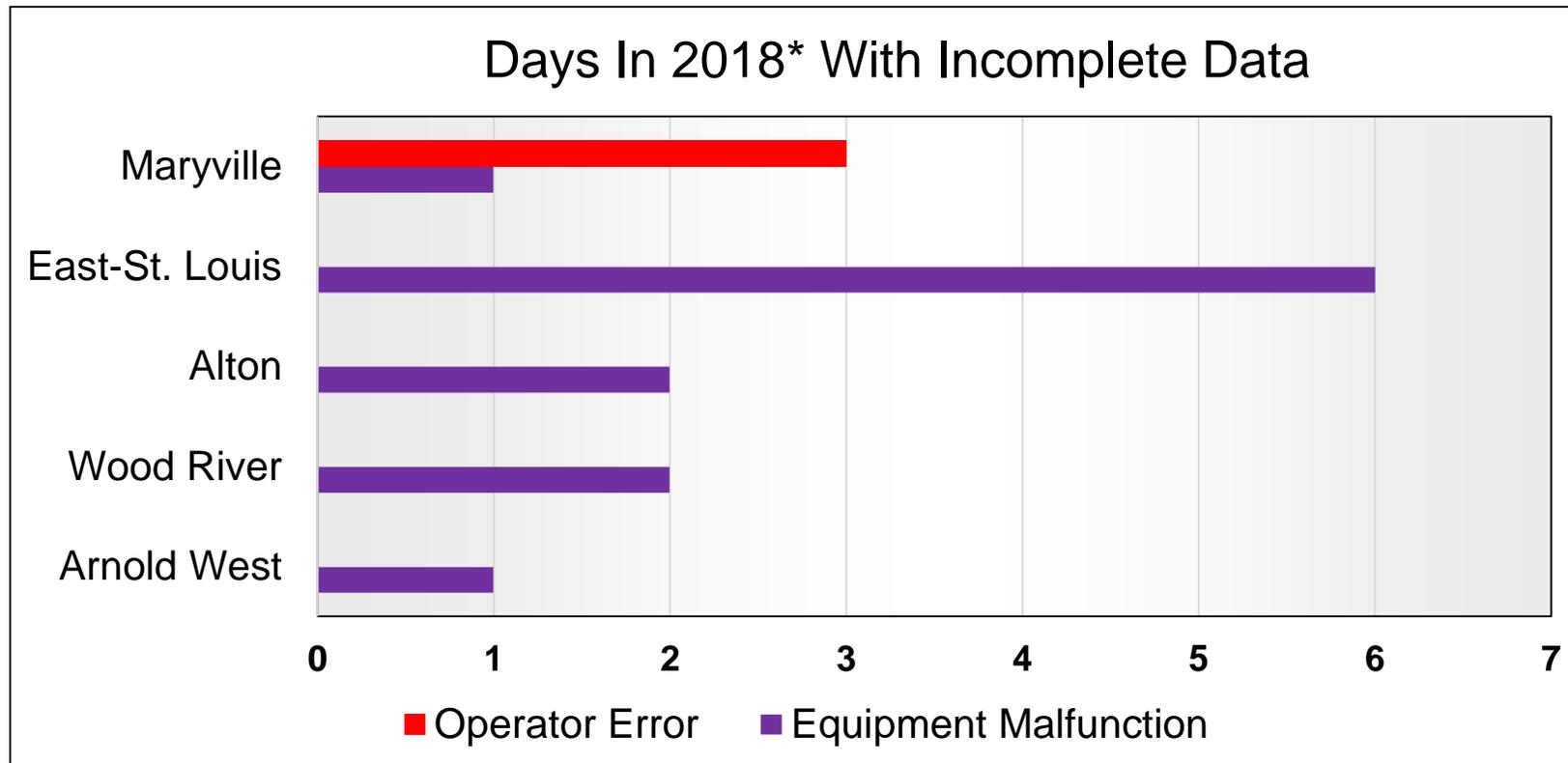
* 2018 data is preliminary and still needs to be quality assured

St. Louis Region General Ozone Trends 1992 – 2018



Days with Incomplete 1-Hour Data By Monitor

- ▶ Four or more hours with no values recorded at a monitor
- ▶ Incomplete does not always mean unmonitored
- ▶ Cause provided by partner agencies



* 2018 data is preliminary and still needs to be quality assured



2019 Ozone Season



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2019 Ozone Season

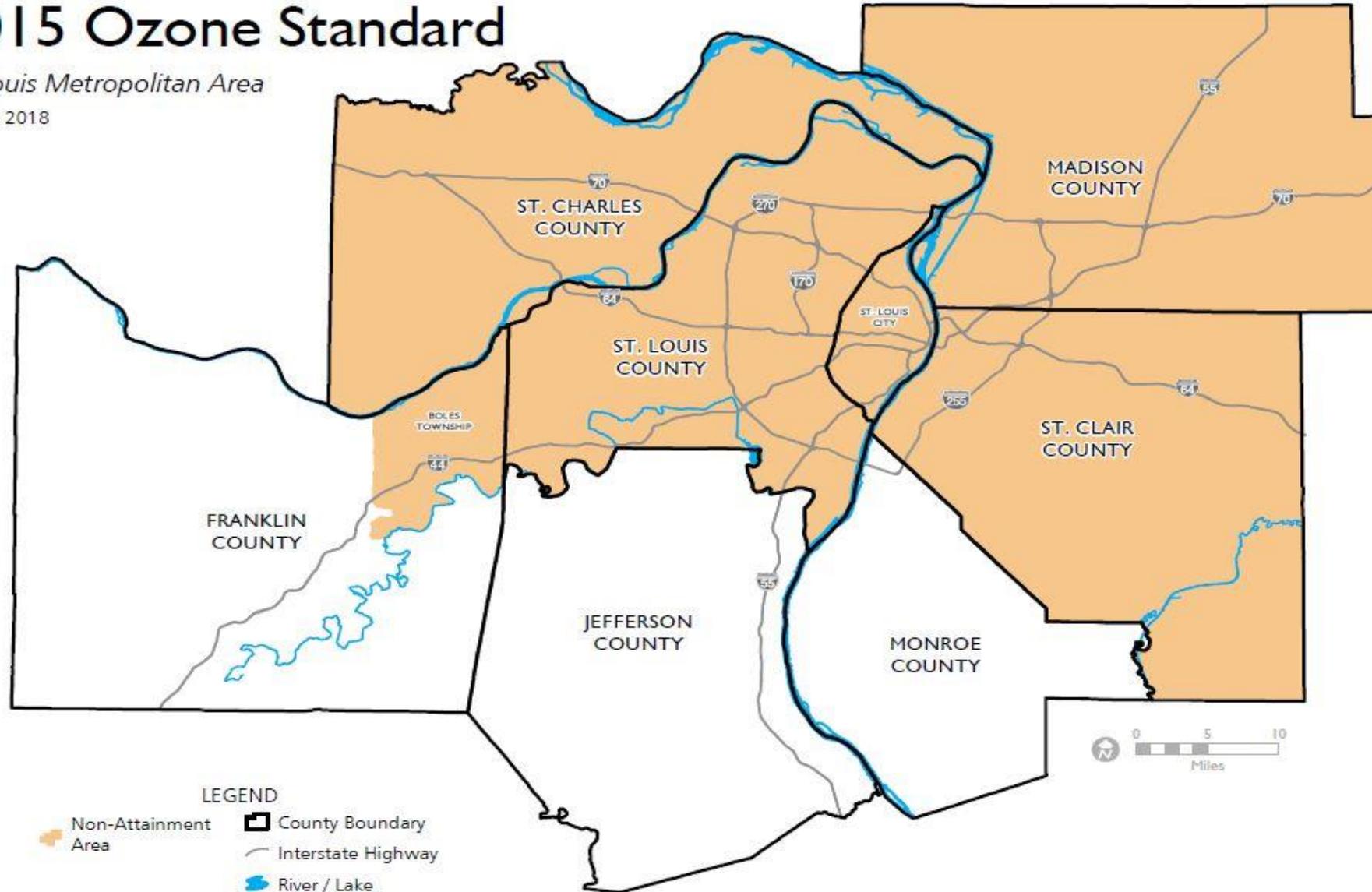
- ▶ Began March 1
- ▶ Arnold West monitor now identified as Transport/Tracking
 - ▶ In 2018 EPA designated most of Franklin County and all of Jefferson and Monroe Counties to be in attainment of 2015 ozone standard
- ▶ So far – no exceedances
- ▶ West Alton monitor was off-line due to flooding
- ▶ Ends October 31



Non-Attainment Area 2015 Ozone Standard

St. Louis Metropolitan Area

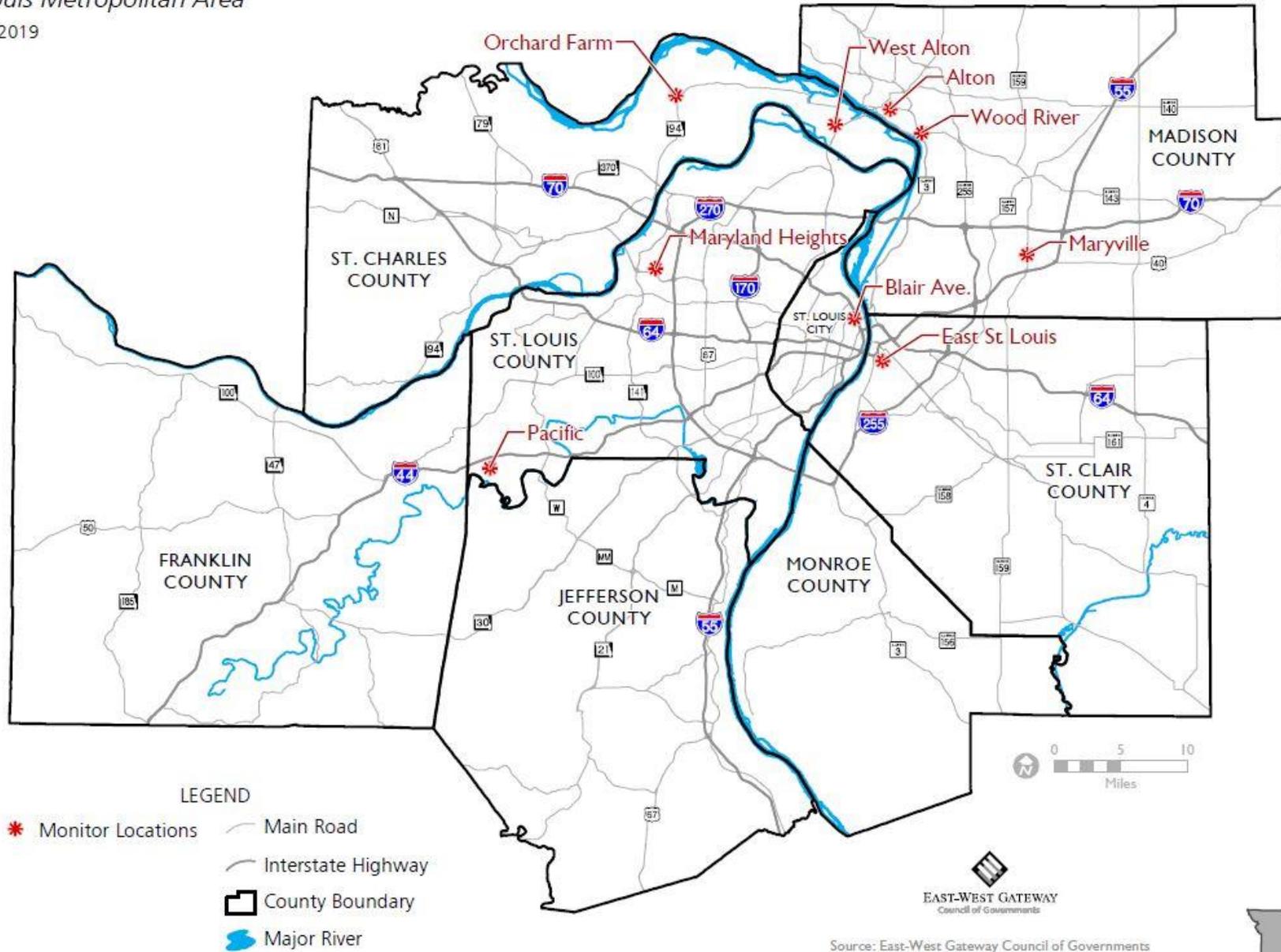
August 2018



Ozone Monitor Network

St. Louis Metropolitan Area

March 2019



Source: East-West Gateway Council of Governments



Ozone Data Sharing Project Products



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Products

- ▶ Tables
 - ▶ 1-hour ozone values by monitor by day
 - ▶ Days with 8-hour exceedances
 - ▶ 4th highest 8-hour averages by monitor
 - ▶ Days with incomplete data
- ▶ East-West Gateway Website
 - ▶ Maximum 8-hour values by monitor
 - ▶ AQI calendar



Air Quality Index

- ▶ EPA's Air Quality Index (AQI) calculator informs people about air pollution levels and associated health impacts
- ▶ Eight-hour average is entered into calculator and converted to a standardized AQI value (0 to 500)
- ▶ Ozone standard of 70 ppb is equal to 100 on the AQI scale
- ▶ AQI has six color-coded categories each with different health concern

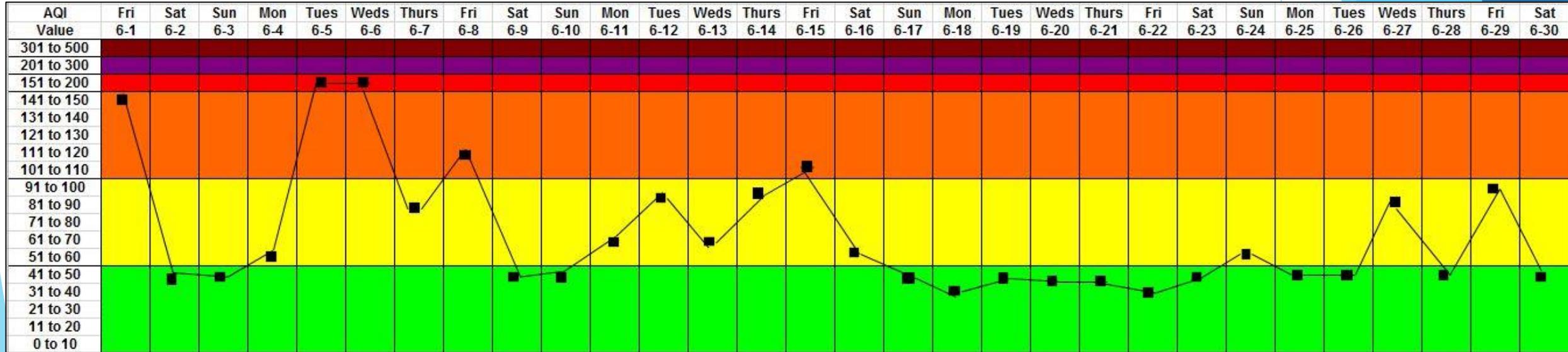
Air Quality Index					
Good	Moderate	Unhealthy for sensitive groups	Unhealthy	Very Unhealthy	Hazardous
0 ↔ 50	51 ↔ 100	101 ↔ 150	151 ↔ 200	201 ↔ 300	301 ↔ +



Gateway's AQI Calendar

- ▶ East-West Gateway looks at eight-hour average from each monitor in eight-county area and uses the highest average to calculate the daily AQI

June 2018 *



* 2018 data is preliminary and still needs to be quality assured



For Additional Information

On-line Air Quality Resource Center

www.ewgateway.org/community-planning/environmental/air-quality



April 9, 2019 - Looking east from SSM St.
Mary's Health Center
MDNR Visual Air Pollution Camera

Carol Lawrence
Manager, Environmental Services

Maureen McCarthy
Environmental Services Planner

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