St. Louis, MO-IL
Nonattainment Area

Final Area Designations for the 2015 Ozone National Ambient Air Quality Standards (NAAQS) Technical Support Document (TSD)

1.0 Summary

This technical support document (TSD) describes EPA's final designation for the St. Louis, MO-IL area in Missouri and Illinois as nonattainment for the 2015 ozone National Ambient Air Quality Standards (NAAQS).

On October 1, 2015, EPA promulgated revised primary and secondary ozone national ambient air quality standards (NAAQS (80 FR 6592, October 26, 2015)). In that action, EPA strengthened both standards to a level of 0.070 parts per million (ppm), while retaining their indicators, averaging times, and forms. EPA revised the ozone standards based on an integrated assessment of an extensive body of new scientific evidence, which substantially strengthens our knowledge regarding ozone-related health and welfare effects, the results of exposure and risk analyses, the advice of the Clean Air Scientific Advisory Committee and consideration of public comments.

Following promulgation of a new or revised NAAQS, the Clean Air Act (CAA) requires EPA to determine if areas in the country meet the new standards. Accordingly, EPA designated all areas of the country as to whether they met, or did not meet, the NAAQS. EPA designated areas for the 2015 Ozone NAAQS in 3 rounds, resulting in 52 nonattainment areas. These are described below:

- Round 1- November 6, 2017: EPA designated 2,646 counties, 2 separate tribal areas and 5 territories as Attainment/Unclassifiable. We also designated 1 Unclassifiable area.
- Round 2- April 30, 2018: EPA designated 51 Nonattainment areas, 1 Unclassifiable area, and all remaining areas as Attainment/Unclassifiable, except for the 8 counties in the San Antonio, TX area.
- Round 3- July 17, 2018: EPA designated 1 county in the San Antonio area as Nonattainment and the other 7 counties as Attainment/Unclassifiable.

Challenges to EPA's Designations

Multiple petitioners (several environmental and public health advocacy groups, 3 local government agencies, and the State of Illinois) filed six petitions for review challenging EPA's 2015 ozone NAAQS designations promulgated on April 30, 2018. The District of Columbia Circuit Court consolidated the petitions into a single case, *Clean Wisconsin v. EPA* (No. 18-1203).

- Collectively, the petitioners challenged aspects of EPA's final designations associated with 9 nonattainment areas, and involving 17 counties.
- Petitioners primarily argued that EPA improperly designated counties (in whole or part) as attainment that should have been designated as nonattainment based on contributions to nearby counties with violating monitors.
- In its brief, EPA requested voluntary remand of the final designation decisions for 10 counties associated with 4 nonattainment areas to further review those designations.

Court Decision

On July 10, 2020, the District of Columbia Circuit Court issued its decision on the April 30, 2018, designations. The Court granted EPA's request for voluntary remand, as well as remanding a number of other areas to the Agency. In total, the Court remanded 16 counties in 9 nonattainment areas back to EPA. The Court did not vacate the existing designations, but required EPA to "issue revised designations as expeditiously as practicable."

The Court remanded EPA's designation of attainment/unclassifiable for Jefferson County, Missouri, and Monroe County, Illinois. For Jefferson County, Missouri, the Court pointed to EPA's inconsistent treatment of Jefferson County and Boles Township in Franklin County. Both of these counties contain large NOx stationary sources and Jefferson County has higher population and vehicle miles traveled than Boles Township in Franklin County. The Court also cited EPA's inconsistent conclusions between intended and final designations for Jefferson County when relying on similar facts and analysis. For Monroe County, Illinois, the Court remanded the county's attainment designation citing EPA's insufficient explanation and inconsistent conclusions between the intended and final designations when relying on similar facts and analysis. In light of the Court decision, EPA re-evaluated the existing technical record for Jefferson and Monroe counties including data and information that was used for the initial April 2018 designations. Based on EPA's technical re-analysis as described in this TSD, EPA is modifying the April 2018 designations for Jefferson and Monroe counties. Table 1 shows EPA's 2018 designation and the final modification to that designation. The EPA must designate an area nonattainment if it has an air quality monitor that is violating the standard or if it has sources of emissions that are contributing to a violation of the NAAQS in a nearby area. A detailed description of the nonattainment boundary for the St. Louis, MO-IL nonattainment area is found in the supporting technical analysis in Section 3 of this document.

Under section 107(d), states were required to submit area designation recommendations to EPA for the 2015 ozone NAAQS no later than 1 year following promulgation of the standards, i.e., by October 1, 2016. Tribes were also invited to submit area designation recommendations. On September 30, 2016, Illinois recommended that the counties identified in Table 1 be designated nonattainment for the 2015 ozone NAAQS based on air quality data from 2013-2015. On September 30, 2016, Missouri recommended that certain counties in Missouri be designated as nonattainment for the 2015 ozone NAAQS based on air quality data from 2013-2015. On September 22, 2017, Missouri requested that EPA not act on these recommendations, and indicated they would submit additional information to inform designations and boundaries for the area. On December 22, 2017, EPA responded to state recommendations and notified states of intended modifications to the state recommendations. EPA's intended designation for the St. Louis, MO-IL nonattainment area is described in Table 1. On February 23, 2018, Missouri submitted additional information, recommending St. Charles County, St. Louis County, and St. Louis City be designated nonattainment based on air quality data from 2015-2017.

Table 1. Recommended Nonattainment Counties and EPA's Final Designated Nonattainment Area for the 2015 Ozone NAAQS

St. Louis, MO-IL	Recommended Nonattainment Counties September 30, 2016	Updated Recommended Nonattainment Counties February 23, 2018	EPA's Intended Nonattainment Counties December 22, 2017	EPA's Final Nonattainment Counties April 30, 2018	EPA's Final Nonattainment Counties Remand Response – January 15, 2021
Missouri	None	City of St. Louis St. Charles St. Louis	City of St. Louis Franklin Jefferson St. Louis County St. Charles	City of St. Louis Franklin (partial; Boles Township) St. Louis County St. Charles	City of St. Louis Franklin (partial; Boles Township) Jefferson St. Louis County St. Charles
Illinois	Madison Monroe St. Clair		Madison Monroe St. Clair	Madison St. Clair	Madison Monroe St. Clair

The St. Louis, MO-IL area is a part of a multi-state (Missouri and Illinois) core-based statistical area (CBSA). The Missouri counties in the CBSA are Franklin, Jefferson, Lincoln, St. Charles, St. Louis and Warren, and the City of St. Louis. The Illinois counties in the CBSA are Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe, and St. Clair. There are two additional sparsely-populated micropolitan counties outside the CBSA (but part of the larger CSA) located to the distant east (Marion County, Illinois, approximately 70 miles from St. Louis) and to the distant south (St. Francois County, Missouri, approximately 60 miles from St. Louis) that we are not considering nearby for purposes of this assessment.

After considering the States' recommendations, and re-evaluating the existing technical record for this area, EPA is designating Boles Township in Franklin County, Jefferson, St. Charles and St. Louis counties, and the City of St. Louis in Missouri and Madison, Monroe and St. Clair counties in Illinois as nonattainment based on technical analyses discussed in Section 3 of this document. This final January 2021 nonattainment boundary for the 2015 ozone NAAQS is largely the same as the nonattainment boundary for the 2008 ozone NAAQS. The boundaries differ by Jersey County, Illinois and the portion of Franklin County, Missouri outside Boles Township being designated as attainment/unclassifiable for the 2015 ozone NAAQS. Both Franklin County, Missouri and Jersey County, Illinois were designated as full county nonattainment for the 2008 ozone NAAQS.

2.0 Nonattainment Area Analyses and Boundary Determination

EPA re-evaluated the designations for Jefferson County, Missouri, and Monroe County, Illinois, considering the specific facts and circumstances of the St. Louis CBSA using data available at the time of the original

designation in April 2018. In accordance with the CAA section 107(d), EPA is designating as nonattainment the areas with the monitors that are violating the 2015 ozone NAAQS and nearby areas with emissions sources (i.e., stationary, mobile, and/or area sources) that contribute to the violations. As described in EPA's designations guidance for the 2015 NAAQS (hereafter referred to as the "ozone designations guidance")[1] after identifying each monitor indicating a violation of the ozone NAAQS in an area, EPA analyzed those nearby areas with emissions potentially contributing to the violating area. In guidance issued in February 2016, EPA provided that using the Core Based Statistical Area (CBSA) or Combined Statistical Area (CSA)[2] as a starting point for the contribution analysis is a reasonable approach to ensure that the nearby areas most likely to contribute to a violating area are evaluated. The area-specific analyses may support nonattainment boundaries that are smaller or larger than the CBSA or CSA.

As noted above, EPA completed initial area designations in three separate rounds. In accordance with the Court's decision, EPA has re-evaluated the designations for Jefferson County, Missouri, and Monroe County, Illinois, consistent with the designations guidance (and EPA's past practice) regarding the scope of the area EPA would analyze in determining nonattainment boundaries for the ozone NAAQS as outlined above. The Technical Analysis section below contains EPA's re-analysis of the existing technical record for the St. Louis, MO-IL nonattainment area.

EPA believes that using the CBSA[3] is an appropriate starting point for the contribution analysis for the St. Louis area to ensure that the nearby areas most likely to contribute to a violating area are evaluated. The area-specific analyses may support nonattainment boundaries that are smaller or larger than the CBSA. As previously stated, the St. Louis CBSA includes the counties of Franklin, Jefferson, Lincoln, St. Charles, and St. Louis, Warren, and the City of St. Louis, in Missouri as well as the counties of Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe, and St. Clair in Illinois. EPA's analytical approach is described in Section 3 of this technical support document.

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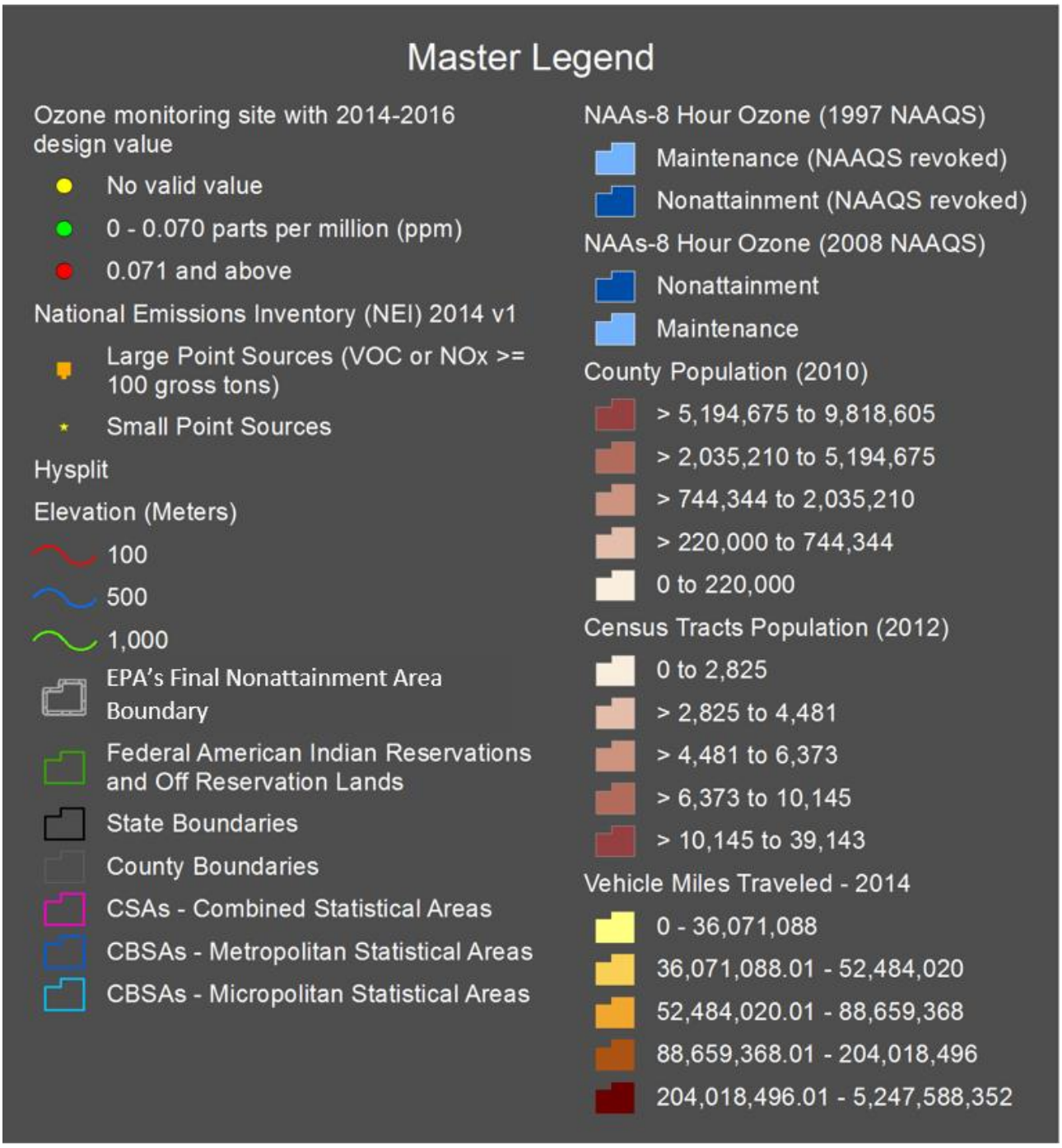
[1] EPA issued guidance on February 25, 2016 that identified important factors that EPA intended to evaluate in determining appropriate area designations and nonattainment boundaries for the 2015 ozone NAAQS. Available at *https://www.epa.gov/ozone-designations/epa-guidance-area-designations-2015-ozone-naaqs*

[2] Lists of CBSAs and CSAs and their geographic components are provided at www.census.gov/population/www/metroareas/metrodef.html. The Office of Management and Budget (OMB) adopts standards for defining statistical areas. The statistical areas are delineated based on U.S. Census Bureau data. The lists are periodically updated by the OMB. EPA used the most recent July 2015 update (OMB Bulletin No. 15-01), which is based on application of the 2010 OMB standards to the 2010 Census, 2006-2010 American Community Survey, as well as 2013 Population Estimates Program data.

[3] Lists of CBSAs and CSAs and their geographic components are provided at www.census.gov/population/www/metroareas/metrodef.html. The Office of Management and Budget (OMB) adopts standards for defining statistical areas. The statistical areas are delineated based on U.S. Census Bureau data. The lists are periodically updated by the OMB. EPA used the most recent July 2015 update (OMB Bulletin No. 15-01), which is based on application of the 2010 OMB standards to the 2010 Census, 2006-2010 American Community Survey, as well as 2013 Population Estimates Program data.



Figures in the remainder of this document refer to the master legend above.

3.0 Technical Analysis for the St. Louis, MO-IL Nonattainment Area

This technical analysis identifies any monitors in the St. Louis, MO-IL nonattainment area that violate the 2015 ozone NAAQS. It also provides EPA's re-evaluation of Jefferson County, Missouri, and Monroe County, Illinois, to determine whether these counties contain sources of emissions that potentially contribute to ambient ozone concentrations at nearby violating monitors in the area, based on the weight-of-evidence of the five factors recommended in EPA's ozone designations guidance and any other relevant information. In re-

analyzing the designations for Jefferson County, Missouri, and Monroe County, Illinois, EPA used the technical data and information available at the time of the 2018 air quality designations.

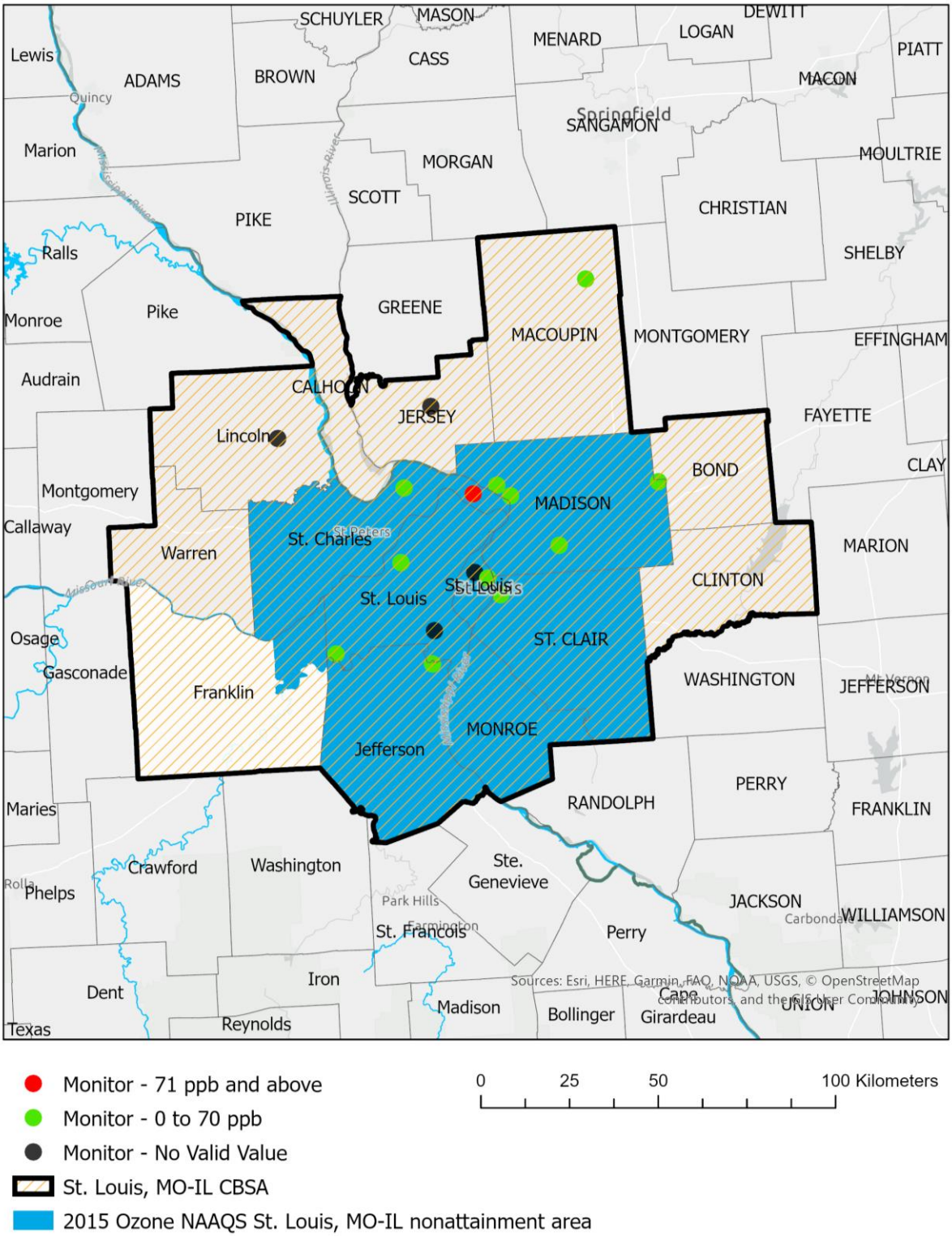
The five factors recommended in EPA's guidance are:

1. Air Quality Data (including the design value calculated for each Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitor;
2. Emissions and Emissions-Related Data (including locations of sources, population, amount of emissions, and urban growth patterns);
3. Meteorology (weather/transport patterns);
4. Geography/Topography (including mountain ranges or other physical features that may influence the fate and transport of emissions and ozone concentrations); and
5. Jurisdictional Boundaries (e.g., counties, air districts, existing nonattainment areas, areas of Indian country, Metropolitan Planning Organizations (MPOs)).

Figure 1 is a map of EPA's final nonattainment boundary for the St. Louis, MO-IL area. The map shows the location of the ambient air quality monitors, county, and other jurisdictional boundaries. All of the areas in the final January 2021 nonattainment boundary for the 2015 ozone NAAQS (shown in blue) were also in the boundary for 2008 ozone NAAQS nonattainment area.

For purposes of the 1997 ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entire counties of Franklin, Jefferson, St. Charles, and St. Louis, and the City of St. Louis, Missouri as well as the entire counties of Jersey, Madison, Monroe, and St. Clair, Illinois. For purposes of the 2008 ozone NAAQS, this area was designated nonattainment and included the same counties as for the 1997 ozone NAAQS, except for Jersey County in Illinois.

Figure 1. EPA's Final Nonattainment Boundaries for the St. Louis, MO-IL Area



EPA must designate as nonattainment any area that monitors a violation of the NAAQS and any nearby areas that contribute to the violation. In review of updated information, including early certified 2017 air quality data, using 2015-2017 design values, EPA has determined St. Charles County, Missouri, has a monitor in violation of the 2015 ozone NAAQS, and is included in the nonattainment area. Even though there are fewer violating monitors when considering the early certified 2015-2017 design values as compared to the 2014-2016 design values, EPA is acting consistently with the intended nonattainment designations by designating as nonattainment the counties that either contain a monitor that is violating the 2015 ozone NAAQS or that contain sources of emissions that are contributing to a violation in a nearby area. Based on the re-analysis described below, EPA has determined not to modify the States' recommendations to include St. Charles and St. Louis counties, as well as the City of St. Louis, Missouri and the counties of Madison, Monroe[4], and St. Clair, Illinois as part of the nonattainment area. In addition, EPA has determined to modify the state's recommendation to include Jefferson County and Boles Township in Franklin County as part of the designated nonattainment area based on a determination that those areas contain sources of emissions that contribute to air quality at the violating monitor in St. Charles County.

EPA's final action to designate St. Charles, St. Louis, and Jefferson counties as well as the City of St. Louis, Missouri and the counties of Madison, Monroe, and St. Clair, Illinois as nonattainment is consistent with EPA's intended designations included in the December 2017 120-day letter. EPA is modifying its intended nonattainment designation of Franklin County, Missouri to only include Boles Township in the nonattainment area and to designate the rest of the county as attainment/unclassifiable. EPA is designating all other counties in the area as attainment/unclassifiable. The following sections describe the five-factor analysis. While the factors are presented individually, they are not independent. The five-factor analysis process carefully considers the interconnections among the different factors and the dependence of each factor on one or more of the others, such as the interaction between emissions and meteorology for the area being evaluated.

Factor Assessment

Factor 1: Air Quality Data

The 2015 ozone NAAQS is met when the design value is 0.070 ppm or less. The design value is the 3-year average of the annual 4th highest daily maximum 8-hour average ozone concentration.[5] Only ozone measurement data collected in accordance with the quality assurance (QA) requirements using approved (FRM/FEM) monitors are used for NAAQS compliance determinations.[6] EPA uses FRM/FEM measurement data residing in EPA's Air Quality System (AQS) database to calculate the ozone design values. Individual violations of the 2015 ozone NAAQS that EPA determines have been caused by an exceptional event that meets the

[4] On September 30, 2016, Illinois submitted the state's recommendation that a designation of nonattainment for Monroe County would be appropriate. After EPA released its intended designations, Illinois submitted a letter on April 26, 2018, notifying EPA that "it would seem appropriate to consider a designation of attainment" for Monroe County. EPA does not believe that the letter Illinois sent in April 2018 constituted an updated recommendation from the state. This is supported by the fact that Illinois was among the Petitioners seeking a remand of the April 2018 Monroe County attainment designation. As such, EPA is relying on Illinois' September 30, 2016, recommendation that Monroe County be designated as nonattainment.

[5] The specific methodology for calculating the ozone design values, including computational formulas and data completeness requirements, is described in 40 CFR part 50, appendix U.

[6] The QA requirements for ozone monitoring data are specified in 40 CFR part 58, appendix A. The performance test requirements for candidate FEMs are provided in 40 CFR part 53, subpart B.

administrative and technical criteria in the Exceptional Events Rule[7] are not included in these calculations. Whenever several monitors are located in a county (or designated nonattainment area), the design value for the county or area is determined by the monitor with the highest valid design value. The presence of one or more violating monitors (i.e. monitors with design values greater than 0.070 ppm) in a county or other geographic area forms the basis for designating that county or area as nonattainment. The remaining four factors are then used as the technical basis for determining the spatial extent of the designated nonattainment area surrounding the violating monitor(s) based on a consideration of what nearby areas are contributing to a violation of the NAAQS.

EPA identified monitors where the most recent design values violate the NAAQS and examined historical ozone air quality measurement data (including previous design values) to understand the nature of the ozone ambient air quality problem in the area. Eligible monitors for providing design value data generally include State and Local Air Monitoring Stations (SLAMS) that are operated in accordance with 40 CFR part 58, appendix A, C, D and E and operating with an FRM or FEM monitor. These requirements must be met in order to be acceptable for comparison to the 2015 ozone NAAQS for designation purposes. All data from Special Purpose Monitors (SPMs) using an FRM or FEM are eligible for comparison to the NAAQS, subject to the requirements given in the March 28, 2016, *Revision to Ambient Monitoring Quality Assurance and Other Requirements Rule* (81 FR 17248).

EPA based its evaluation on 2014-2016 monitoring data for its intended designations announced in December 2017. However, since that time, the Missouri Department of Natural Resources and Illinois Environmental Protection Agency submitted their 2017 ozone data certifications in the AQS database on February 09, 2018, and February 28, 2018, respectively. EPA has concurred on the 2017 data in the AQS database. Therefore, in finalizing the designation for this area EPA considered 2015-2017 air quality monitoring data. This was the most recent three-year period with fully certified air quality data for the area when EPA finalized the designations in April 2018.

The locations of all monitors in the area of analysis are shown in Figure 1, and the 2014-2016 and 2015-2017 design values for the area of analysis are shown in Table 2.

[7] EPA finalized the rule on the Treatment of Data Influenced by Exceptional Events (81 FR 68513) and the guidance on the Preparation of Exceptional Events Demonstrations for Wildfire Events in September of 2016. For more information, see *https://www.epa.gov/air-quality-analysis/exceptional-events-rule-and-guidance*.

Table 2. Air Quality Data (all values in ppm) [a]

County/State	Local Site Name	AQS Site ID	2015-2017 Design Value	2014-2016 Design Value	2014 4th Highest Daily Max Value	2015 4th Highest Daily Max Value	2016 4th Highest Daily Max Value	2017 4th Highest Daily Max Value
Jersey, IL	Illini Jr. High	170831001	0.069	0.068	0.065	0.067	0.074	0.067
Macoupin, IL	IEPA Trailer	171170002	0.065	0.064	0.063	0.064	0.067	0.066
Madison, IL	Clara Barton School	171190008	0.069	0.071	0.072	0.069	0.073	0.066
	Southwest Cable TV	171191009	0.068	0.067	0.070	0.064	0.067	0.074
	Water Plant	**171193007**	**0.070**	**0.071**	**0.070**	**0.069**	**0.075**	**0.067**
	Alhambra	171199991	0.065	0.067	0.068	0.067	0.068	0.062
Saint Clair, IL	IEPA-RAPS Trailer	171630010	0.068	0.068	0.067	0.066	0.073	0.067
Jefferson, MO	Arnold West	290990019	0.068	0.070	0.072	0.069	0.070	0.066[8]
Lincoln, MO	Foley	291130003	N/A	0.065	0.067	0.065	0.065	N/A
	Foley	291130004	N/A	N/A	N/A	N/A	N/A	0.066
Saint Charles, MO	**West Alton**	**291831002**	**0.072**	**0.072**	**0.072**	**0.070**	**0.075**	**0.072**
	Orchard Farm	291831004	0.070	0.071	0.072	0.066	0.076	0.068
Saint Louis, MO	Pacific	291890005	0.064	0.065	0.065	0.065	0.067	0.062
	Maryland Heights	**291890014**	**0.069**	**0.071**	**0.072**	**0.069**	**0.073**	**0.067**
City of St. Louis, MO	Blair Street	295100085	0.066	0.065	0.066	0.063	0.068	0.068

[a] The highest 2015-2017 design value in counties with multiple monitors is indicated in **bold**.

In the analysis for EPA's intended designations, based on 2014-2016 data, five monitors in three different counties indicated violations of the 2015 NAAQS: two monitors in St. Charles County and one monitor in St.

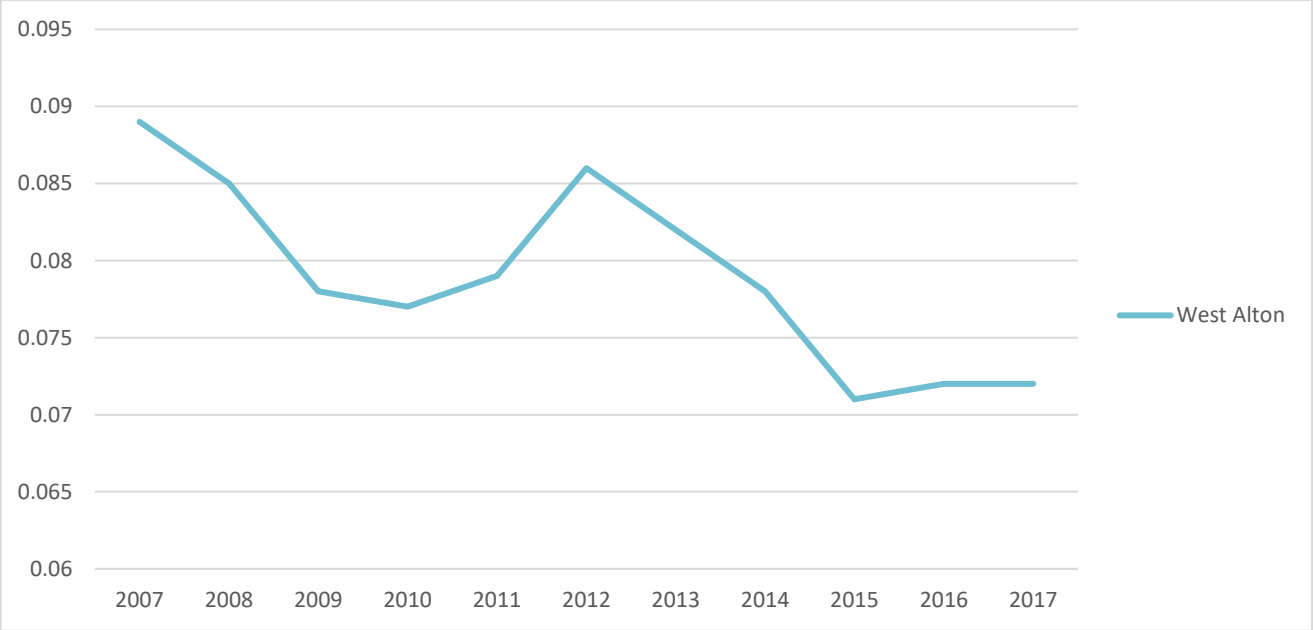
[8] Review of the data from the Arnold West monitor (site ID 290990019) showed a potential low bias when comparing recorded 2017 data to other St. Louis monitoring location sites. The comparison showed apparent bias in ozone concentrations observed at the Arnold West site from 3/1/2017 through 7/5/2017. This could have been because of ozone scrubbing from particulate contamination in the site inlet manifold possibly due to sandblasting during water tower maintenance performed near the site from 3/31/2017 to 6/23/2017. Missouri's Arnold West site quality assurance performance records indicate that the monitor was performing within specifications during this period. Missouri has indicated that it will place informational flags in the AQS database for the Arnold West ozone data set for the period of time likely impacted by the water tower maintenance work. The annual fourth-highest daily maximum 8-hour ozone concentration ranking for the Arnold West site (and hence its 2015-2017 design value of 68 ppb) does not change due to the data ranking, flagging, and QC standards as there are no provisions in 40 CFR 58 or 40 CFR 50 that allow for adjusting ozone data due to bias

Louis County in Missouri and two monitors in Madison County, Illinois. For the April 2018 final designation, based on 2015-2017 data, only one monitor in St. Charles County, Missouri is in violation of the 2015 ozone NAAQS. There are no violating monitors in the Illinois portion of the area for 2015-2017.

Figure 1, shown previously, identifies the St. Louis, MO-IL final nonattainment area and the violating monitor. Table 2 identifies the design values for all monitors in the area of analysis. As indicated on the map, there is one violating monitor that is located in the Missouri portion of the final nonattainment area; which is located in St. Charles County, Missouri. There are no violating monitors located in the Illinois portion of the nonattainment area. There are 14 monitors in the area of analysis that are attaining the standard.

As shown in Figure 2, there is an overall downward trend in the annual design values for the violating St. Charles County monitor (West Alton) from 2007-2017 which have decreased from an 89 ppb design value in 2007 to a 72 ppb design value in 2017. Missouri notes in their revised boundary recommendation document and technical support document (Hereafter MO TSD, dated February 2018), that this downward trend is expected to continue with new federal onroad and nonroad source controls that target NO_X emissions from motor vehicles and the Cross-State Air Pollution Rule (CSAPR) that targets NO_X emissions from large electric generating units (EGU).[9]

Figure 2. Three-Year Design Values for West Alton Monitor (2007-2017)



Factor 2: Emissions and Emissions-Related Data

EPA evaluated ozone precursor emissions of NOx and VOCs and other emissions-related data that provide information on areas contributing to violating monitors.

[9] See Docket ID: EPA-HQ-OAR-2017-0548-0303, available at www.regulations.gov.

Emissions Data

EPA reviewed data from the 2014 National Emissions Inventory (NEI). For each county in the area of analysis, EPA examined the magnitude of large sources (NOx or VOC emissions greater than 100 tons per year) and the magnitude of county-level emissions reported in the NEI. These county-level emissions represent the sum of emissions from the following general source categories: point sources, non-point (i.e., area) sources, non-road mobile, on-road mobile, and fires. Emissions levels from sources in a nearby area indicate the potential for the area to contribute to monitored violations.

Table 3 provides a county-level emissions summary of NOx and VOC (given in tons per year (tpy)) emissions for the area of analysis considered for inclusion in the intended St. Louis, MO-IL nonattainment area.

Table 3. Total County-Level NOx and VOC Emissions.

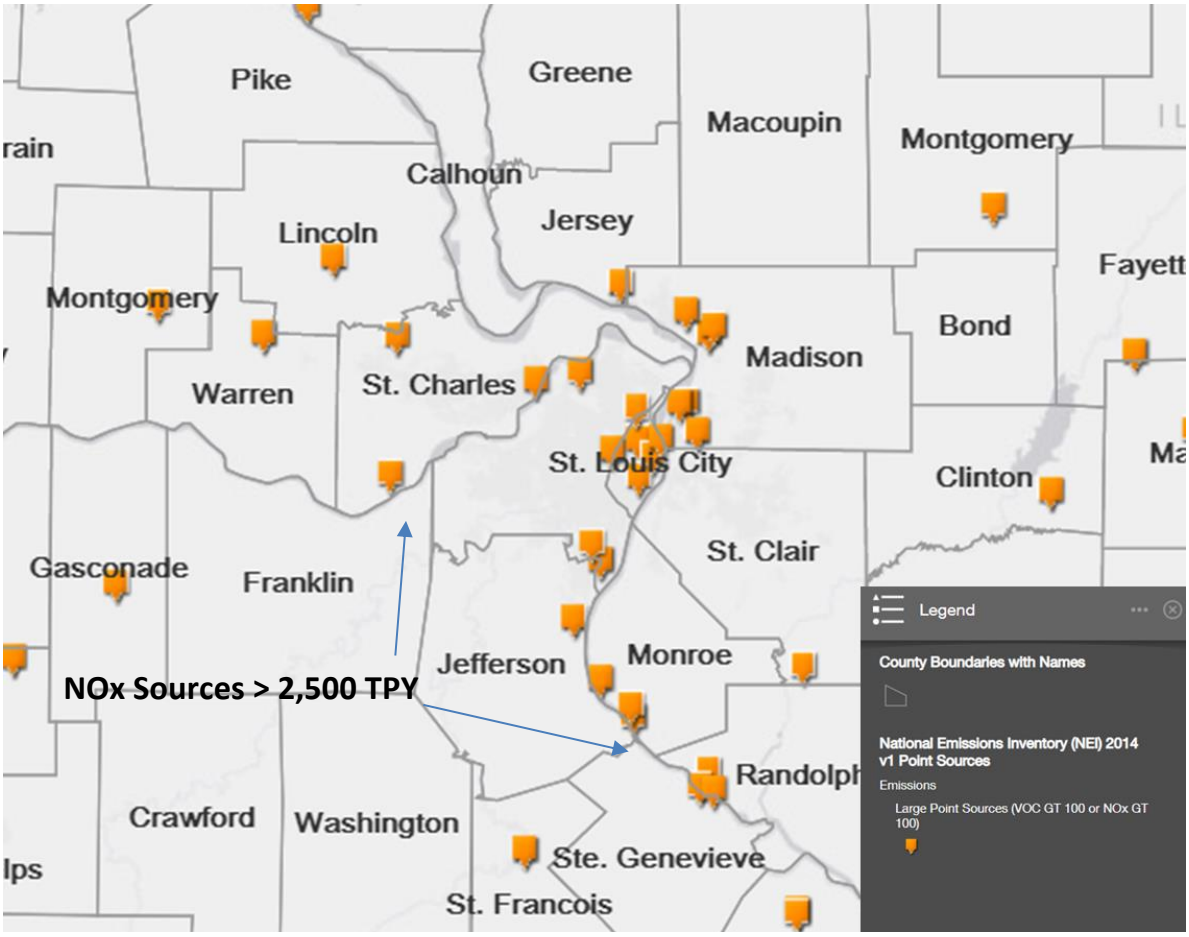
County*	NOx (tpy)	VOC (tpy)	NOx %	VOC %
St. Louis, MO	34,847	26,869	28.8%	31.6%
St. Charles, MO	**16,190**	**9,650**	**13.4%**	**11.3%**
Madison, IL	14,818	9,036	12.3%	10.6%
Jefferson, MO	12,067	6,287	10.0%	7.4%
Franklin, MO	11,742	7,349	9.7%	8.6%
St. Clair, IL	7,639	5,949	6.3%	7.0%
City of St. Louis, MO	7,243	7,238	6.0%	8.5%
Clinton, IL	4,922	2,279	4.1%	2.7%
Monroe, IL	2,682	1,171	2.2%	1.4%
Lincoln, MO	2,268	2,506	1.9%	2.9%
Macoupin, IL	1,795	2,311	1.5%	2.7%
Warren, MO	1,519	1,516	1.3%	1.8%
Bond, IL	1,089	1,104	0.9%	1.3%
Calhoun, IL	1,075	981	0.9%	1.2%
Jersey, IL	1,025	911	0.8%	1.1%
Area Total	*120,921*	*85,156*	*100.0%*	*100.0%*

*****The county with the violating monitor is shown in bold**.**

The locations of the large point sources are shown in Figure 3 below.

In addition to reviewing county-wide emissions of NOx and VOC in the area of analysis, EPA also reviewed emissions from large point sources. The location of these sources, together with the other factors, can help inform nonattainment boundaries. For each county not included in the intended nonattainment boundary, EPA believes these counties do not have sources of emissions that are contributing, in a consistent and substantive way, to a violation of the NAAQS in a nearby area.

Figure 3. Large Point Sources in the Area of Analysis



For NOx, St. Louis County has emissions that are more than twice as high as any of the other counties in the area of analysis. St. Charles and Madison counties have the next highest level of emissions – approximately 13 and 12 percent of total emissions in the area of analysis. Jefferson and Franklin counties each have approximately 10 percent of total emissions in the area of analysis. In Franklin County, Missouri, a single large point source in Boles Township emitted 6,687 tons of NOx in 2014 according to the 2014 NEI, accounting for 57% of Franklin County's NOx emissions from all source types. For Jefferson County, Missouri, two large point sources located towards the southern portion of the county emitted a combined 6,150 tons of NOx in 2014 according to the 2014 NEI. These two point sources account for approximately 51% of Jefferson County's total NOx emissions.

The next highest NOx emissions are in St. Louis City and St. Clair County at about 6 percent of total emissions in the area. The NOx emissions in Clinton County account for approximately 4 percent of total emissions in the area of analysis and the remaining counties have NOx emissions that each account for less than 3 percent of total NOx emissions.

St. Louis County also has significantly higher VOC emissions than the remaining counties. St. Charles and Madison counties have VOC emissions at roughly 11 percent of total emissions in the area of analysis. Franklin, Jefferson and St. Clair counties and the City of St. Louis all have roughly 7 to 8 percent of total VOC emissions for the area of analysis and the remaining counties each account for less than 3 percent of total VOC emissions.

Population density and degree of urbanization

In this part of the factor analysis, EPA evaluated the population and vehicle use characteristics and trends of the area as indicators of the probable location and magnitude of non-point source emissions. These include emissions of NOx and VOC from on-road and non-road vehicles and engines, consumer products, residential fuel combustion, and consumer services. Areas of dense population or commercial development are an indicator of area source and mobile source NOx and VOC emissions that may contribute to violations of the NAAQS. Table 4 shows the population, population density, and population growth information for each county in the area of analysis. Figure 4 contains the population density. For the counties not included in the existing nonattainment boundary, individually they have no more than one quarter the population of the lowest-population full county in the nonattainment area (Jefferson County, Missouri) and about half of the lowest-population partial county in the nonattainment area (Franklin County, Missouri). In addition, all 8 counties listed in Table 4 that are not included in the nonattainment area have population growth less than 4% with half of those having negative growth.

St. Louis County has more than 2.5 times the population as the next populous county and is densely populated with a density of almost 2,000 people per square mile. St. Charles County in Missouri is the next most populated but is more rural in character with a density of 688 people per square mile. St. Louis City is the third most populous area but has the highest population density of almost 5,100 people per square mile. St. Clair and Madison counties in Illinois and Jefferson County in Missouri have the next highest populations and population densities, each with populations between 200,000 and 300,000 and densities of 341 and 401 people per square mile. Franklin County in Missouri has a population of just over 100,000 and a density of 111 people per square mile. The remaining counties have populations less than 100,000 and densities less than 100 people per square mile. These characterizations of population concentration are supported by a more refined 2012 population density map, shown in Figure 4, as provided on page 16 (Figure 5) and a 2014 urbanization map, shown in Figure 5, as provided on page 17 (Figure 6) of Missouri's February 1, 2018, TSD. The maps shows that urbanized land areas within the MSA occur predominantly in St. Louis County, St. Charles County, Jefferson County, and the City of St Louis in Missouri, and St. Clair County, and Madison County in Illinois. In its February 1, 2018, TSD, Missouri emphasizes that the three Missouri counties in closest proximity to the West Alton monitor (St. Louis County, St. Charles County and St Louis City) contain 80.5% of the population in the Missouri portion of the MSA. The more distant counties (Franklin, Jefferson, Lincoln and Warren) comprise 19.5% of the population in the Missouri portion of the MSA based on 2014 population data (MO TSD, page 13).

Table 4. Population and Growth.

County Name	2010 Population	2015 Population	2015 % Population	Population Density (per sq. mi.)	Absolute change in population (2010-2015)	Population % change (2010-2015)
St. Louis, MO	998,954	1,003,362	35.7%	1,976	4,408	0.4%
St. Charles, MO*	**360,485**	**385,590**	**13.7%**	**688**	**25,105**	**6.5%**
City of St. Louis, MO	319,294	315,685	11.2%	5,099	-3,609	-1.1%
St. Clair, IL	270,056	264,052	9.4%	401	-6,004	-2.3%
Madison, IL	269,282	266,209	9.5%	372	-3,073	-1.2%
Jefferson, MO	218,733	224,124	8.0%	341	5,391	2.4%
Franklin, MO	101,492	102,426	3.6%	111	934	0.9%
Lincoln, MO	52,566	54,696	1.9%	87	2,130	3.9%
Macoupin, IL	47,765	46,045	1.6%	53	-1,720	-3.7%
Clinton, IL	37,762	37,786	1.3%	80	24	<0.1%
Monroe, IL	32,957	33,879	1.2%	88	922	2.7%
Warren, MO	32,513	33,513	1.2%	78	1,000	3.0%
Jersey, IL	22,985	22,372	0.8%	61	-613	-2.7%
Bond, IL	17,768	16,950	0.6%	45	-818	-4.8%
Calhoun, IL	5,089	4,899	0.2%	19	-190	-3.9%
Area Total	*2,787,701*	*2,811,588*	*100.0%*			

***The county with the violating monitor is shown in bold.

Figure 4. Population Density for 2012 (Figure 5 from MO TSD, page 16)

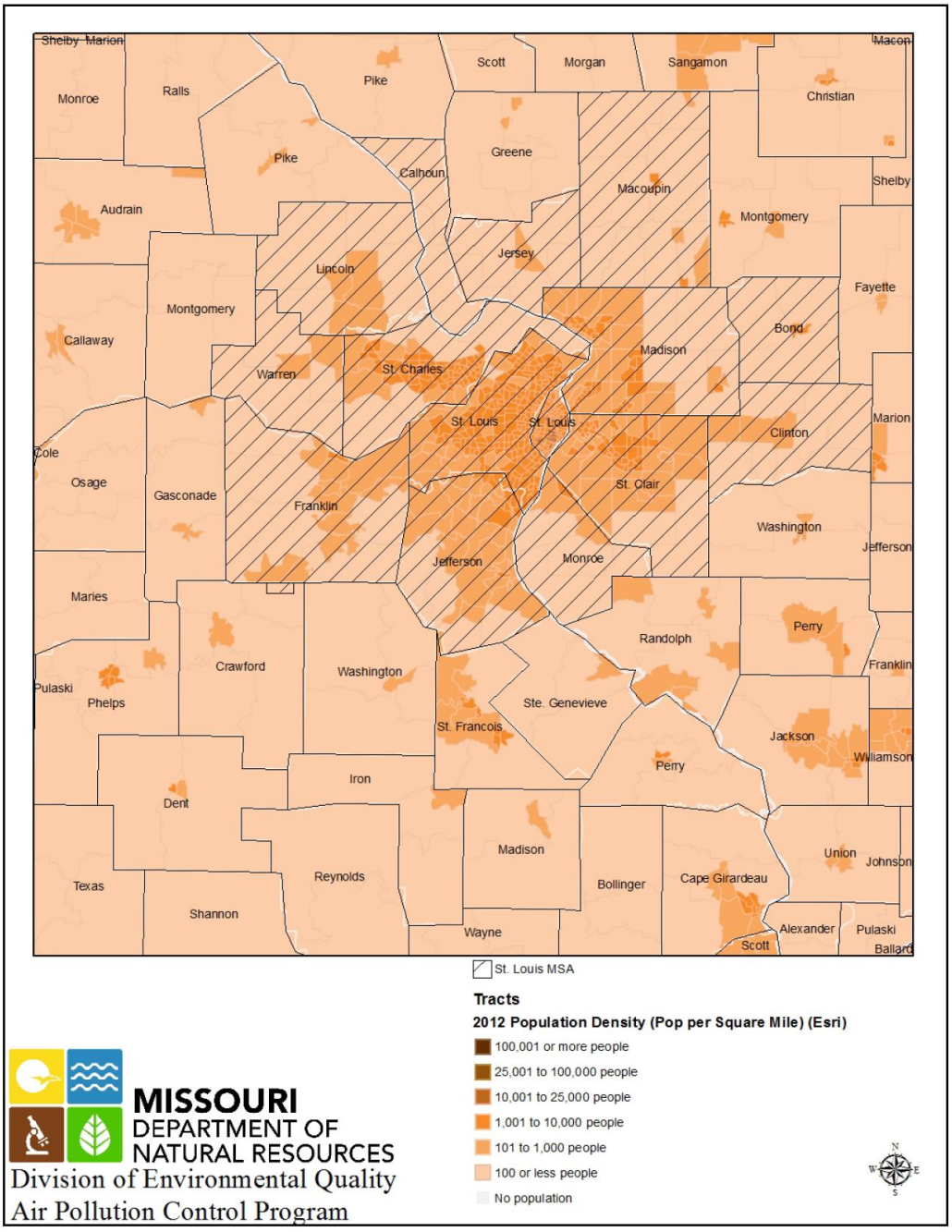
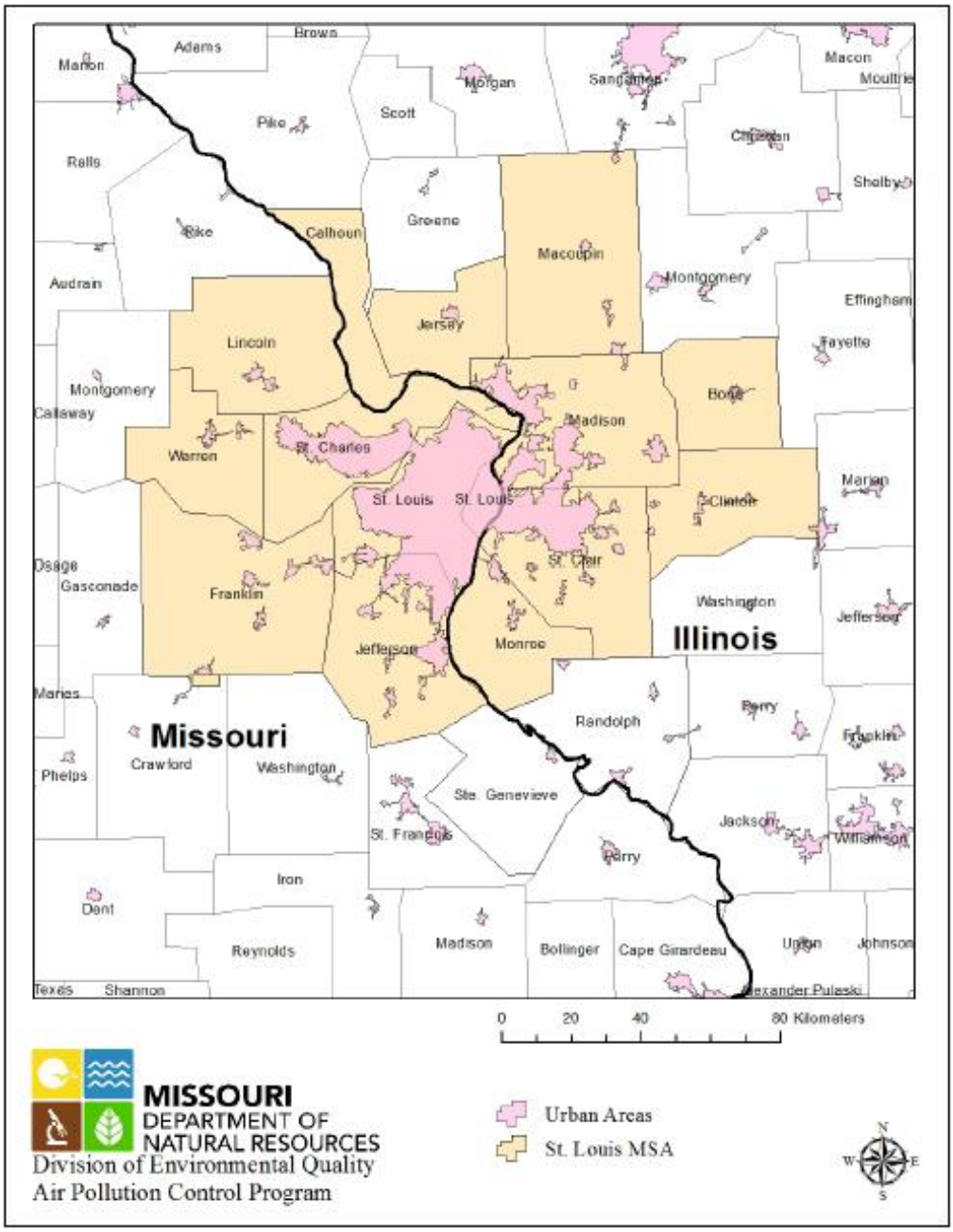


Figure 5. Urbanization in the St. Louis MSA in 2014 (Figure 6 from MO TSD, page 17)



Traffic and Vehicle Miles Traveled (VMT)

EPA evaluated the commuting patterns of residents, as well as the total VMT for each county in the area of analysis. In combination with the population/population density data and the location of main transportation arteries, this information helps identify the probable location of non-point source emissions. A county with high VMT and/or a high number of commuters is generally an integral part of an urban area and high VMT and/or high number of commuters indicates the presence of motor vehicle emissions that may contribute to violations of the NAAQS. Rapid population or VMT growth in a county on the urban perimeter may signify increasing integration with the core urban area, and thus could indicate that the associated area source and mobile source

emissions may be appropriate to include in the nonattainment area. In addition to VMT, EPA evaluated worker data collected by the U.S. Census Bureau[10] for the area of analysis. Table 5 shows the traffic and commuting pattern data, including total VMT for each county, number of residents who work in each county, number of residents that work in counties with violating monitor(s), and the percent of residents working in counties with violating monitor(s). The data in Table 5 are 2014 data.

Table 5. Traffic and Commuting Patterns.

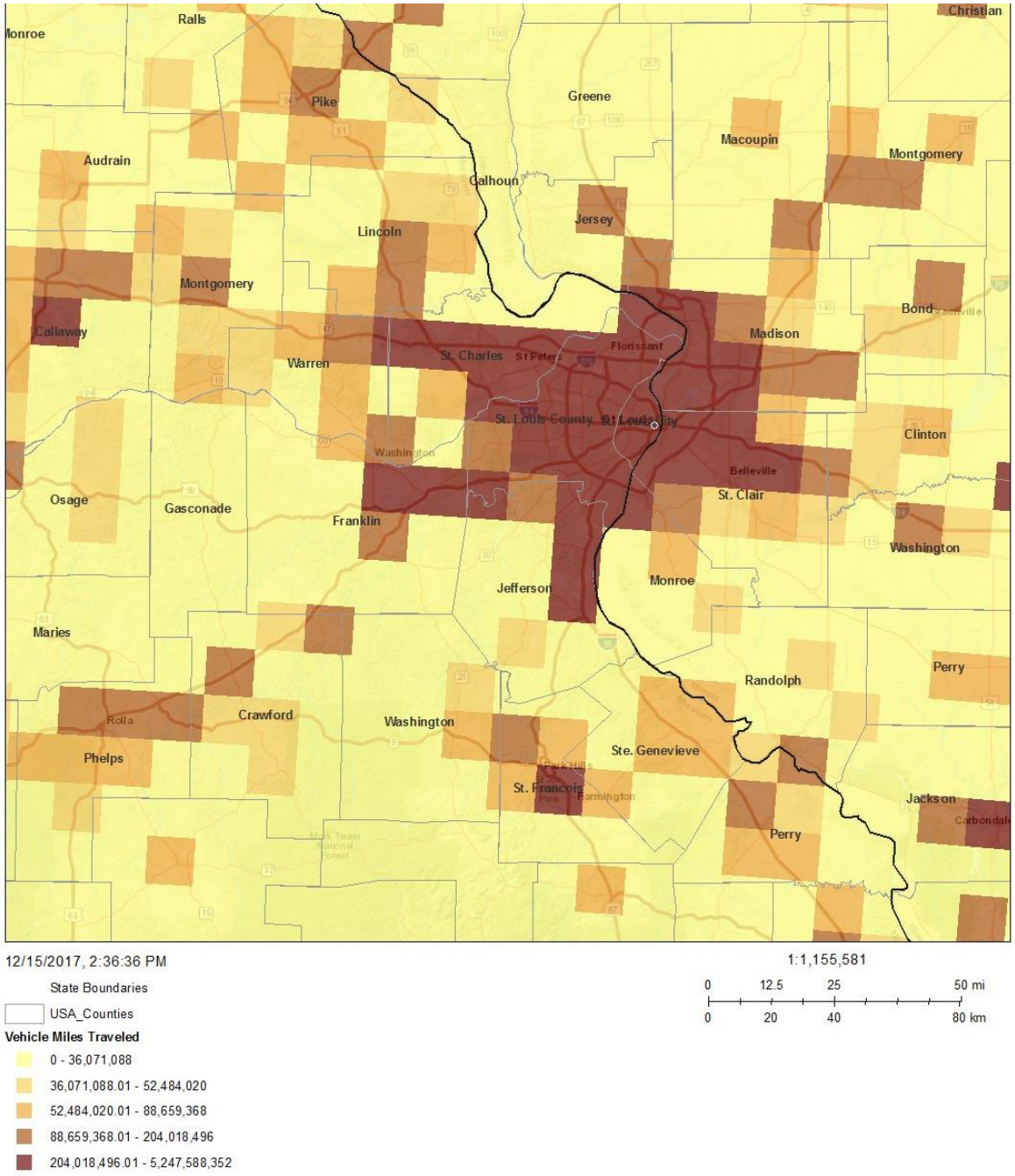
County*	2014 Total VMT (Million Miles)	Number of County Residents Who Work	Number Commuting to or Within Counties with Violating Monitor(s)	Percentage Commuting to or Within Counties with Violating Monitor(s)
St. Louis, MO	11,275	454,912	25,903	5.7%
St. Charles, MO	**3,582**	**191,500**	**68,025**	**35.5%**
Madison, IL	2,935	118,354	1,885	1.6%
St. Clair, IL	2,749	108,274	1,123	1.0%
Jefferson, MO	2,238	106,596	3,552	3.3%
City of St. Louis, MO	1,838	137,995	4,076	3.0%
Franklin, MO	1,532	48,205	2,700	5.6%
Lincoln, MO	573	25,002	6,814	27.3%
Warren, MO	507	14,561	3,613	24.8%
Macoupin, IL	406	21,165	246	1.2%
Clinton, IL	391	17,075	146	0.9%
Monroe, IL	368	17,519	263	1.5%
Bond, IL	292	6,996	17	0.2%
Jersey, IL	196	9,861	176	0.2%
Calhoun, IL	36	2,864	122	0.4%
Area Total	*28,918*	*1,280,879*		

***The county with the violating monitor is shown in bold.**

To show traffic and commuting patterns, Figure 6 overlays twelve-kilometer gridded VMT from the 2014 NEI with a map of the transportation arteries.

[10] The worker data can be accessed at: http://onthemap.ces.census.gov/.

Figure 6. Twelve Kilometer Gridded VMT (Miles) Overlaid with Transportation Arteries



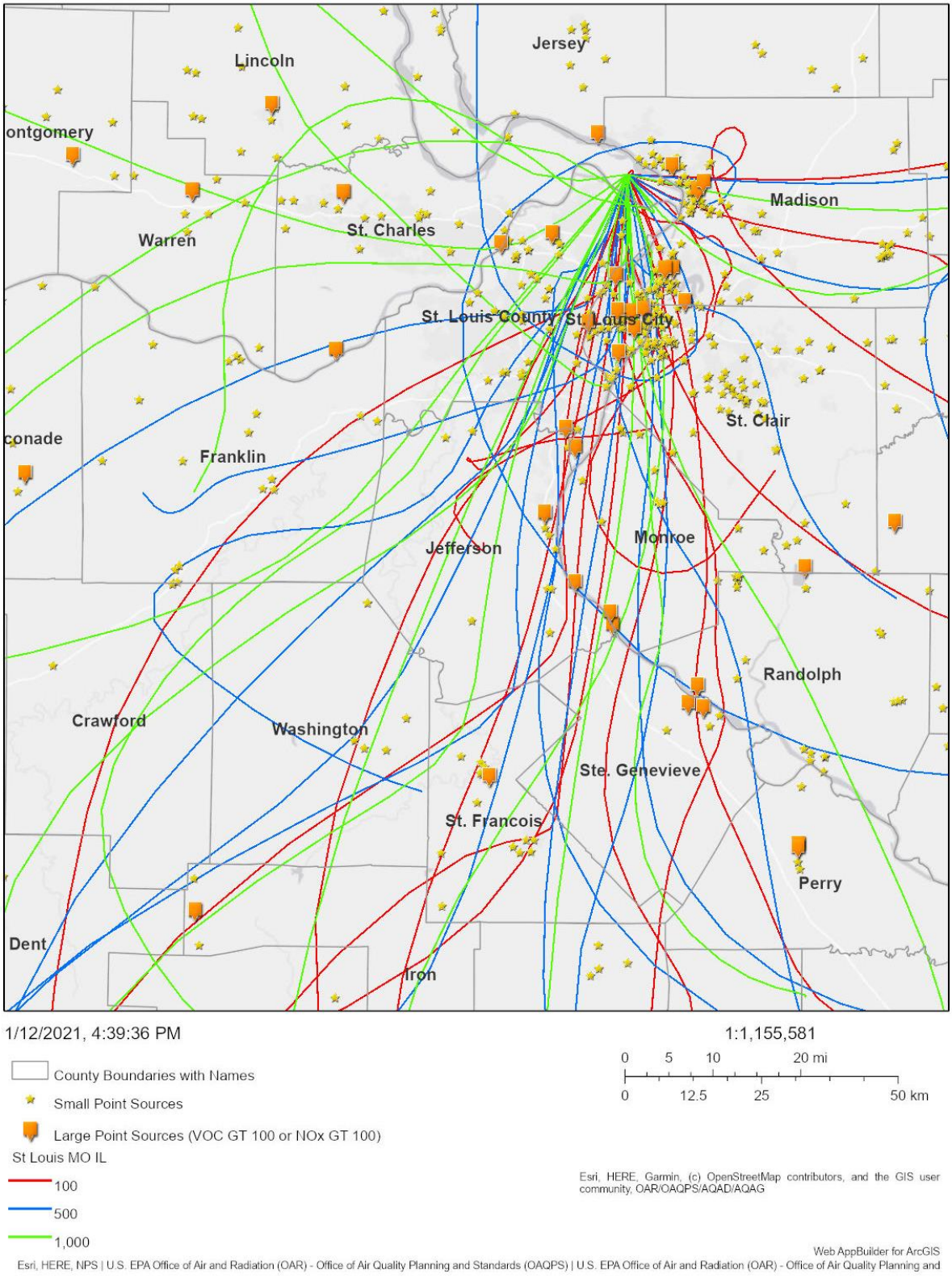
The one violating monitor is in St. Charles County and St. Charles County has the largest proportion of commuters traveling to or within a county with a violating monitor (a little more than 70 percent). St. Charles, St. Louis, and City of St. Louis have the highest magnitude of commuters that travel to or within a county with a violating monitor. Lincoln and Warren counties have approximately 12 to 13 percent of their commuters traveling to a county with a violating monitor and St. Louis City has approximately 6 percent; and the remaining counties all have 2 percent or less. St. Charles County has the second largest VMT and the largest number of residents that travel to or within a county with a violating monitor for work with over 3.5 million vehicle miles traveled and over 92,000 residents commuting to or within counties with a violating monitor. St. Louis County

has the highest VMT with over 11 million vehicle miles traveled and over 71,000 commuting to or within a county with a violating monitor, which is approximately 13 percent of total commuters in the county. Madison County has the third highest VMT in the area of analysis with nearly 3 billion vehicle miles but approximately less than 1 percent of the commuters in the county commute to or within a county with a violating monitor. Franklin and Jefferson counties in Missouri, and St. Clair County in Illinois have more than 1.5 billion vehicle miles traveled, and the remaining counties have 600 million or less vehicle miles traveled. The counties outside the existing 2008 NAAQS nonattainment area have relatively low VMTs as compared to the rest of the area of analysis.

Factor 3: Meteorology

Evaluation of meteorological data helps to assess the fate and transport of emissions contributing to ozone concentrations and to identify areas potentially contributing to the monitored violations. Results of meteorological data analysis may inform the determination of nonattainment area boundaries. In order to determine how meteorological conditions, including, but not limited to, weather, transport patterns, and stagnation conditions, could affect the fate and transport of ozone and precursor emissions from sources in the area, EPA evaluated 2015-2017 HYSPLIT (HYbrid Single-Particle Lagrangian Integrated Trajectory) trajectories at 100, 500, and 1000 meters above ground level (AGL) that illustrate the three-dimensional paths traveled by air parcels to a violating monitor. Figure 7 shows the 24-hour HYSPLIT back trajectories for a combination of all 2015-2017 exceedance days (17 total) for the violating St. Charles County monitor in the area of analysis.

Figure 7. 2015-2017 HYSPLIT Back Trajectories for the West Alton (291831002) Violating Monitor



The HYSPLIT back trajectories in Figure 7 indicate that transport to the St. Louis, MO-IL area is predominately from the south. This southern component to the back trajectories highlights the potential impacts from the counties to the south of St. Louis, Missouri. HYSPLIT also shows transport from east through Madison County, Illinois.

The HYSPLIT back trajectories in Figure 7 show all days exceeding the 2015 ozone NAAQS at the West Alton monitor in 2015 – 2017. Trajectories to the West Alton violating monitor are predominately from the south, with much less frequency from the east and west. On exceedance days, the back trajectories show air masses travel over both large and small point sources (see Factor 2 and Figure 3 above) within St. Louis County, St. Charles County, the City of St. Louis, Franklin County and Jefferson County in Missouri and Madison, Monroe, and St. Clair counties in Illinois (see Factor 2 and Figure 3 above, and similar Figures 7 and 8 in the MO TSD pages 19-20). The most highly urbanized area of the St. Louis metropolitan area, which also contains the highest density of VOC and NOx point sources, is directly south of the West Alton monitor. These counties also contain a majority of the mobile vehicle emissions as these counties have the largest VMT; these counties also have the highest populations and the highest number of commuters as noted in Table 5. The back trajectories indicate that air parcels pass through the counties closest (St. Charles, St. Louis, City of St. Louis in Missouri; Madison and St. Clair in Illinois) to the West Alton monitor as stated by Missouri, but also pass over other upwind counties (e.g., Franklin and Jefferson in Missouri and Monroe in Illinois). Thus, EPA finds that these back trajectories provide evidence that both local emissions from close proximity counties and region-wide emissions from more distant counties contribute to ozone concentrations on ozone exceedance days at West Alton.

EPA observed that the trajectories to the West Alton monitor on 5 of the 17 high-ozone days exhibit a west-south-westerly wind component (see HYSPLIT trajectories in the MO TSD pages 64, 65, 67, 69, and 73). As shown in Figure 7 (above) and in the MO TSD, back trajectories from this direction pass through Franklin County, Missouri. This is most notable on one of the three days (9/23/16, page 73) Missouri highlights in their analysis. As indicated in the emissions factor section above, a large NOx point source in Boles Township with typical emissions of greater than 6,000 tons per year (about half of the total NOx emissions in the county) is located in the trajectory path. This source is approximately 65 km from the violating monitor.

On 13 of the 17 ozone exceedance days at West Alton, HYSPLIT trajectories show a southerly wind component, passing through Jefferson County, Missouri and/or Monroe County, Illinois. These trajectories pass through the populated northern portion of Jefferson County (e.g., see HYSPLIT trajectories in the MO TSD, pages 66, 67, 68, 71 and 77) and the southern portion of the county (e.g., see HYSPLIT trajectories in the MO TSD, pages 64, 67, 70 , 73 and 76), which includes two large NOx point sources with combined emissions greater than 6,100 tons per year (about half the total NOx emissions in the county) that are located approximately 80 km from the violating monitor.

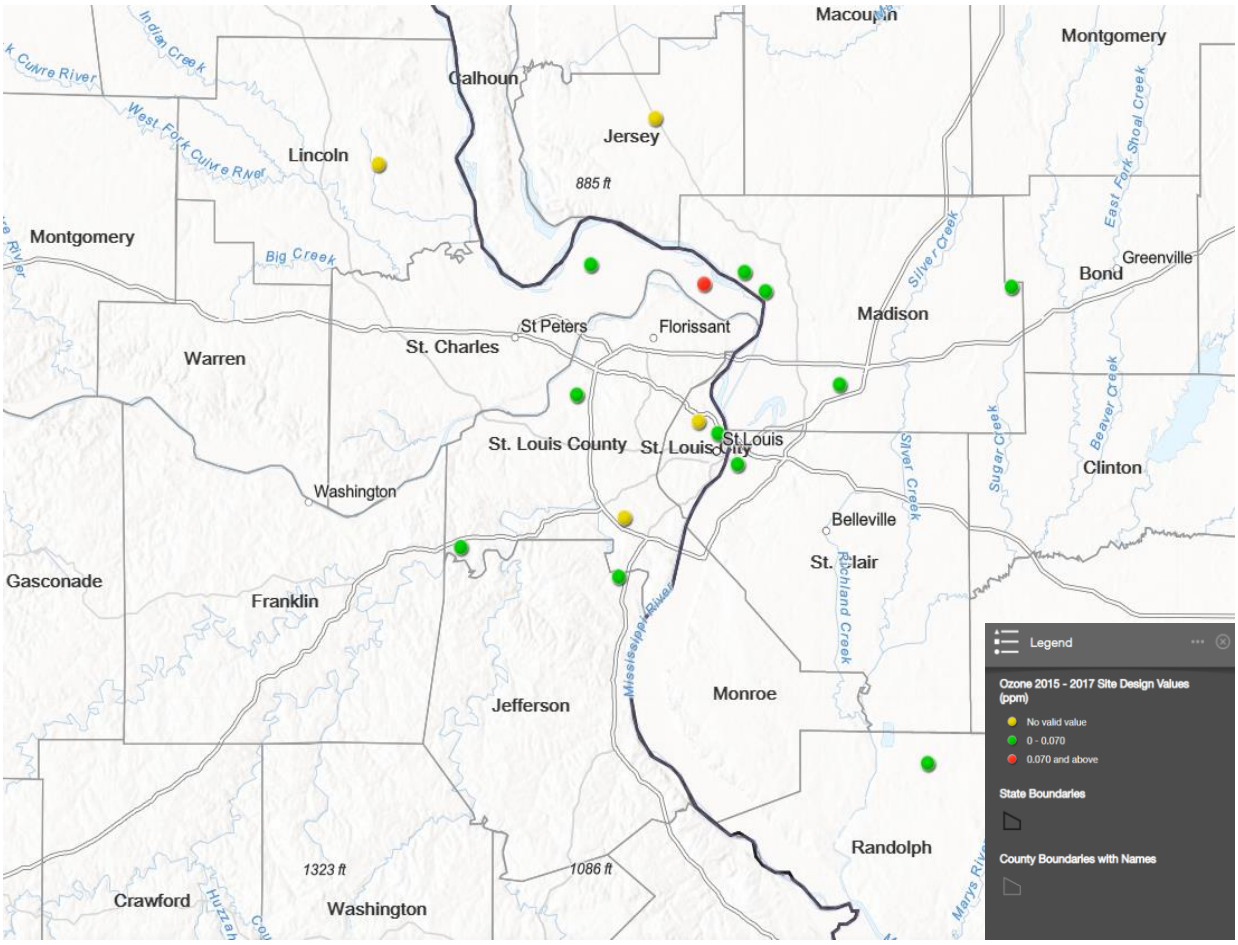
Factor 4: Geography/topography

Consideration of geography or topography can provide additional information relevant to defining nonattainment area boundaries. Analyses should examine the physical features of the land that might define the air shed. Mountains or other physical features may influence the fate and transport of emissions as well as the formation and distribution of ozone concentrations. The absence of any such geographic or topographic features may also be a relevant consideration in selecting boundaries for a given area.

EPA used geography/topography analysis to evaluate the physical features of the land that might affect the air shed and, therefore, the distribution of ozone over the area.

The St. Louis, MO-IL area does not have geographical or topographical features significantly limiting air pollution transport within its air shed. St. Louis is located at the confluence of the Missouri and Mississippi rivers, and they are the most significant topographic feature of the area. These valley effects do not cause the trapping of pollutants and do not cause the long-term buildup of pollutants seen in more extreme topographically influenced areas of the country. Therefore, this factor did not play a pivotal role in this analysis.

Figure 8. Topographic Illustration of the Physical Features



Factor 5: Jurisdictional boundaries

Once the geographic extent of the violating area and the nearby area contributing to violations is determined, EPA considered existing jurisdictional boundaries for the purposes of providing a clearly defined legal boundary to carry out the air quality planning and enforcement functions for nonattainment areas. In defining the boundaries of the intended St. Louis, MO-IL nonattainment area, EPA considered existing jurisdictional boundaries, which can provide easily identifiable and recognized boundaries for purposes of implementing the NAAQS. Examples of jurisdictional boundaries include, but are not limited to: counties, air districts, areas of Indian country, metropolitan planning organizations, and existing nonattainment areas. If an existing jurisdictional boundary is used to help define the nonattainment area, it must encompass all of the area that has

been identified as meeting the nonattainment definition. Where existing jurisdictional boundaries are not adequate or appropriate to describe the nonattainment area, EPA considered other clearly defined and permanent landmarks or geographic coordinates for purposes of identifying the boundaries of the intended designated areas.

The St. Louis, MO-IL area has previously established nonattainment boundaries associated with the 1997 and 2008 ozone NAAQS. For the 1997 ozone NAAQS, this boundary included the City of St. Louis and the counties of Franklin, Jefferson, St. Charles, and St. Louis in Missouri, and Jersey, Madison, Monroe, and St. Clair in Illinois. For the 2008 ozone NAAQS, Missouri recommended, and EPA finalized designations for the same boundary for its portion of the area. For the 2008 NAAQS, Illinois recommended the same boundary for its portion of the area with the exception of Jersey County, and EPA finalized nonattainment designations for those three counties. For the 2015 ozone NAAQS, Illinois recommended the same three-county boundary that was designated nonattainment for the 2008 NAAQS. For the 2015 NAAQS, Missouri has recommended a nonattainment boundary that includes fewer counties than in prior designations, citing fewer violating monitors than in prior years as indicative of ever-improving ozone air quality in the area.

In addition, the East-West Gateway Council of Governments is the designated Metropolitan Planning Organization (MPO) for the area including the City of St. Louis and the counties of Franklin, Jefferson, St. Charles, and St. Louis in Missouri, and Madison, Monroe, and St. Clair counties in Illinois.

Conclusion for the St. Louis, MO-IL Area

Based on the assessment of factors described above, EPA is not modifying the State of Missouri's recommendation to include the following counties in the St. Louis, MO-IL nonattainment area because they are either violating the 2015 ozone NAAQS or contributing to a violation in a nearby area: St. Charles County, City of St. Louis, and St. Louis County. EPA is modifying the State of Missouri's recommendation by including Boles Township in Franklin County and Jefferson County as part of the St. Louis, MO-IL nonattainment area because these areas are contributing to a violation in a nearby area. In addition, EPA is not modifying the State of Illinois' recommendation to include Madison County, Monroe County, and St. Clair County in the St. Louis MO-IL nonattainment area for the 2015 ozone NAAQS. EPA is designating all other portions of the St. Louis CBSA as attainment/unclassifiable, consistent with Missouri's and Illinois' recommendations for these other counties. EPA's final action to designate St. Charles, St. Louis, and Jefferson counties as well as the City of St. Louis, Missouri and the counties of Madison, Monroe, and St. Clair, Illinois as nonattainment, is consistent with the intended designations included in EPA's December 2017 120-day letters to Missouri and Illinois. EPA is modifying its intended nonattainment designation for Franklin County, Missouri, to only include Boles Township in the nonattainment area and to designate the rest of the county as attainment/unclassifiable.

Based on 2015-2017 design values, one monitor in St. Charles County, Missouri is in violation of the 2015 ozone NAAQS, and St. Charles County is included in the final St. Louis, MO-IL nonattainment area. No monitors in Illinois currently violate the 2015 ozone NAAQS. St. Charles County, Missouri, ranks second in NOx and second in VOC emissions, second in population, second in VMT, and first in the percentage of commuters traveling to or within the county with the violating monitor.

Emissions and emissions-related data and meteorological data support the inclusion of additional counties in the final nonattainment area. St. Louis County, Franklin County, Jefferson County, and the City of St. Louis in Missouri and Madison County, St. Clair County and Monroe County in Illinois, do not have violating monitors. However, these counties have among the highest NOx and VOC emissions in the area of analysis and among the

highest VMT in those counties. St. Louis County, Missouri, ranks first in NOx and VOC emissions, first in population, first in VMT, and second in the percentage of commuters traveling to the county with the violating monitor (St. Charles, MO). Madison County, Illinois, ranks third in NOx and VOC emissions, third in population, third in VMT, and seventh in the percentage of commuters traveling to the county with the violating monitor. Franklin County ranked in the top five within the area of analysis in NOx and VOC emissions, and in the top seven for both population and VMT. Jefferson County ranked fourth and sixth, respectively, for NOx and VOC emissions; sixth for population; and fifth for total VMT. The City of St. Louis has the third largest population and the highest population density, and ranks in the top seven for in NOx and VOC emissions when compared to the rest of the area of analysis. St. Clair County ranks fourth in VMT and sixth in both NOx and VOC emissions and population. Monroe has the 11th largest population, ranks 12th in VMT, and ranked 9th and 12th for NOx and VOC emissions, respectively. There are large point sources that emitted over 6,000 tons of NOx in 2014 located in Boles Township of Franklin County and in Southern Jefferson County. HYSPLIT back trajectories indicate that air masses traverse these counties on ozone exceedance days, providing evidence that emissions from these counites have the potential to contribute to the violating monitor. St. Louis County, Franklin County, Jefferson County, and the City of St. Louis in Missouri and Madison County, St. Clair County and Monroe County in Illinois were also included as part of the nonattainment area for the 1997 and 2008 ozone NAAQS and they are all part of the MPO. In addition, emissions from these additional counties (i.e., not including St. Charles County) account for 75.1% of VOC and 75.3% of NOx emissions in the area of analysis. Therefore, these counties are included in the nonattainment area.

EPA is designating Boles Township in Franklin County, Missouri, as nonattainment and the remainder of the county as attainment/unclassifiable. As shown in Figure 7, some exceedance day back trajectories pass through Franklin County. A large NOx point source with typical emissions of greater than 6,000 tons per year is located in Boles Township. This source accounts for more than half of the NOx emissions within the county. Franklin County as a whole is less urban than other areas included in the nonattainment area. Emissions from sources outside Boles Township are relatively low, with levels less than the more densely populated City of St. Louis and five other counties in the area of analysis.

EPA is designating the entirety of Jefferson County, Missouri, as nonattainment. The population density and the large amount of VMT (larger than Franklin County) in the northern portion of the county demonstrate the connectedness of Jefferson County to the rest of the metropolitan area. The two large NOx point sources located in the southern portion of Jefferson County account for more than half of the county's total NOx emissions. For these reasons, a partial county nonattainment area is not technically supported as in Boles Township in Franklin County. Lastly, as shown in Figure 7, several exceedance day back trajectories pass over Jefferson County. Altogether, these factors indicate the likely contribution from Jefferson County to the violating monitor in St. Charles County and form the basis for EPA's nonattainment designation that consists of the entirety of Jefferson County.

For the remaining counties in the area of analysis, our analysis of the totality of the factors presented in the preceding sections for each county do not support a decision to include them as part of the nonattainment area. EPA is not modifying the State of Missouri's recommendation to designate the counties of Lincoln and Warren in Missouri as attainment/unclassifiable for the 2015 ozone NAAQS. EPA is not modifying the State of Illinois' recommendation to designate Bond, Calhoun, Clinton, Jersey and Macoupin counties as attainment/unclassifiable for the 2015 ozone NAAQS. The exclusion of these counties from the 2015 ozone NAAQS nonattainment area boundary is consistent with the boundaries for the 2008 and 1997 ozone NAAQS nonattainment areas. Additionally, these counties are not part of the MPO.

Warren County, Missouri is located to the west-northwest of the metropolitan area. Warren County ranks 12th in NOx emissions and 11th in VOC emissions, 12th in population, and 9th in VMT. Lincoln County, Missouri has a monitor that attains the 2015 ozone NAAQS, and ranks 10th in NOx, 8th in VOC, 8th in population, and 8th in VMT. For the Illinois counties to be designated as attainment/unclassifiable: Bond County ranks 14th in population and 13th in VMT; Clinton County ranks 10th in population and 11th in VMT; Calhoun County ranks 15th in population and 15th in VMT; Jersey County ranks 13th in population and 14th in VMT; and Macoupin ranks 9th in population and 10th in VMT. Moreover, these counties rank among the lowest for the emissions-related factor. The emissions rankings for NOx and VOC are as follows: Bond (13th/13th); Clinton (8th/10th); Calhoun (14th/14th); Jersey (15th/15th); and Macoupin (11th/9th). Further, Jersey, Bond, Calhoun and Macoupin counties experienced negative VMT growth from 2010 to 2015.

With regards to meteorology, Calhoun, Jersey and Macoupin counties in Illinois are all located to the north and northeast and few back trajectories pass through each of these counties showing limited potential for contribution to the violating monitor. Likewise, Warren County and Lincoln County in Missouri are located to the west and north of the violating monitor, respectively, and HYSPLIT trajectories indicate that Warren and Lincoln counties are not typically upwind of the violating monitor on exceedance days. Clinton County and Bond County in Illinois are located to the east of the violating monitor, and back trajectories show the potential for air masses to traverse these counties. However, these counties have lower emissions, VMT, and population, than other counties in the St. Louis area, which limits their respective impact at the violating monitor.

Missouri's analysis of meteorology and HYSPLIT back trajectories on the highest ozone days at the West Alton monitor show relatively stagnant conditions and winds from the south, indicative of the precursor emissions in the counties south of the violating monitor heavily influencing monitored ozone levels at the monitor. Under these conditions, counties more distant and not aligned with the predominate wind direction from the violating monitor, including Bond, Clinton, Jersey, and Macoupin counties in Illinois, and Warren and Lincoln counties and western Franklin County in Missouri, are less likely to contribute to the violations.

Based on the assessment of factors described above, EPA is designating the following Missouri counties as part of the St. Louis, MO-IL nonattainment area for the 2015 ozone NAAQS: Boles Township in Franklin County, Jefferson County, St. Charles County, City of St. Louis, and St. Louis County. In addition, EPA is not modifying the State of Illinois' recommendation to designate Madison County, Monroe County, and St. Clair County as part of the St. Louis, MO-IL nonattainment area for the 2015 ozone NAAQS. These are the same counties that were included in the St. Louis, MO-IL nonattainment area for the 2008 8-hour ozone NAAQS. EPA is designating the remainder of Franklin County (excluding Boles Township), Lincoln, and Warren counties in Missouri and Bond, Calhoun, Clinton, Jersey, and Macoupin counties in Illinois as attainment/unclassifiable for the 2015 ozone NAAQS.