



2010 Sulfur Dioxide National Ambient Air Quality Standard Summary of Recommendation of Nonattainment and Unclassifiable Boundaries in Missouri

In June 2010, the U.S. Environmental Protection Agency (EPA) promulgated a revision to the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO₂), which established “a new 1-hour SO₂ standard at a level of 75 parts per billion (ppb), based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations.” This new standard replaced both the 24-hour and annual standards.

As provided under Clean Air Act Subparagraph 107(d)(1)(A), the governor of each state is required to submit a recommendation to the EPA regarding the attainment status of all areas within that state. This recommendation is due to EPA by June 2, 2011. Each area of the state shall be recommended for designation as:

- nonattainment for areas that do not meet the NAAQS or contain sources that contribute to nonattainment in a nearby area,
- attainment for areas that meet the NAAQS, or
- unclassifiable for areas that cannot be classified as attainment or nonattainment based on available information.

The EPA has chosen a different approach to determine attainment status for the 1-hour SO₂ NAAQS. Unlike other criteria pollutants, SO₂ is almost exclusively a point source-emitted pollutant. A monitoring network large enough to adequately cover all large sources would be prohibitively expensive and an affordable network would leave large gaps in coverage. Therefore, EPA has decided to use a hybrid monitoring-modeling approach for SO₂. This hybrid approach involves a modest monitoring network and extensive use of refined air dispersion modeling.

- Nonattainment areas will be determined by either monitoring or modeling data which show a violation, or likely violation, of the standard.
- Both monitoring and modeling are required to show attainment.
- Areas without either monitoring or modeling data will be designated unclassifiable.

Since the final SO₂ rule states that modeling is not required for initial nonattainment determinations and EPA’s modeling guidance was not available in time for the Department to take these recommendations through its public process and meet the June 2, 2011 deadline, at this time the boundary recommendations are based on factors other than modeling. Therefore, in this initial round of recommendations, no areas can be recommended as attainment; areas that monitor or that likely contribute to violations will be recommended as nonattainment; and all other areas of the state will be recommended as unclassifiable. As the SO₂ modeling guidance is released and finalized, the Department intends to conduct refined dispersion modeling of SO₂ sources in accordance with EPA’s guidelines and provide additional technical justification as needed for recommended nonattainment area boundaries.

Because all areas of the state are evaluated without modeling at this time, only those areas with violating monitors and areas immediately surrounding them are addressed in this document. For 2007-2009, the four violating monitors are Troost in Kansas City, Main Street in Herculaneum, and James River & South Charleston in Springfield. Sources in these three counties (Greene, Jackson, and Jefferson) and surrounding areas (neighboring counties and states) were considered in the analysis to determine their likely impact on the violating monitors. If emissions from a particular area in Missouri are determined to have a substantial impact on the violating monitor, that area is included in the recommended nonattainment area.

As stated in the preamble of EPA's final SO₂ rule, county lines are the presumptive boundaries for SO₂ nonattainment areas. Therefore, county boundaries were the starting point for this analysis. The information contained in this document demonstrates why a smaller area (less than countywide) for nonattainment boundary recommendations is appropriate for all three counties containing monitors that do not meet the 1-hour SO₂ NAAQS.

EPA expects to issue final designations by June 2012. If the EPA intends to modify the state's recommendations or needs additional technical justification to support the designation, they will notify the Department 120 days prior to finalizing the designations. For the SO₂ standard, these "120-day" letters are expected to be released around February 2012. The Department will then be required to submit attainment state implementation plans (SIPs) for nonattainment areas to EPA by February 2014 outlining actions that will be taken to meet the standard.

The Department expects that some SO₂ emission sources located in the recommended unclassifiable areas may contribute to violations of the 1-hour SO₂ standard. These sources will be evaluated with refined modeling analyses when EPA provides official modeling guidance. Any sources located in unclassifiable areas later found to contribute to SO₂ violations will be addressed in the Infrastructure SIP due June 2013.

A summary of the implementation timeline for the 1-hour SO₂ standard is below:

June 2010	EPA establishes new primary 1-hour SO ₂ standard of 75 ppb
June 2011	States must submit designation recommendations
Feb 2012	EPA notifies states if they intend to modify recommendations (120-day letters)
June 2012	EPA finalizes initial area designations
June 2013	States must submit infrastructure SIPs for unclassifiable areas
Feb 2014	States must submit attainment SIPs for nonattainment areas
Aug 2017	Initial attainment date for all areas

On February 17, 2011, a preview of EPA's draft Boundary Recommendation guidance was released. In that document, EPA lists a number of different factors to be considered when establishing boundaries for nonattainment areas:

- Monitoring data
- Emissions, including growth, controls, and regional emission reductions
- Meteorology

- Topography
- Jurisdictional boundaries

The Department developed this boundary recommendation based on a review of the available technical information as required by EPA. Based on 2007-2009 monitoring data, three distinct areas of the state violate the 2010 1-hour SO₂ NAAQS. The recommended boundaries for the 1-hour SO₂ NAAQS nonattainment areas in Missouri include the following [*please reference attached maps indicating recommendation for SO₂ nonattainment area boundaries*]:

Jefferson County Nonattainment Area

Jefferson County: Herculaneum and Festus townships and the Missouri portions of Valmeyer and Selma townships west of the Mississippi River/Jefferson County line with the state of Illinois [see Figure 1].

Jackson County Nonattainment Area

Jackson County: The portion of Jackson County bounded by the county line on the north, the state of Kansas on the west, Interstate-435 on the east and the following southern boundary line – that part of Jackson County north of Interstate-670 from the Kansas border to the intersection with Interstate-435 [see Figure 2].

Greene County Nonattainment Area

Greene County: The portion of Greene County bounded by the county line on the south, U.S. 65 on the east, U.S. 60 on the north, and U.S. 160 (South Campbell Ave) on the west [see Figure 3].

The remaining counties in the state, as well as the remaining portions of Jackson, Jefferson and Greene Counties, are recommended for designation as unclassifiable.

Figure 1. Recommended SO₂ Nonattainment Area for Jefferson County, Missouri

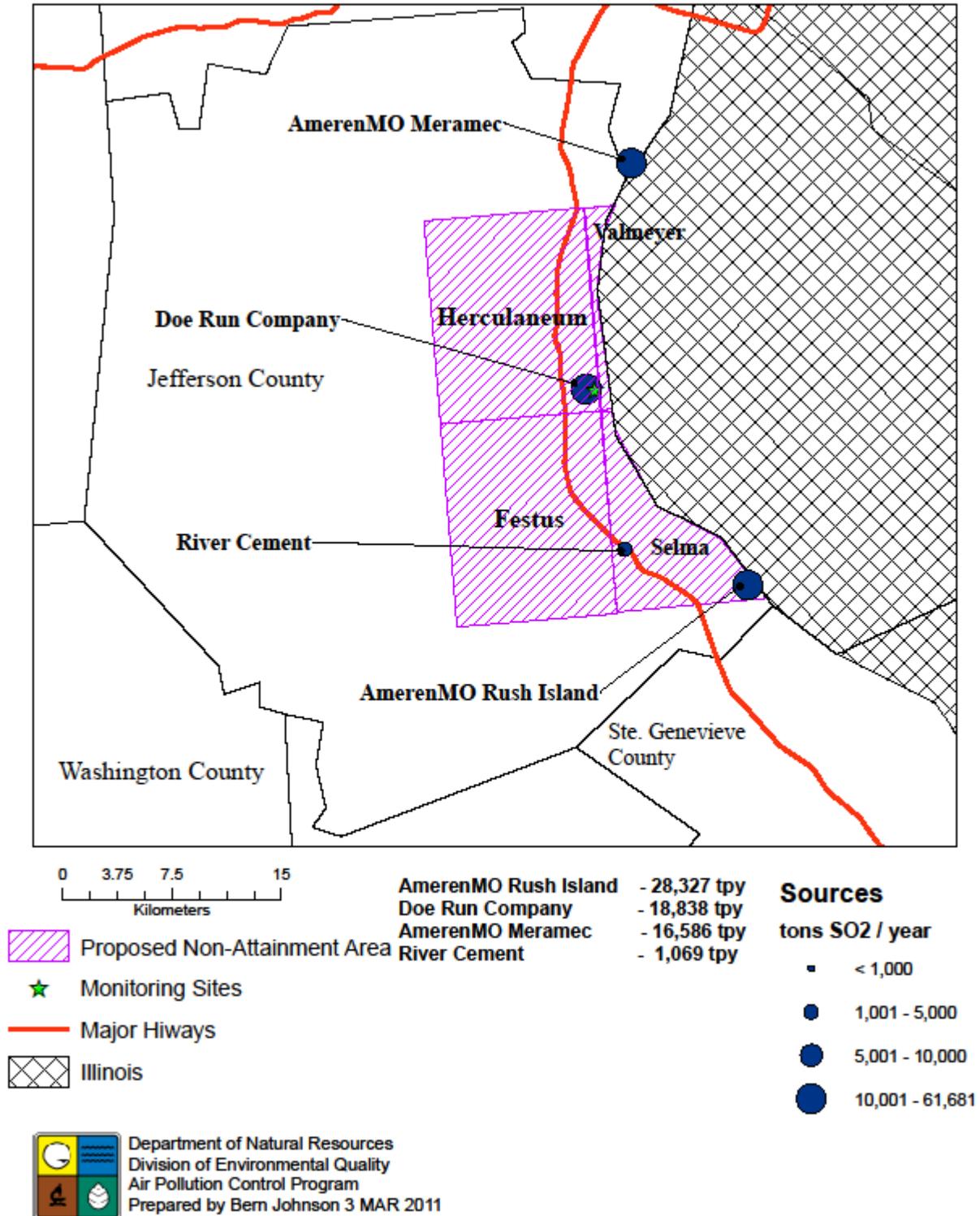


Figure 2. Recommended SO₂ Nonattainment Area for Jackson County, Missouri

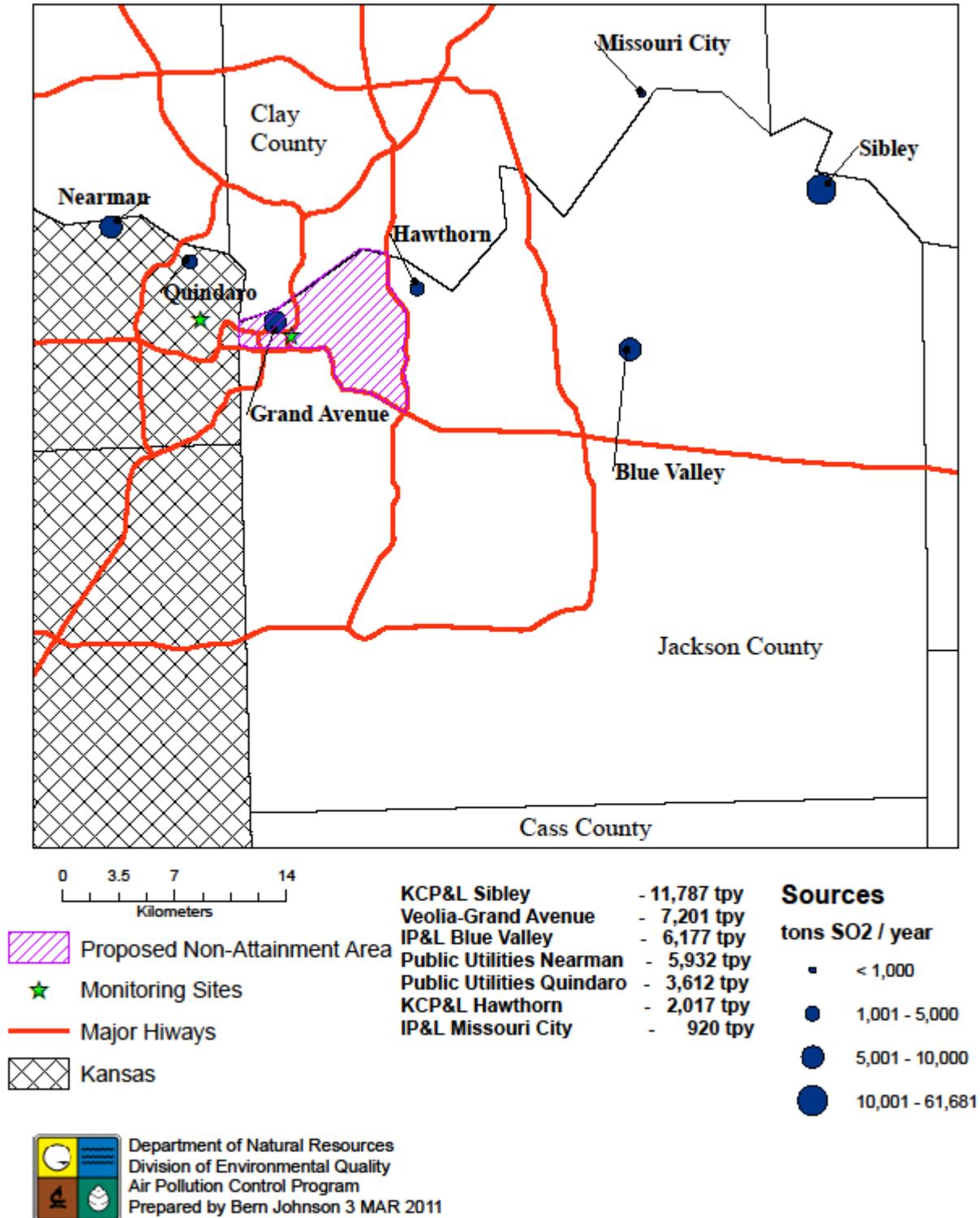


Figure 3. Recommended SO₂ Nonattainment Area for Greene County, Missouri

