

2010 Sulfur Dioxide (SO₂) 1-Hour National Ambient Air Quality Standard (NAAQS)

Jackson County SO₂ Nonattainment Area Plan

Public Hearing
June 25, 2015

SO₂ Standards

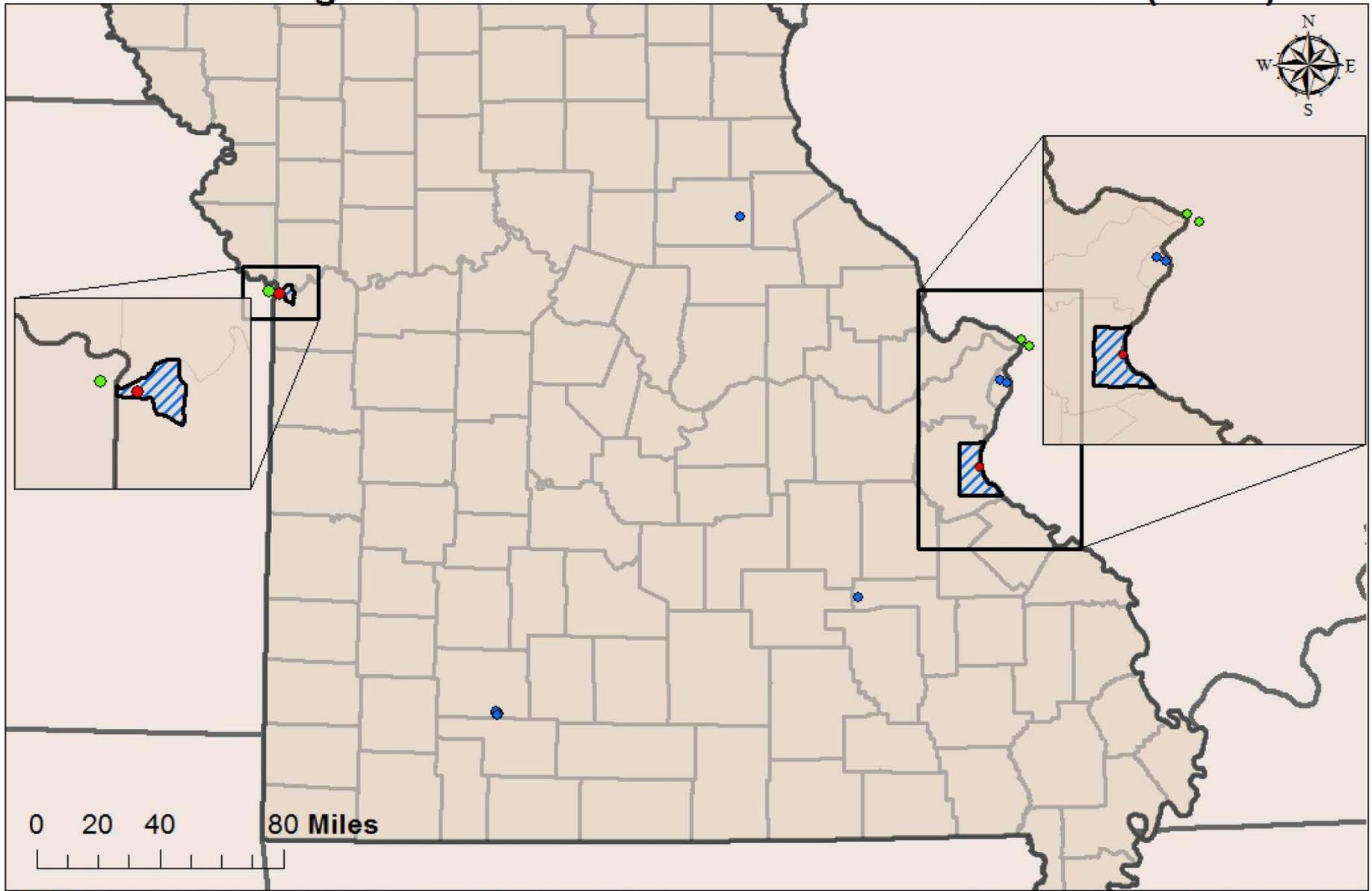
- **Current (2010)**

- Primary standard revised to 75 ppb (1-hour)
- Annual and 24-hour standards were revoked

- **Historical (1971)**

- Primary (health-based) standards set at:
 - 0.14 ppm, or 140 ppb (24-Hour)
 - 0.03 ppm, or 30 ppb (Annual)

SO2 Monitoring Network and Current Nonattainment Areas (NAAs)



Legend

 Nearby Out of State SO ₂ Monitors	 Violating MO SO ₂ Monitors
 MO SO ₂ Monitors	 Existing MO SO ₂ NAA's

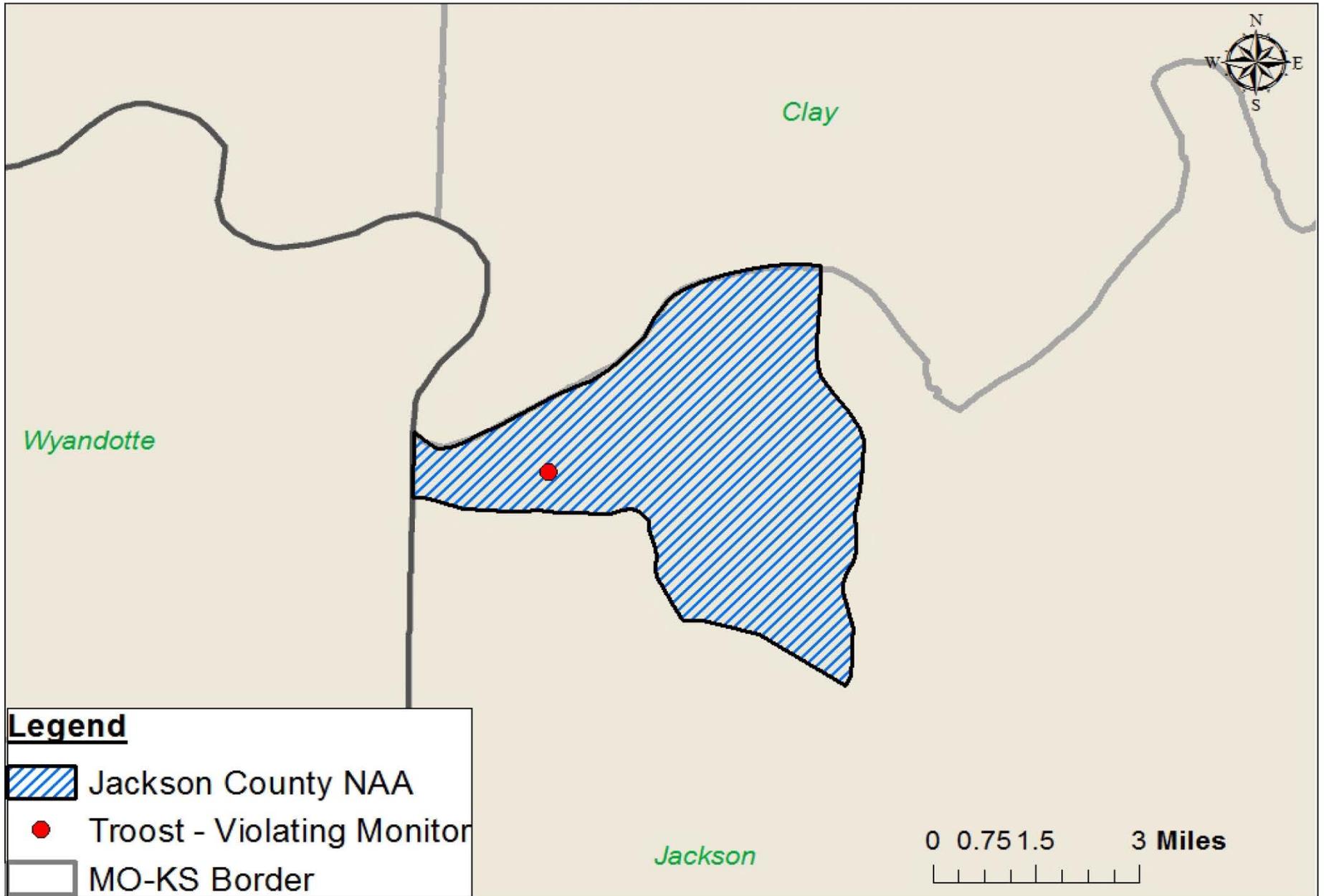
Jackson County NAA Plan Timeline

- May 22- July 2, 2015: Public review & comment
- June 25, 2015: Public hearing
- August 3, 2015: Presented for Adoption
- End of 2015: Submit to EPA w/ New State Rule

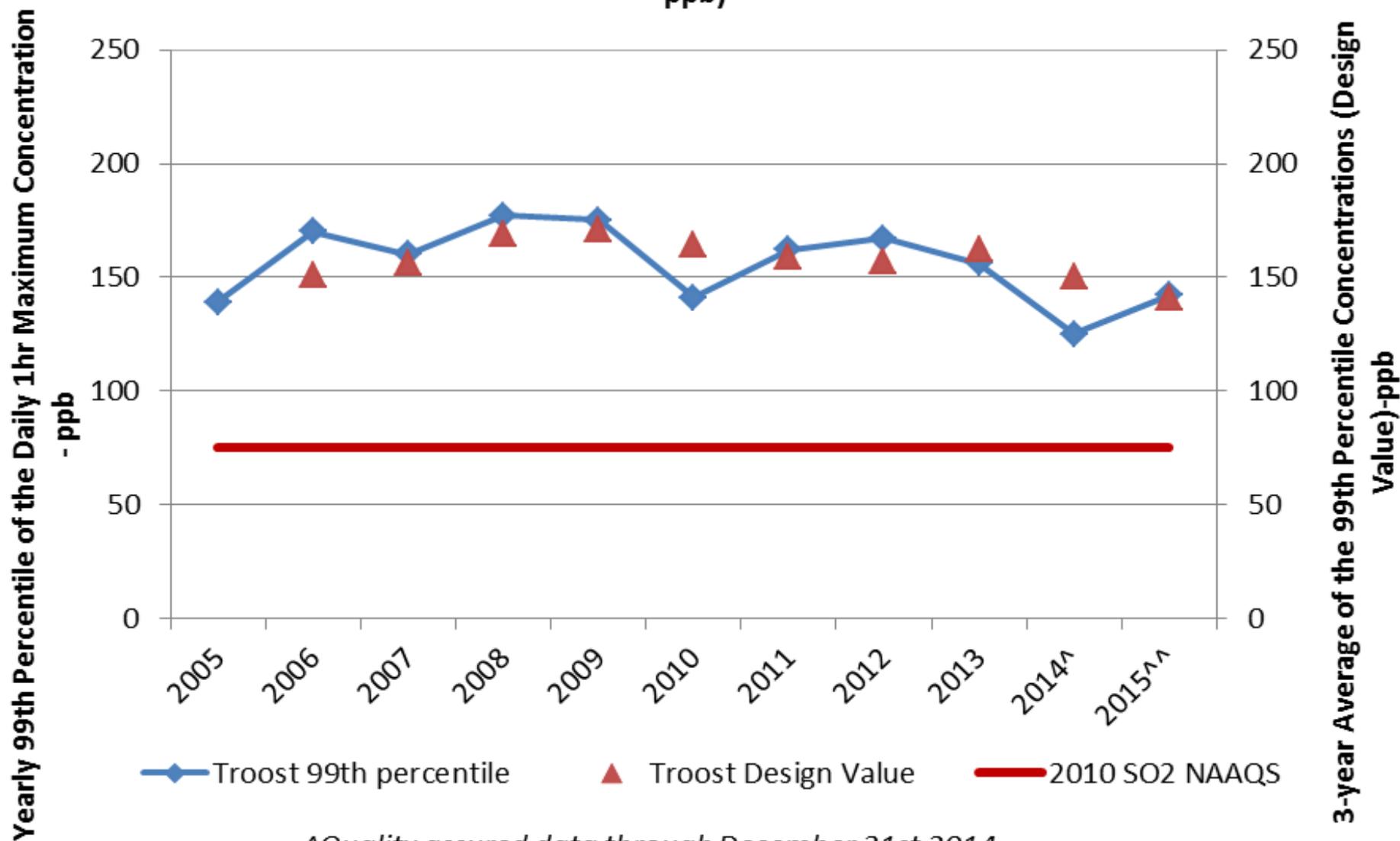
Initial Round SO₂ Nonattainment Area Compliance Dates

- January 1, 2017: Plan's control strategy
fully in place
- October 2018: Attainment date

Jackson County SO2 Nonattainment Area (NAA) with Violating Troost Monitor



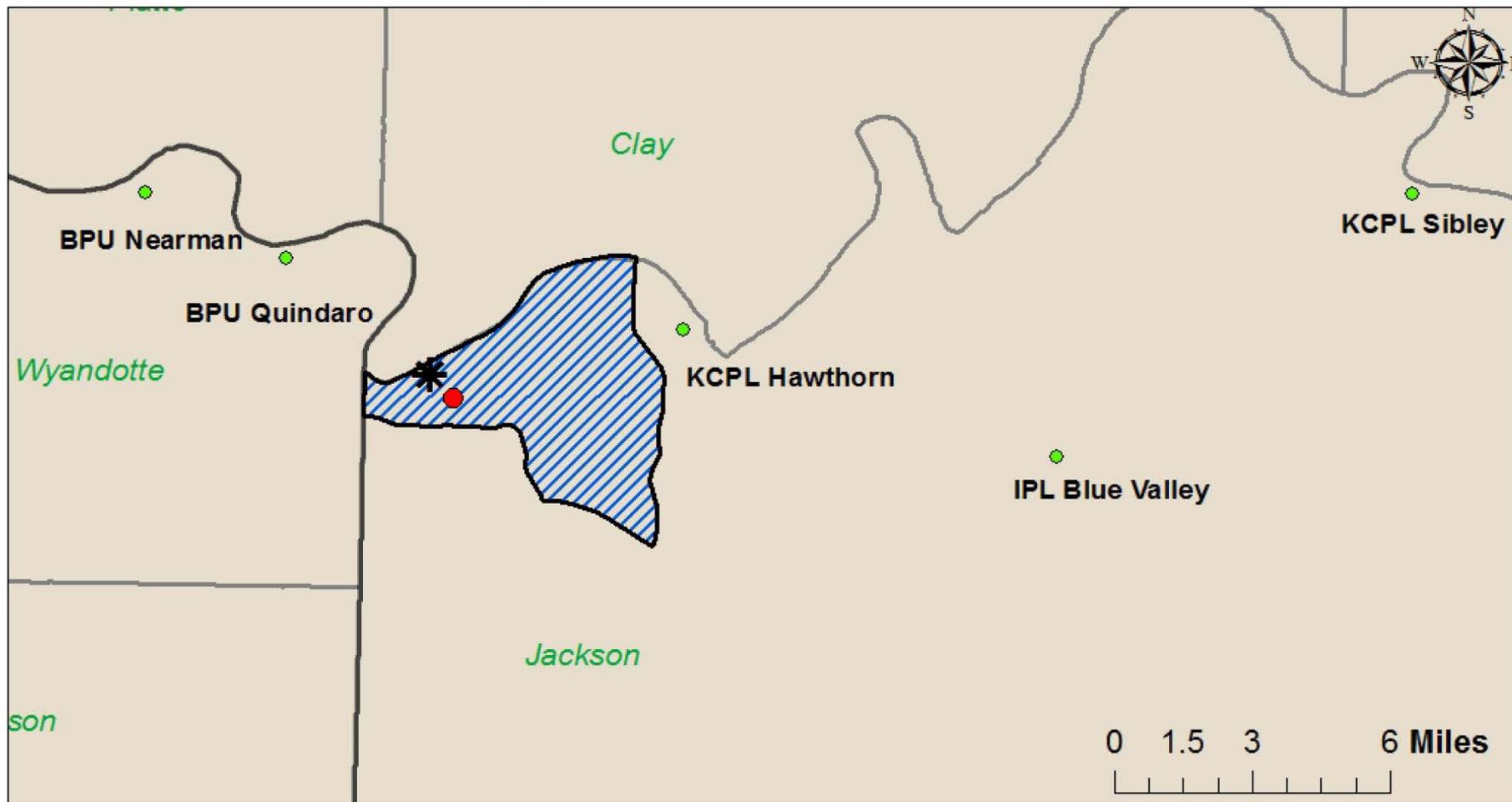
Troost Sulfur Dioxide (SO₂) Concentrations (99th Percentile of the Daily 1-hour Maximum Concentrations and the Corresponding Design Values (Parts Per Billion-ppb))



[^]Quality assured data through December 31st 2014

^{^^}Preliminary data through May 11th 2015

Jackson County SO2 Nonattainment Area (NAA) with Large SO2 Sources Identified



Legend

- * Veolia Energy Steam Plant
- Troost - Violating Monitor
- Large SO2 Sources
- ▨ Jackson County NAA

Control Strategy

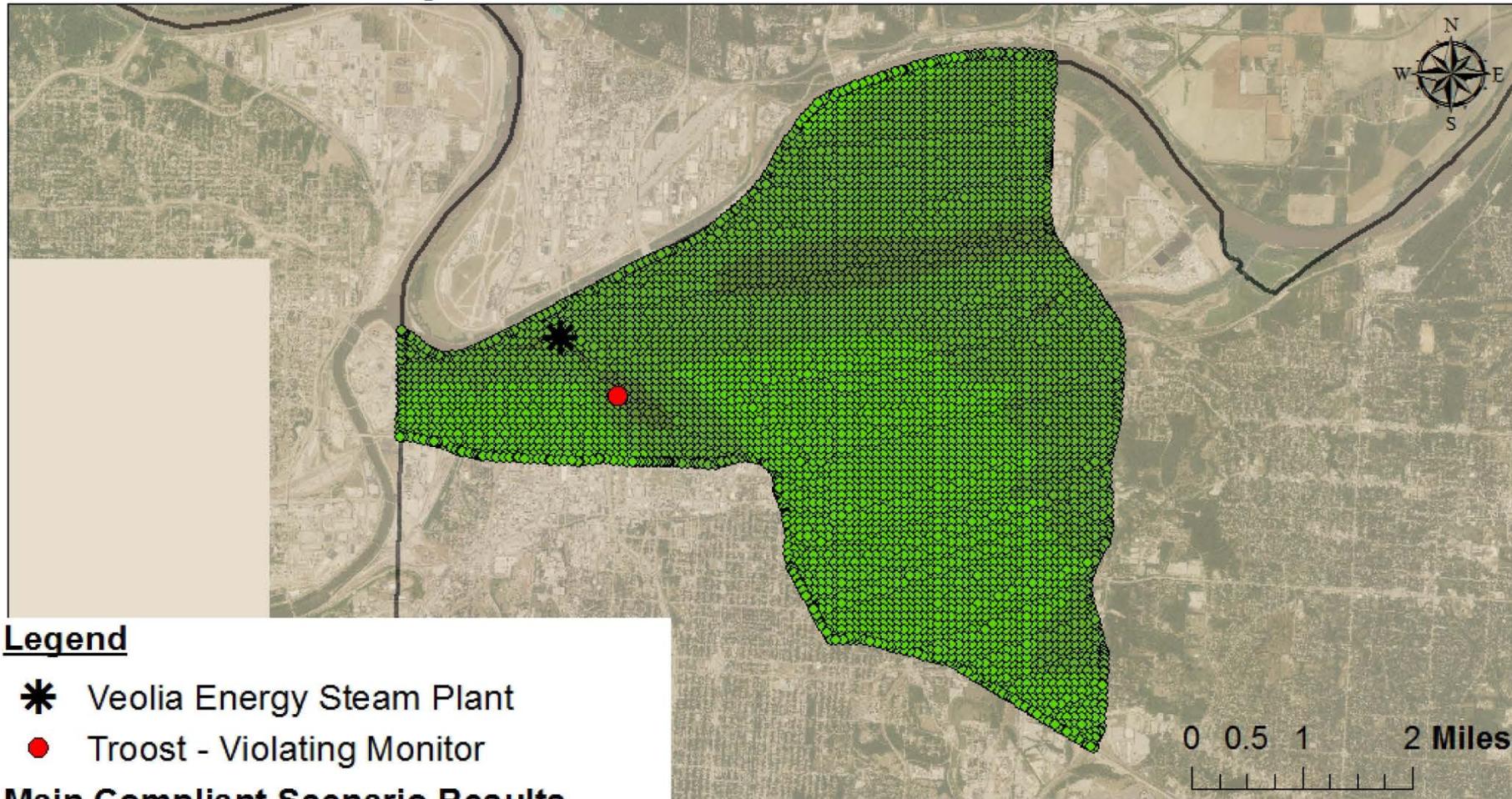
- Emission Limits for Veolia yielding 95% reductions in allowable SO₂ emissions
- Emission Limits for boilers at two KCPL stations
- Natural Gas required for units at KCPL Hawthorn & IPL Blue Valley
- Delivery of Ultra Low Sulfur Diesel
- Proposed new MO SO₂ rule

Modeling Analysis

- Several model scenarios included in plan
- Together, scenarios demonstrate NAAQS compliance throughout the NAA
- Analysis supported by evaluation of potential emissions for all interactive sources

Note: 75 ppb = 196.73 $\mu\text{g}/\text{m}^3$

Jackson County SO2 Nonattainment Area (NAA) Compliant Scenario Model Results



Legend

- * Veolia Energy Steam Plant
- Troost - Violating Monitor

Main Compliant Scenario Results

Conc. (ug/m3)-All Receptors Compliant

- 136.110 - 150.000
- 150.001 - 175.000
- 175.001 - 196.725

Conclusion

- Main control strategy: Emission Limits & Unit Specific Fuel Requirements
 - Troost Avenue monitor expected to be in compliance by October 2018
- Modeling analysis: the entire area is in compliance under controlled conditions
- Additional requirements: Delivery of Ultra Low Sulfur Diesel

Division of Environmental Quality Director: Leanne Tippett Mosby

Date: June 25, 2015

Nothing in this document may be used to implement any enforcement action or levy any penalty unless promulgated by rule under chapter 536 or authorized by statute.