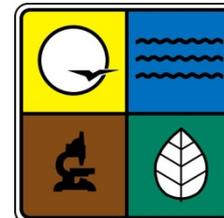


March 2014 PM_{2.5} Episode: Visibility Impact and Speciation Results

Jerry Downs

2014 Air Quality Monitoring Agencies Meeting
St. Louis MO
May 15, 2014

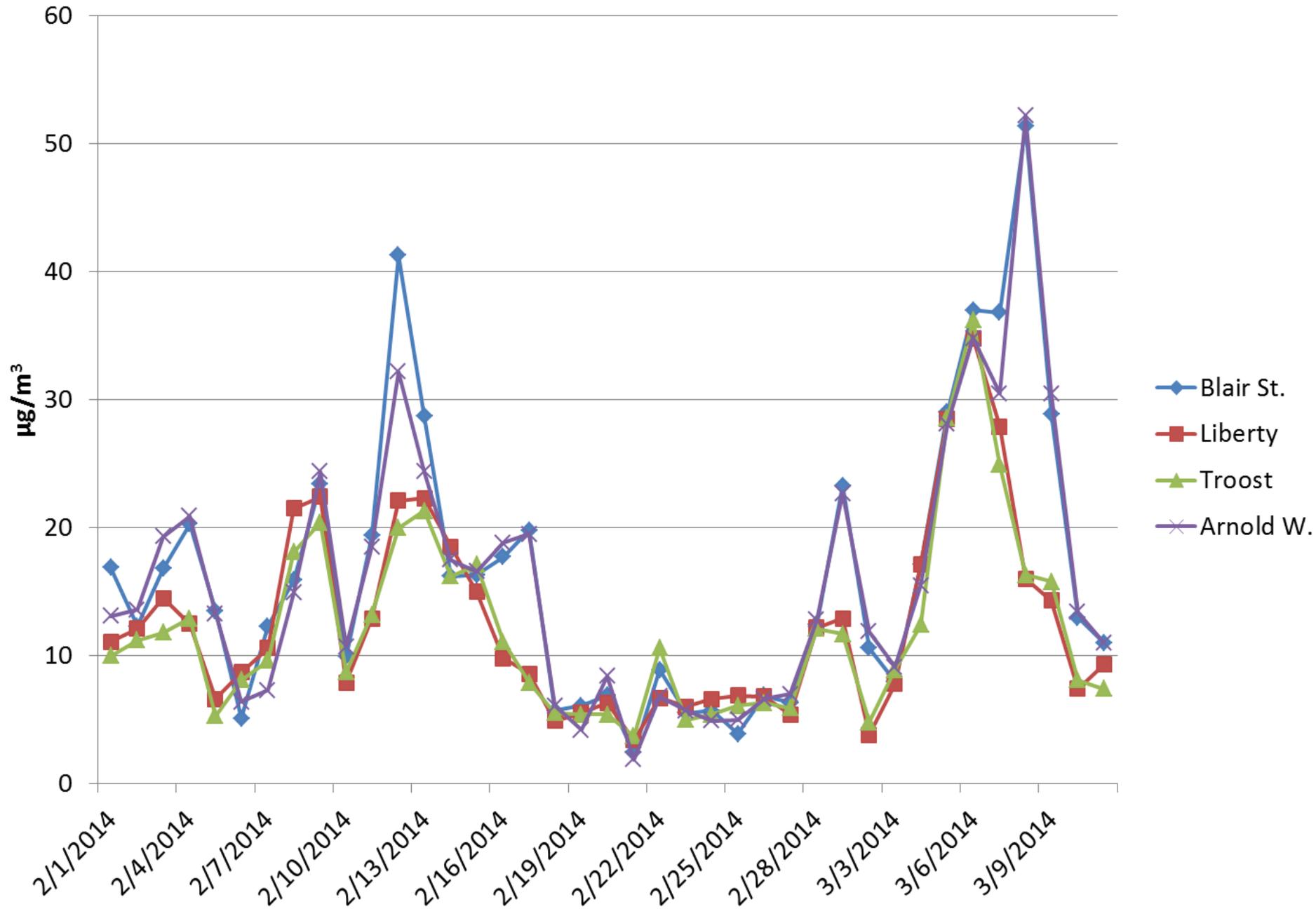


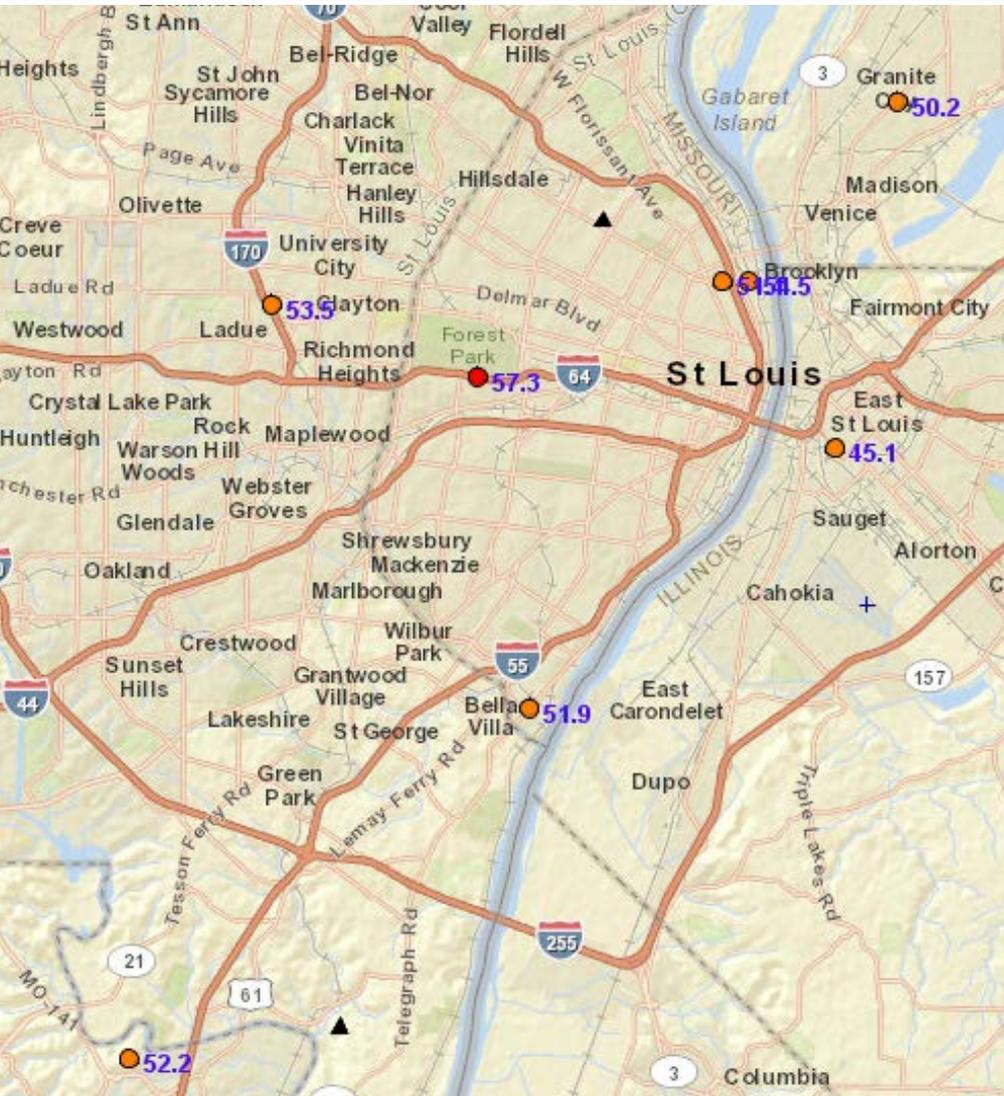
MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Elevated PM_{2.5} Episodes

- **February 12-13, 2014: statewide but higher in St. Louis area than Kansas City**
- **March 6-8, 2014: statewide but maximum was higher and 2 days later in St. Louis area than Kansas City. Speciation data for March 6 can be compared to other days.**

PM_{2.5} FEM 24-hr Averages, 2/1-3/11/2014





EPA's AirNowTech
Navigator, Saturday,
March 8th 2014
Area wide PM_{2.5} Episode
24-hour average.

March 3, 2014, 24-hour PM_{2.5} 9.3 µg/m³ (Forest Park site)

Mar 03 14 12:00:18



March 4, 2014, 24-hour PM_{2.5} 19.4 µg/m³ (Forest Park site)

Mar 04 14 12:00:13



March 5, 2014, 24-hour PM_{2.5} 29.9 µg/m³ (Forest Park site)

Mar 05 14 12:00:16



March 6, 2014, 24-hour PM_{2.5} 36.5 µg/m³ (Forest Park site)

Mar 06 14 12:00:15



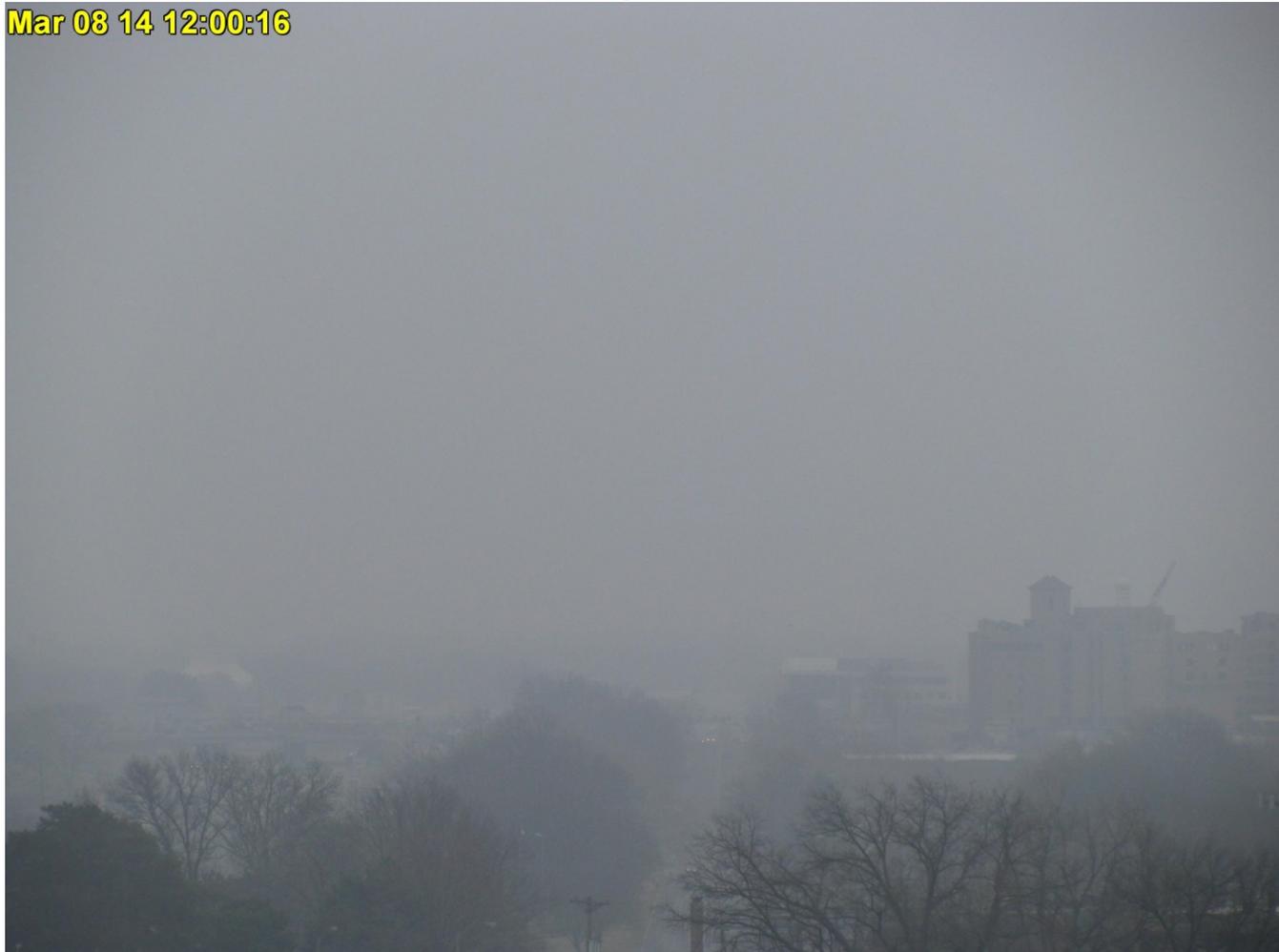
March 7, 2014, 24-hour PM_{2.5} 36.1 µg/m³ (Forest Park site)

Mar 07 14 12:00:18



March 8, 2014, 24-hour PM_{2.5} 54.6 µg/m³ (Forest Park site)

Mar 08 14 12:00:16



1-hour PM_{2.5}
Concentration
at Noon CST:

70.8 µg/m³

March 9, 2014, 24-hour PM_{2.5} 27.6 µg/m³ (Forest Park site)

Mar 09 14 12:00:18



March 10, 2014, 24-hour PM_{2.5} 14.0 µg/m³ (Forest Park site)

Mar 10 14 12:05:52



March 11, 2014, 24-hour PM_{2.5} 12.6 µg/m³ (Forest Park site)

Mar 11 14 12:00:14

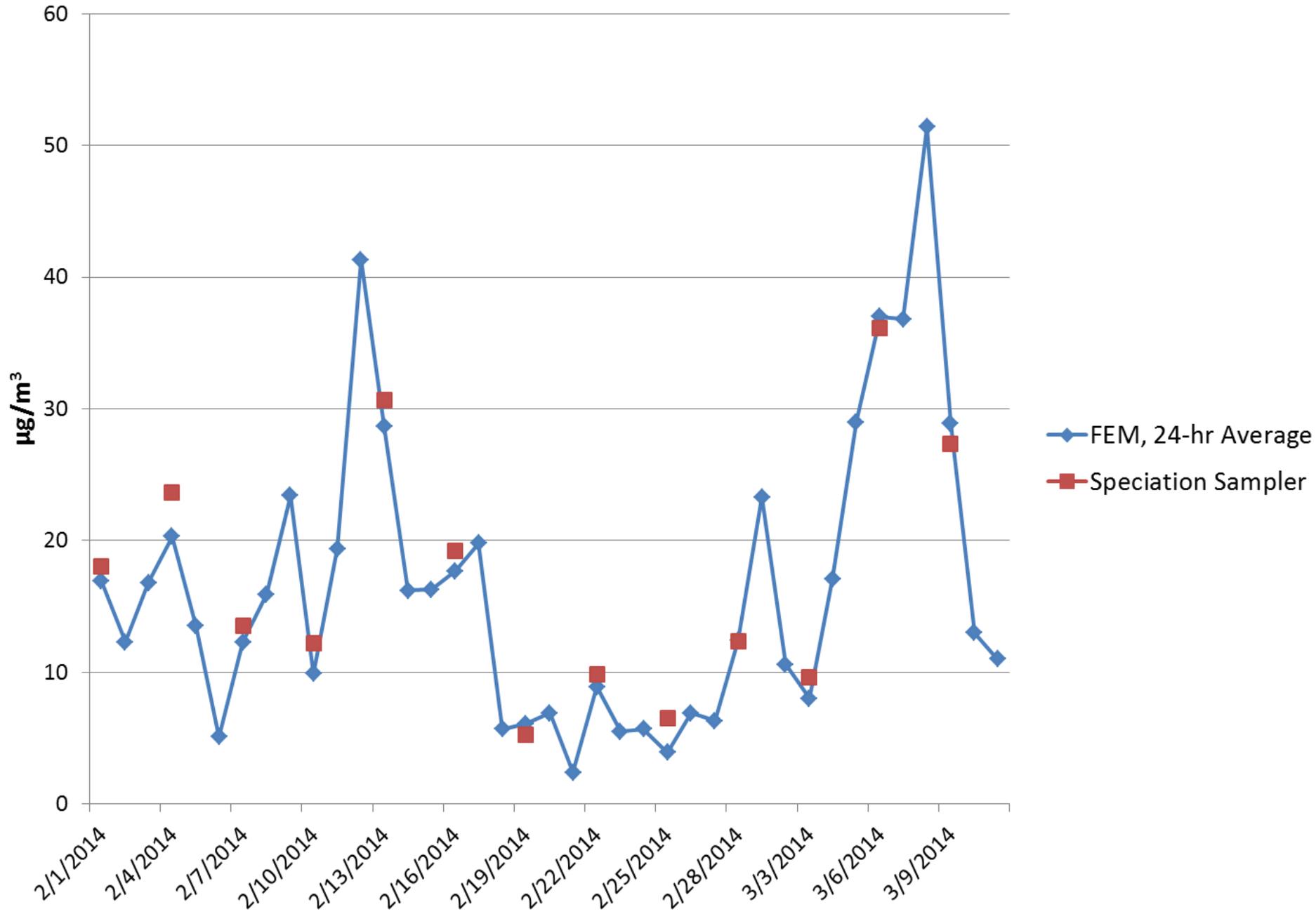


March 12, 2014, 24-hour PM_{2.5} 3.4 µg/m³ (Forest Park site)

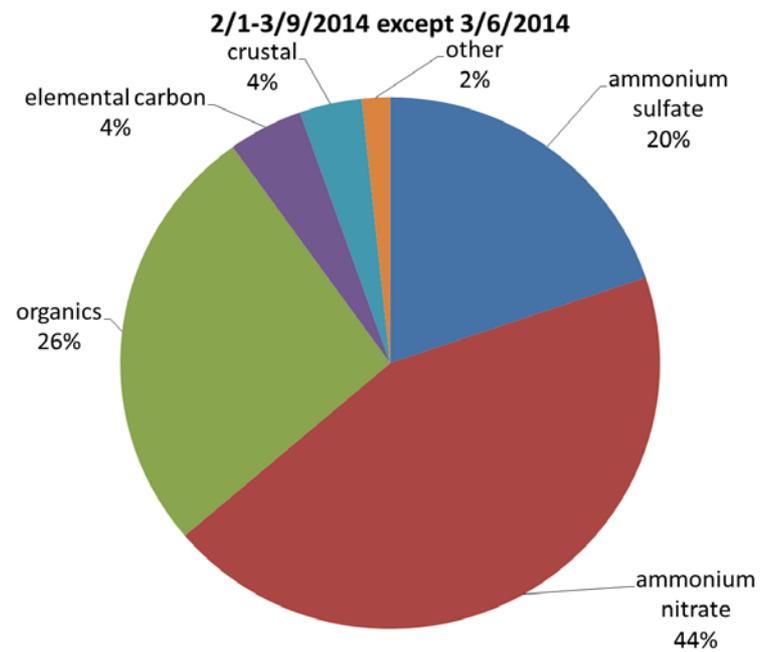
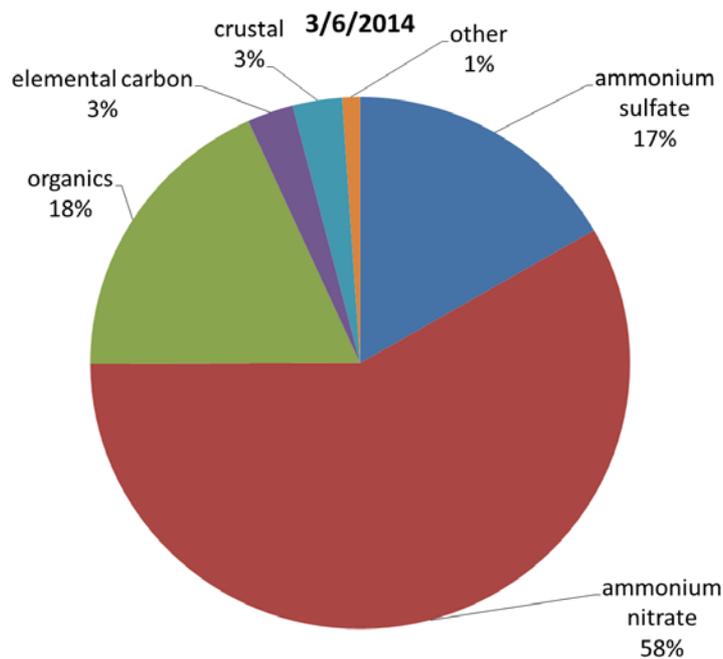
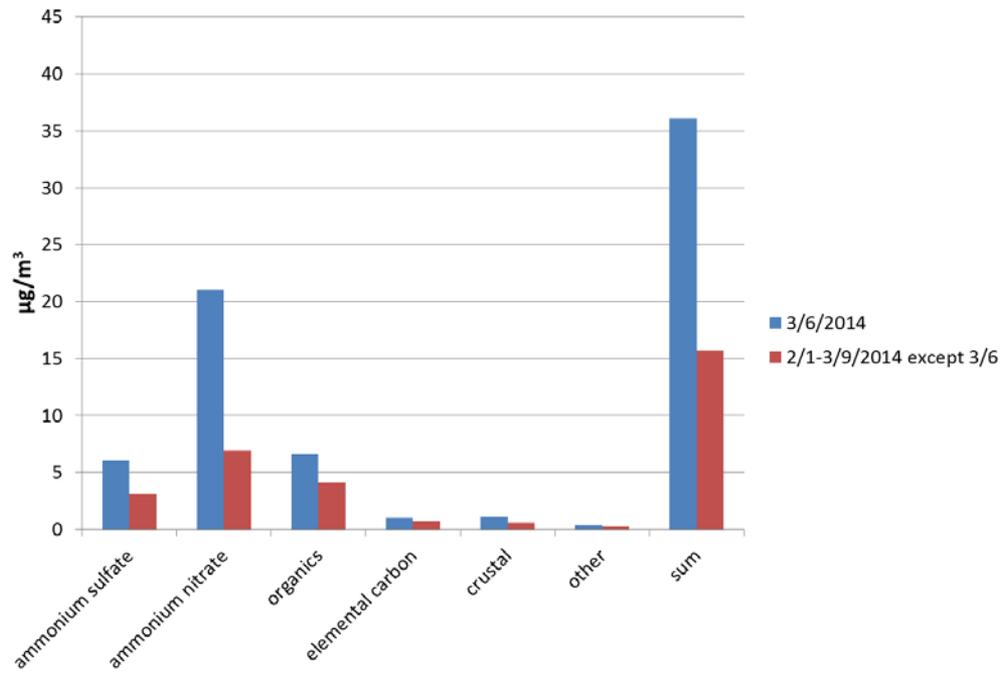
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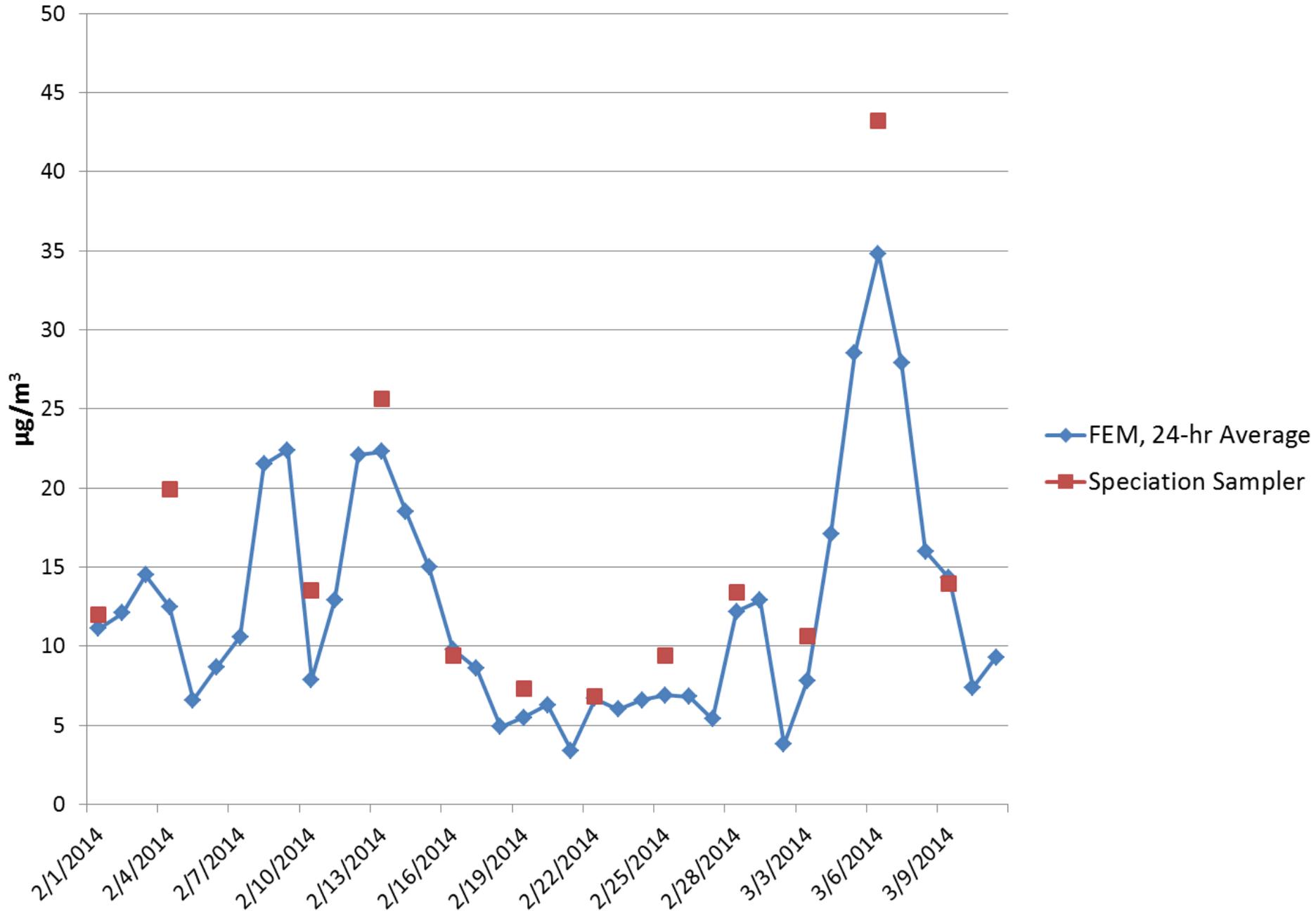
Blair St. PM_{2.5}, 2/1-3/11/2014



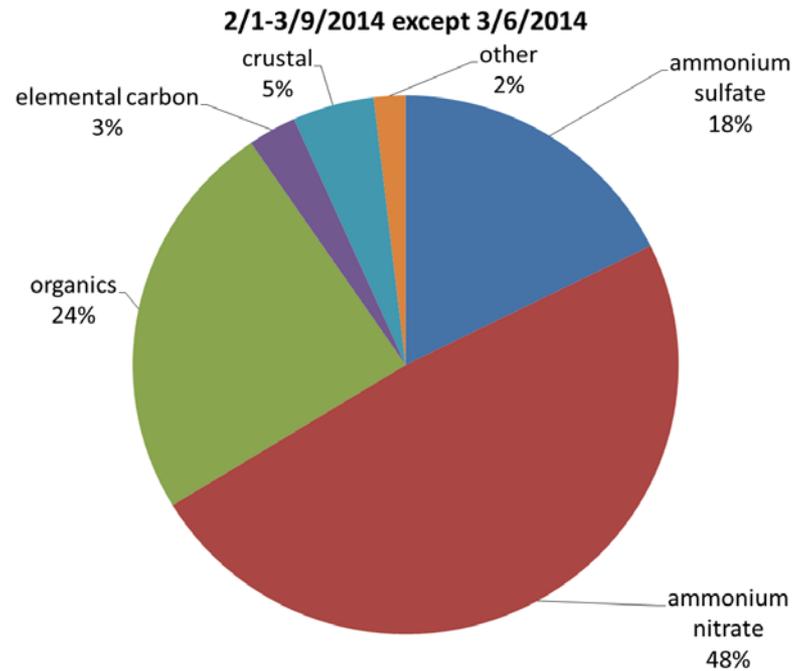
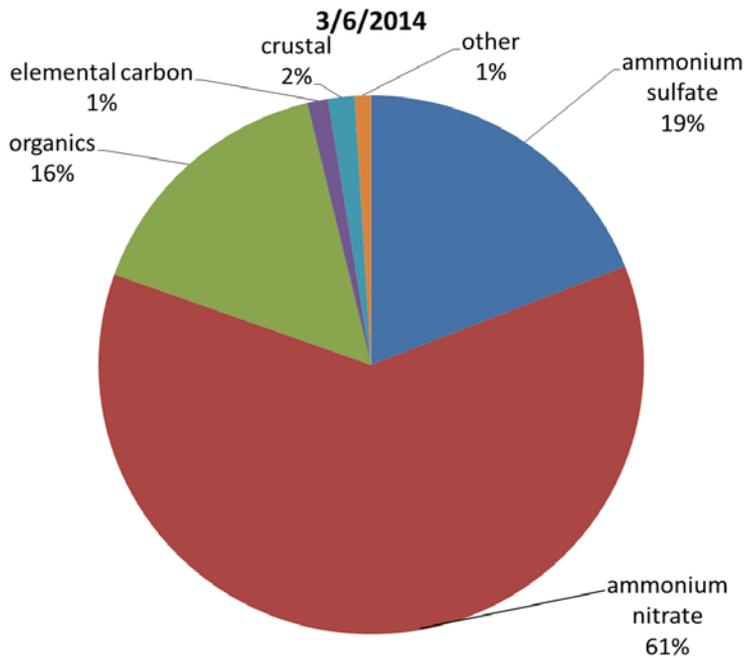
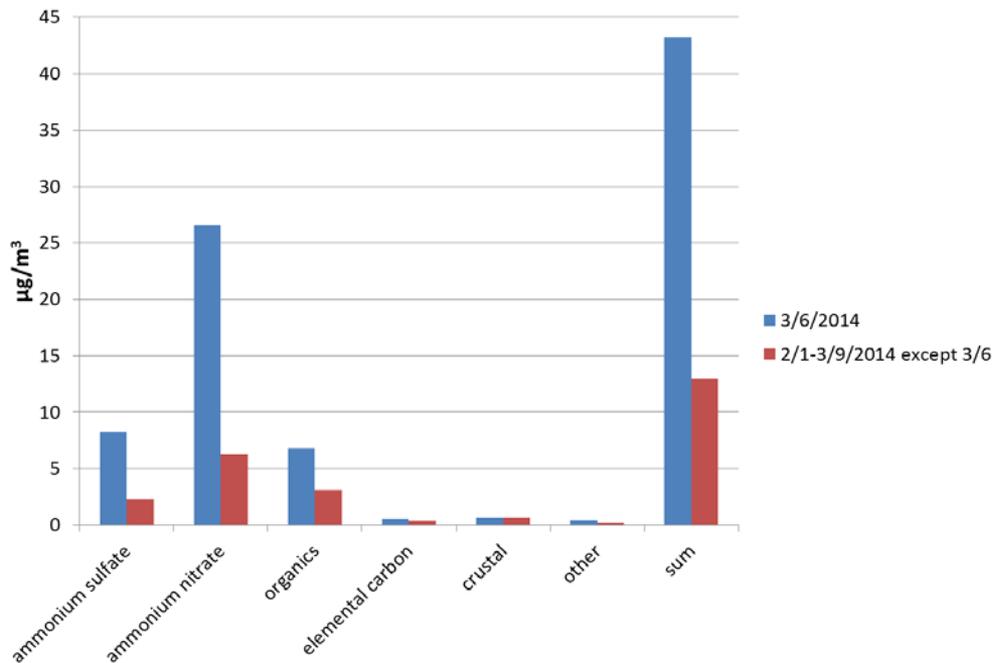
Blair St. PM_{2.5} Speciation



Liberty PM_{2.5}, 2/1-3/11/2014



Liberty PM_{2.5} Speciation



Elevated PM_{2.5} Episode Speciation Results, March 6, 2014

- **Ammonium nitrate is the primary contributor to elevated PM_{2.5} at St. Louis and Kansas City area sites**
- **Other major species (ammonium sulfate and organics) are also elevated, but to a lesser extent**

Division of Environmental Quality
Director: Leanne Tippett Mosby

Date: May 15, 2014

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.