



BY2011 Emissions Inventory

(Draft)

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Overview

Base Year 2011 Emissions Inventory

- Emission Source Sectors
 - Point (EGU* & Non-EGU)
 - Area
 - Nonroad (NMIM model & MAR** sources)
 - Onroad (MOVES2010a)

- Period & Pollutants
 - Annual – VOC, NO_x, CO, PM_{2.5}-Pri, SO₂, NH₃
 - Avg Ozone Season Day – VOC, NO_x, CO

* EGU – Electric Generating Unit

** MAR – Marine, Air, Rail



Development - Emissions Inventory

- Point Sources – States
 - National Emissions Inventory (NEI 2011) was starting point
 - Developed annual and OSD (derived from annual) emissions inventories

- Area & MAR Sources – States
 - NEI 2011 was starting point
 - Developed annual and OSD (derived from annual) emissions inventories



Development - Emissions Inventory

- Nonroad Sources (NMIM model) – MWAQC Staff
 - NEI 2011 inputs used
 - NMIM2008 software (NONROAD2008a model embedded)

- Onroad Sources – MWAQC/TPB Staff
 - MOVES2010a model used
 - Fuel & I/M Program inputs – States
 - Meteorology – MWAQC Staff
 - Dulles & National airports data averaged for 2011
 - Transportation inputs – TPB Staff
 - Inventory Development Periods
 - Annual run – Model run for Jan-Dec 2011
 - OSD run – Model run for July (Weekday)

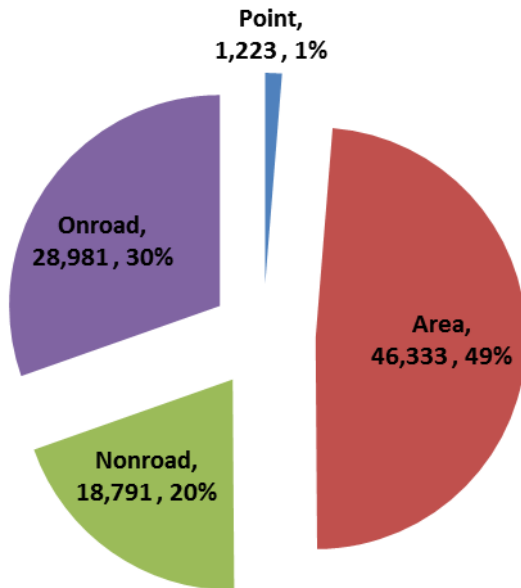


Emission by Source

VOC

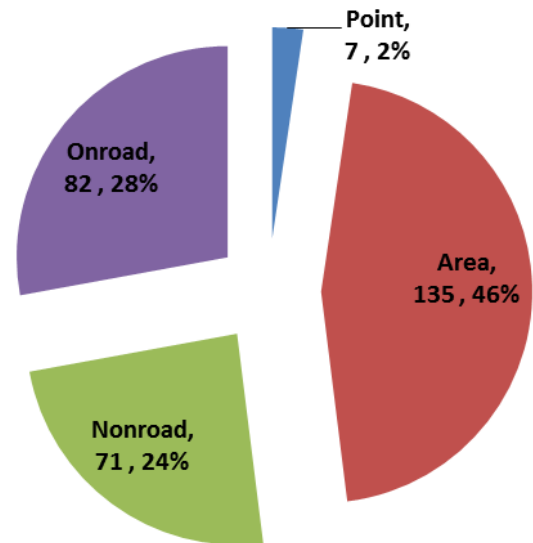
Annual 2011 VOC Emissions (tpy)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)

**Total
95,329**



OSD 2011 VOC Emissions (tpd)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)

**Total
295.33**



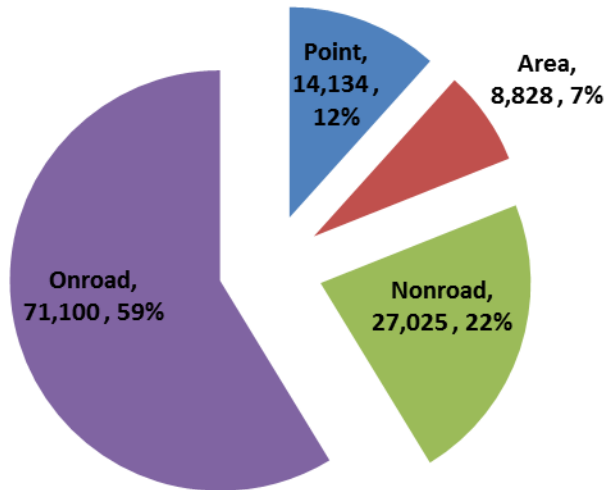


Emission by Source

NOx

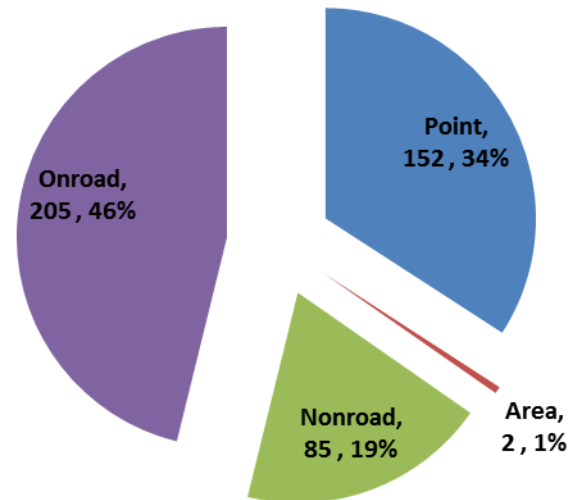
Annual 2011 NOx Emissions (tpy)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)

**Total
121,086**



OSD 2011 NOx Emissions (tpd)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)

**Total
445.13**



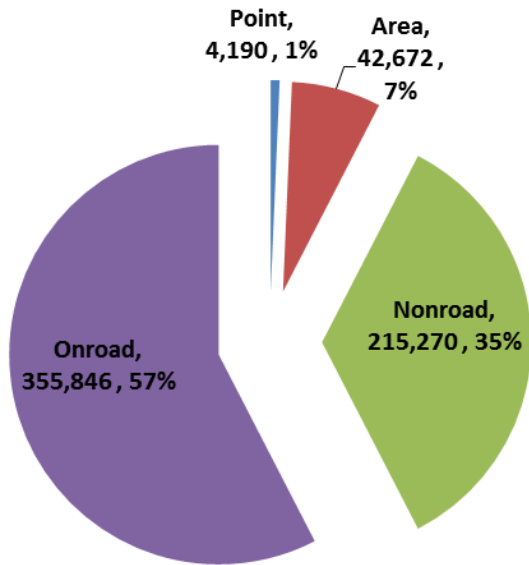


Emission by Source

CO

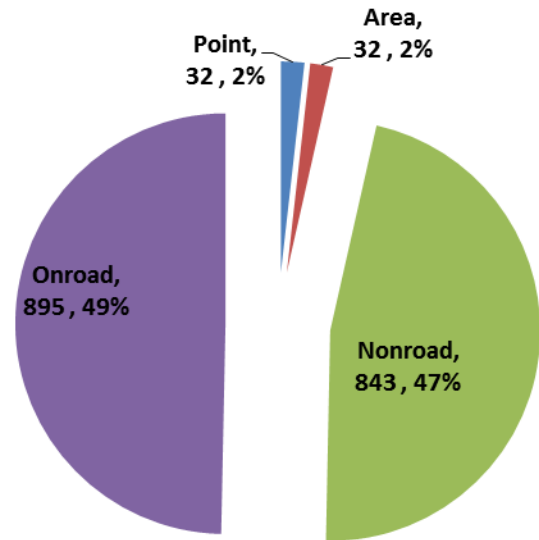
Annual 2011 CO Emissions (tpy)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)

**Total
617,978**



OSD 2011 CO Emissions (tpd)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)

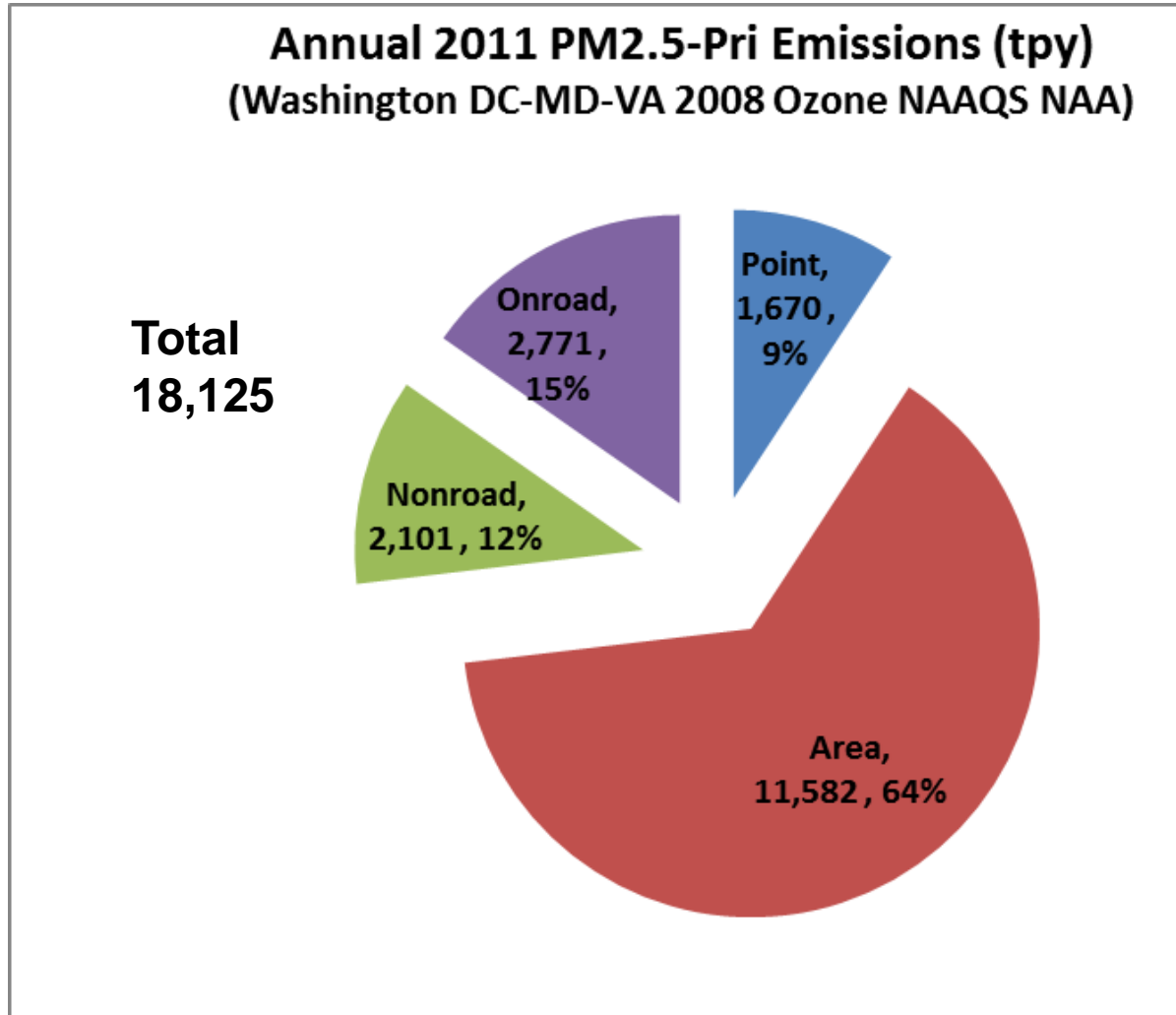
**Total
1,801.56**





Emission by Source

PM2.5

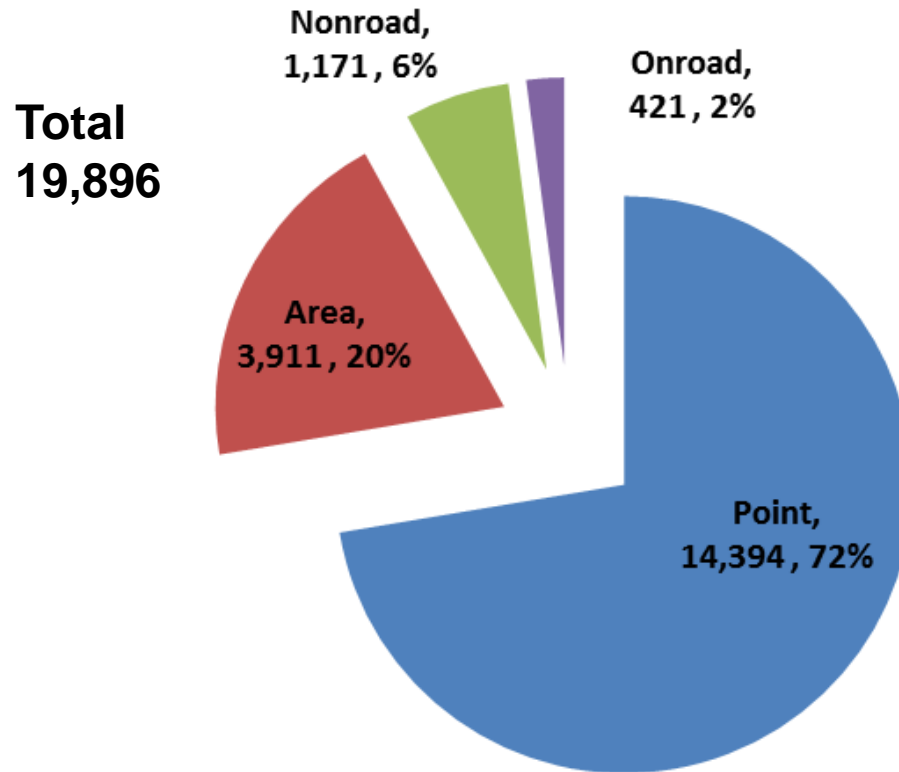




Emission by Source

SO₂

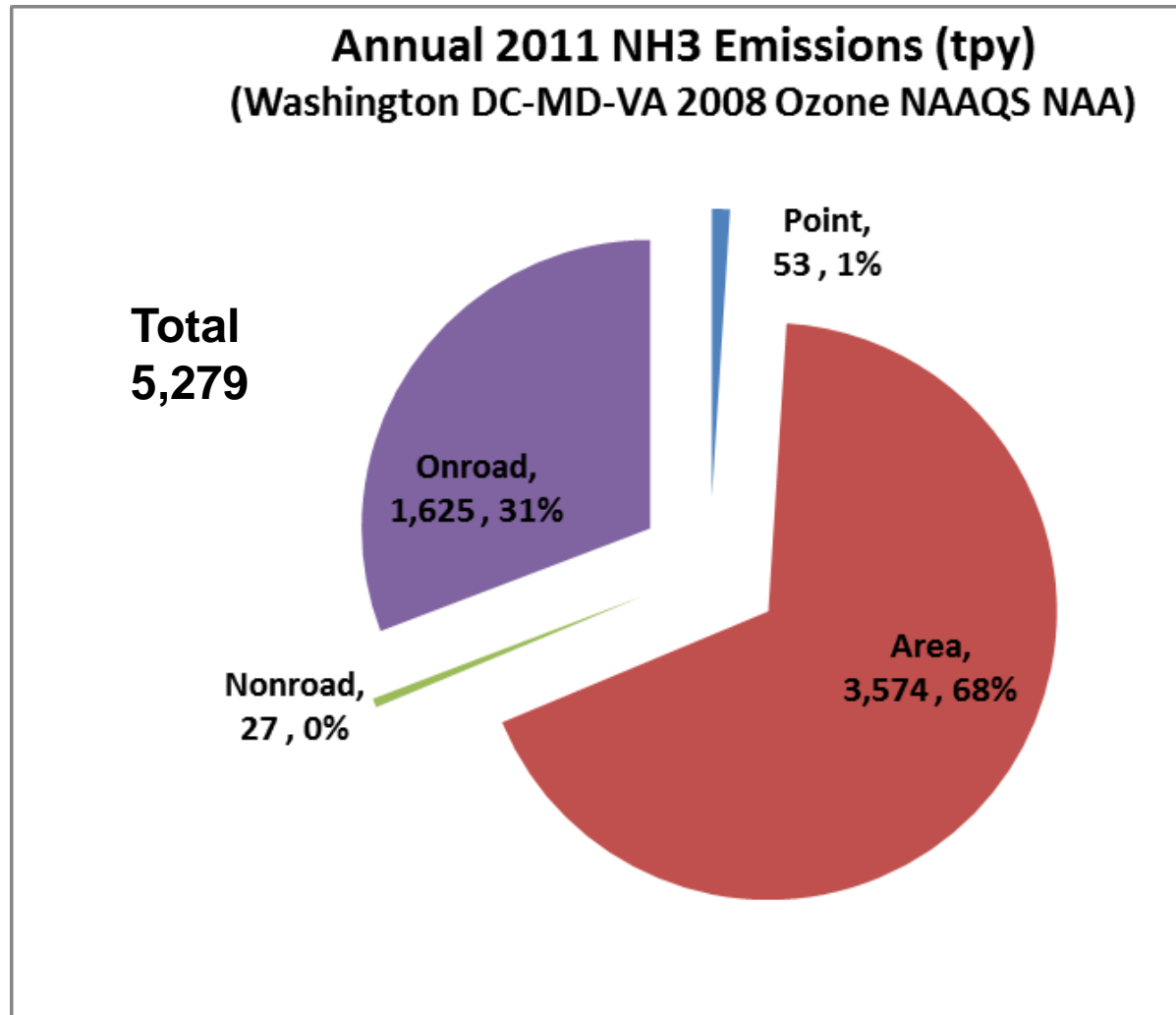
Annual 2011 SO₂ Emissions (tpy)
(Washington DC-MD-VA 2008 Ozone NAAQS NAA)





Emission by Source

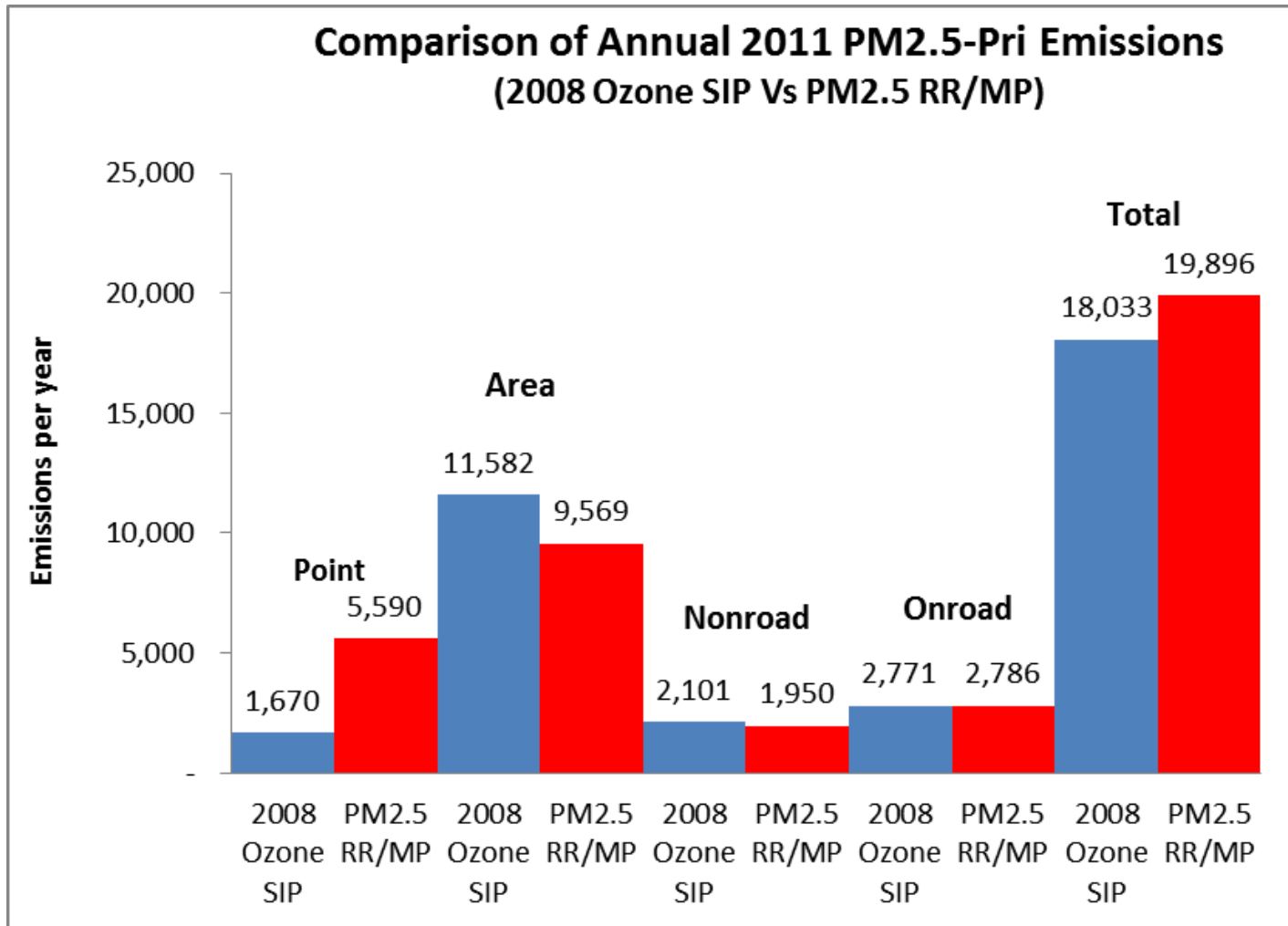
NH₃





Comparison of 2011 Emissions

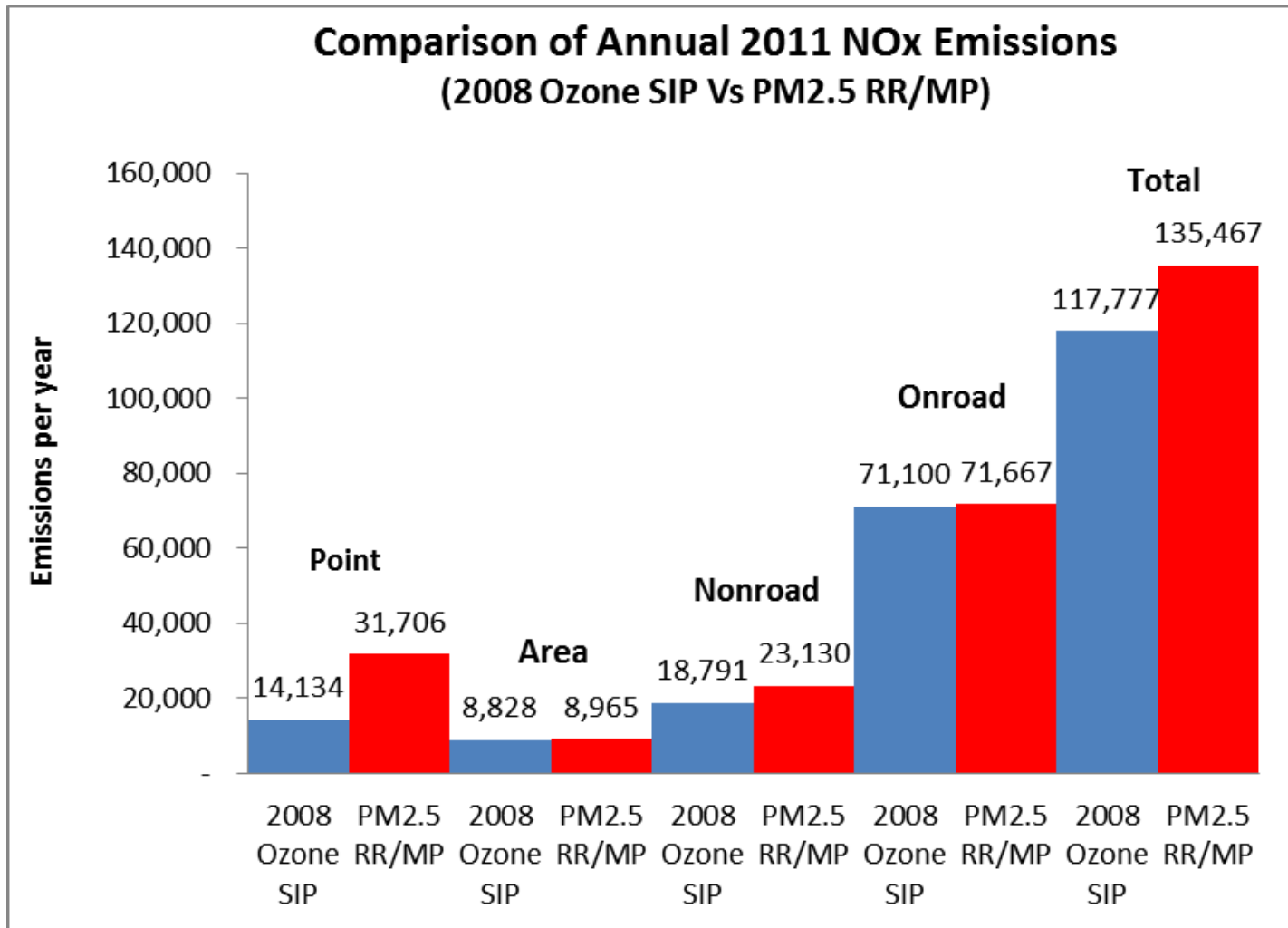
PM2.5





Comparison of 2011 Emissions

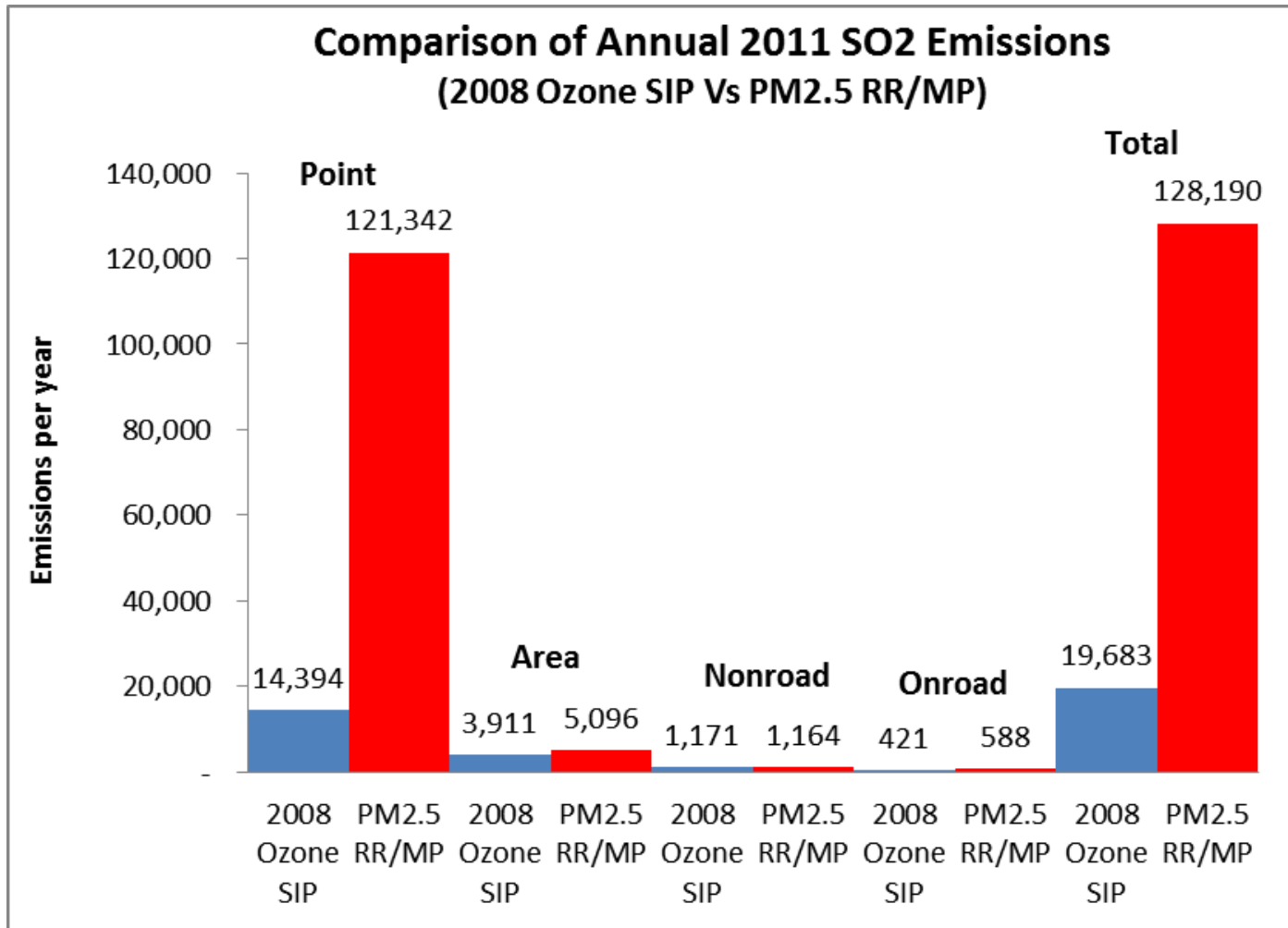
NOx





Comparison of 2011 Emissions

SO2





Conclusion

Largest Emission sources

- VOC, PM_{2.5}-Pri, NH₃ – Area
- NO_x, CO – Onroad
- SO₂ – Point