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# **MANE-VU Emissions Inventory Status**

**November 2-3, 2005  
OTC Fall Meeting**

**Serpil Kayin, Megan Schuster, and Pat Davis**

**MARAMA**

# Presentation Outline

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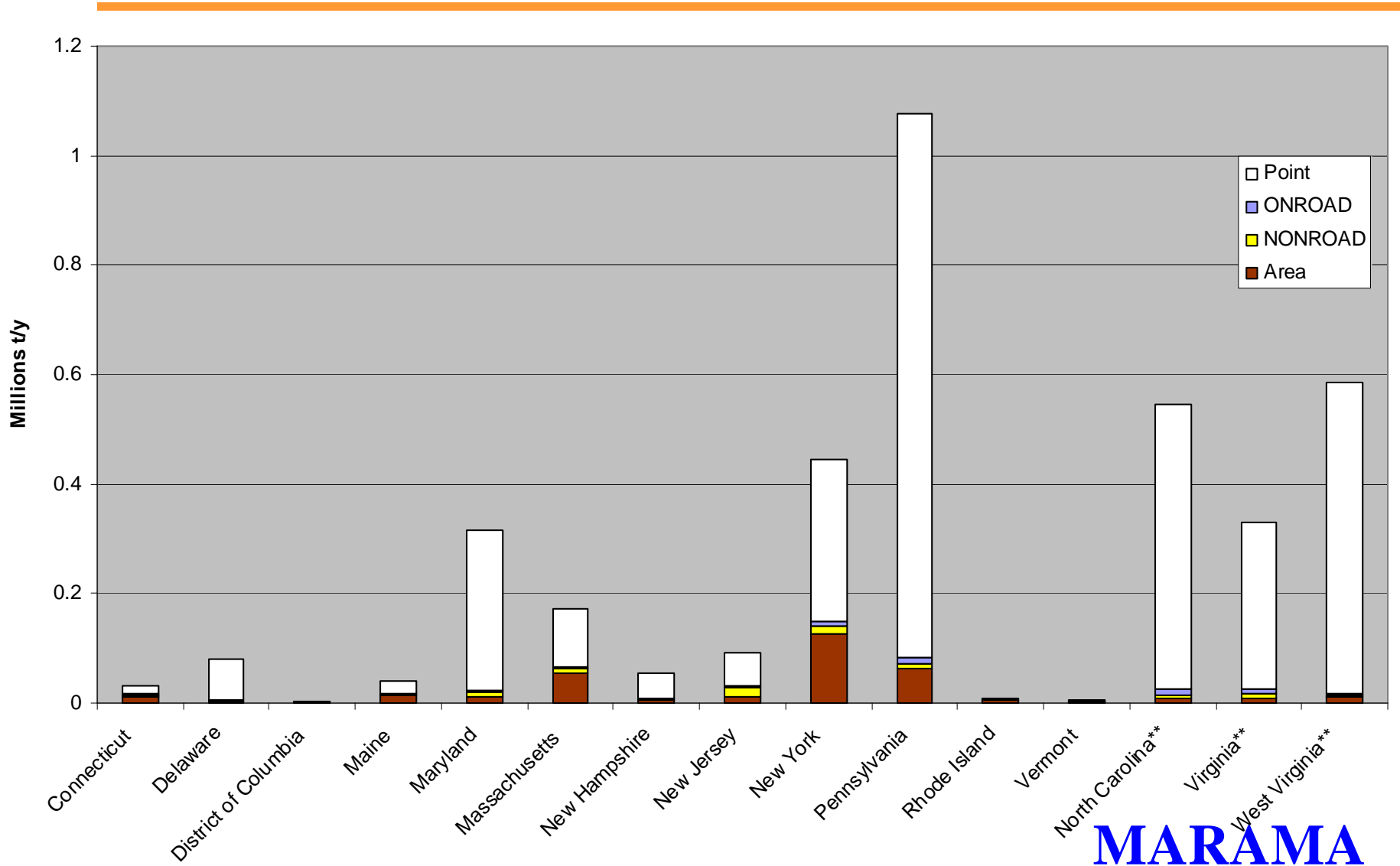
- **Where we are**
  - **2002 MANE-VU Modeling Inventory Status: Data availability and summaries by pollutant, major source categories, state and regional totals, important source categories (SCCs) by pollutant, state, and regional totals, density maps, and seasonality.**
- **Where are we going? Projected future inventories: 2009, 2012, 2018**
  - **Summaries by pollutant, state, regional total and important source categories**
  - **Potential non-EGU controls for SO<sub>2</sub>, NO<sub>x</sub>, VOC?**

# MANE-VU 2002 Modeling Inventory

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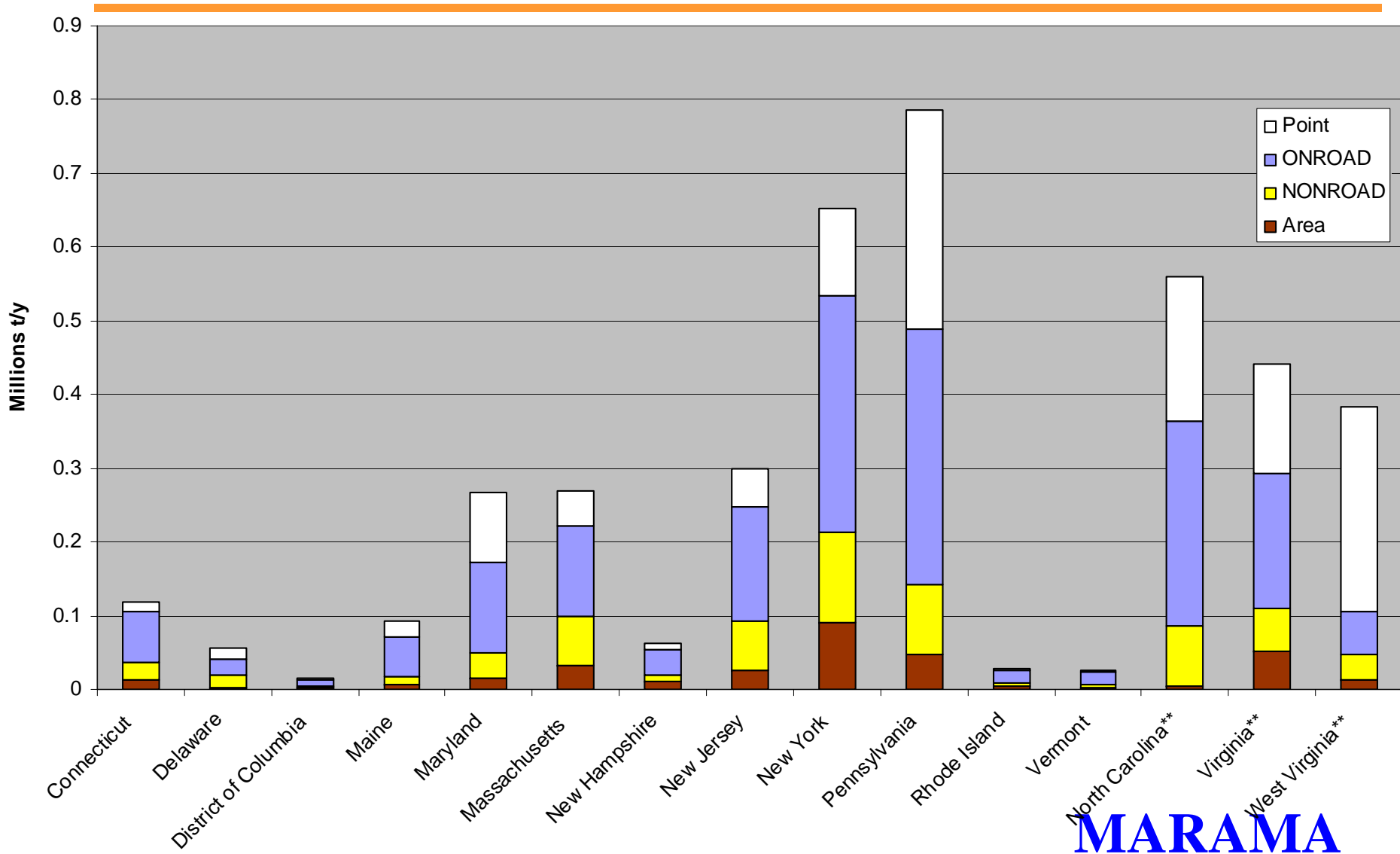
- Version 1 of 2002 MANE-VU Modeling Inventory and Summary
  - [www.marama.org](http://www.marama.org) click on Regional Haze
  - Summaries by state, region, pollutant, SCC, density maps, comparison with 1996 and 1999 inventories
- Version 2 of 2002 MANE-VU Modeling Inventory available
  - Based on updates from states (adding emissions for new SCCs, or updating old data)
- Projections are developed based on Version 2
- Version 3 of 2002 inventory will be available soon
- TSD for SIPs will be devoped

## 2002 MARAMA + NESCAUM Total Annual SO2 Emissions by State



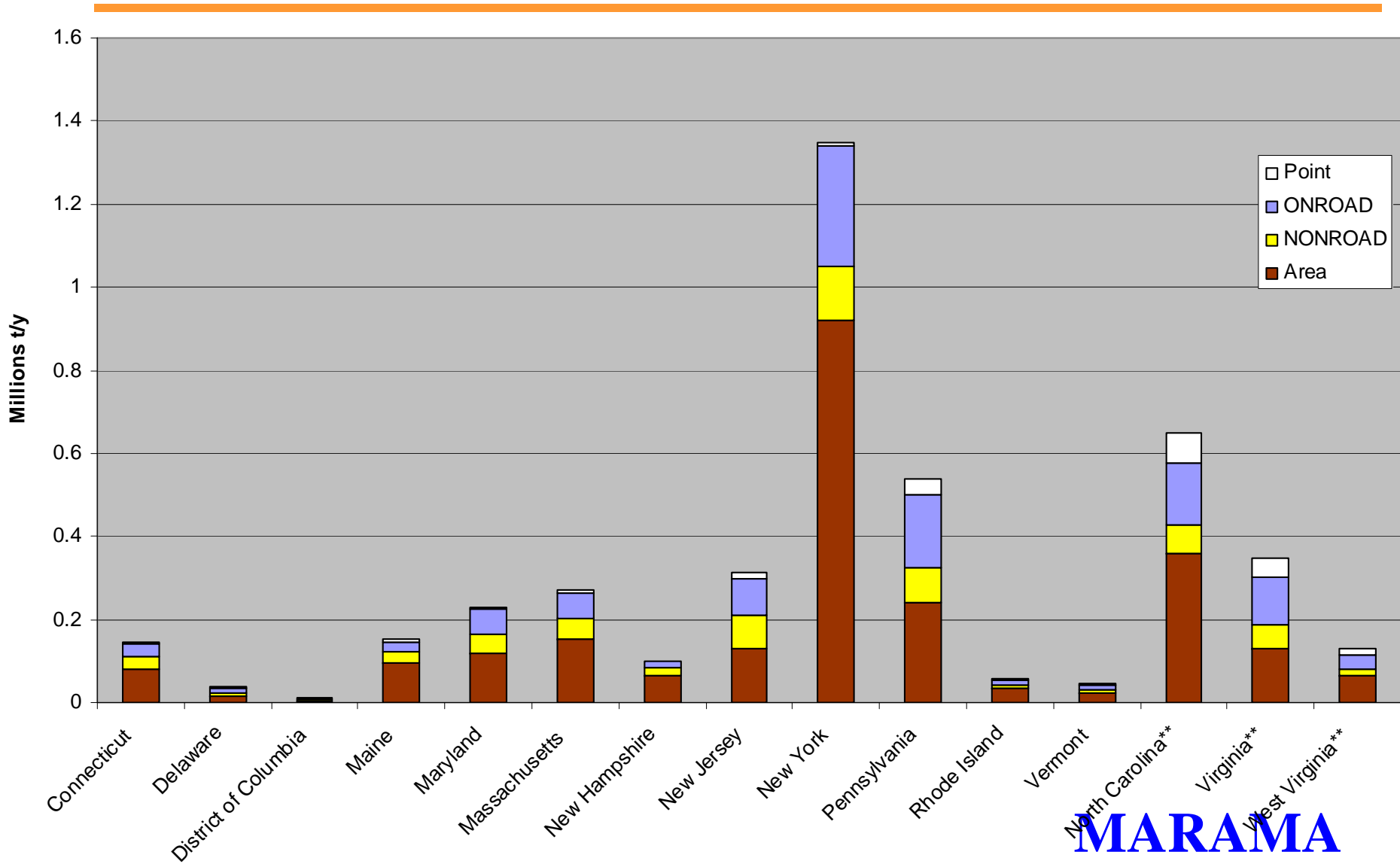
**MARAMA**

## 2002 MARAMA + NESCAUM Total Annual NOx Emissions by State



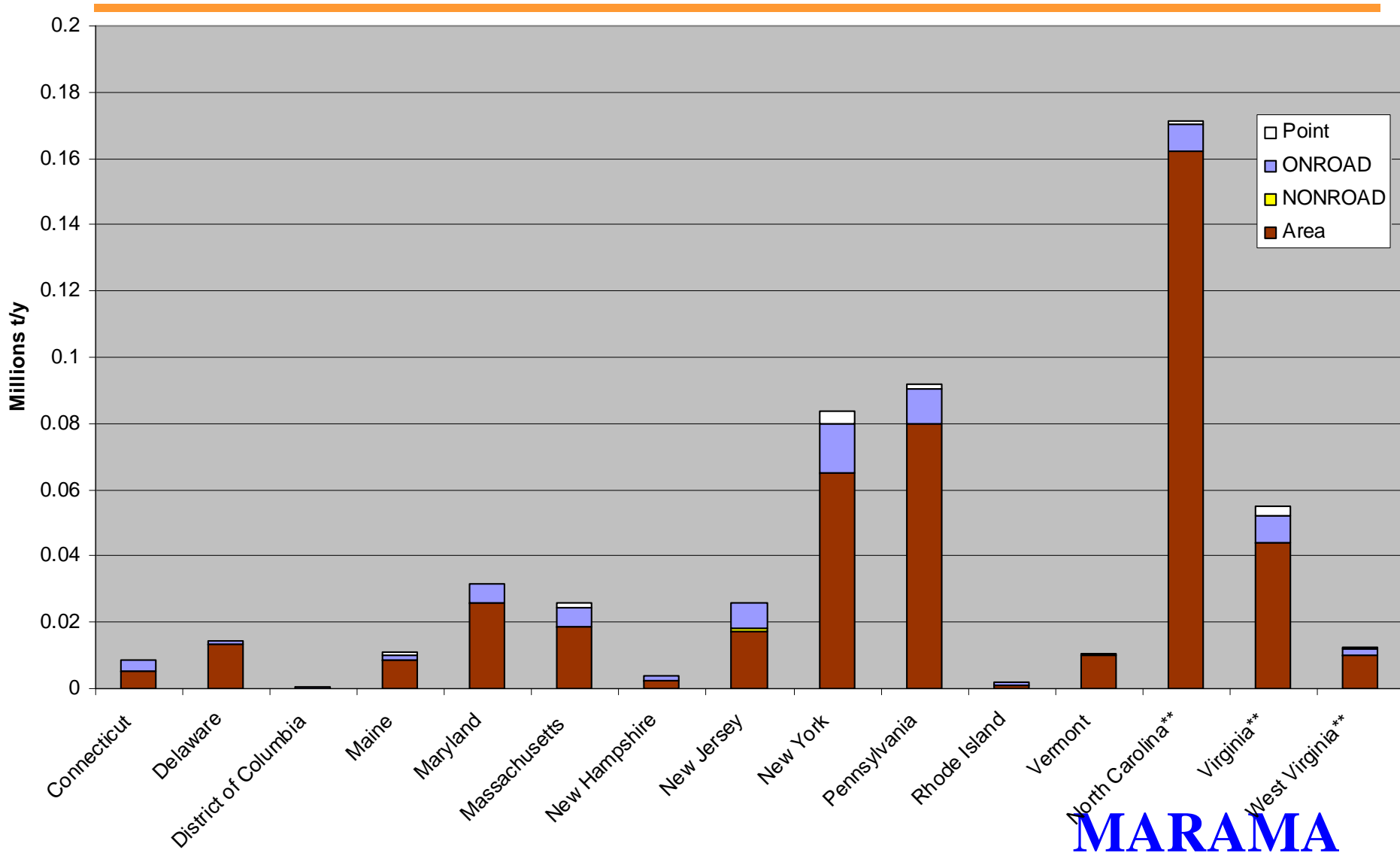
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## 2002 MARAMA + NESCAUM Total Annual VOC Emissions by State



MARAMA

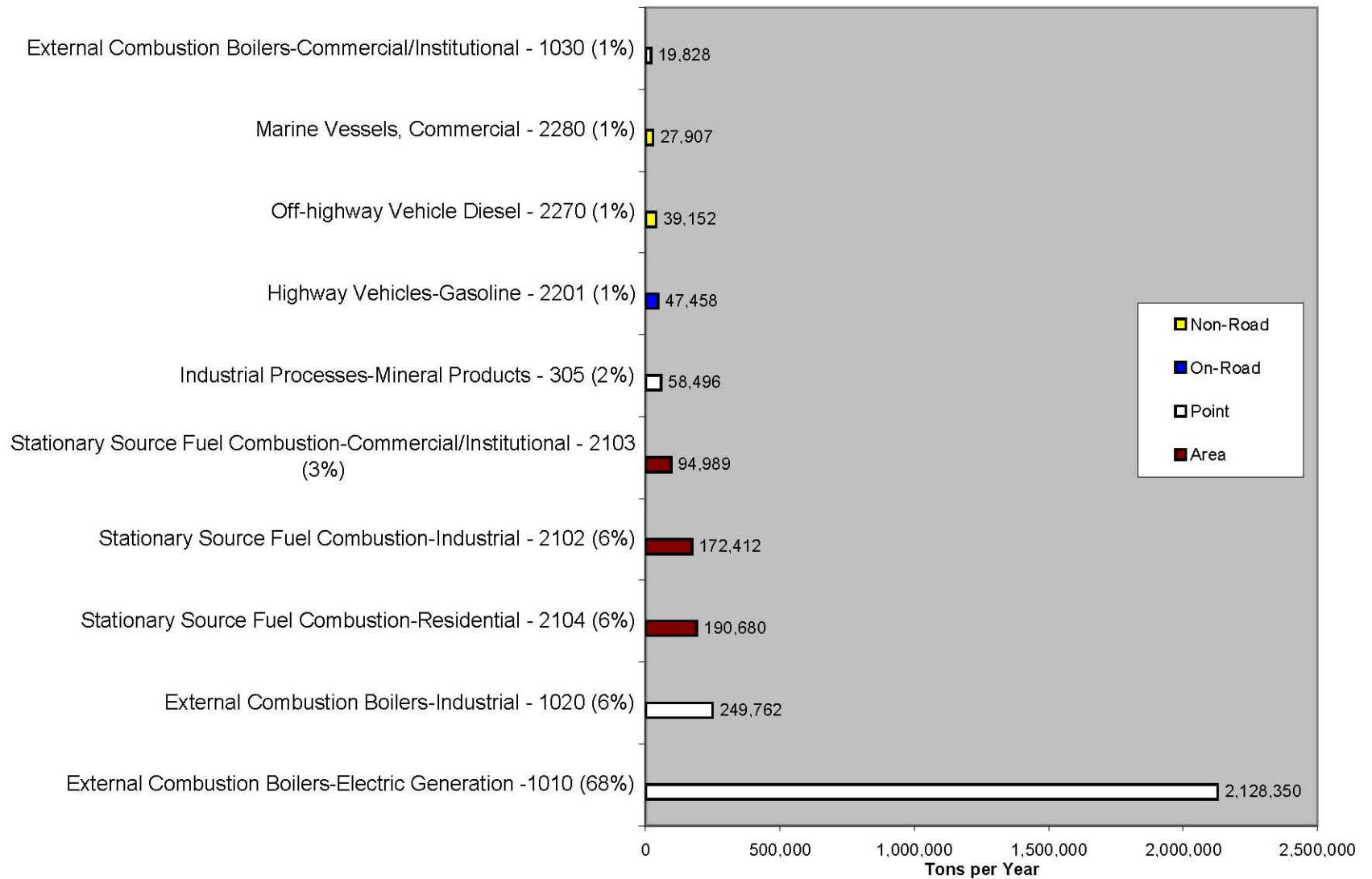
## 2002 MARAMA + NESCAUM Total Annual NH3 Emissions by State



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# MARAMA + NESCAUM 2002 SO2 Inventory (Top Source Categories)

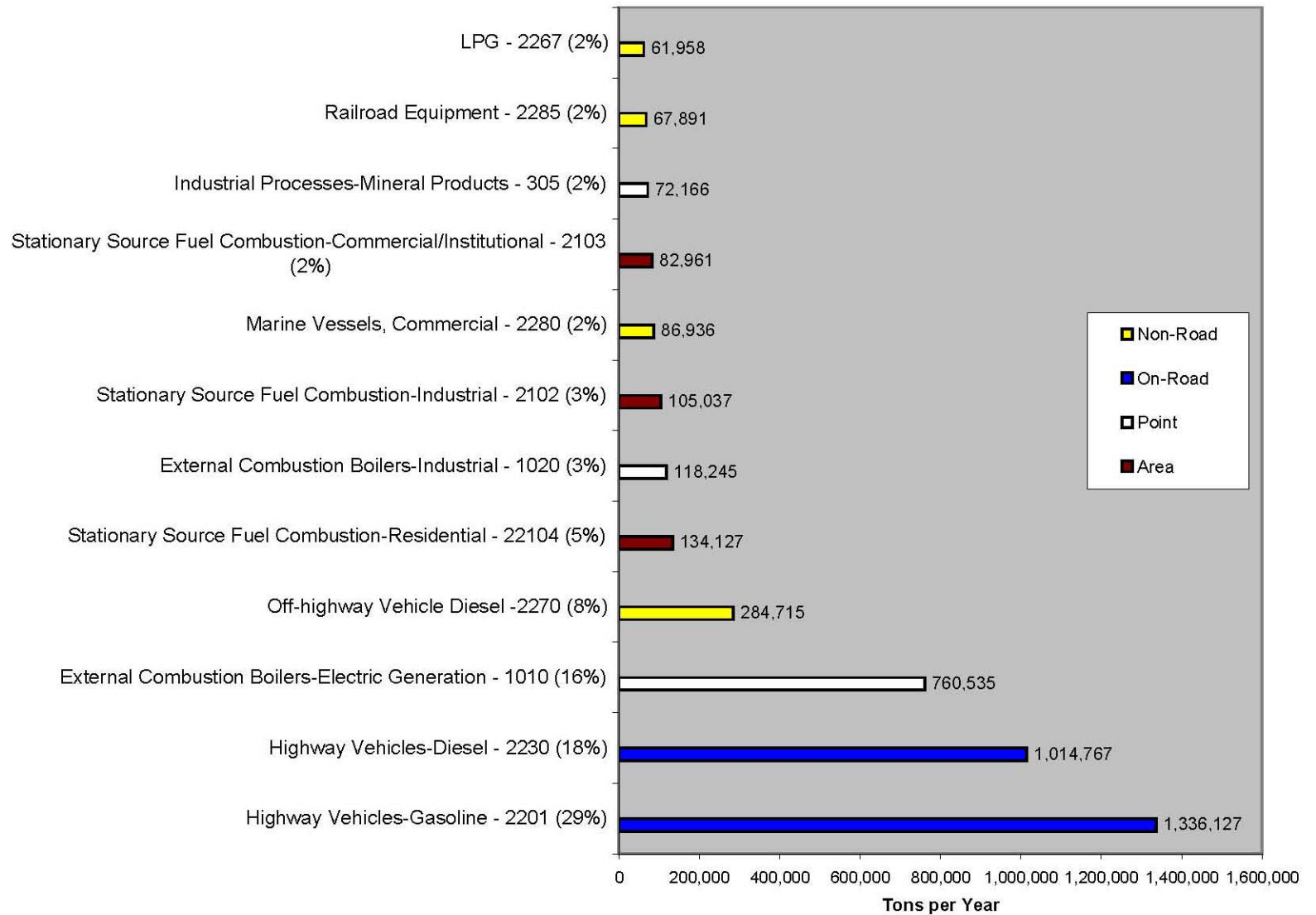
Total Emissions - 3,140,418 t/yr





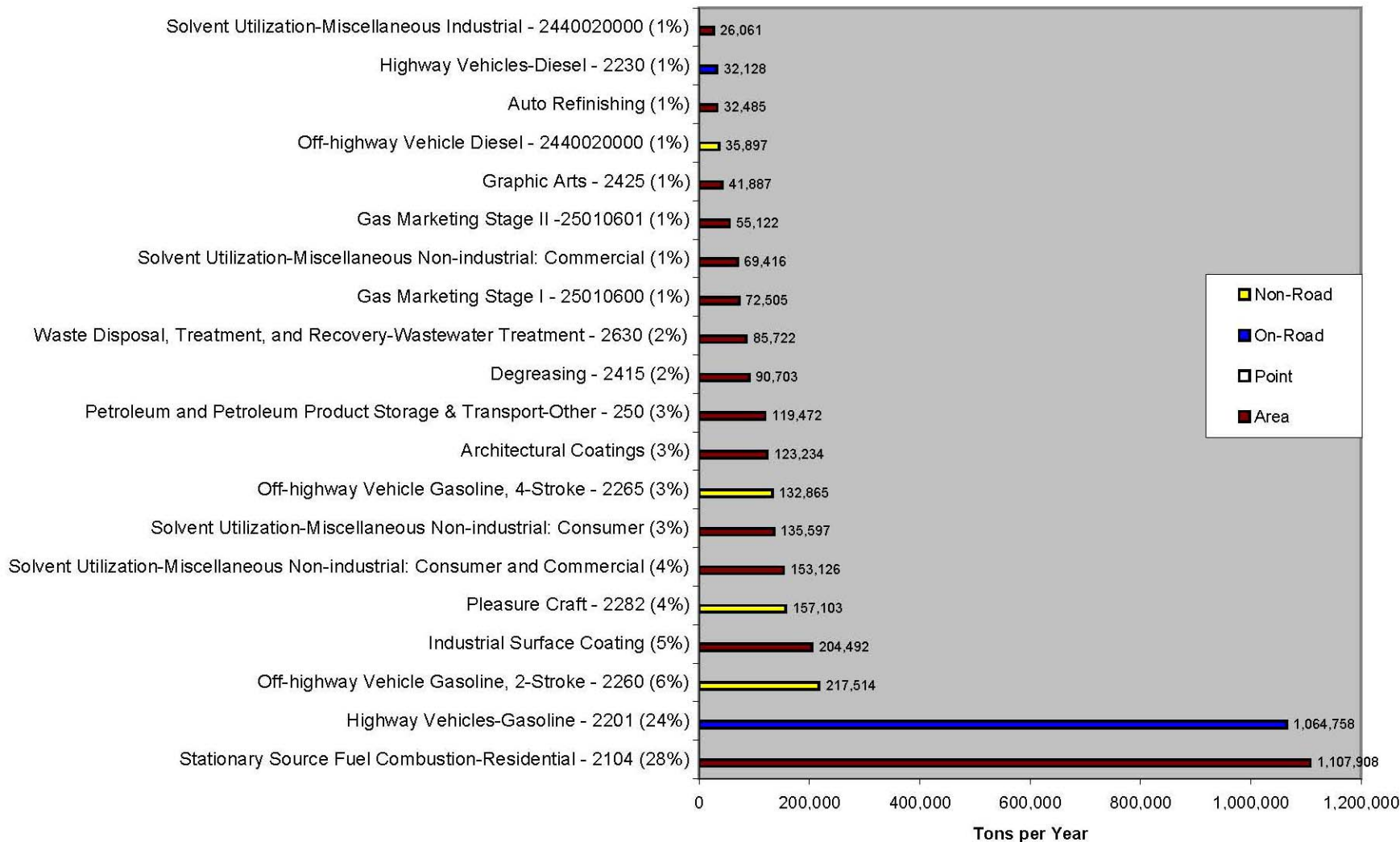
# MARAMA + NESCAUM 2002 NOx Inventory (Top Source Categories)

Total Emissions - 4,447,752 t/yr



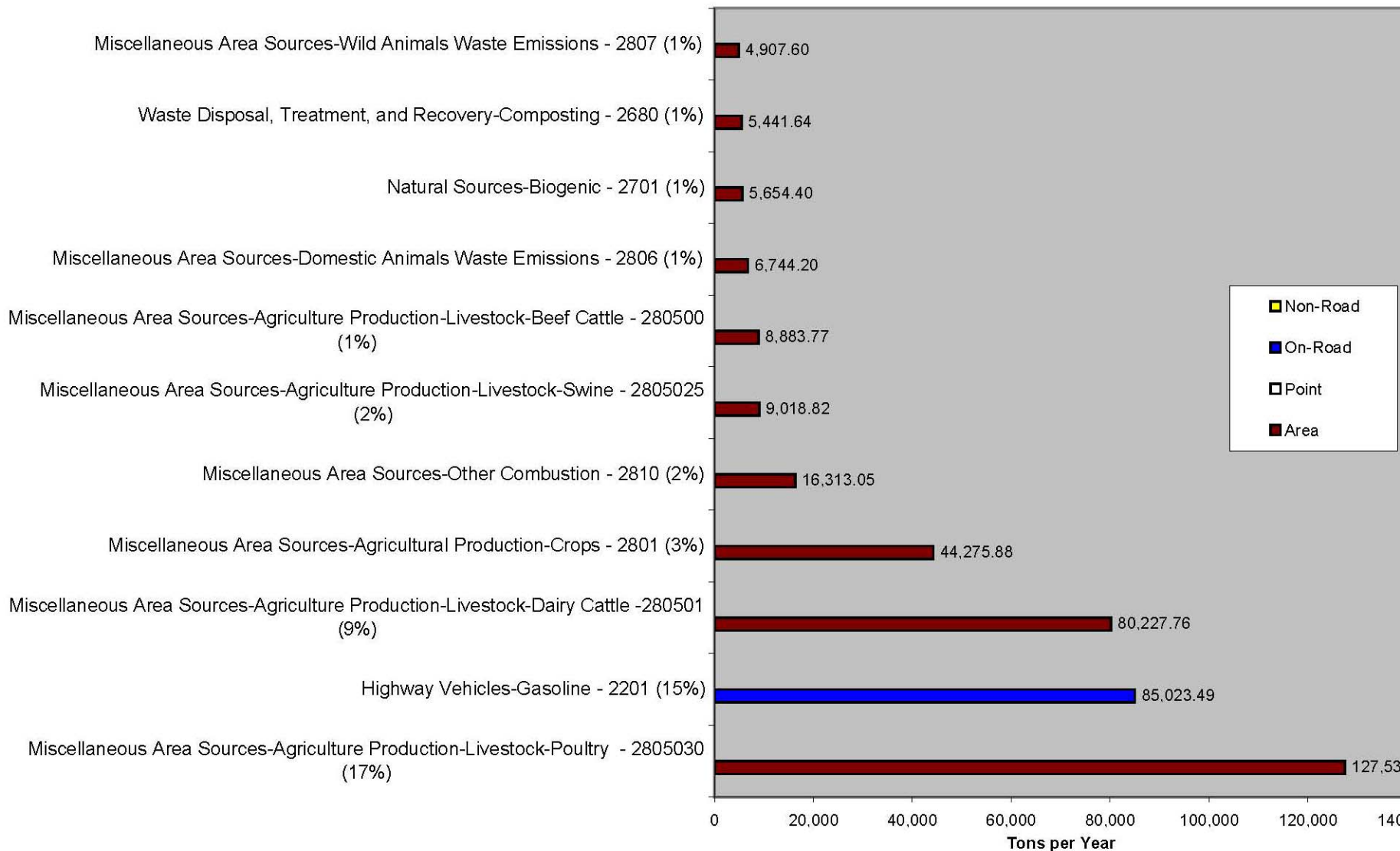
# MARAMA + NESCAUM 2002 VOC Inventory (Top Source Categories)

Total Emissions - 4,185,386 t/yr



# MARAMA + NESCAUM 2002 NH3 Inventory (Top Source Categories)

Total Emissions - 538,023 t/yr



# MANE-VU Future Year Inventories (2009, 2012, 2018)

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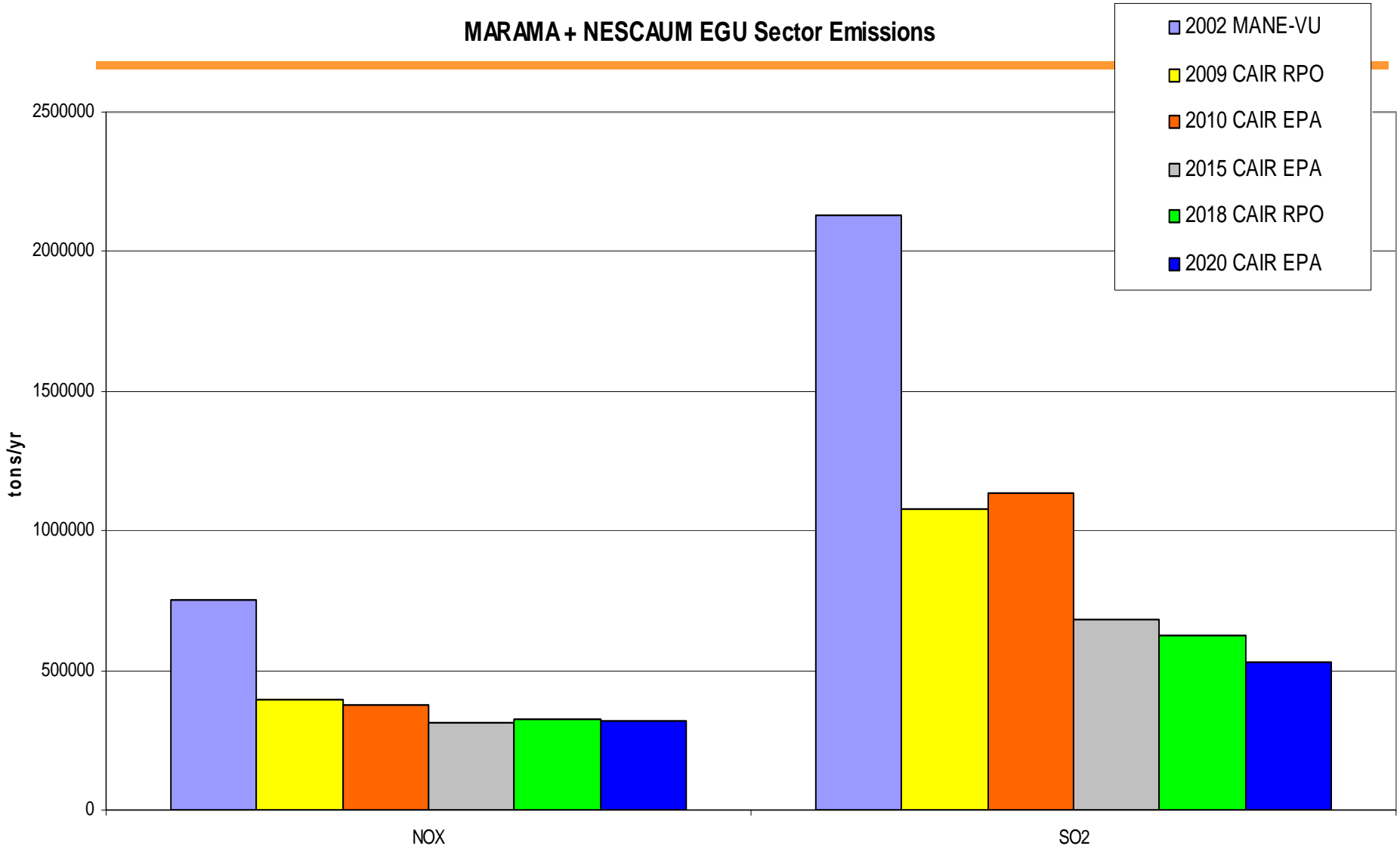
- EGU sector:
  - Worked with eastern RPOs, ran IPM with and without CAIR/CAMR
  - Contract in place with ICF for further technical sensitivity and policy runs
- Non-EGU Point, Area, and Non-Road
  - Growth and control packages and emission summaries available (includes “on the books” and “on the way” controls).
  - Contract in place with MACTEC for further work to develop inventories based on further control strategies.

# MANE-VU Future Year Inventories (2009, 2012, 2018)

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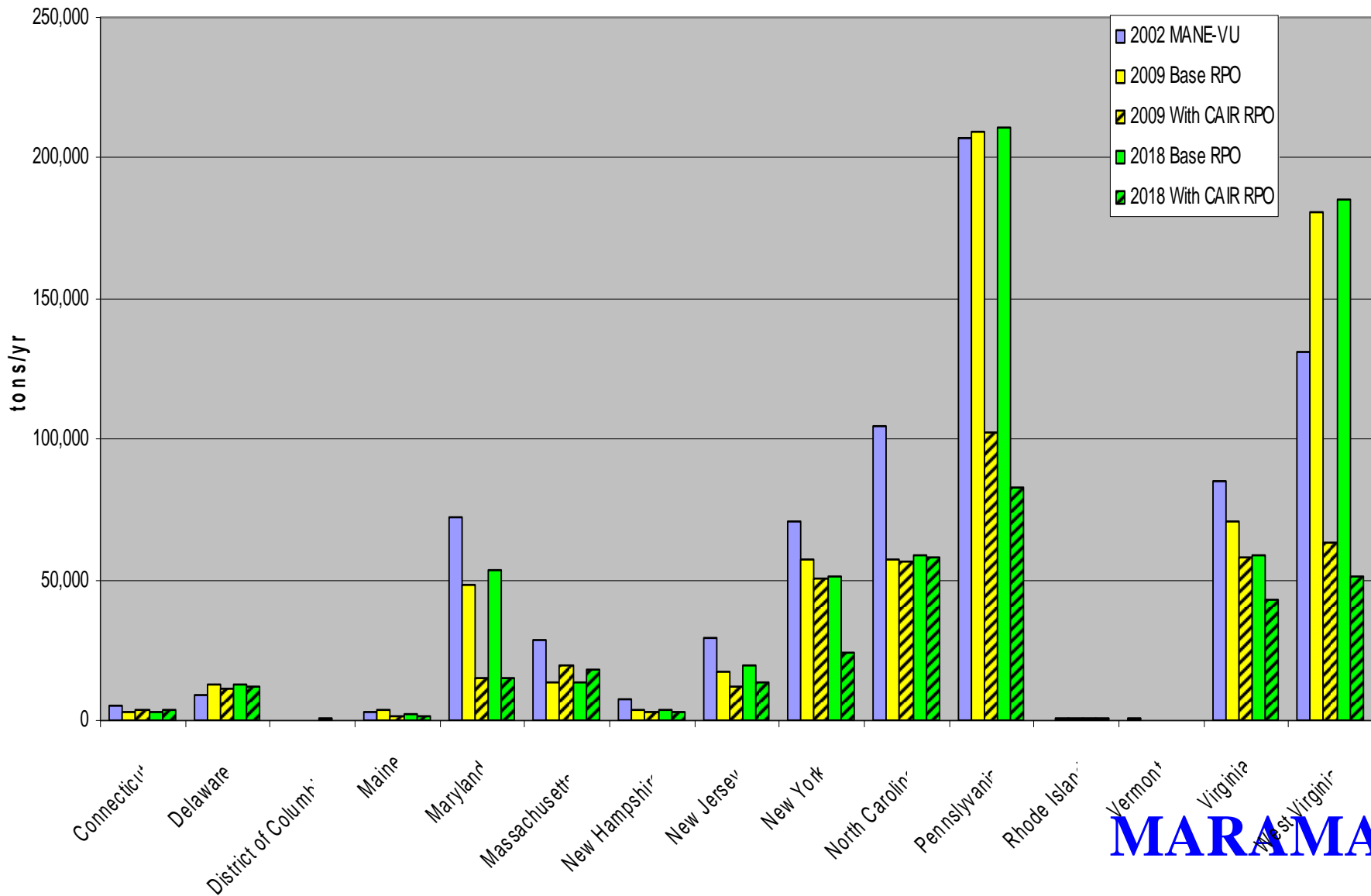
- Mobile source inventories
  - States submitted M6 input files and VMT data for 2009, 2012, and 2018
  - NESCAUM and NY DEC QA'd data and it is ready for SMOKE modeling
- TSD for SIPs will be developed

# MARAMA + NESCAUM EGU Sector Emissions

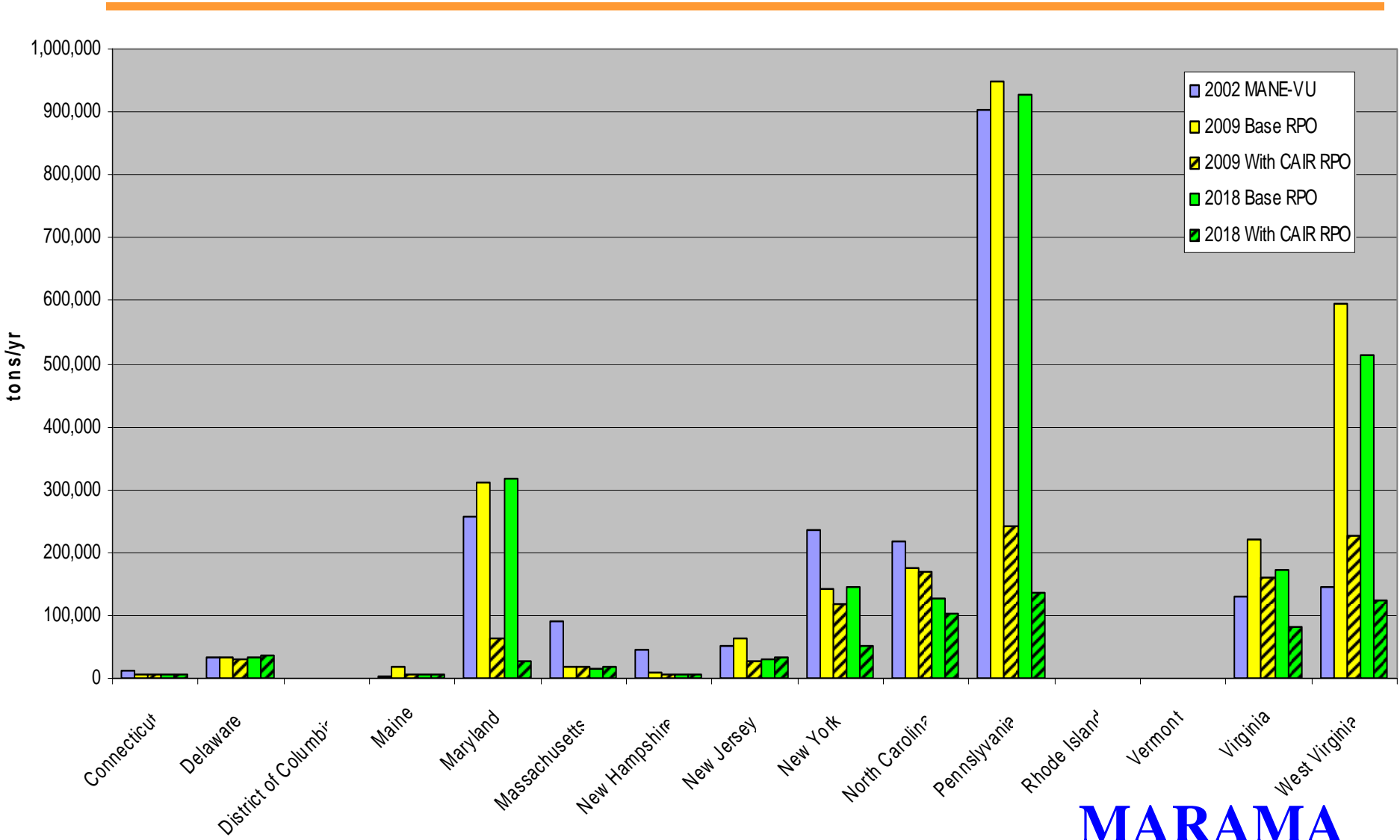


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## Comparison of EGU Sector NOx Emissions

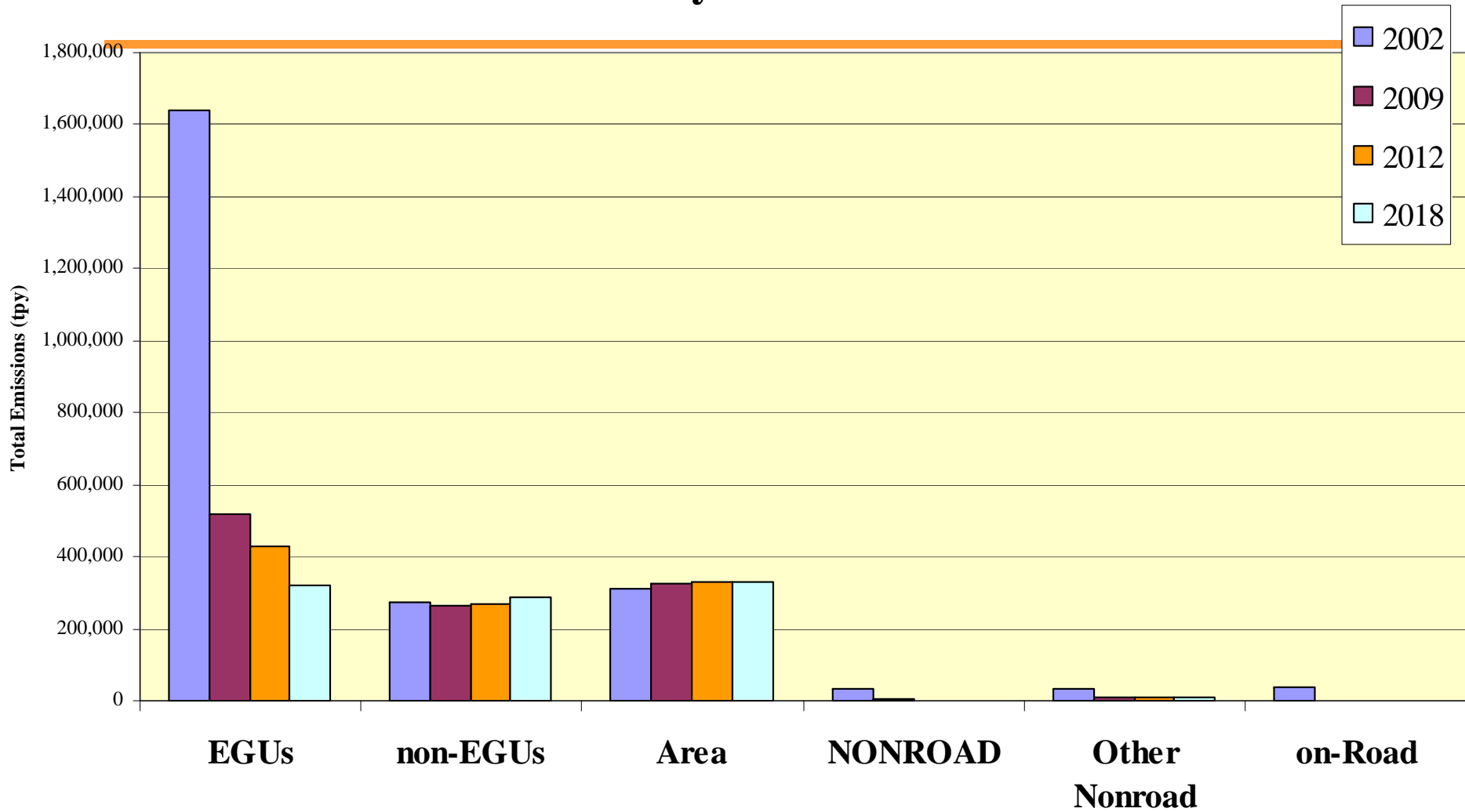


## Comparison of EGU Sector SO2 Emissions



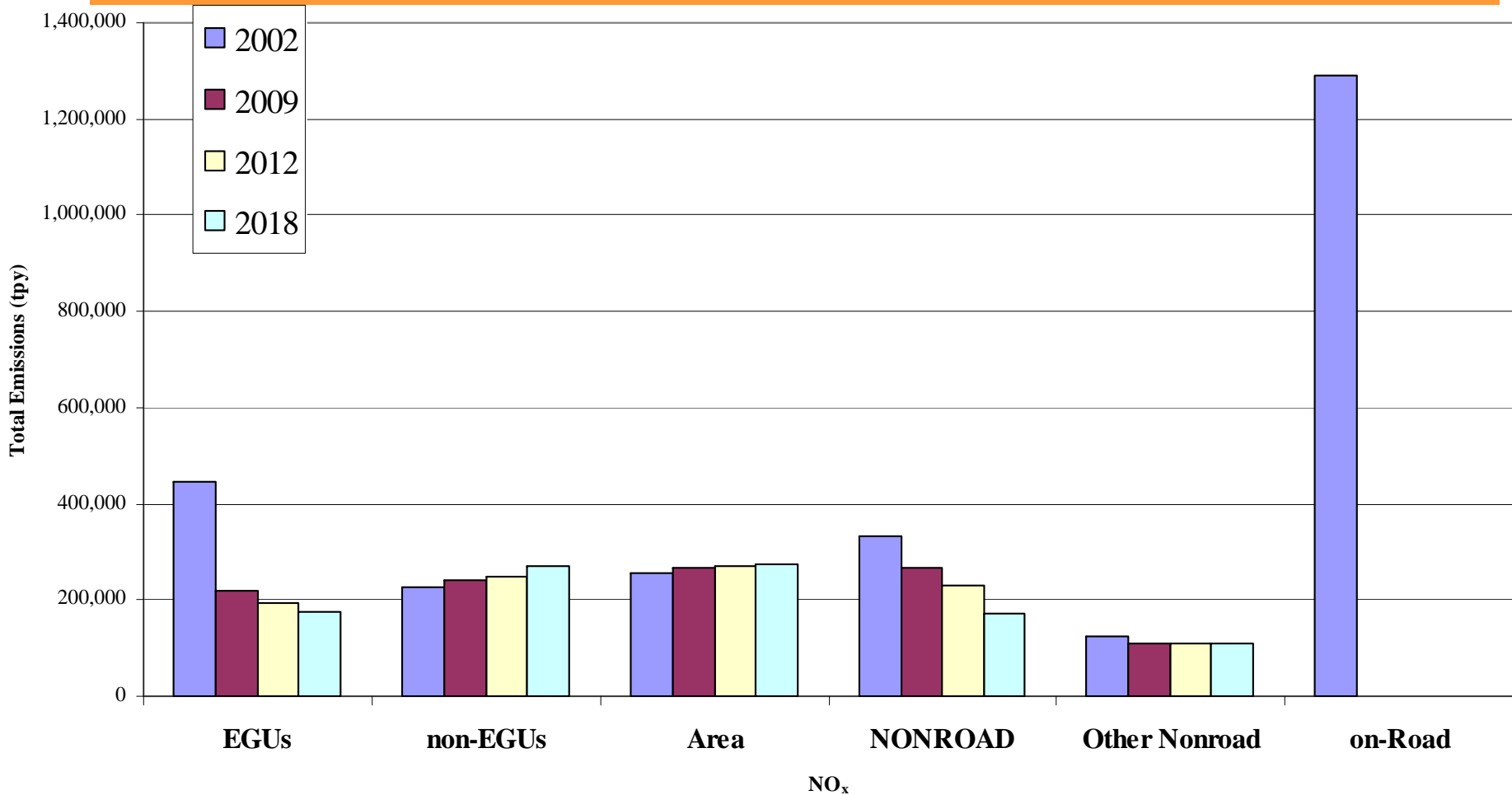


# Sector Summary for Sulfur Dioxide



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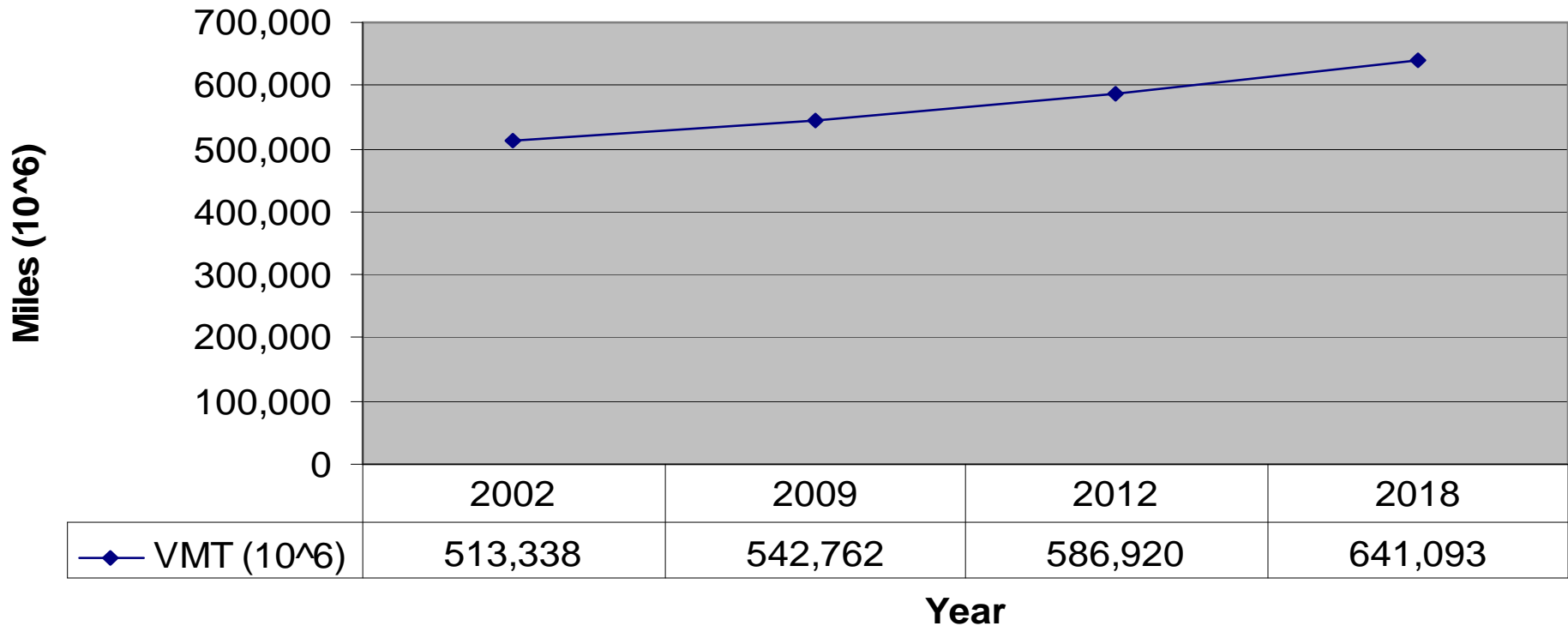
# Sector Summary for Oxides of Nitrogen



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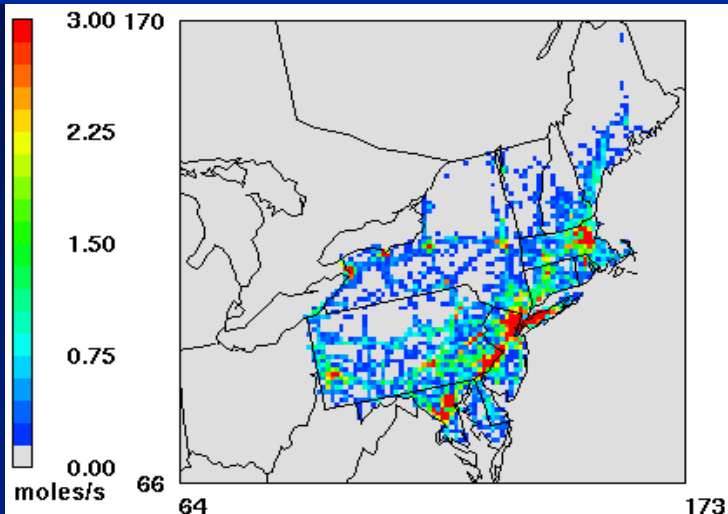
# MANE-VU Vehicle Miles Traveled

## Vehicle Miles Travel growth



# On-Road NOx Emissions Distribution

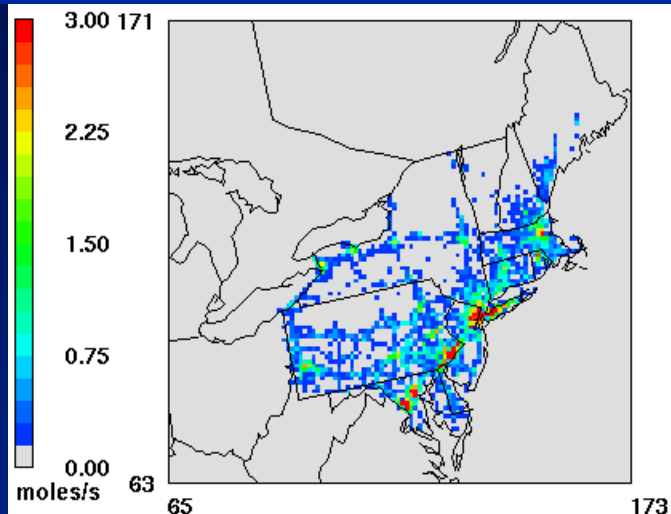
## Aug 1<sup>st</sup>, 12LST of year 2002/2009/2012/2018



August 1,2002 17:00:00  
Min= 0.00 at (64,66), Max= 13.55 at (138,103)

c=mgts\_l.20020801.1.otc12.manevu\_2012\_m6.ncf

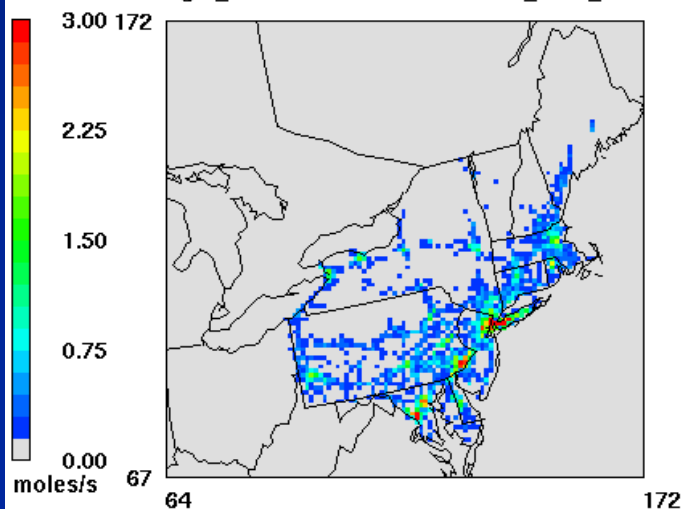
Y2002



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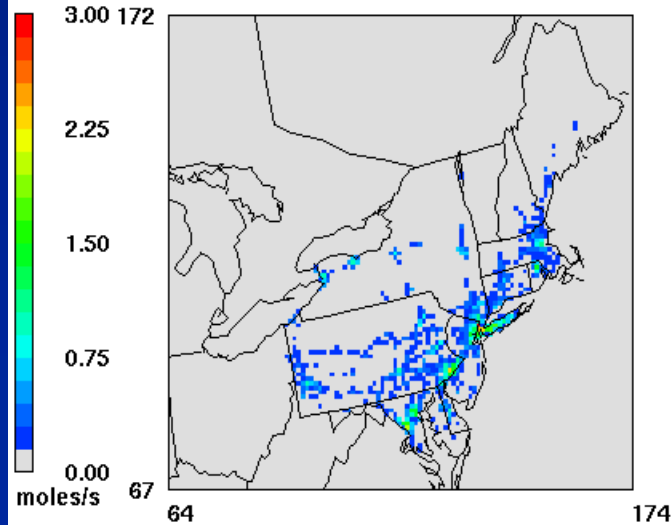
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Y2009



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Min= 0.00 at (64,67), Max= 5.64 at (138,103)

Y2012

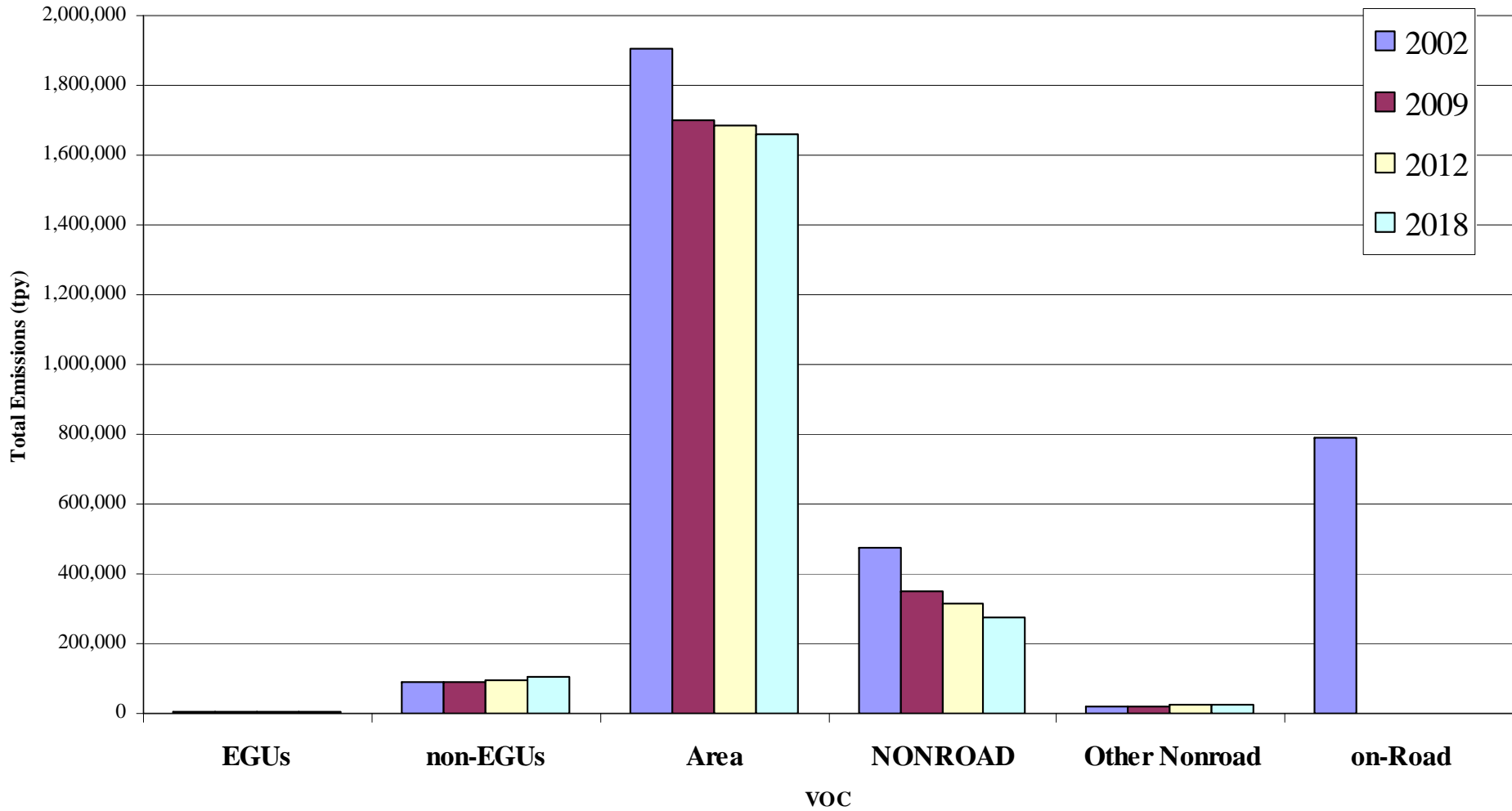


August 1,2002 17:00:00  
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Y2018

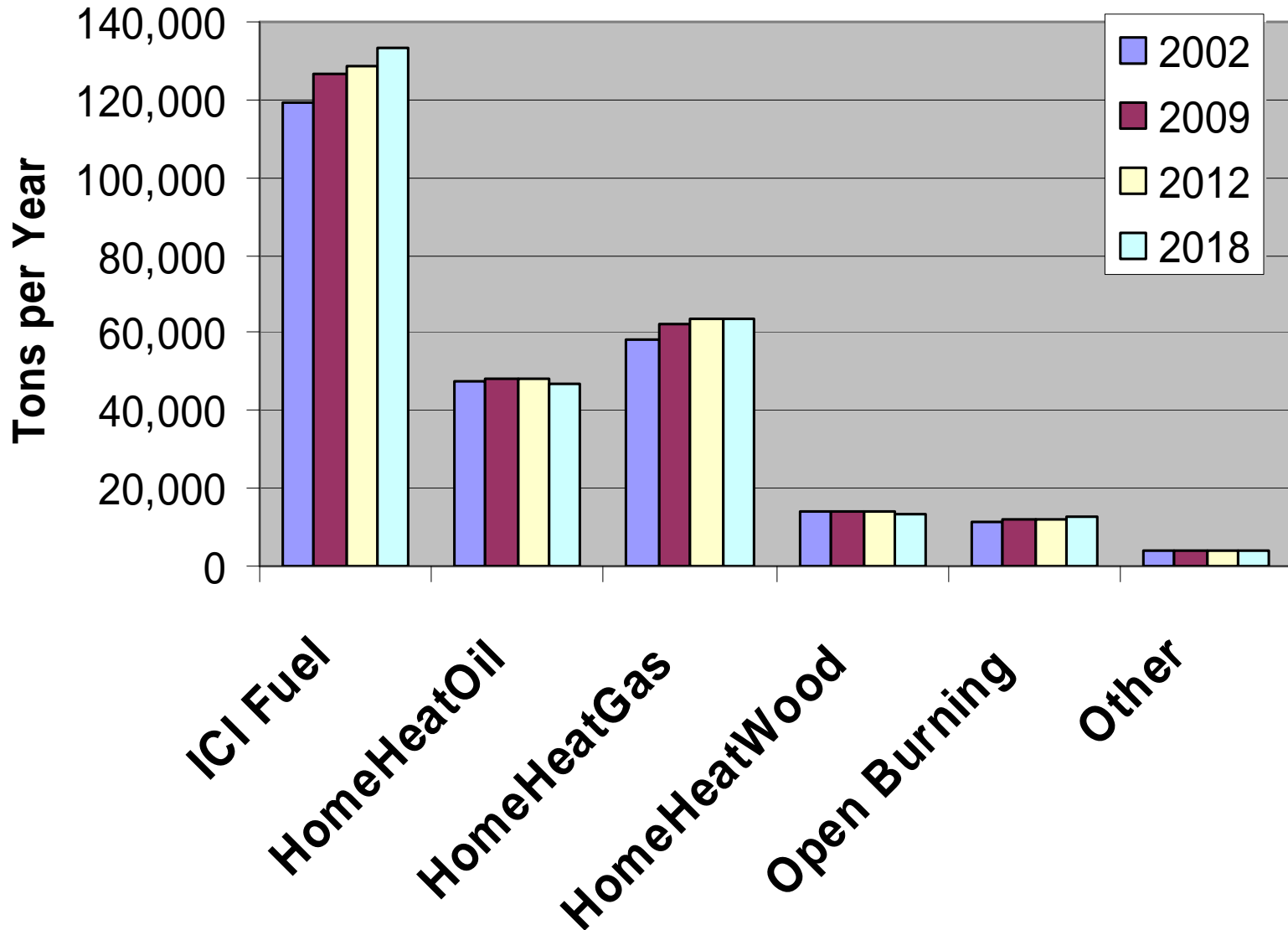
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# Sector Summary for Volatile Organic Compounds

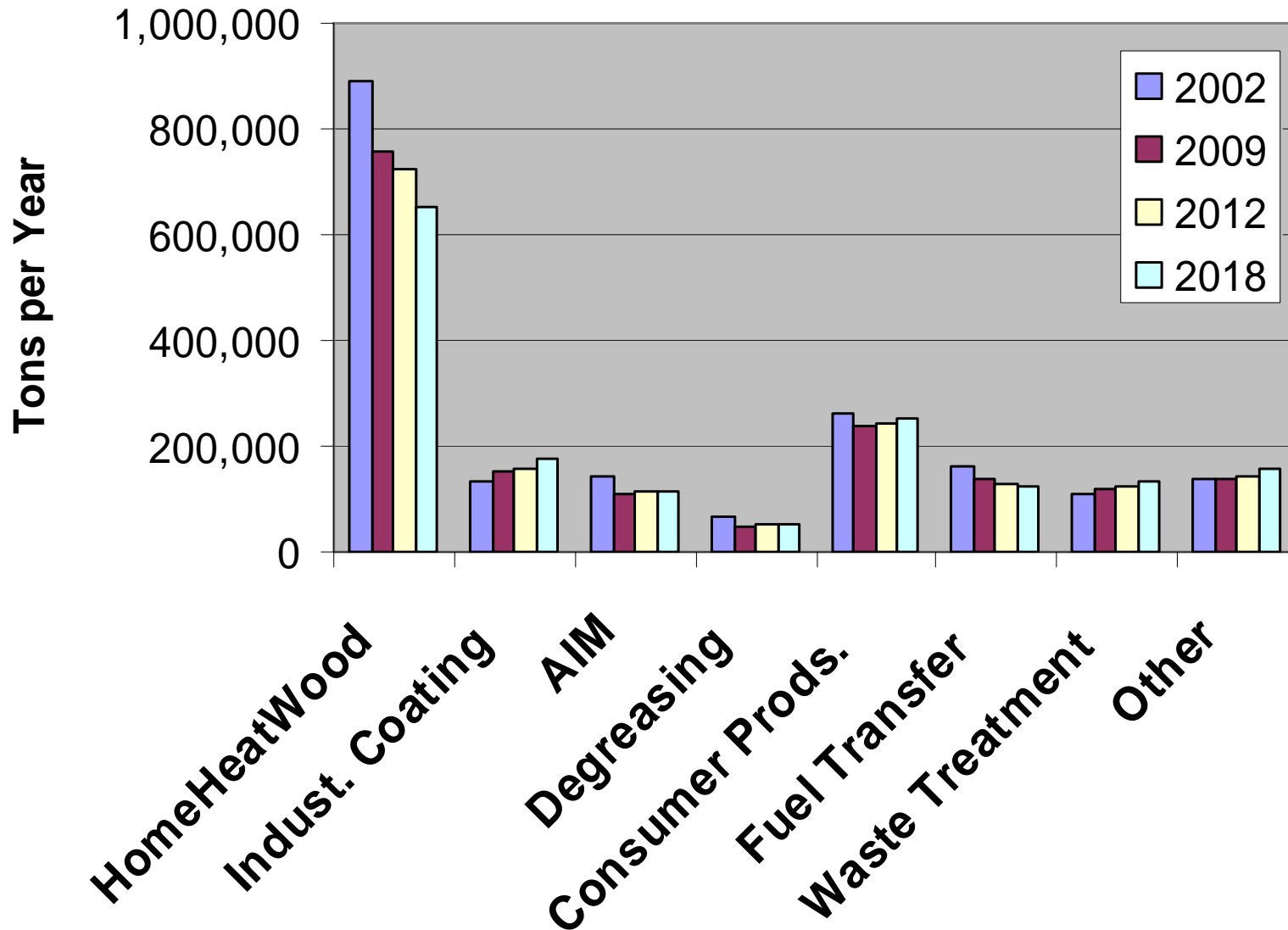


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# Area Source NOx Emissions



# Area Source VOC Emissions



# Major Contributors in the MANE-VU Region

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- **NO<sub>x</sub>**

- ~50% mobile
- ~20% EGUs

- **VOC**

- ~30% Res. Fuel Comb. (of which 80% wood— V3 will go down)
- ~25% Highway-gasoline

- **SO<sub>2</sub>**

- ~70% EGUs
- ~10% Industrial
- ~10% Residential

- **NH<sub>3</sub>**

- ~15% Highway-gasoline, rest agricultural

- **PM<sub>2.5</sub>**

- ~25% EGUs and Industrial
- ~15% Off-highway
- ~10% Highway