
MANE-VU Emissions Inventory Status

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

Serpil Kayin, Megan Schuster, and Pat Davis

MARAMA

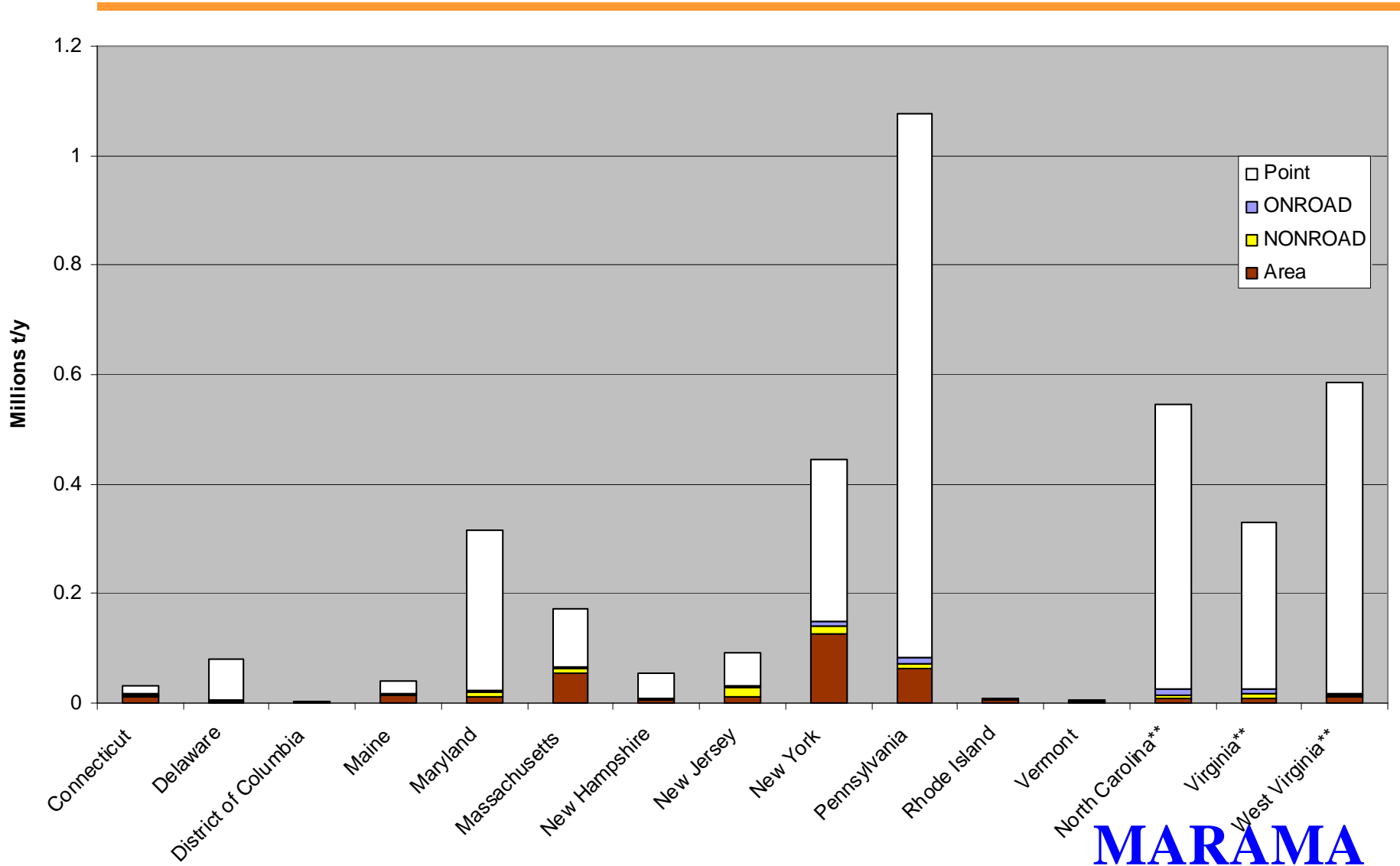
Presentation Outline

- **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 SO₂, NO_x, VOC?**

MANE-VU 2002 Modeling Inventory

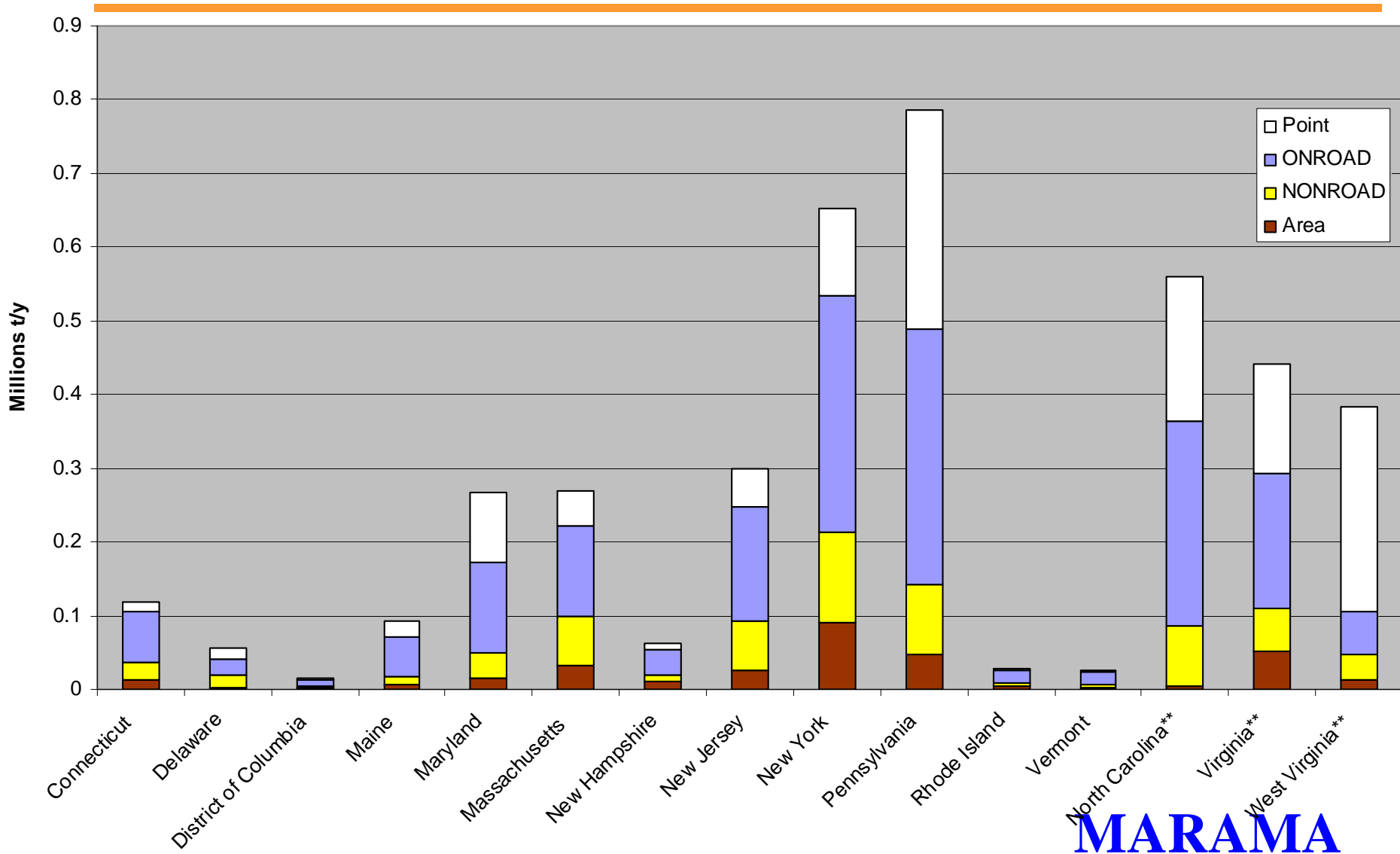
- Version 1 of 2002 MANE-VU Modeling Inventory and Summary
 - www.marama.org click on Regional Haze
 - Summaries by state, region, pollutant, SCC, density maps, comparison with 1996 and 1999 inventories
- Version 2 of 2002 MANE-VU Modeling Inventory available
 - Based on updates from states (adding emissions 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



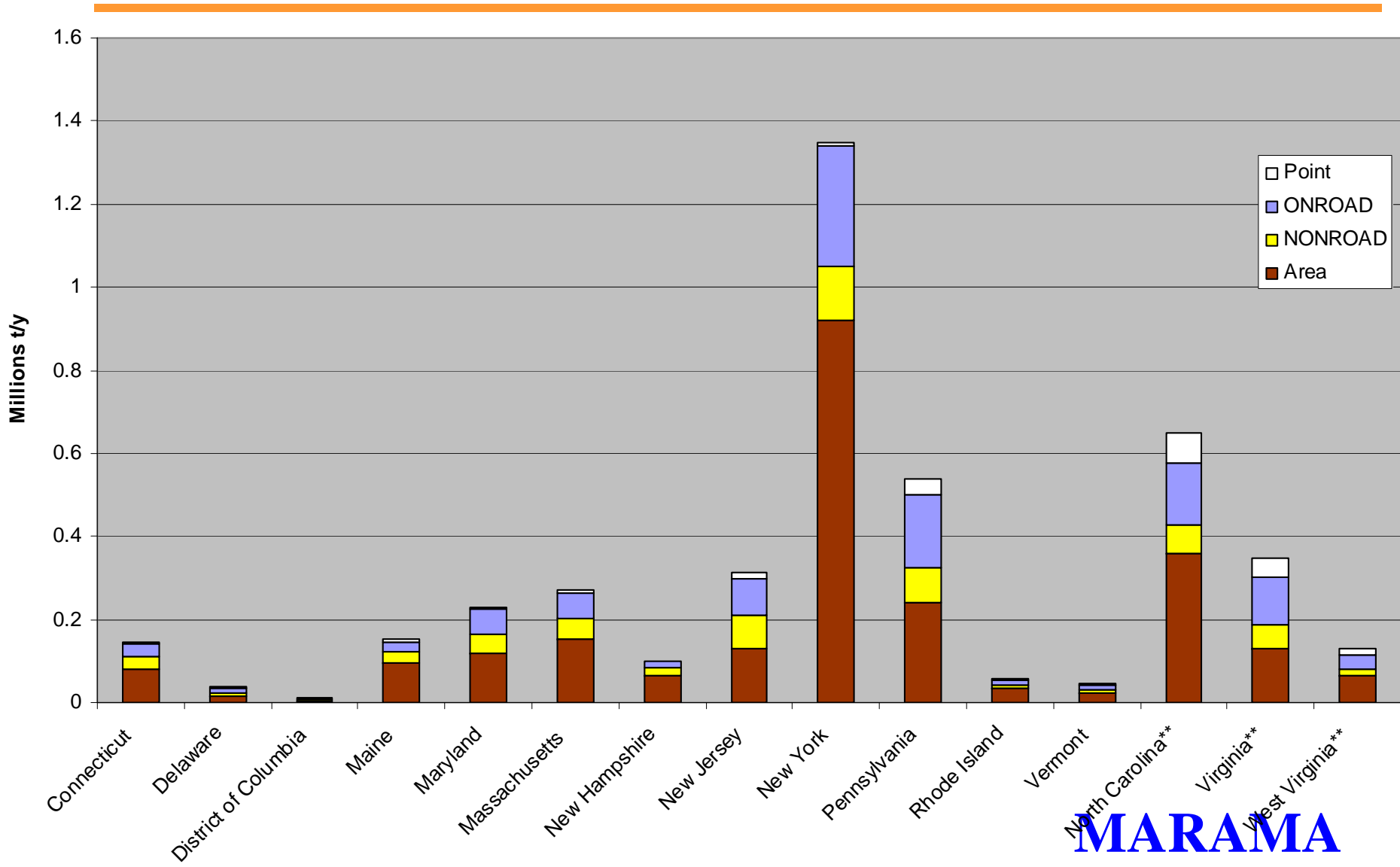
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2002 MARAMA + NESCAUM Total Annual NOx Emissions by State



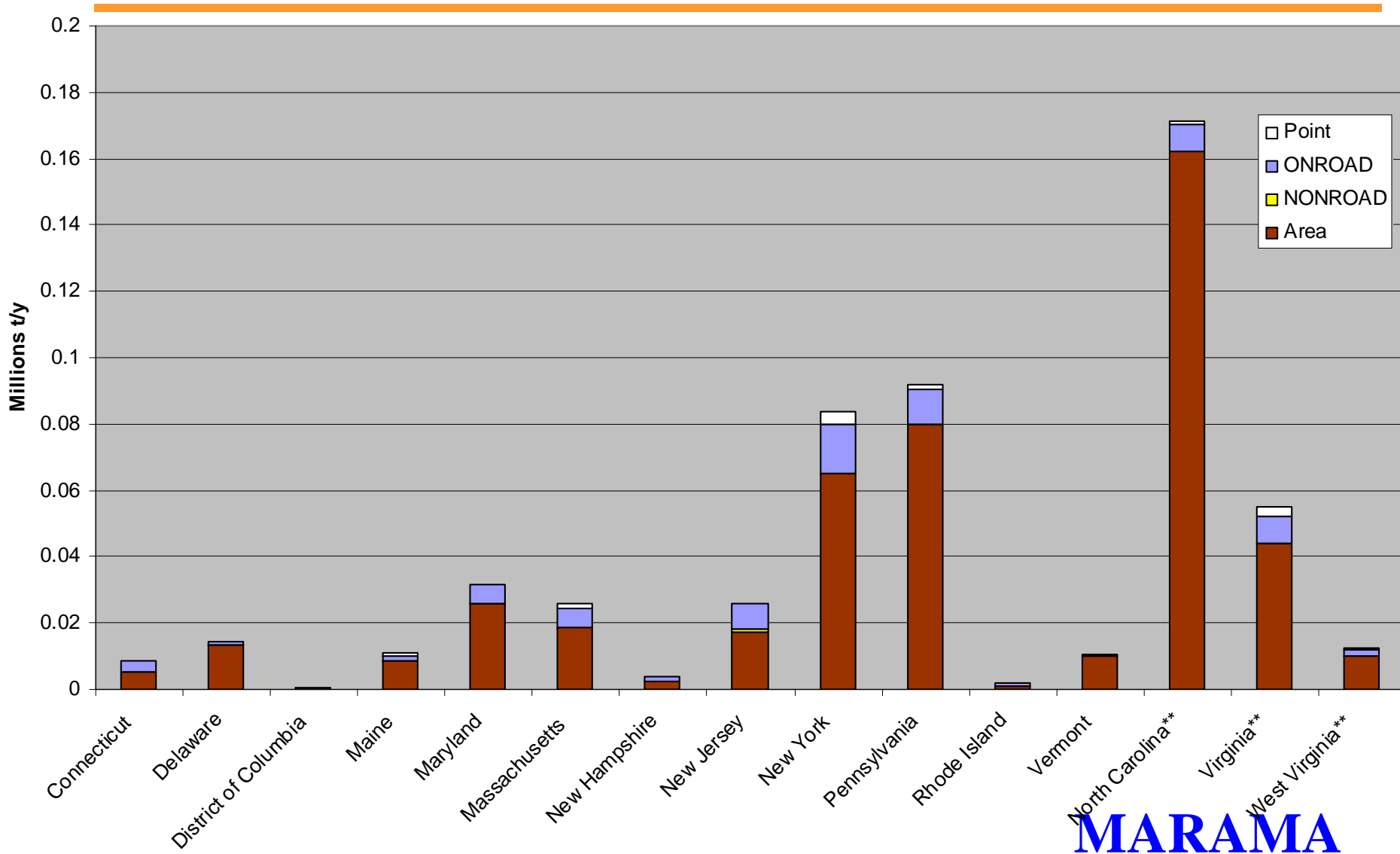
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2002 MARAMA + NESCAUM Total Annual VOC Emissions by State



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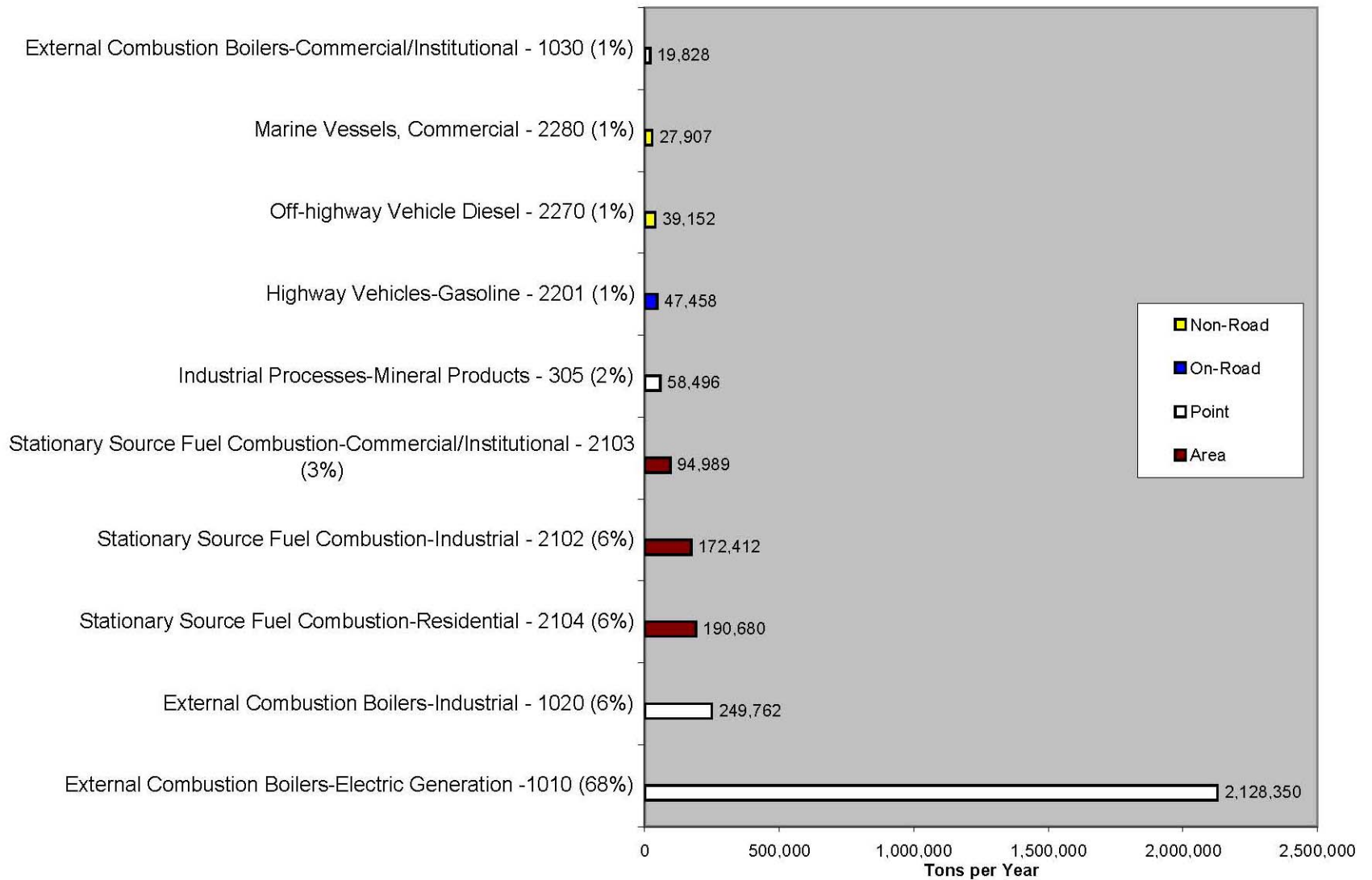
2002 MARAMA + NESCAUM Total Annual NH3 Emissions by State



MARAMA

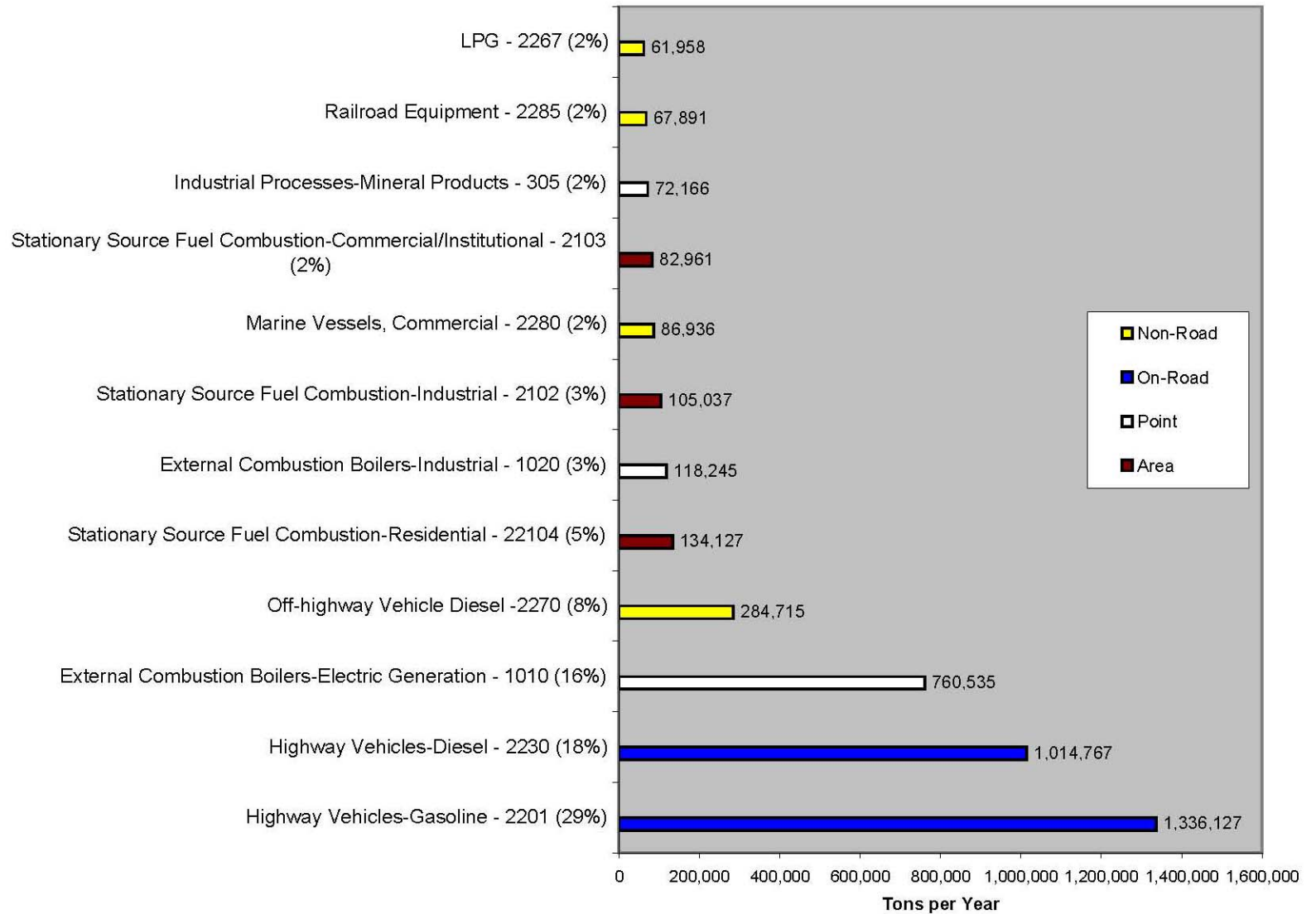
MARAMA + NESCAUM 2002 SO2 Inventory (Top Source Categories)

Total Emissions - 3,140,418 t/yr



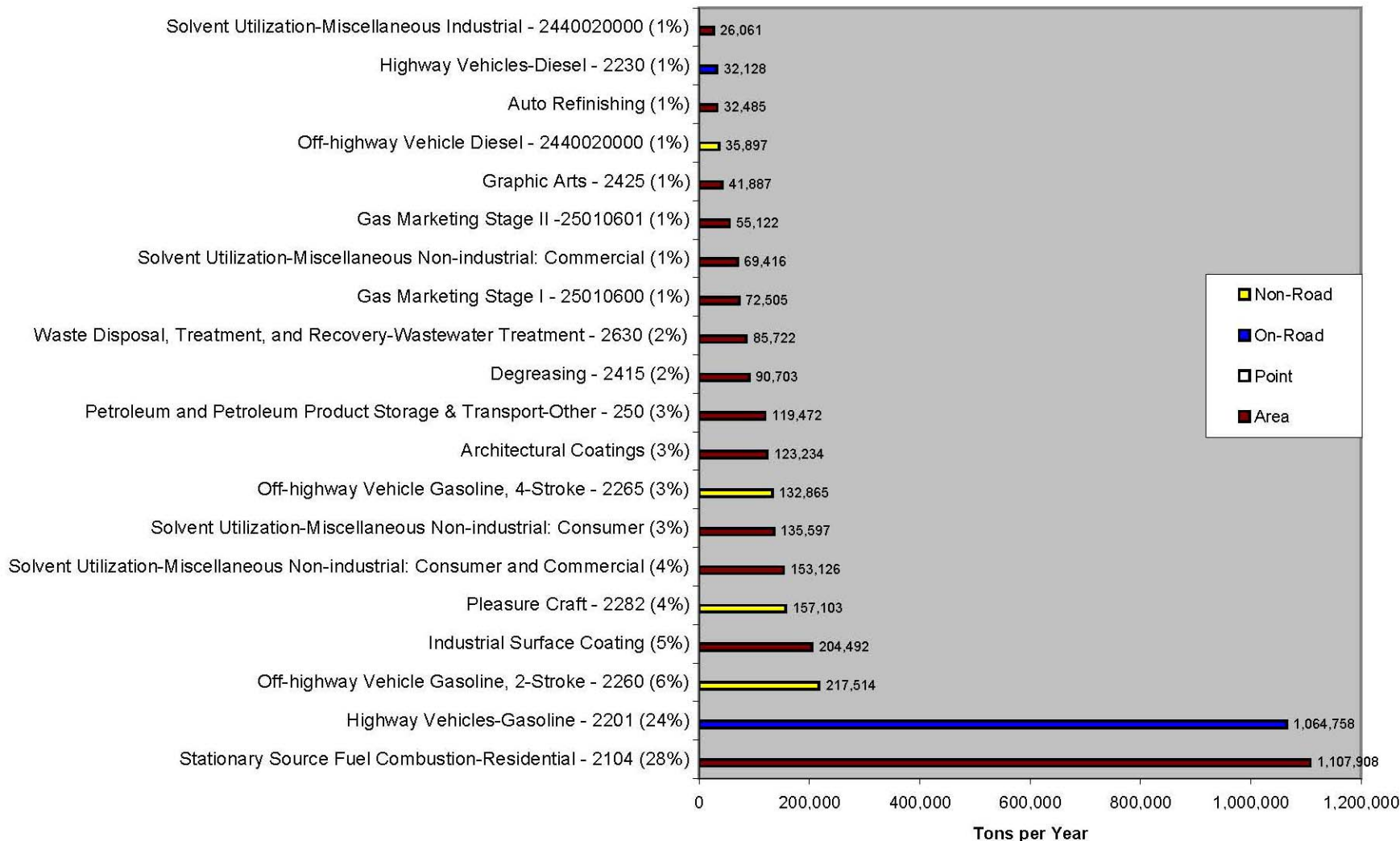
MARAMA + NESCAUM 2002 NOx Inventory (Top Source Categories)

Total Emissions - 4,447,752 t/yr



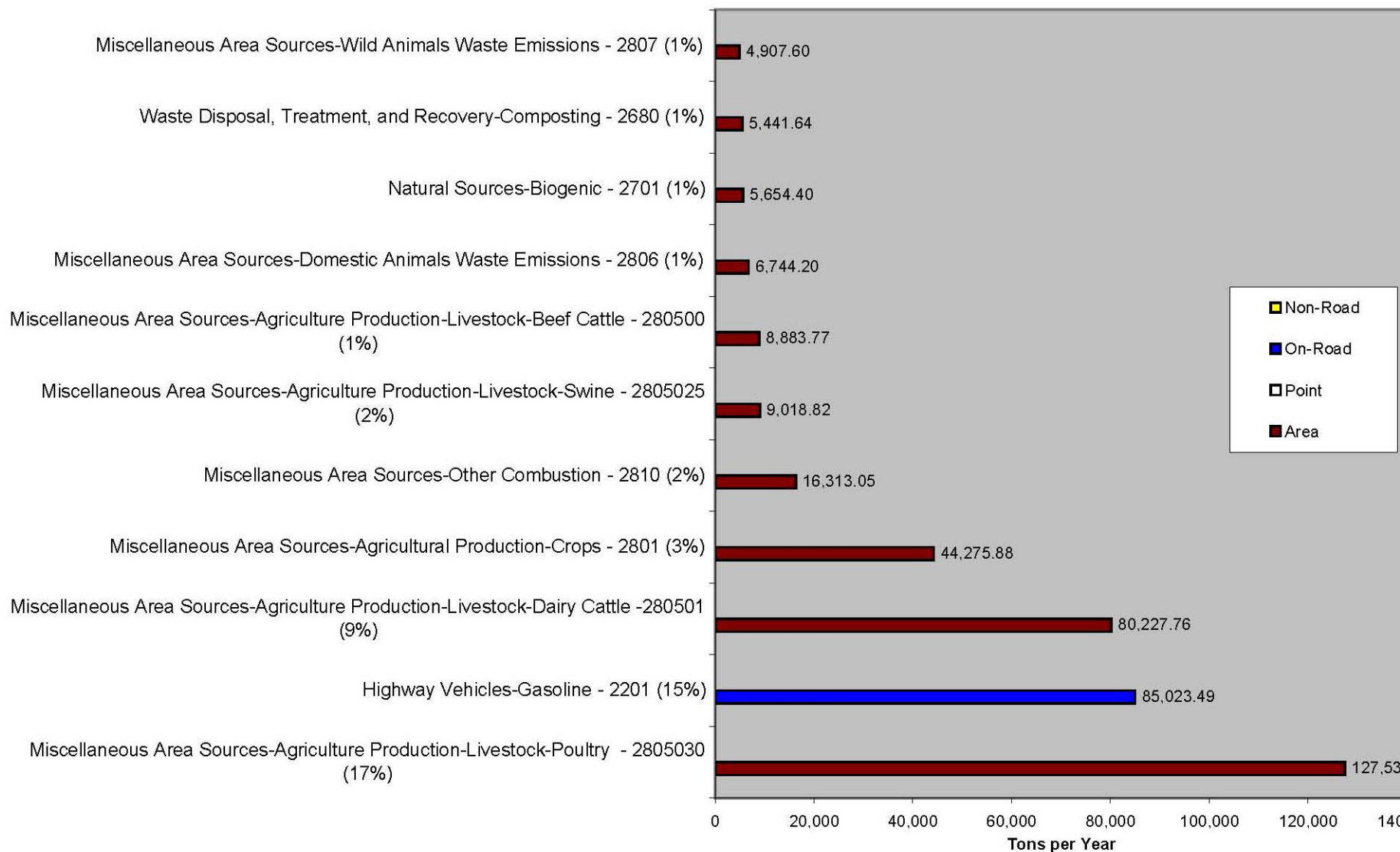
MARAMA + NESCAUM 2002 VOC Inventory (Top Source Categories)

Total Emissions - 4,185,386 t/yr



MARAMA + NESCAUM 2002 NH3 Inventory (Top Source Categories)

Total Emissions - 538,023 t/yr



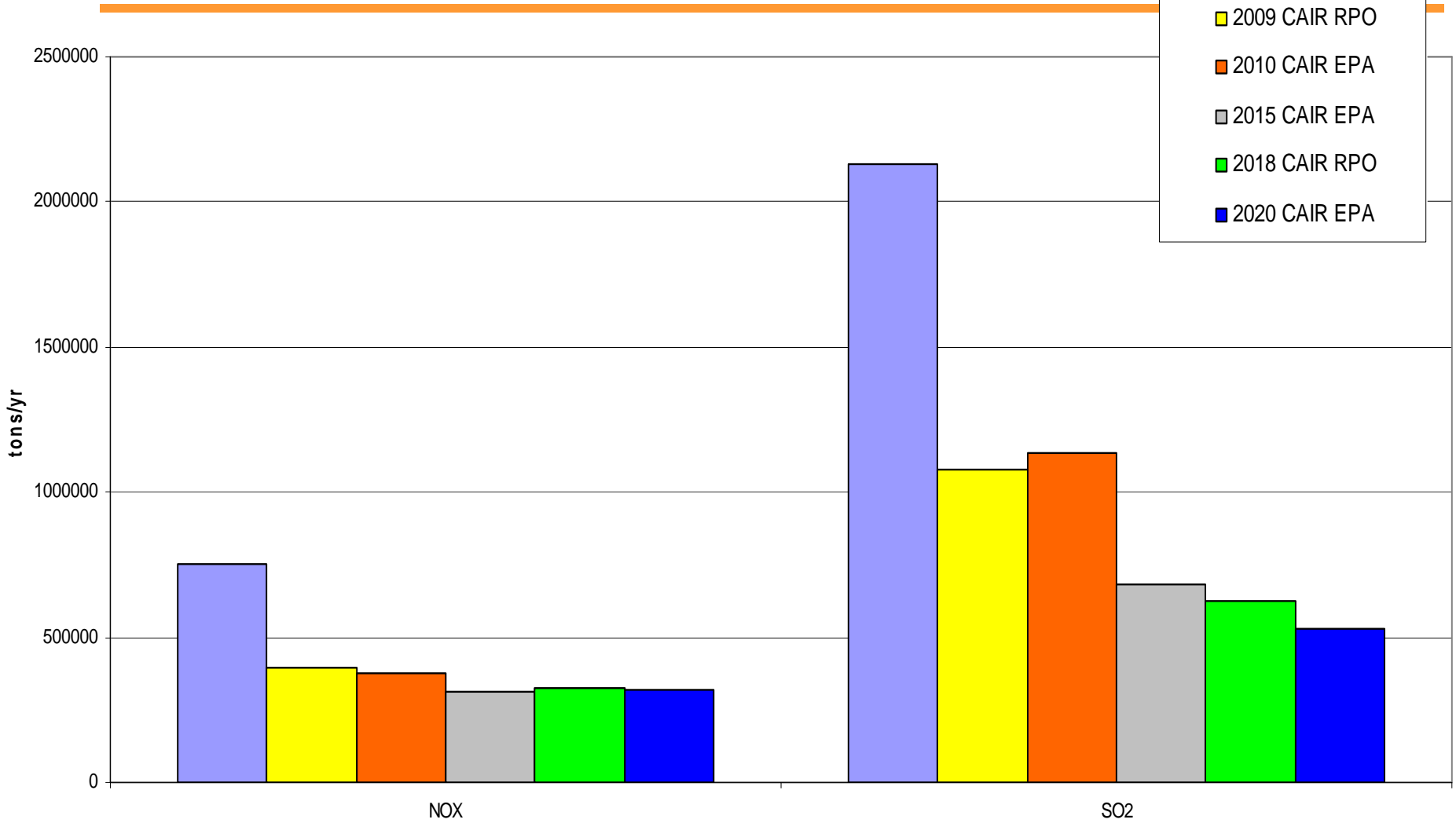
MANE-VU Future Year Inventories (2009, 2012, 2018)

- 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)

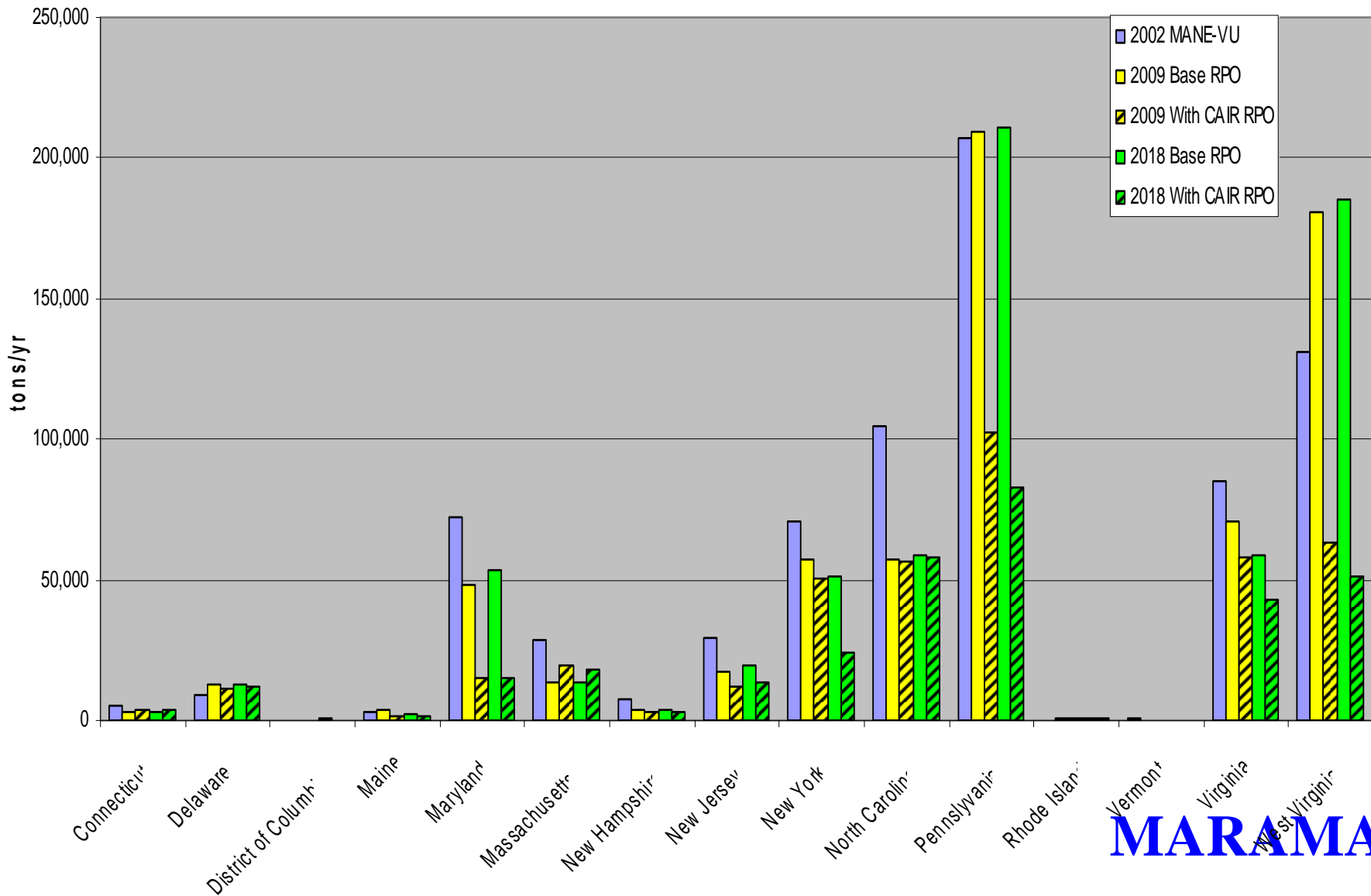
- Mobile source inventories
 - States submitted M6 input files and VMT data for 2009, 2012, and 2018
 - NESCAUM and NY DEC QA'd data and it is ready for SMOKE modeling
- TSD for SIPs will be developed

MARAMA + NESCAUM EGU Sector Emissions

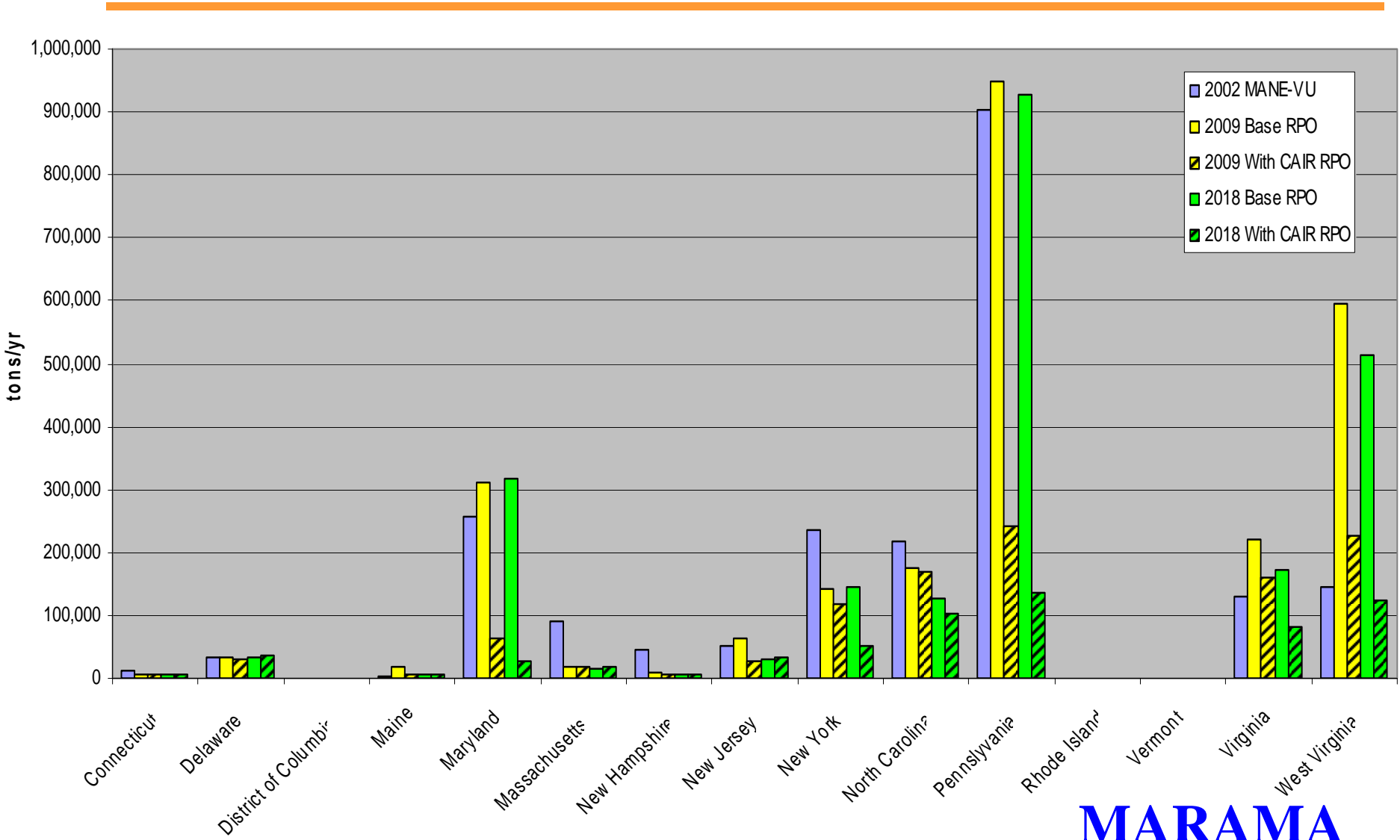


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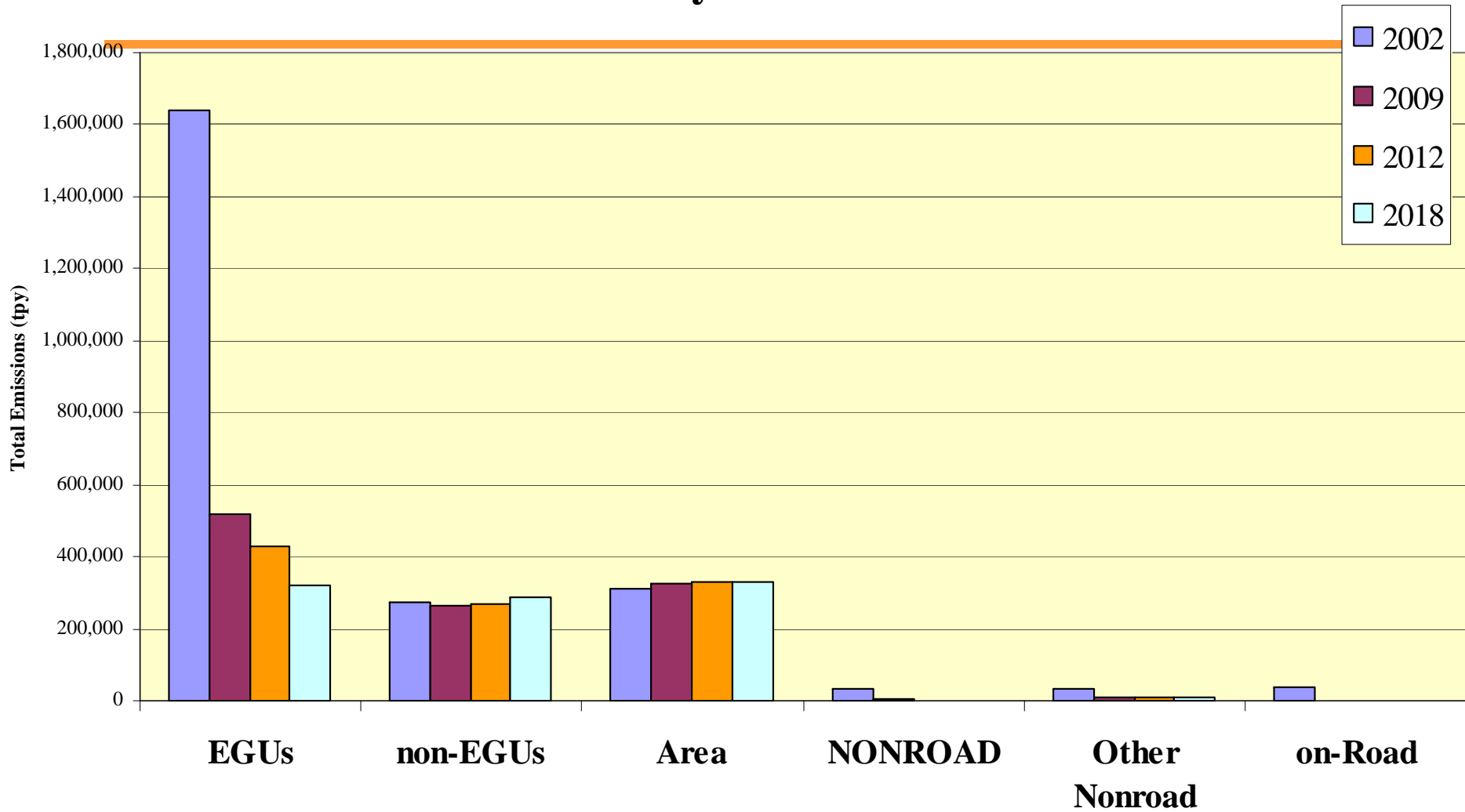
Comparison of EGU Sector NOx Emissions



Comparison of EGU Sector SO2 Emissions

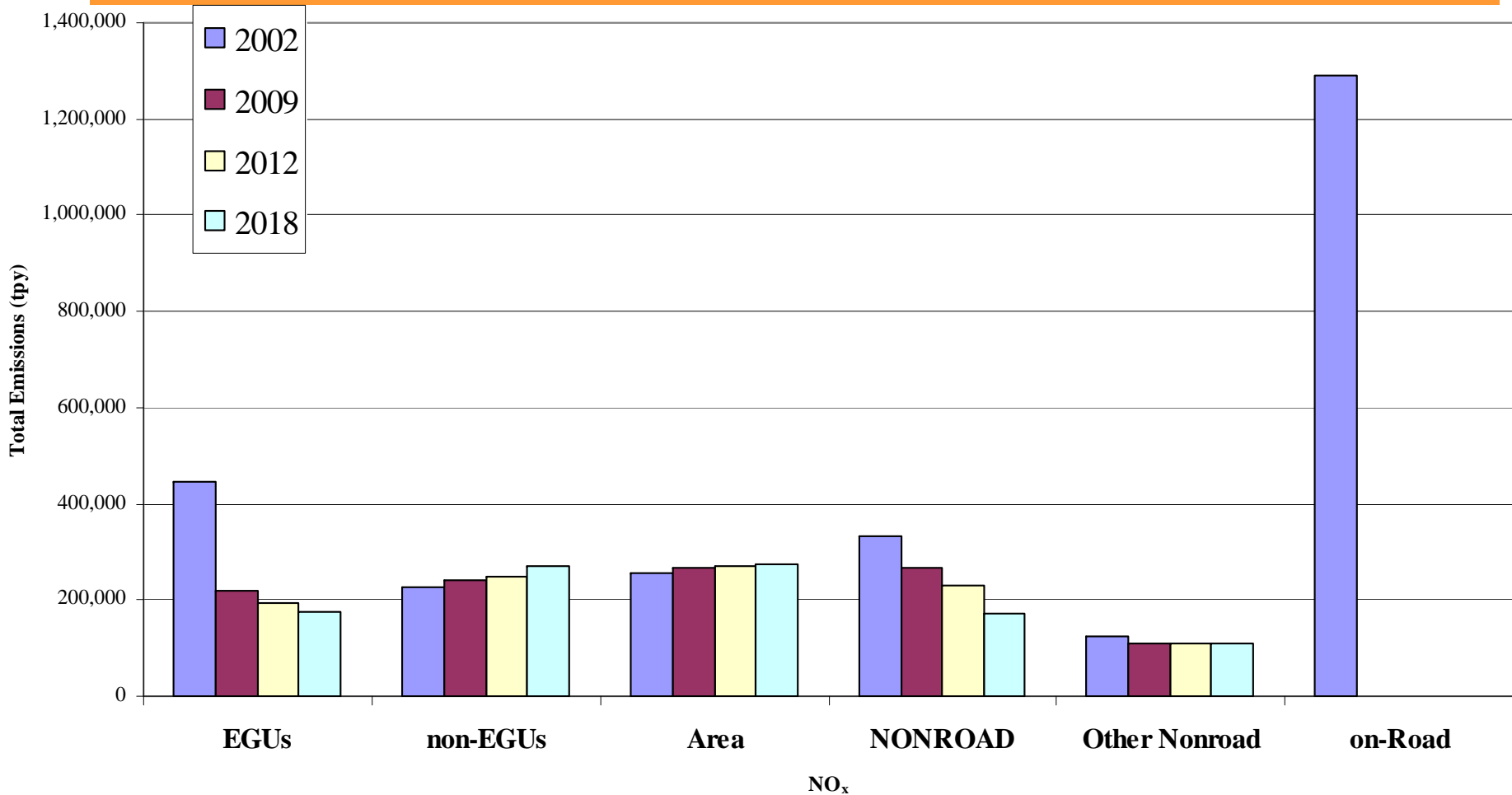


Sector Summary for Sulfur Dioxide



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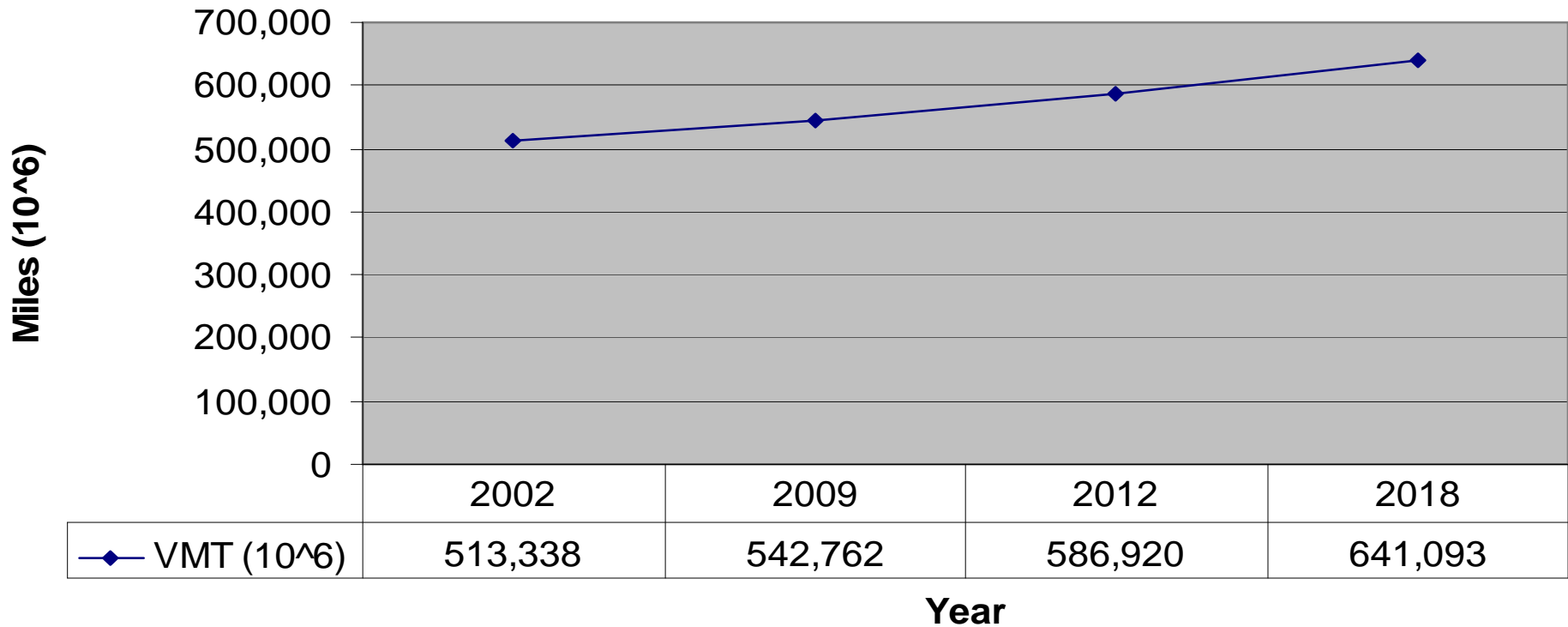
Sector Summary for Oxides of Nitrogen



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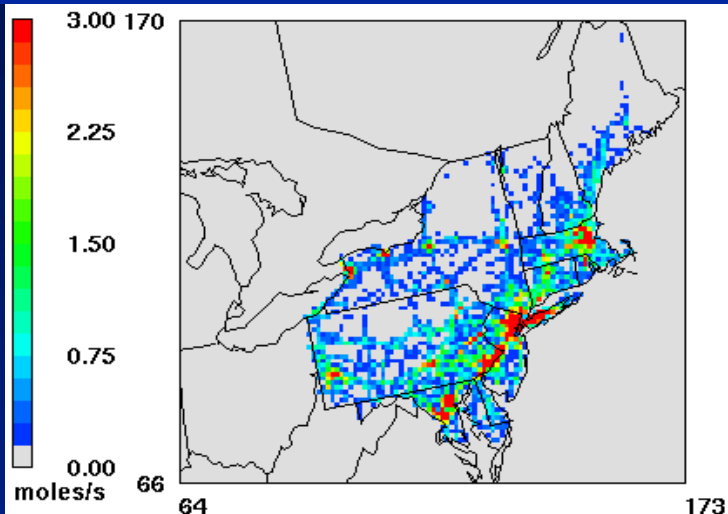
MANE-VU Vehicle Miles Traveled

Vehicle Miles Travel growth



On-Road NOx Emissions Distribution

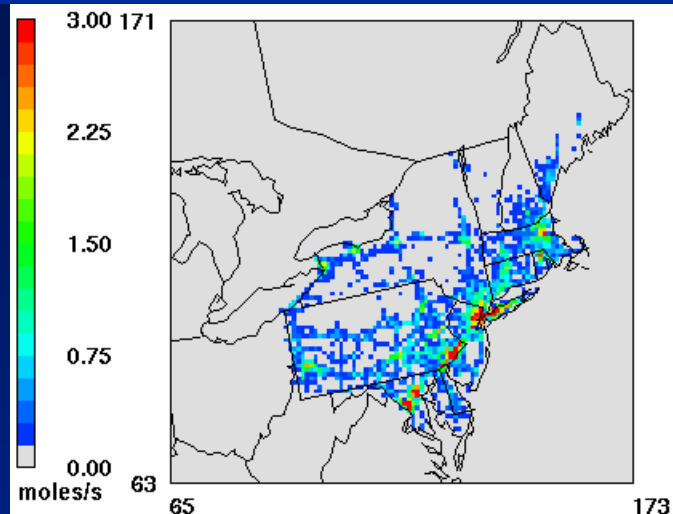
Aug 1st, 12LST of year 2002/2009/2012/2018



Y2002

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

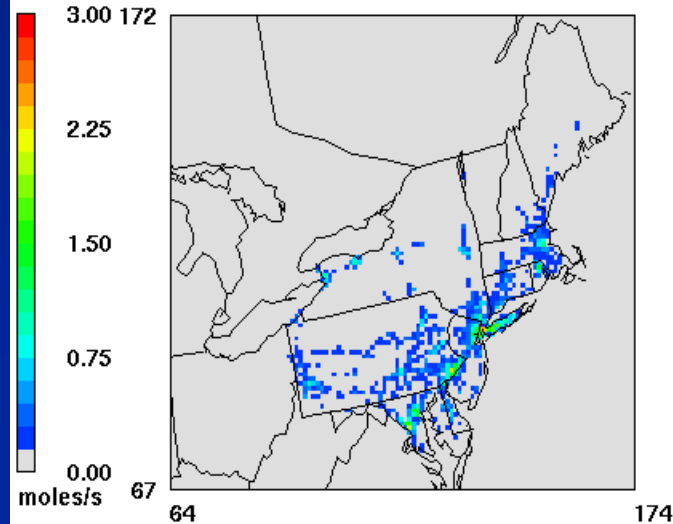
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Y2009

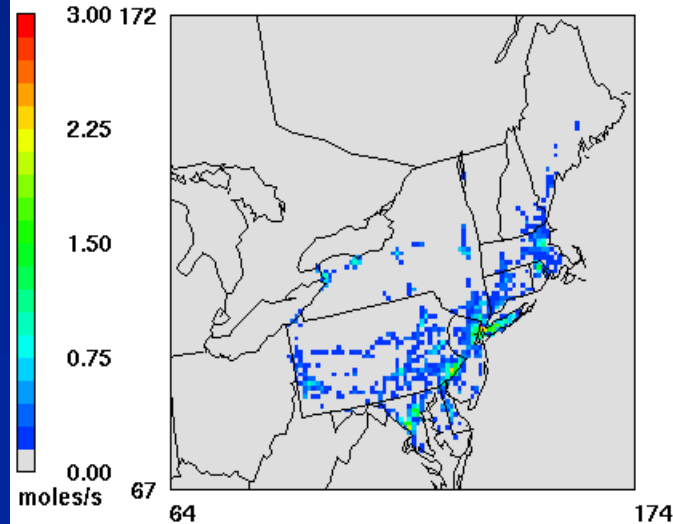
August 1,2002 17:00:00
Min= 0.00 at (65,63), Max= 6.67 at (138,103)

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Y2012

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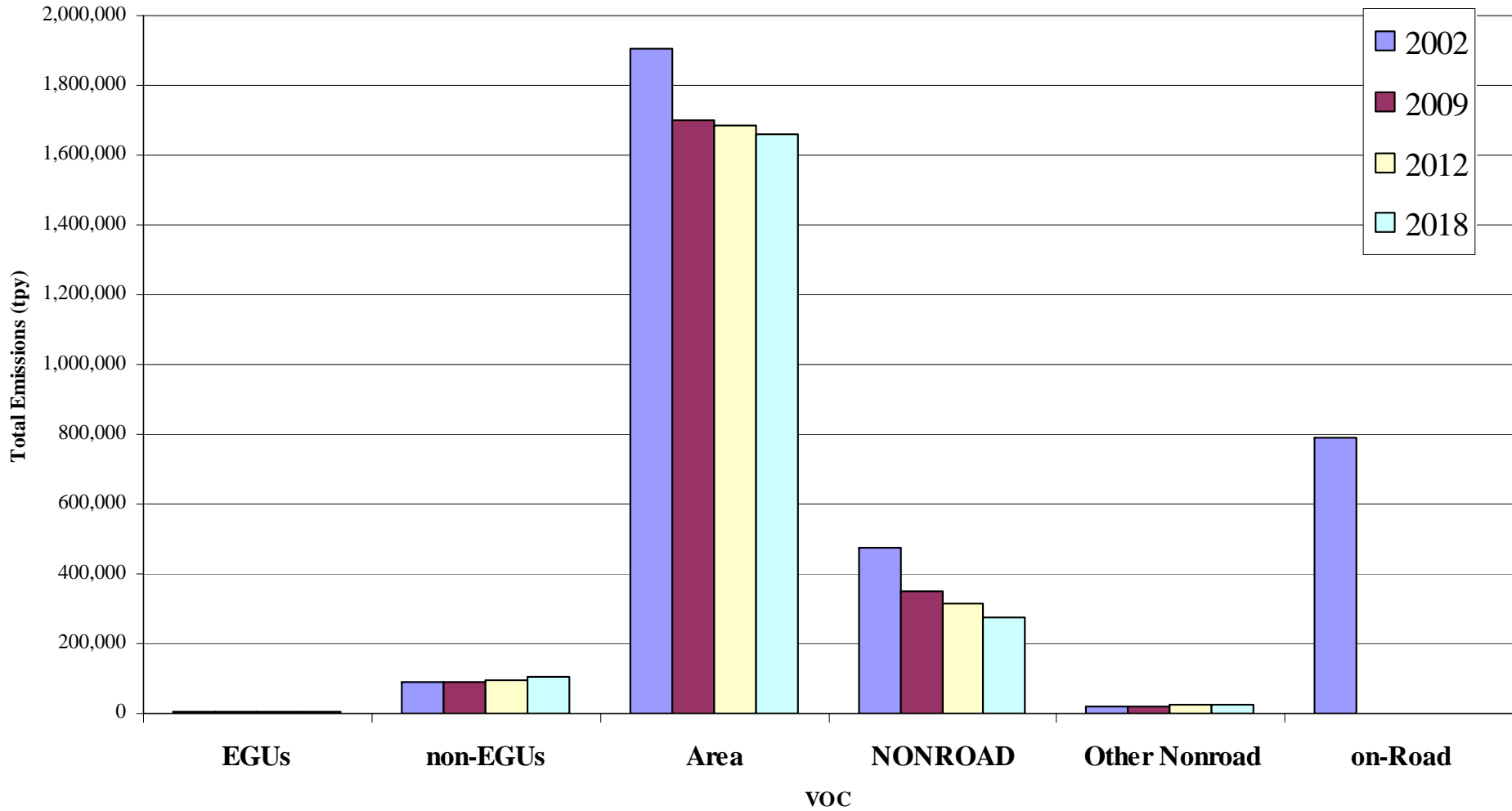


Y2018

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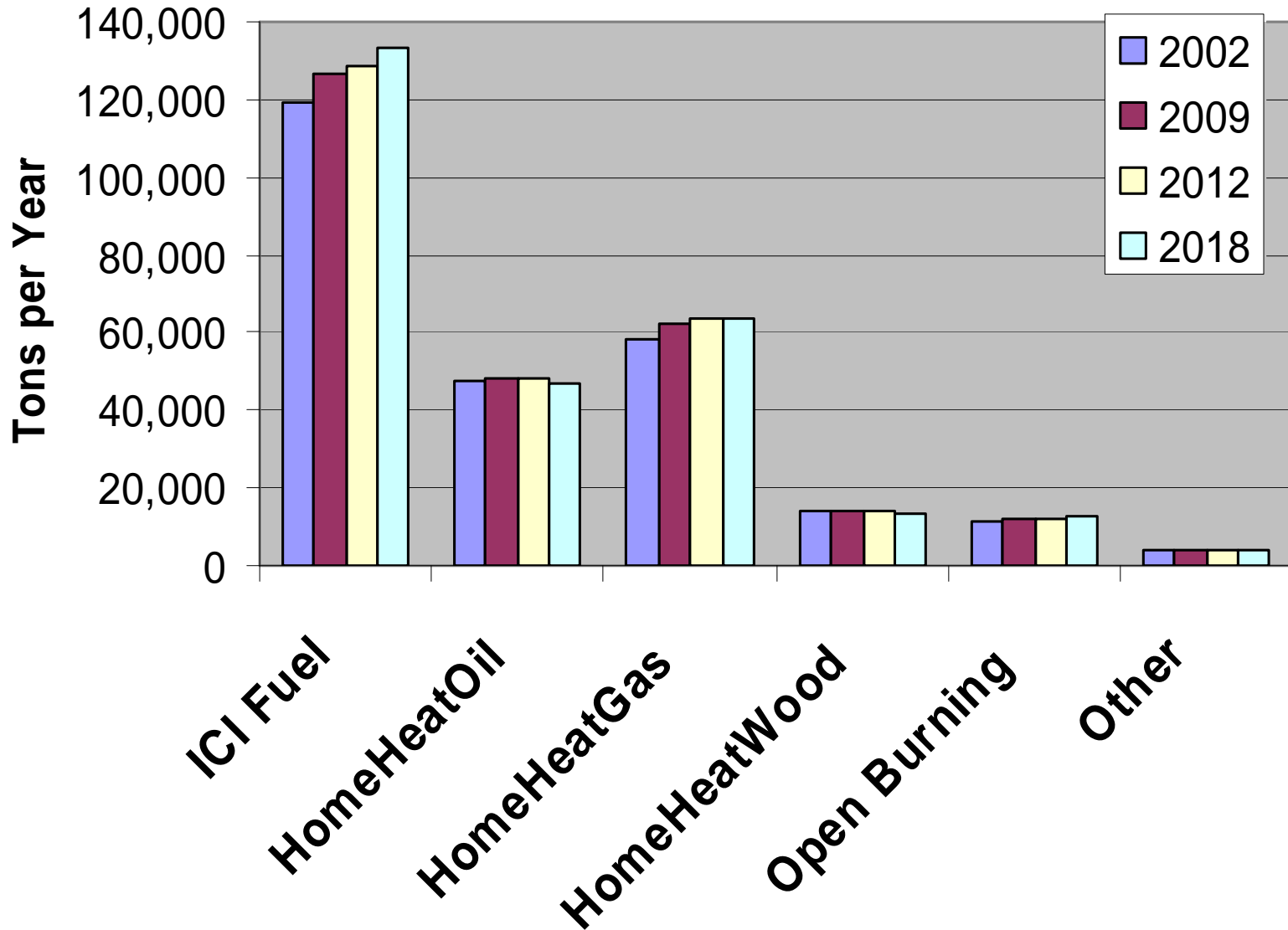
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Sector Summary for Volatile Organic Compounds

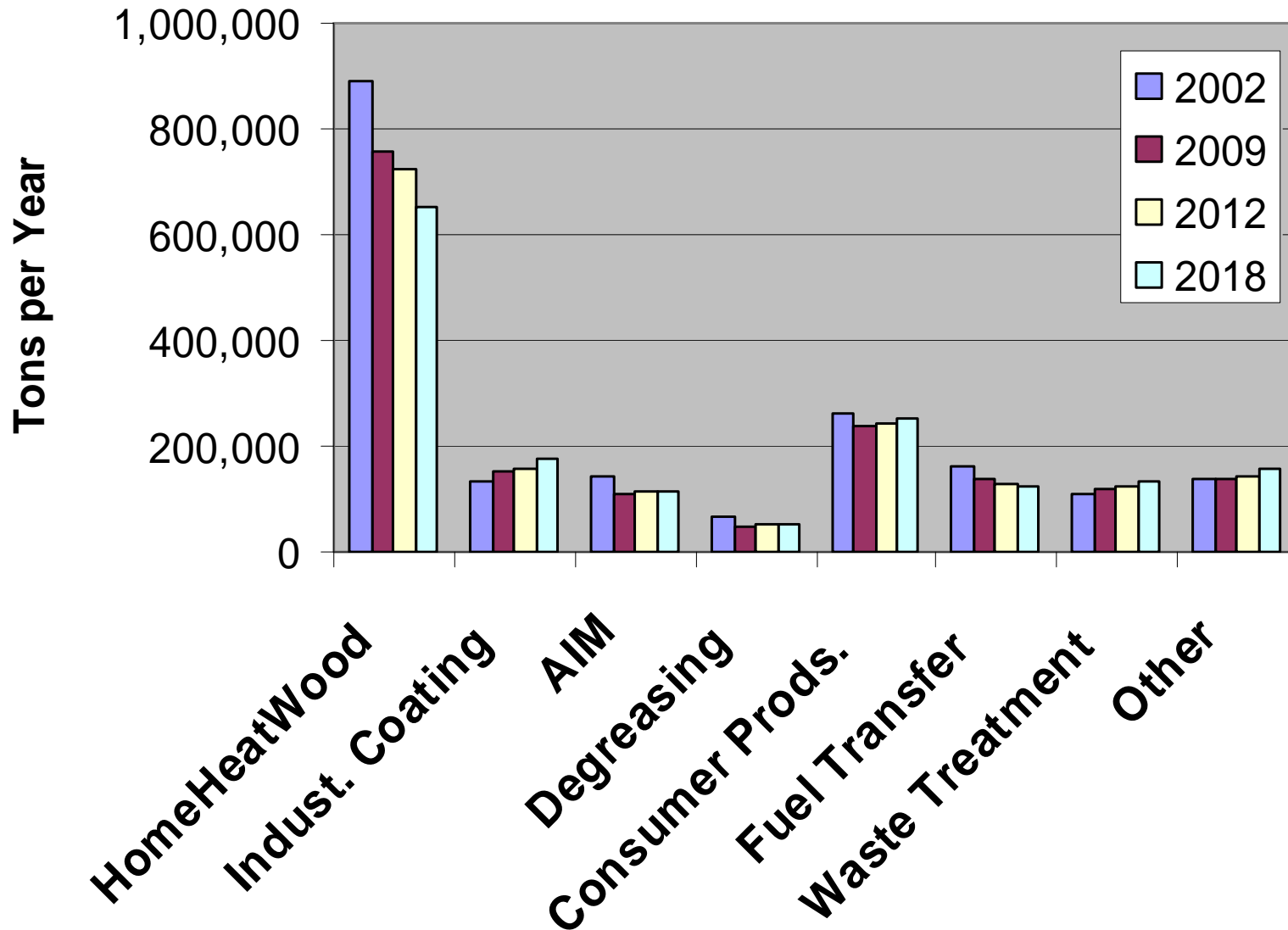


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Area Source NOx Emissions



Area Source VOC Emissions



Major Contributors in the MANE-VU Region

- **NO_x**

- ~50% mobile
- ~20% EGUs

- **VOC**

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

- **SO₂**

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

- **NH₃**

- ~15% Highway-gasoline, rest agricultural

- **PM_{2.5}**

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