

Modeling Committee Update

OTC/MANE-VU Fall Meeting

November 15th, 2012

Washington, D.C.



OZONE TRANSPORT COMMISSION

Overview

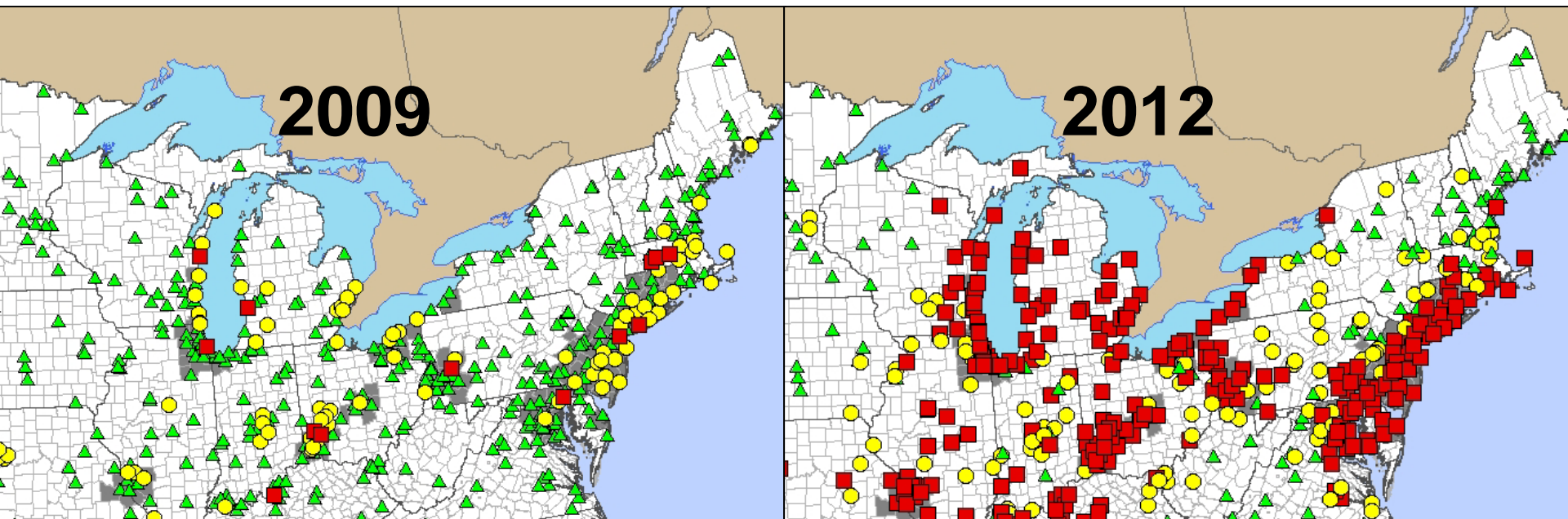
1. 2012 Ozone Season
2. Building Level 3 Screening
3. Level 3A Modeling Results
4. Proposed Screening Modeling Runs



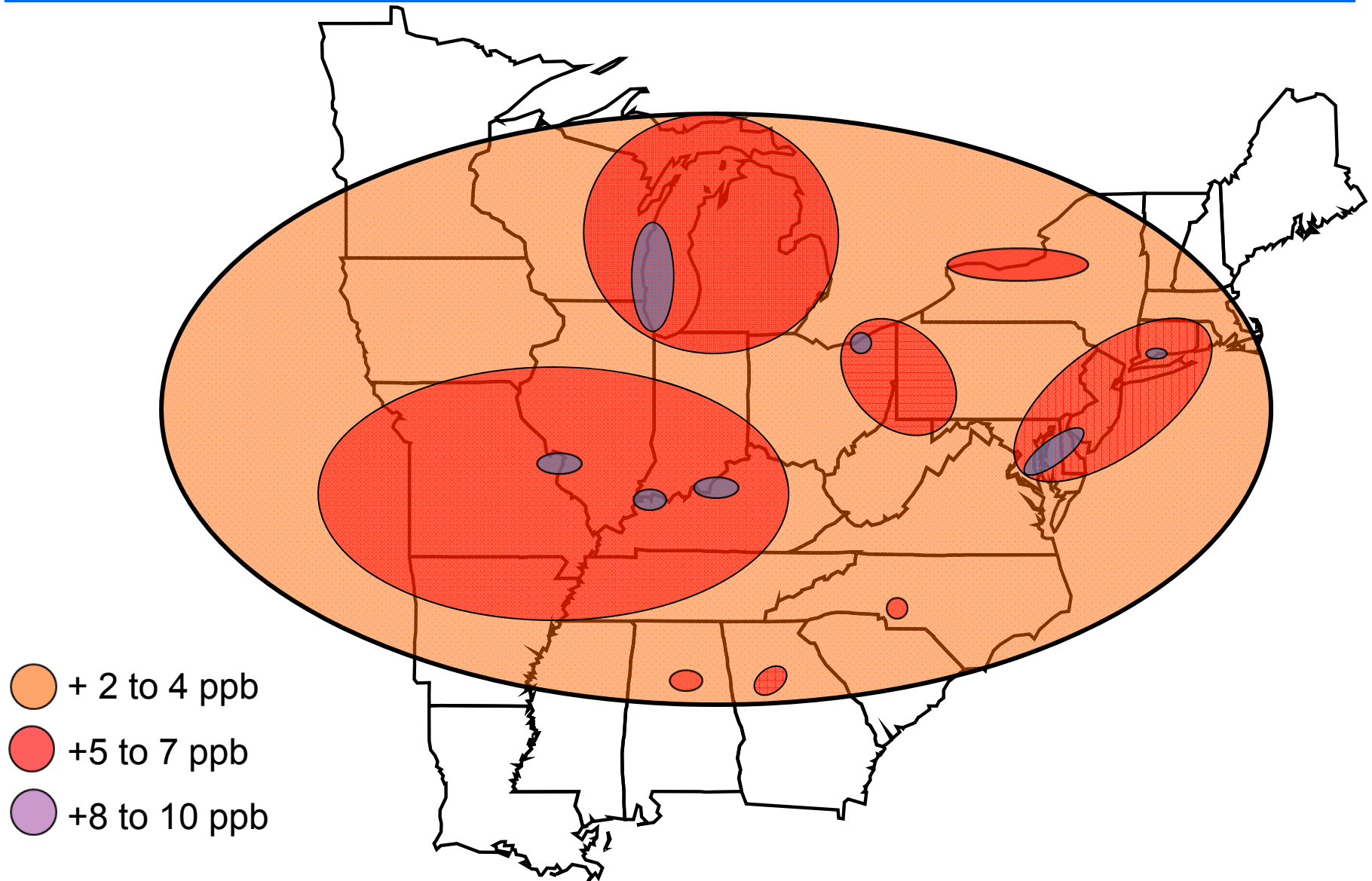
Ozone Design Value Update

Design values are a 3-year average of the 4th highest values by monitor. This value is compared to the standard.

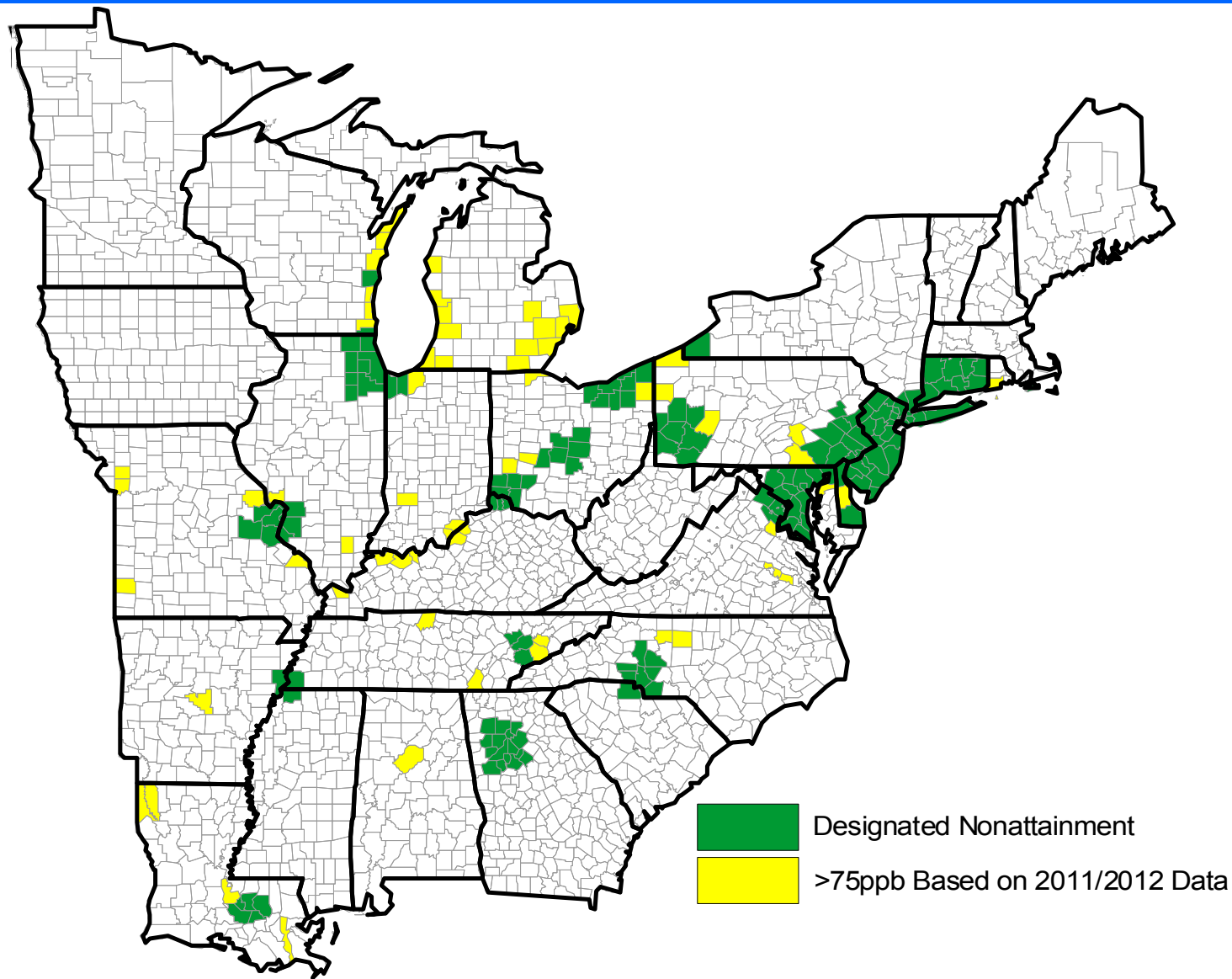
This year we dropped 2009 and added 2012 to the calculation.



Differences Between 2009-2011 and 2010-2012 Design Values

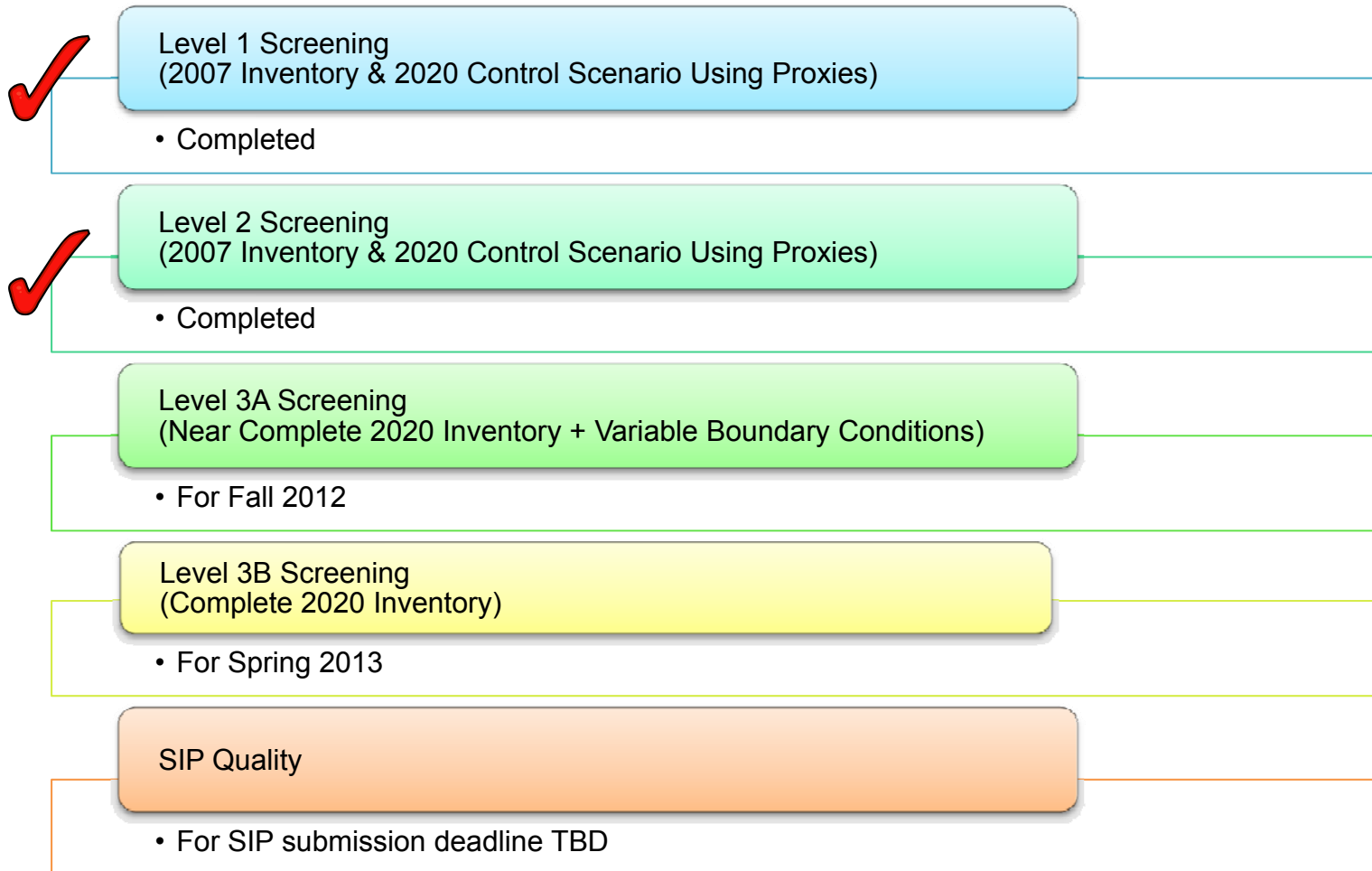


Ozone Nonattainment





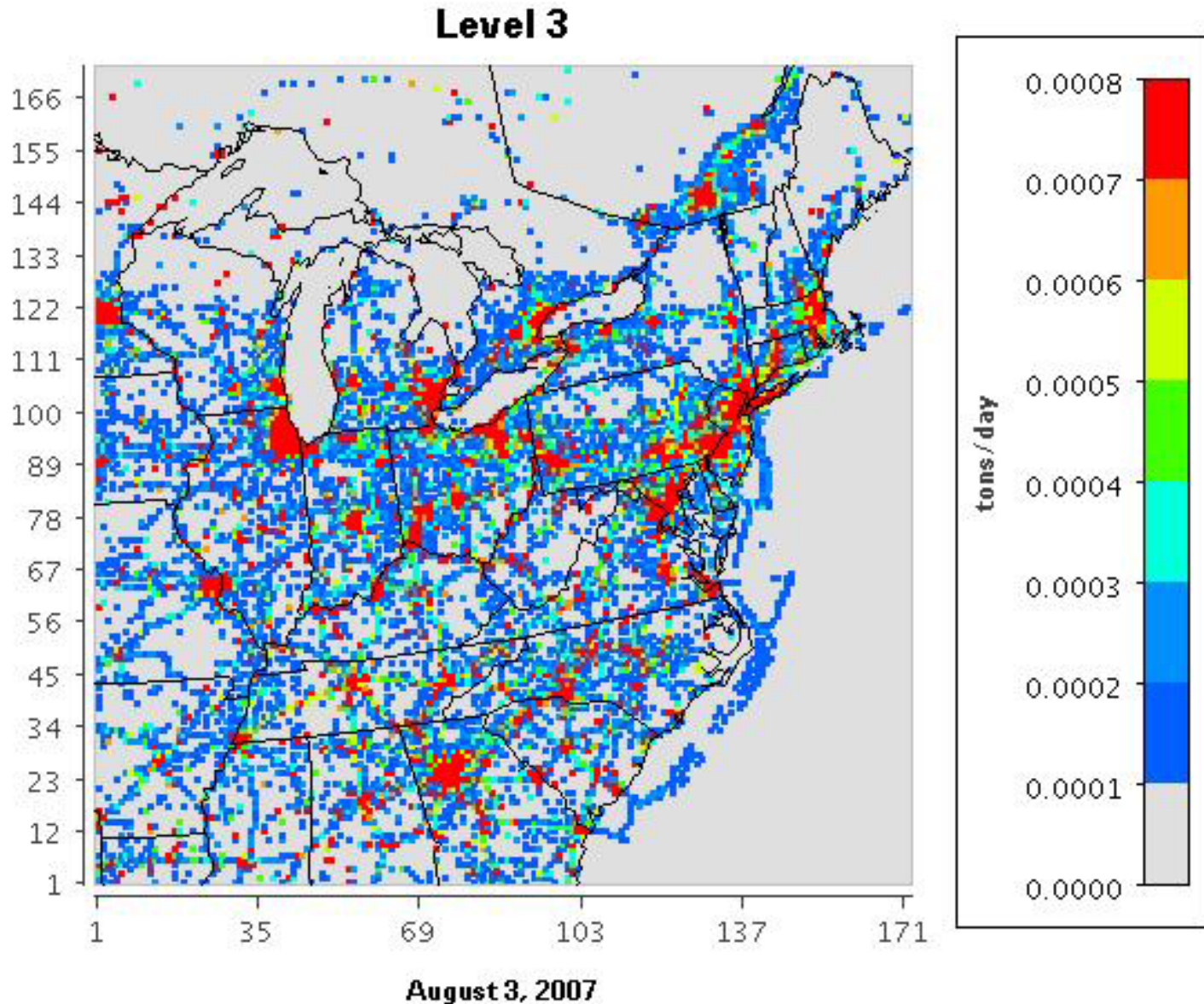
Screening Modeling Schedule



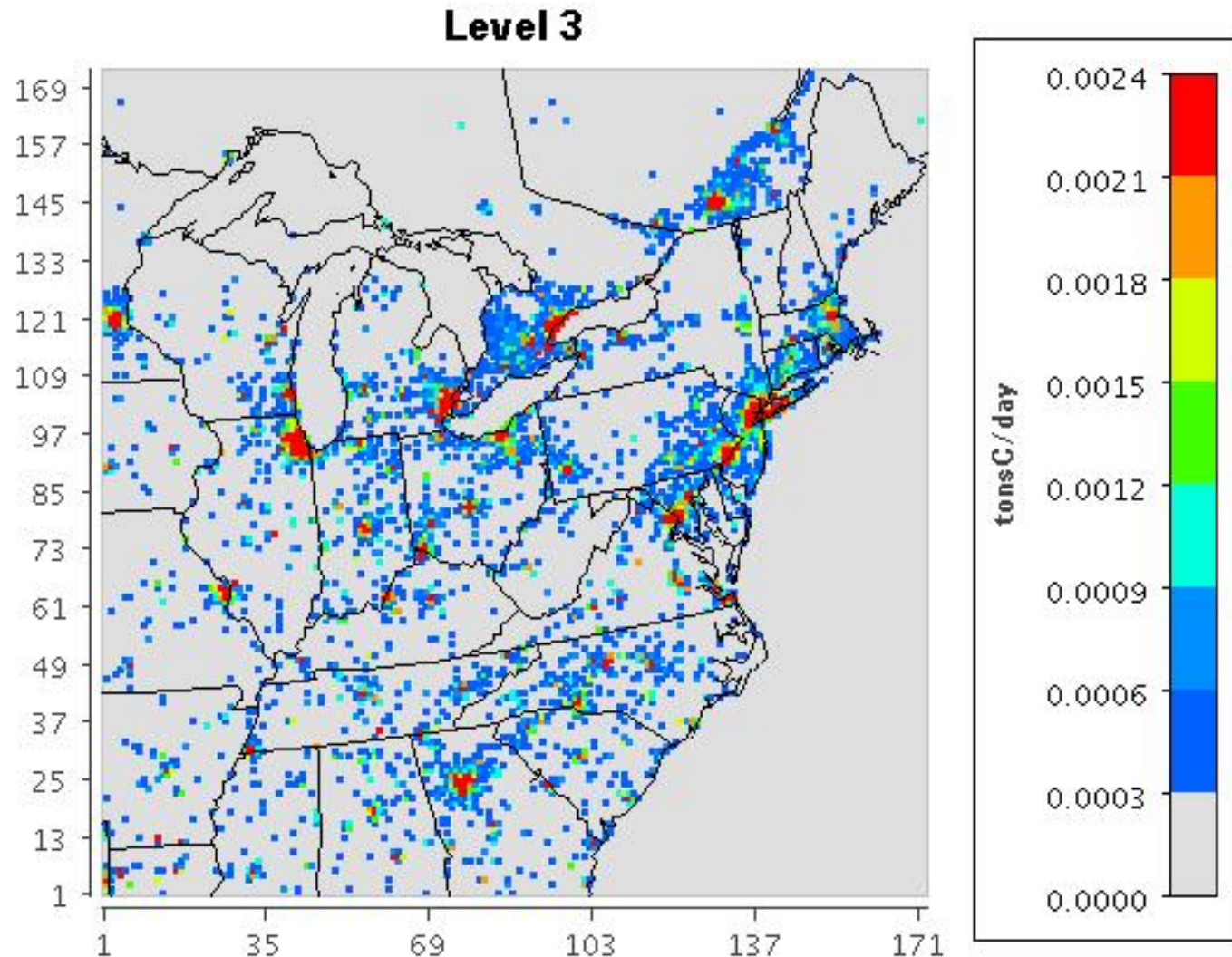
Summary - Upgrades from Level 2 to 3A

- Upgraded MARAMA V3 2007 & 2020 Inventories
 - Decrease in NO_x for every state from 1-5%
 - Decrease in VOC for every state except PA & DC
- 2020 Updates
 - MOVES estimates
 - Updated EGU proxy
- Emissions Outside of the OTR
 - Full 2007 SESARM inventory
 - Updated NEI for remaining areas/sectors
- Boundary Conditions
 - Improved from static to modeled time variant

NOx Emissions - Anthropogenic



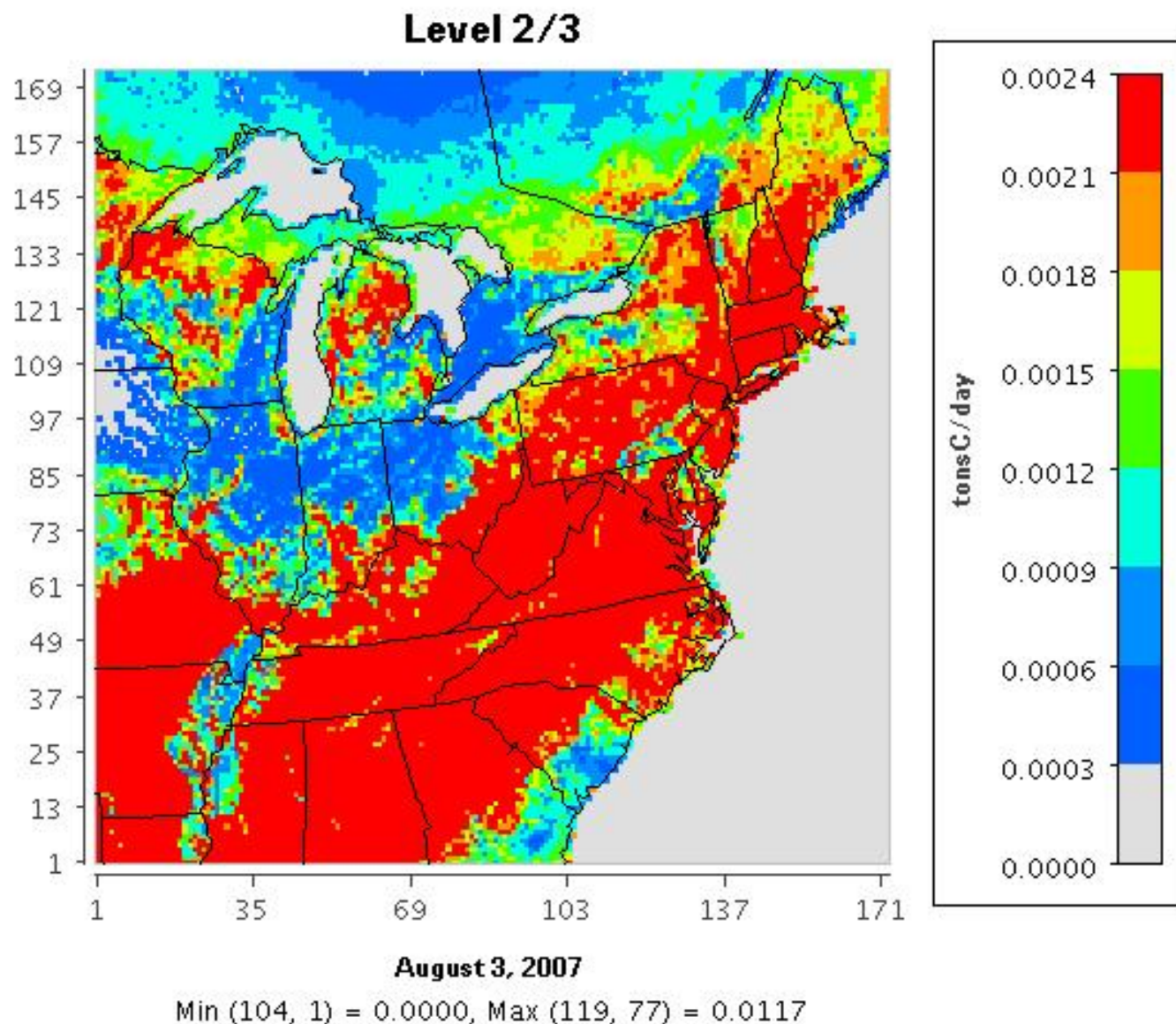
VOC Emissions - Anthropogenic



August 3, 2007

Min (105, 1) = 0.0000, Max (138, 102) = 0.0182

VOC Emissions - Natural

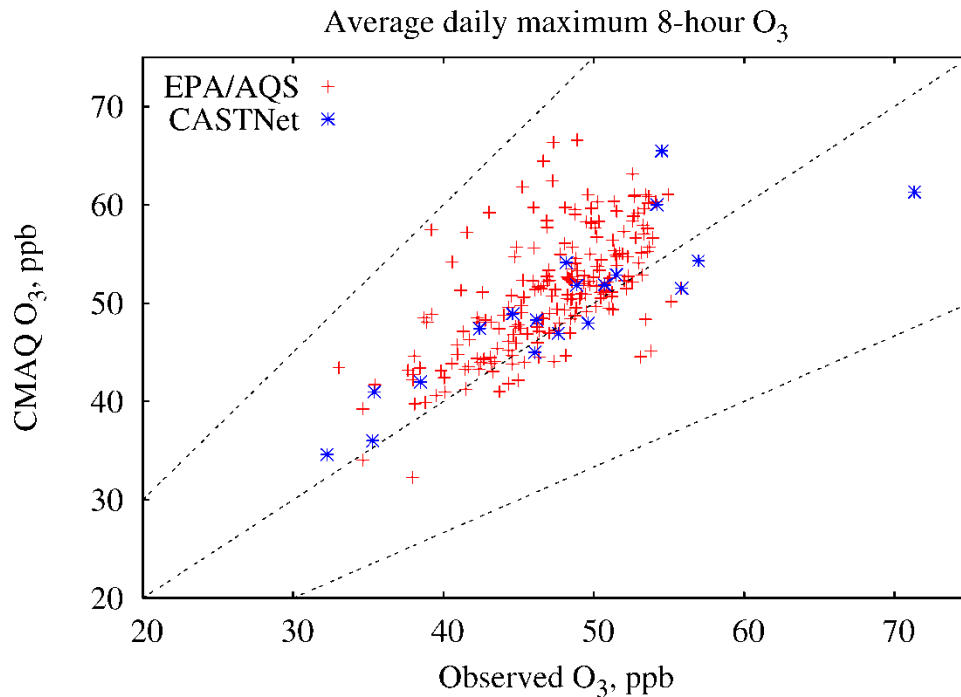


OTC Modeling Committee

Modeling Results

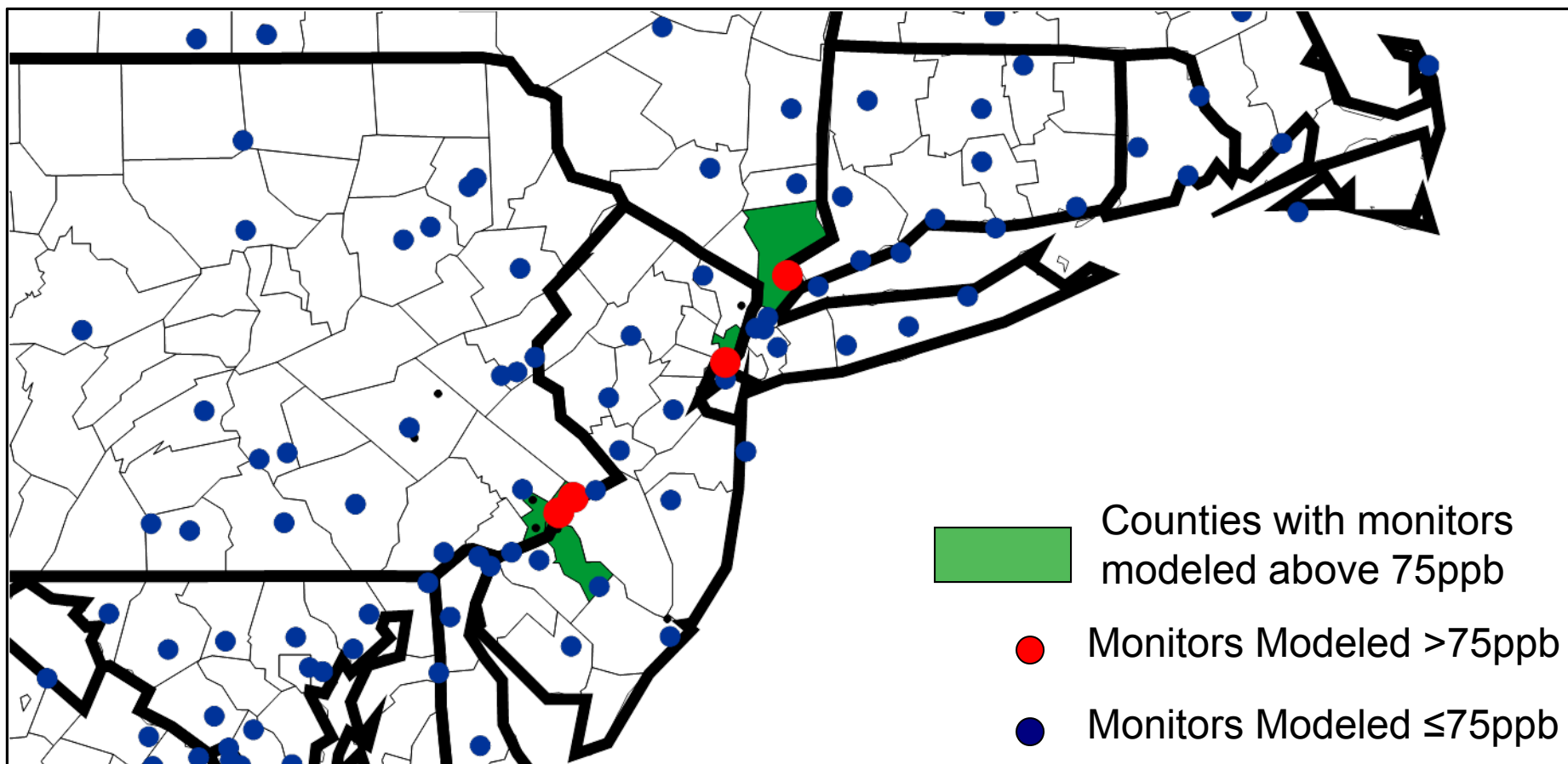
Sensitivity modeling focused on identifying measures that help OTR states meet Attainment. This includes super-regional and national measures to address transport.

2007 Base - Model Performance



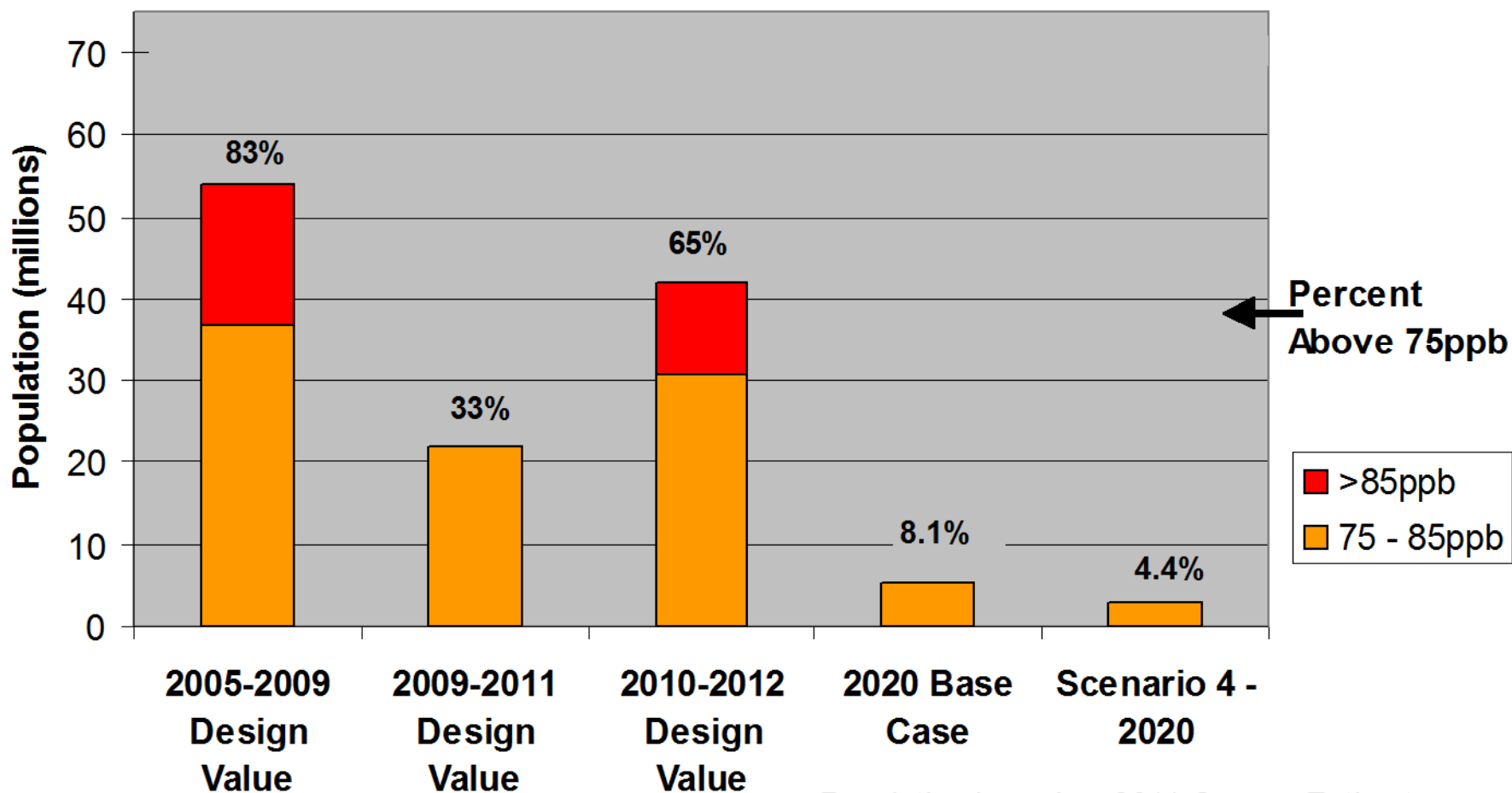
- **The OTC CMAQ modeling platform performs very well and within recommended modeling guidelines.**
- The model slightly over-predicts ozone, but captures day-night and seasonal patterns very well.
- The model also tends to predict slightly higher than observed ozone along the urban corridor.

2020 Base – On the Way Controls



Population Exposure to Ozone in the Ozone Transport Region

Population Ozone Exposure in the OTR



Population based on 2011 Census Estimates

Upcoming Screening Modeling - 2013

Currently Planned

- Level 3B 2020 Base case with ERTAC data
- Other Sensitivity Runs

A continued evaluation of options that might bring all our states into compliance with air quality standards

Questions

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