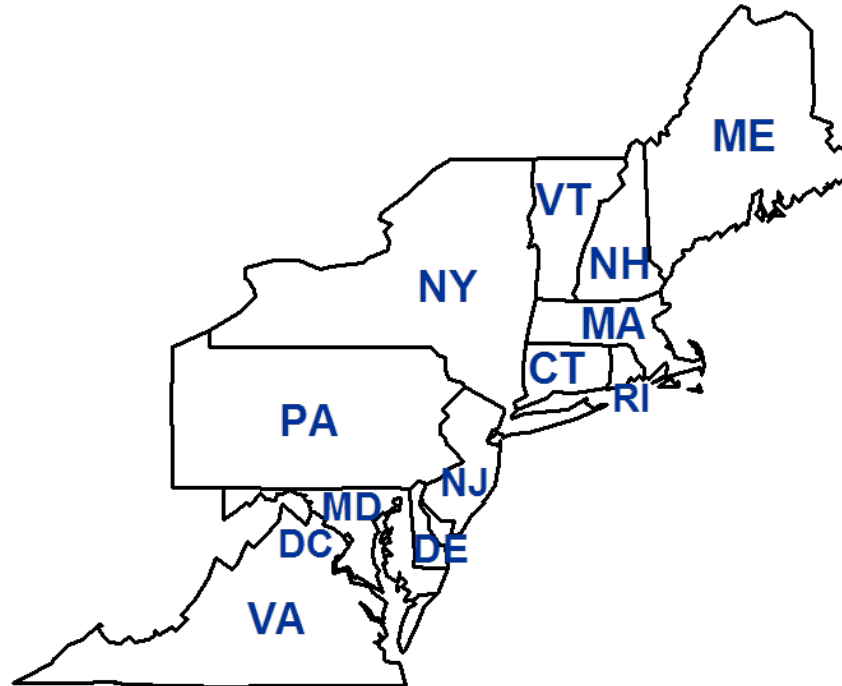


# Modeling Committee Update

## OTC Annual Meeting



May 24<sup>th</sup>, 2012

Alexandria, VA

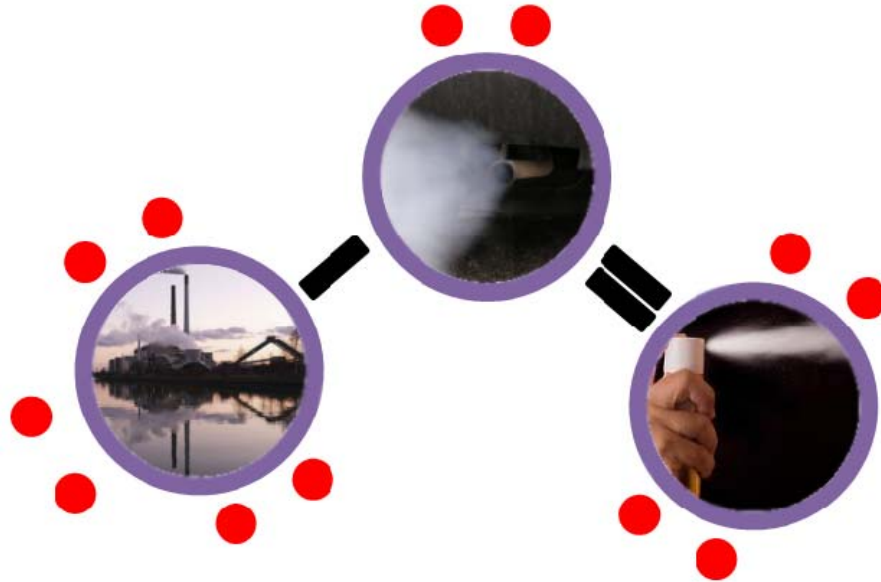


**OZONE** TRANSPORT COMMISSION

# Overview

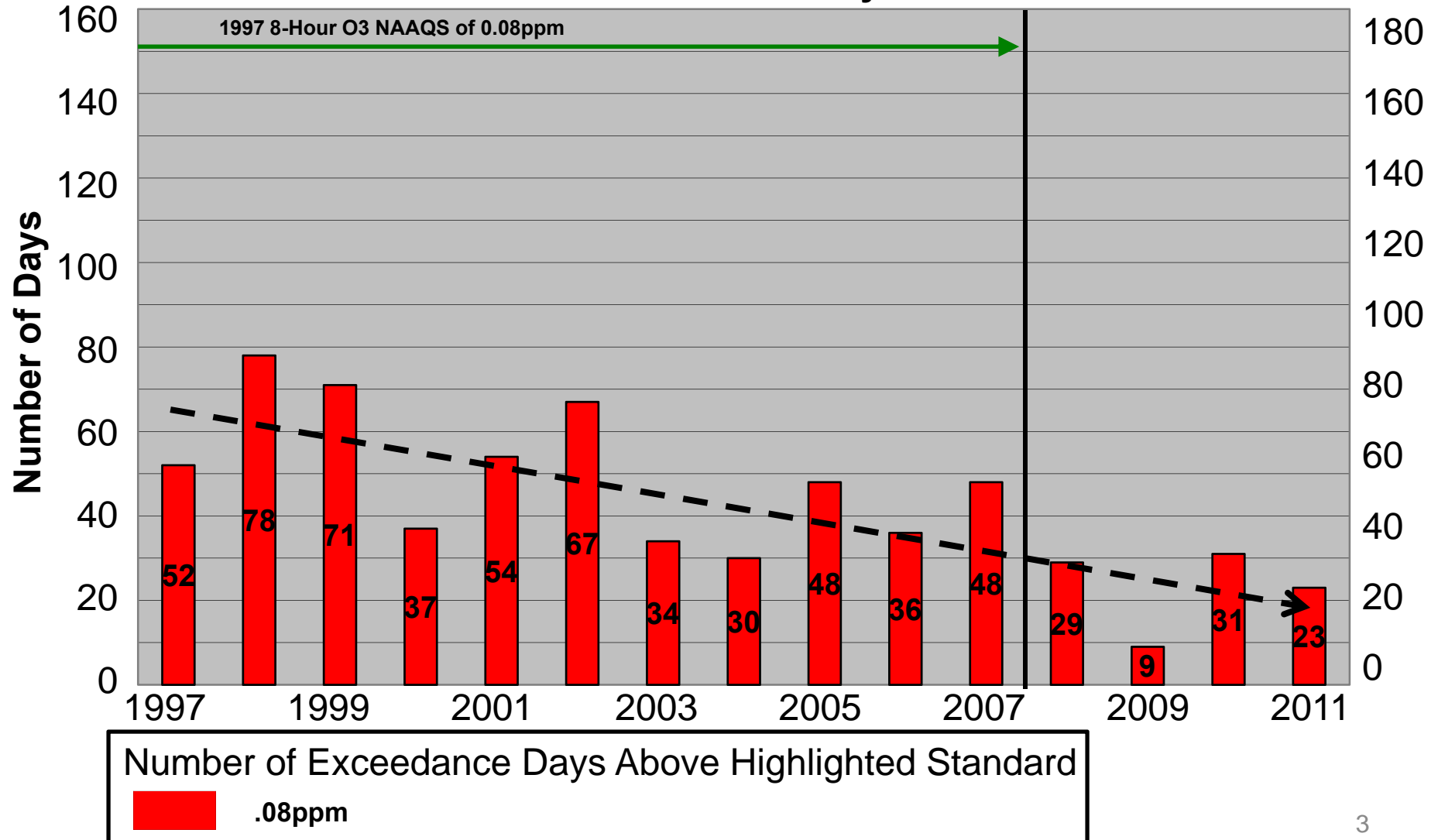
---

1. Ozone trends in the OTR
2. 2012 ozone designations
3. Level 3 Screening scenario possibilities
4. Emission inventory update
5. Other Committee activities



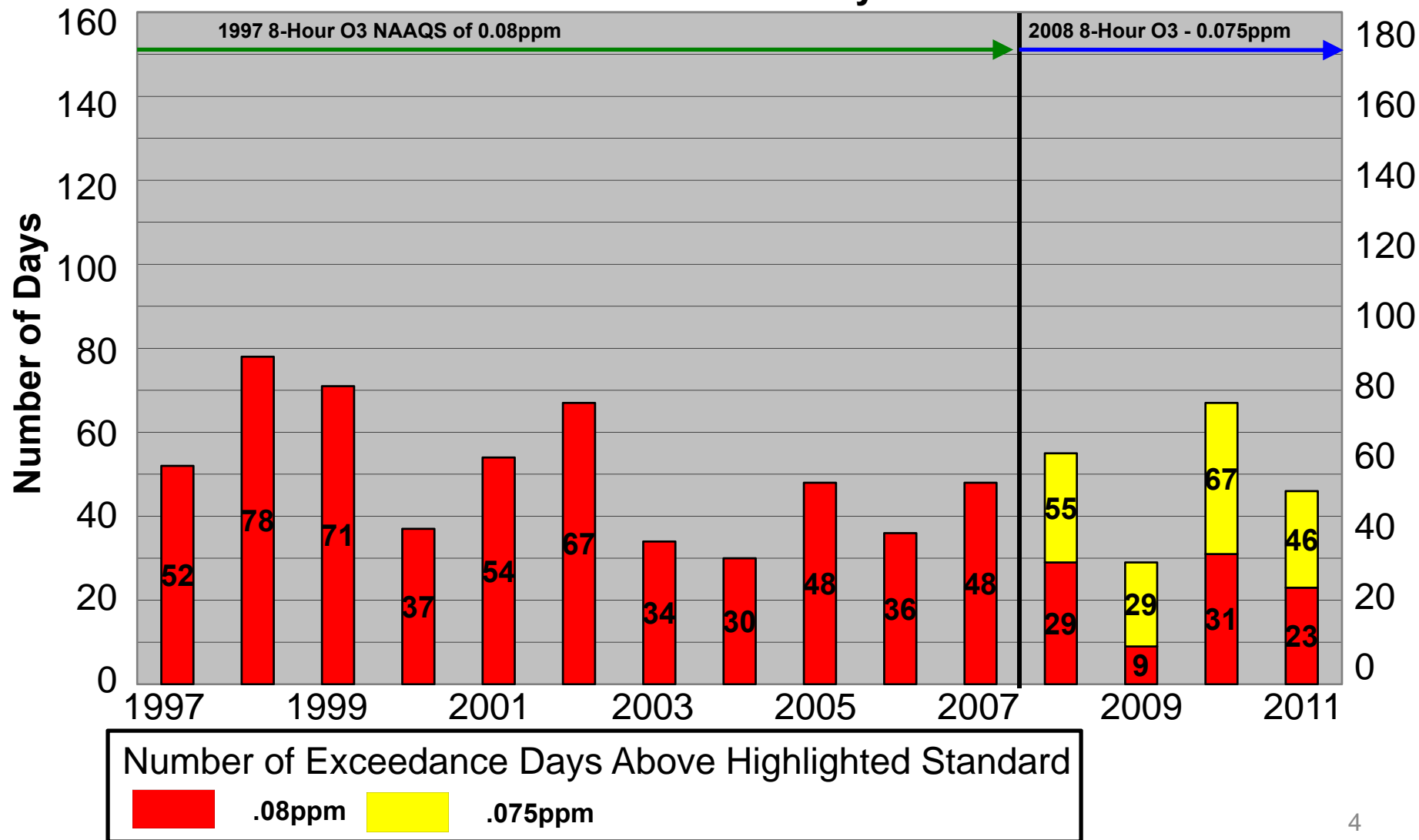
# 8-Hour Ozone Trends in OTR

## 8-Hour Ozone Exceedance Days in the OTR



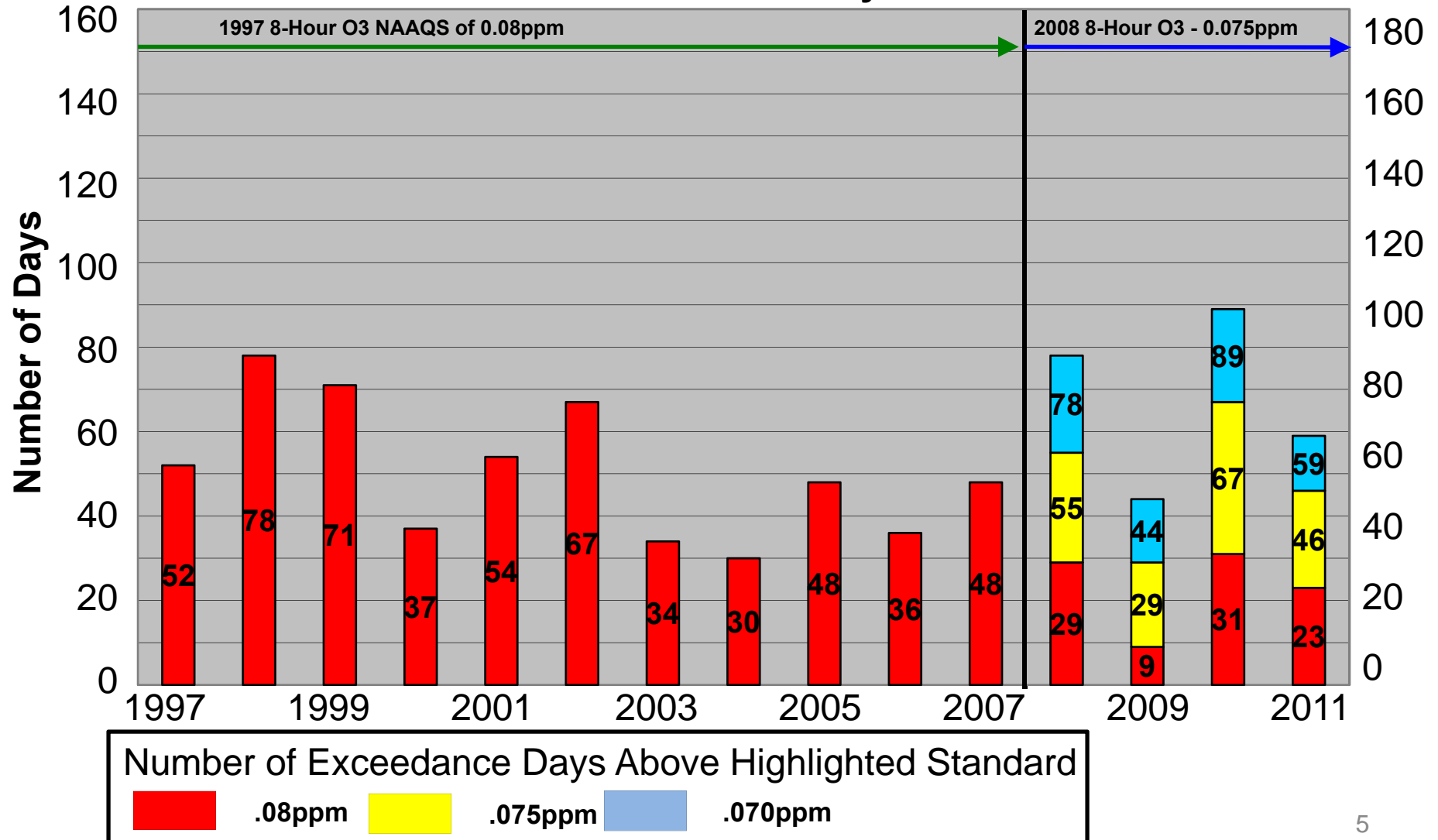
# 8-Hour Ozone Trends in OTR

## 8-Hour Ozone Exceedance Days in the OTR



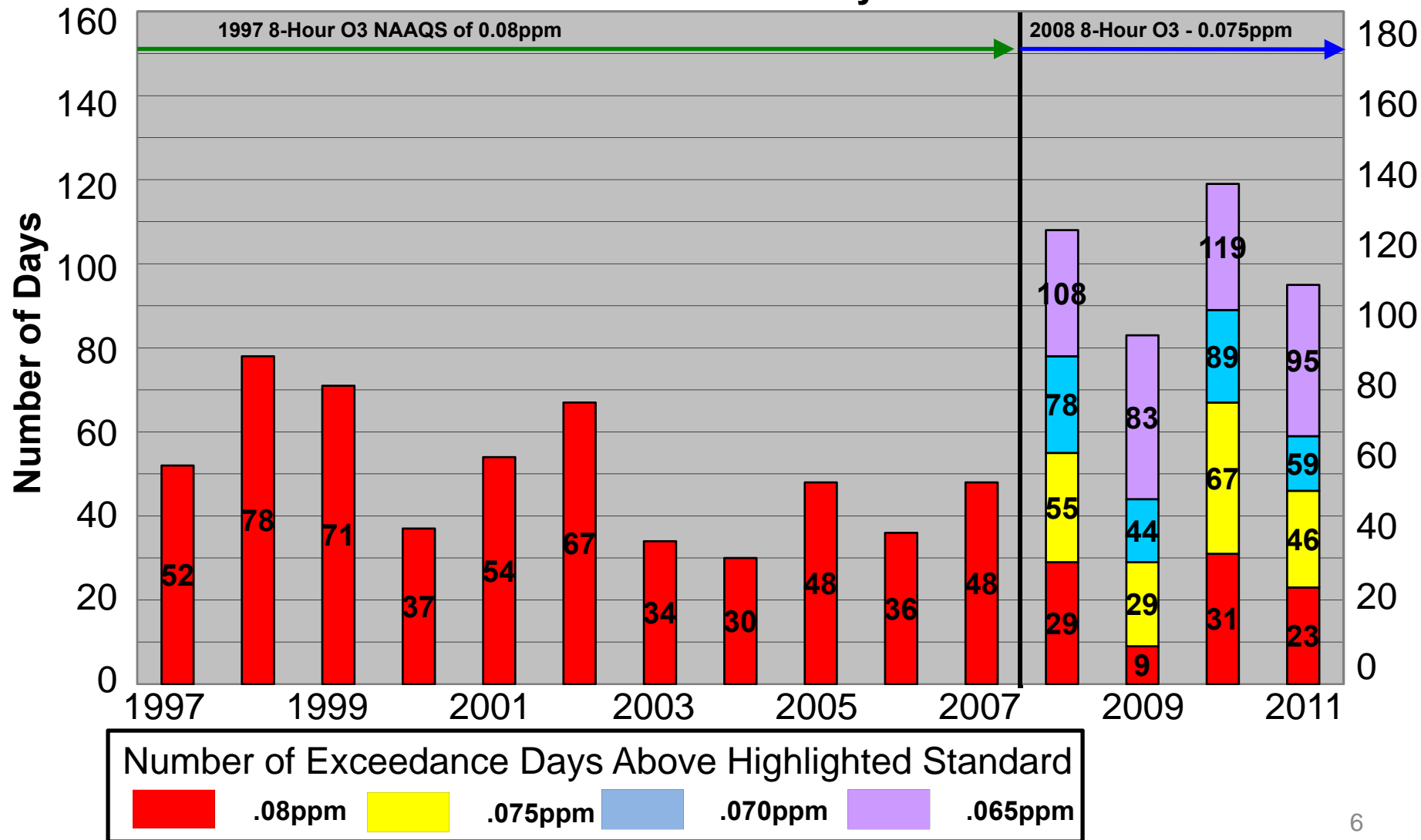
# 8-Hour Ozone Trends in OTR

## 8-Hour Ozone Exceedance Days in the OTR



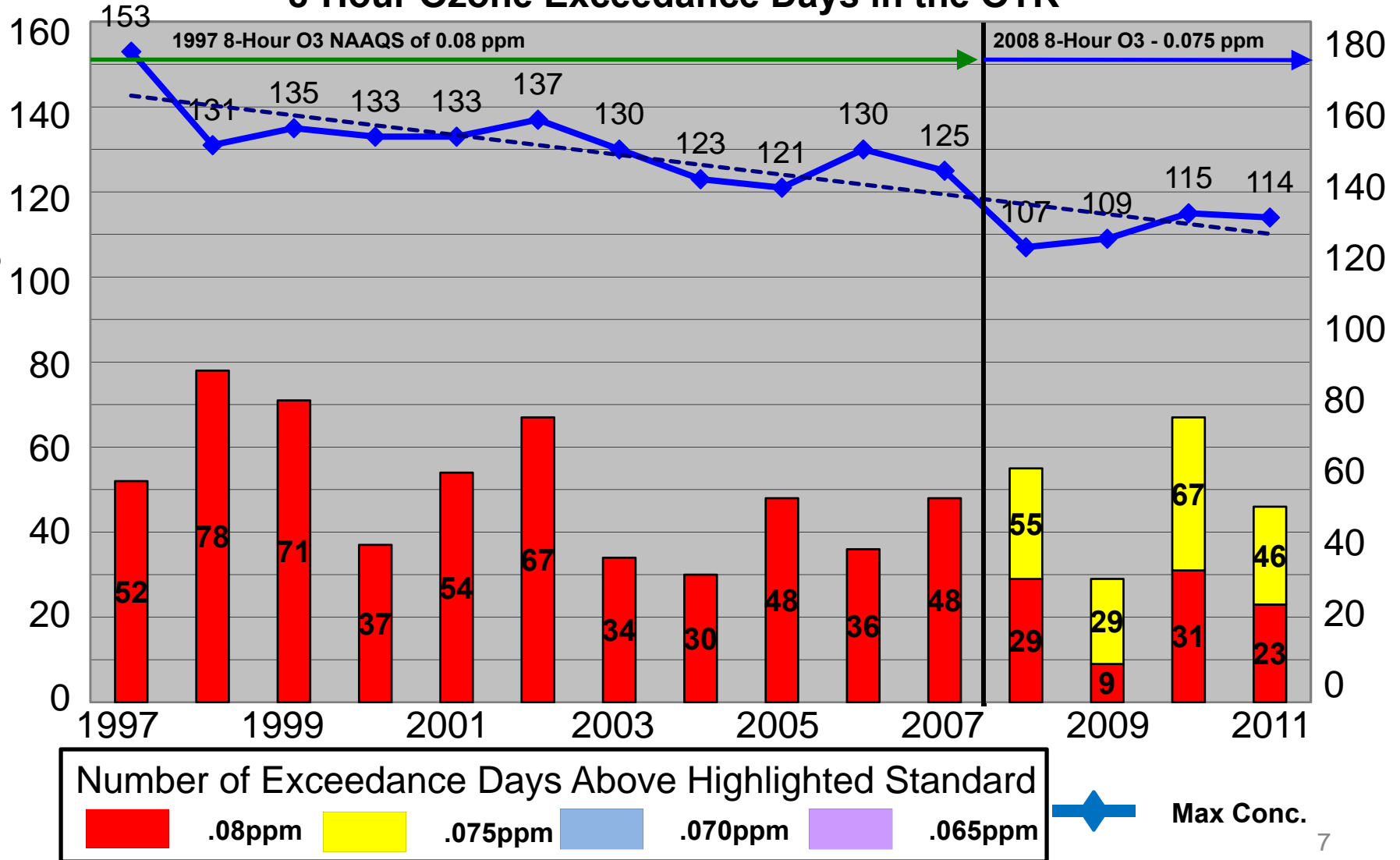
# 8-Hour Ozone Trends in OTR

## 8-Hour Ozone Exceedance Days in the OTR



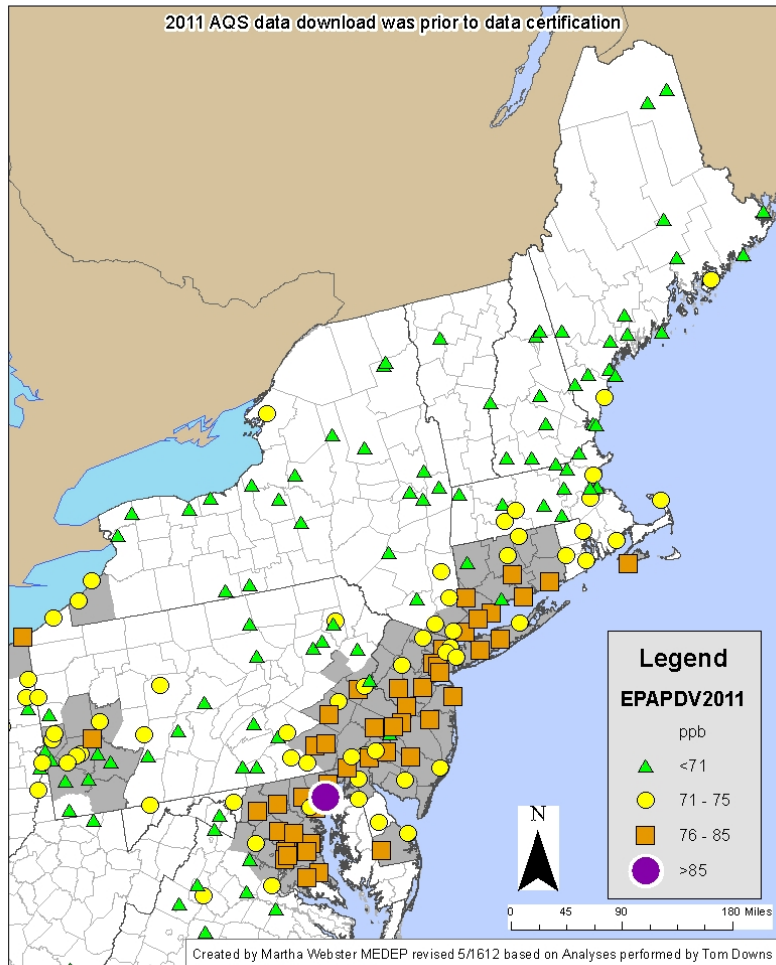
# 8-Hour Ozone Trends in OTR

## 8-Hour Ozone Exceedance Days in the OTR



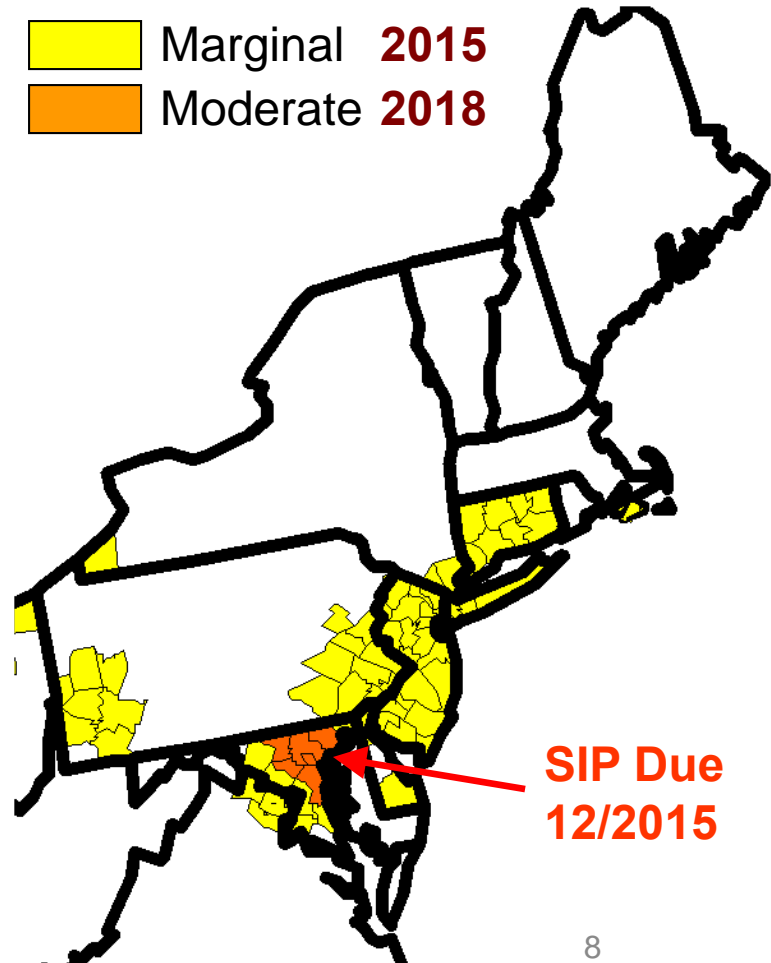
# May 2012 Ozone Designations

## Design Value by Monitor 2008, 2009, 2010



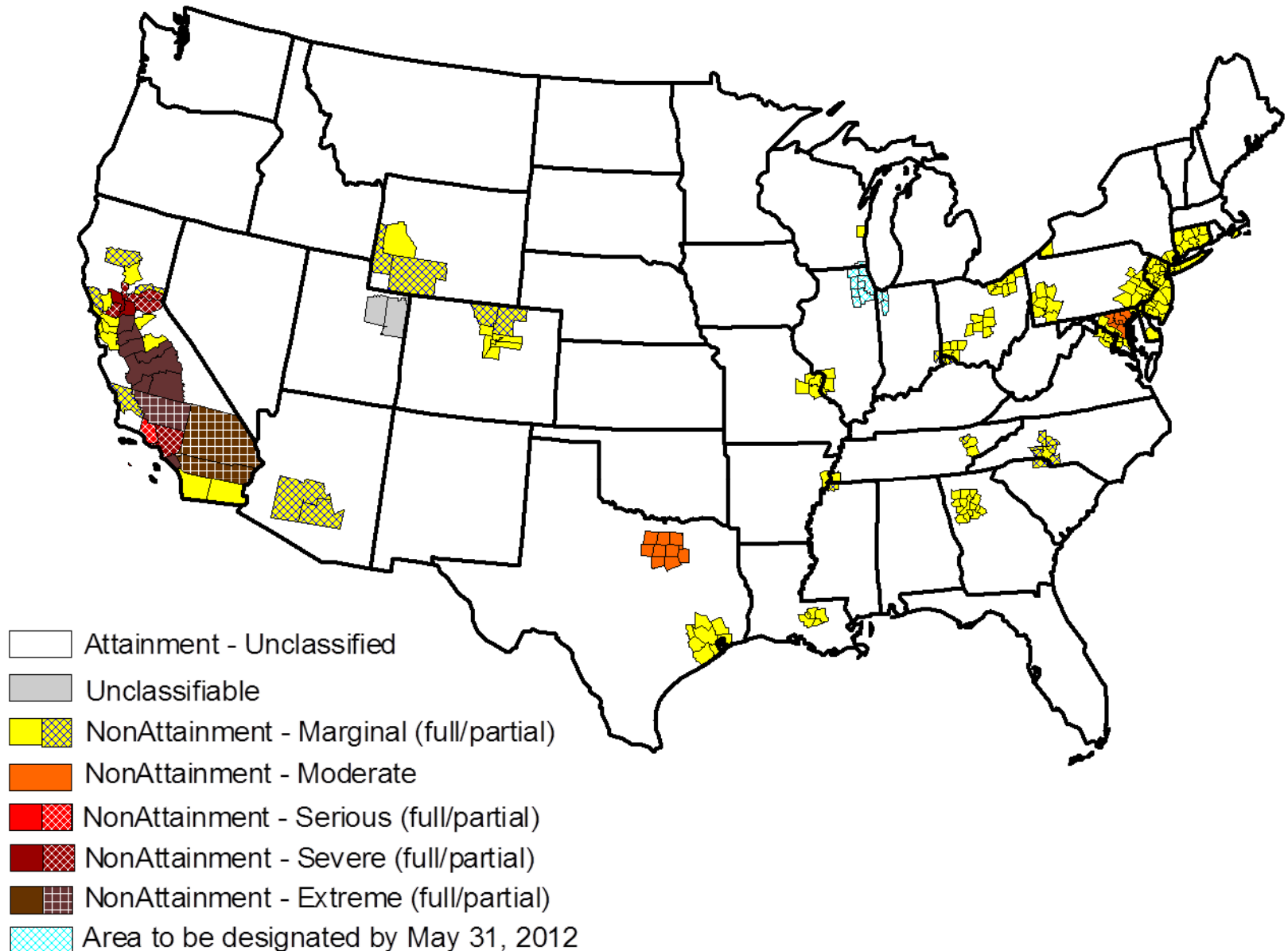
## 2012 Ozone Designations

- Marginal **2015**
- Moderate **2018**





# May 2012 Ozone Designations



# Screening Modeling Schedule

Level 1 Screening  
(2007 Inventory & 2020 Control Scenario Using Proxies)

- Completed



Level 2 Screening  
(2007 Inventory & 2020 Control Scenario Using Proxies)

- Completed "Scenario 4"



Level 3 Screening  
(Complete 2020 Inventory + Boundary Conditions)

- For Fall 2012



SIP Quality

- For SIP submission deadline TBD

# Planned Level 3 Screening Activities

- Base Cases – 2007 and 2020
- Proposed Control Cases
  - OTC “Controlled Inventory”  
– update Scenario 4
  - Explore Urban focused VOC Reductions
  - Point/Nonroad/Area NOx Reduction
  - Tier 3 + Low Sulfur Fuel
  - Theoretical CSAPR 2 Program
  - 2015/2018 OTB/OTW



# Emission Inventory Status

	2007 Base (Screening/SIP)		2020 Base (Screening)		2017 Base
Sector	OTR	Outside OTR	OTR	Outside OTR	(SIP)
Area	√	√	√	√	√
NonEGU	√	√	√	√	√
NonRoad	√	√	√	√	√
OnRoad	√	√	3/4	√ Proxy	X
EGU	√	√	X	√ Proxy	X

# Mobile Emissions - MOVES

---

- MOVES FOR 2007 COMPLETE
  - Used in Level 2 modeling
- MOVES FOR 2020 NEARING COMPLETION
  - Should be available soon
  - Puzzling results in some states still under investigation
- MOVES FOR 2017 NOT AVAILABLE
  - MARAMA collected inputs must be updated
  - Collecting contractor bids to run 2017 MOVES  
but currently no budget identified to do the model runs

# ERTAC EGU Growth

---

- ERTAC = Eastern Regional Technical Advisory Committee
- Multi-Regional Collaboration (States and Industry)
- Goal: Methodology to Create EGU FY Emission Inventories
  - Conservative predictions of activity
  - Transparent
  - Inexpensive
  - Relies on base year activity data
  - Realistic temporal profile that matches meteorology
  - Flexible
- First results expected Summer 2012

# Capturing Dramatic Economic Shifts

- There are some dramatic changes in certain economic sectors that we need to really focus on for future year emissions:
  - EGU changes in dispatch and retirements
  - Natural gas
  - Gasoline prices and VMT
- Two competing concerns:
  - There may be major changes needed to the way we have historically assumed certain sectors will grow
  - Recent economic down-turn will – over time – see recovery and emission growth will likely follow





# Other Modeling Committee Activities

---

- Enhancing health benefit modeling capability (BenMap)
- Studying transport patterns over recent years
- Working collaboratively with other regions on technical initiatives, such as fine-tuning the ERTAC model
- Emission inventory group studying emission trends



# Key Points

---

1. Since 2009 was a “clean” year, the shifting from 2009-11 to 2010-12 will likely cause design values to increase
2. Level 3 screening to be ready for OTC Fall Meeting
  - a) Still problems with MOVES in some states. May need proxy estimates in some locations
  - b) ERTAC running behind schedule and the Committee is developing proxy methods to improve current estimates
3. Groups to study health benefits from select modeling scenarios and air pollution transport patterns of recent years
4. Emerging issues such as a recovering economy and volatile fuel prices are changing the playing field and will add to the challenge of policy planning.

## Committee Chair:

- **Jeff Underhill** (NHDES)  
[jeffrey.underhill@des.nh.gov](mailto:jeffrey.underhill@des.nh.gov) (603) 271-1102

## Modeling Lead:

- **Mike Ku** (NYDEC)  
[mku@dec.state.ny.us](mailto:mku@dec.state.ny.us) (518) 402-8402

## Emissions Inventory Lead:

- **Susan Wierman** (MARAMA)  
[swierman@marama.org](mailto:swierman@marama.org) (443) 901-1882

## OTC Committee Lead:

- **Joseph Jakuta** (OTC)  
[jjakuta@otcair.org](mailto:jjakuta@otcair.org) (202) 508-3839

## Transport Team lead:

- **Tad Aburn** (MDE)  
[gaburn@mde.state.md.us](mailto:gaburn@mde.state.md.us) (410) 537-3255