

# The Summer of 2012 & Ozone Advance

# Agenda

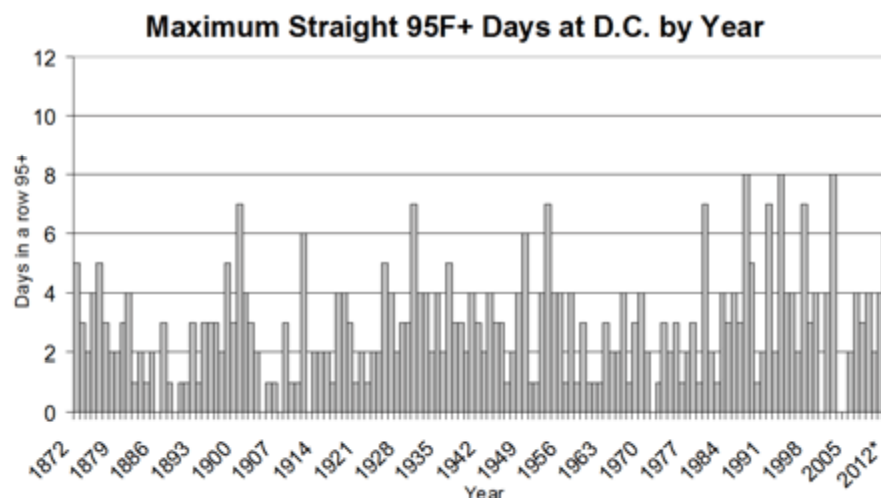
- Look back on the summer of 2012
- Questions

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- What is Ozone Advance?
- What areas are participating?
- What will the Action Plans contain?
- Questions

# The Summer of 2012-Hot & Dry

- 11 day heat wave from 6/28-7/8 was record setting in a number of ways.
- Plagiarized shamelessly from *The Washington Post* Weather Blog (Posted 01:33 PM ET, 7/9/2012, Ian Livingston and Jason Samenow)
- Various stages of draught watch across much of the Commonwealth



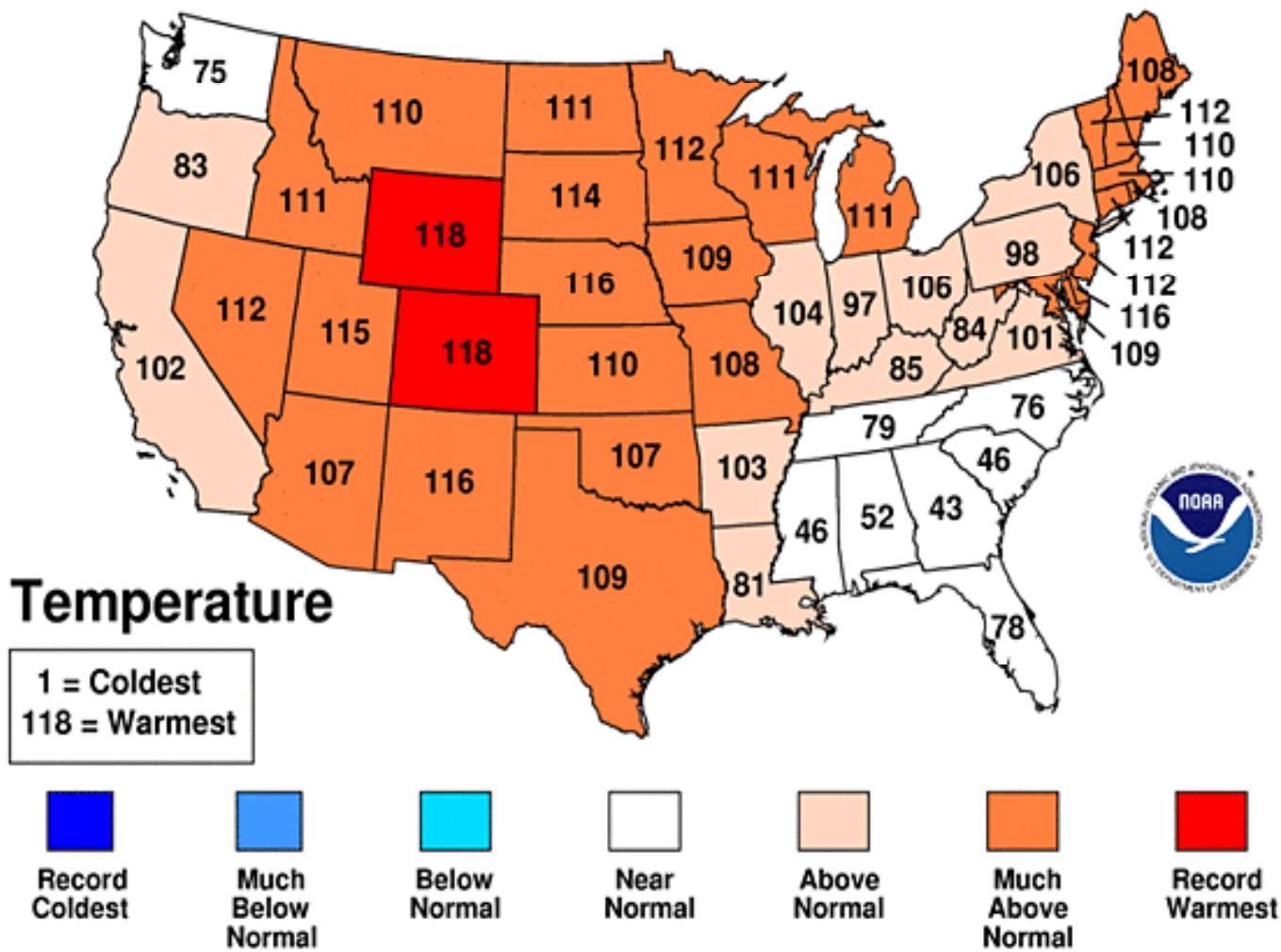
## Top 10 Hottest 11-Day Stretches in D.C.

Year	Dates	Avg Hi	Highest	Days 100+
2012	6/28-7/8	99.5	105	5
1930	7/19-7/29	99	106	6
2011	7/22-8/1	97.9	104	4
1993	7/4-7/14	97.4	100	3
1988	7/7-7/17	97.3	104	4
1980	8/1-8/11	97	100	2
1953	8/25-9/4	96.5	100	2
1988	8/7-8/17	96.3	103	2
1999	7/23-8/2	96.2	101	1
2002	8/10-8/20	96.1	100	1

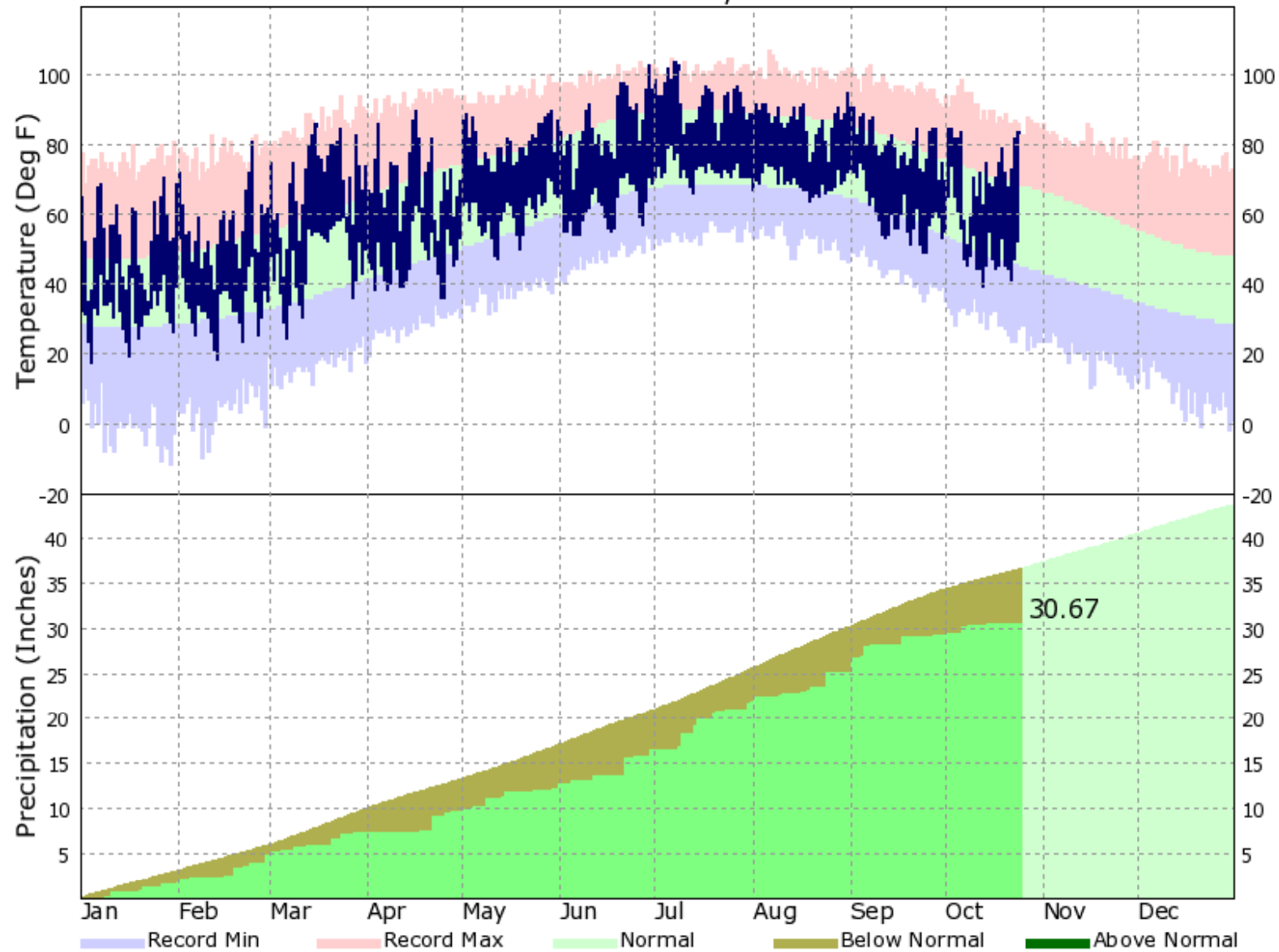
# June-August 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA

Data from  
NOAA -  
courtesy of  
Dan  
Salkovitz

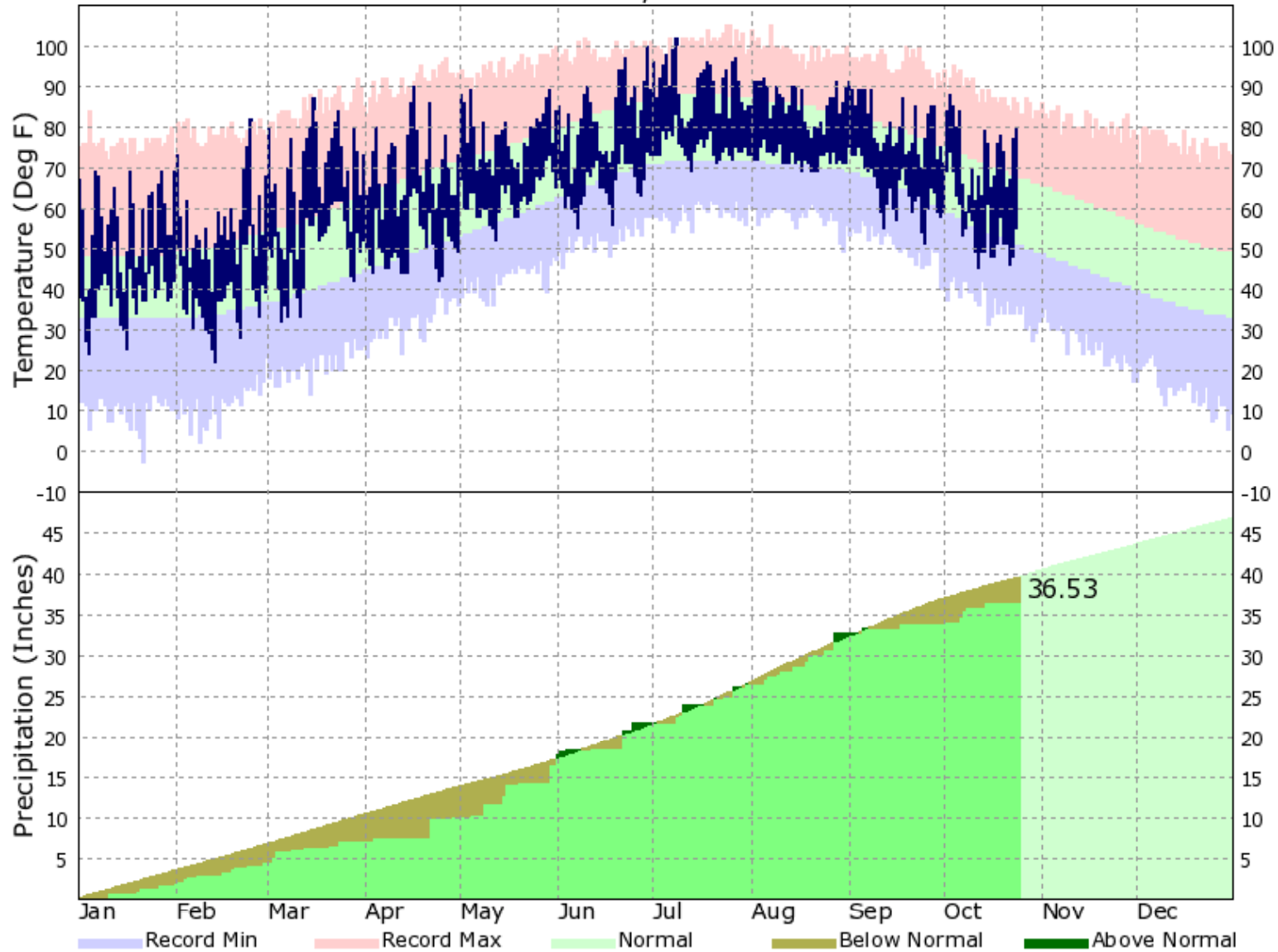


# RICHMOND ASOS, VA - 2012

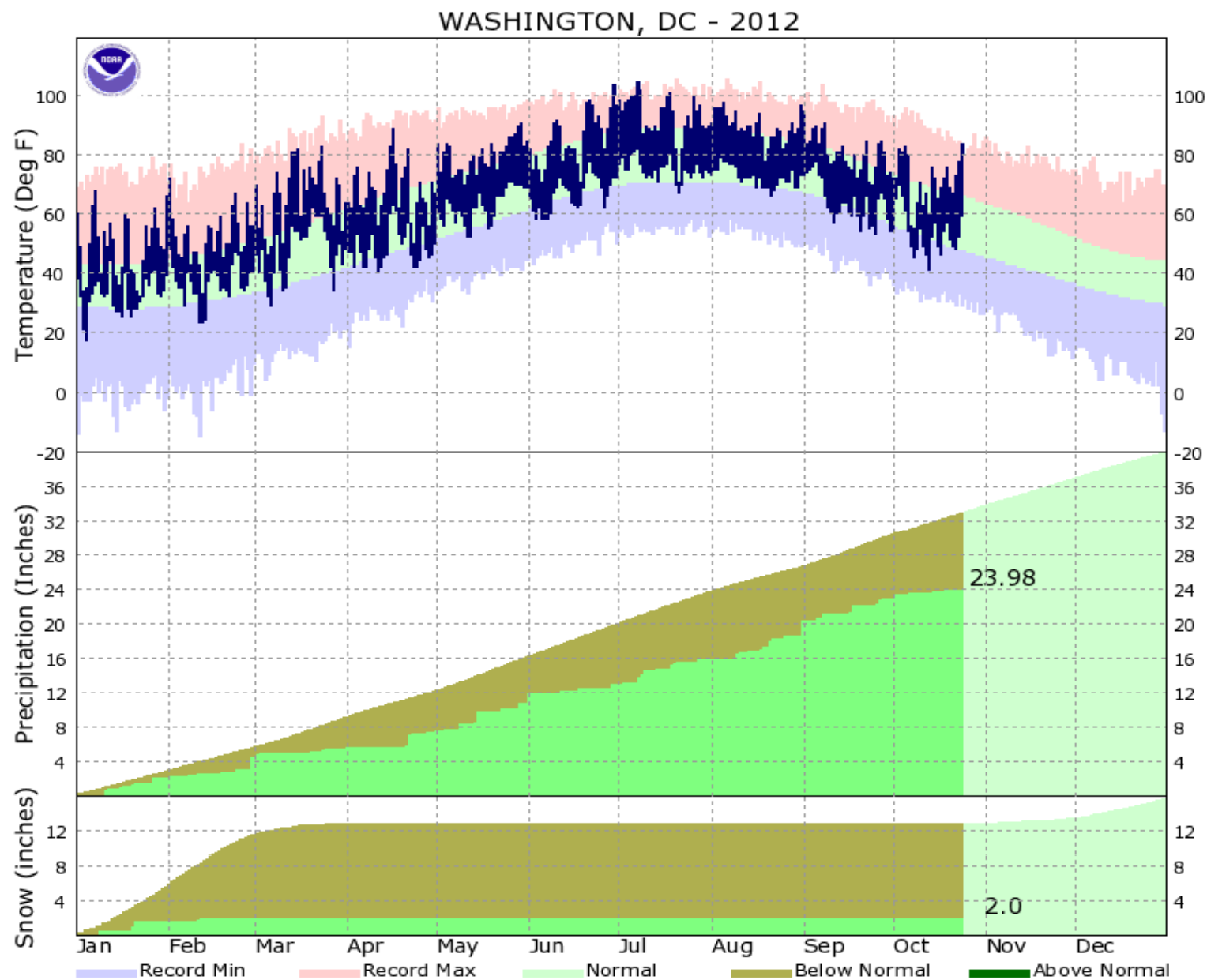


Data from  
 Richmond  
 Interna'l  
 Airport -  
 courtesy of  
 Dan  
 Salkovitz

# NORFOLK, VA - 2012



Data from  
Norfolk  
Internat'l  
Airport -  
courtesy of  
Dan  
Salkovitz



Data from  
National  
Airport -  
courtesy of  
Dan  
Salkovitz

# The Summer of 2012..Air Quality

- Stafford recorded the first exceedence on May 19<sup>th</sup>!
- A couple days of high transport from the Midwest
- 19 of 23 monitors exceeded on 6/29
- Hampton recorded 101 on 6/29

***75 ppb is the current standard!***

Monitor	4 <sup>th</sup> Highest, 2012
Caroline	76 ppb
Stafford	76 ppb
Charles City	76 ppb
Hanover	76 ppb
Henrico	78 ppb
Hampton	74 ppb





# Questions on 2012 Summertime Data?

# What is Ozone Advance?

## ■ Goals:

- ☐ Reduce emissions of ozone precursors so that areas will continue to maintain healthy air quality and comply with the 2008 Ozone NAAQS
- ☐ Make progress towards meeting any future ozone NAAQS

## ■ New EPA program

- ☐ Final guidance published on 4/4/2012
- ☐ Builds off the Early Action Compact and Ozone Flex programs

## ■ Area must currently be in attainment of ozone standards to sign up.

# What is Ozone Advance?

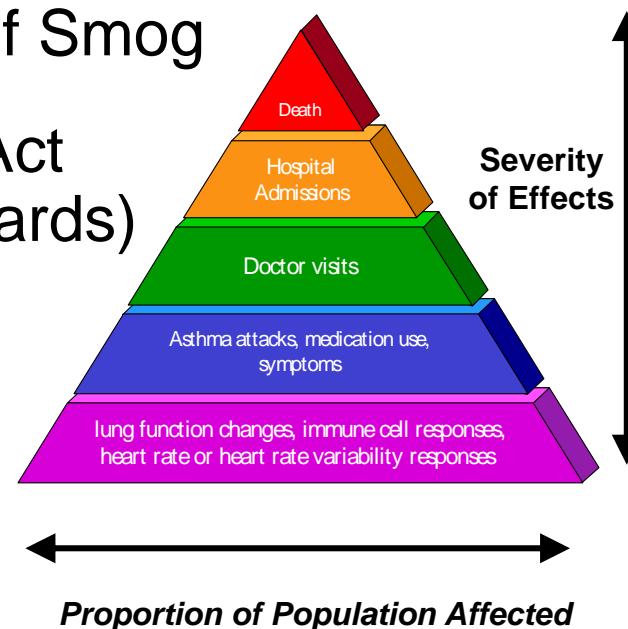
- Voluntary program to encourage emission reductions of ozone precursors
  - Regulatory efforts
  - Non-regulatory efforts
  - Public awareness
- Collaborative Effort
  - State agencies (VDOT, VDRPT, VPA, VDEQ, DMME)
  - Local governments
  - Area Stakeholders (Military bases, Industry, Citizen Groups, Others)
- **Participants may withdraw from program at any time**

# Why Participate? Background

- Formation:  $\text{VOC} + \text{NO}_x + \text{Sunlight} = \text{Ozone}$   
(volatile organic compounds + oxides of nitrogen + sunlight = ozone)

- Mainly a Summertime Pollutant
- Lung Irritant: Primary Component of Smog
- Heavily regulated by the Clean Air Act (National Ambient Air Quality Standards)

- Affected populations:
  - ☐ Children
  - ☐ Elderly
  - ☐ People with lung diseases
  - ☐ Heavy exposure/Outdoor workers



# Why Participate? Background

- Areas have historically experienced problems complying with EPA's ozone standards:
  - ☐ Richmond-Petersburg
  - ☐ Hampton Roads
  - ☐ Fredericksburg
  - ☐ Northern Virginia
  - ☐ Roanoke
- Variety of planning exercises used to bring air quality into compliance
  - ☐ Costly
  - ☐ Time consuming

# Why Participate? More Background

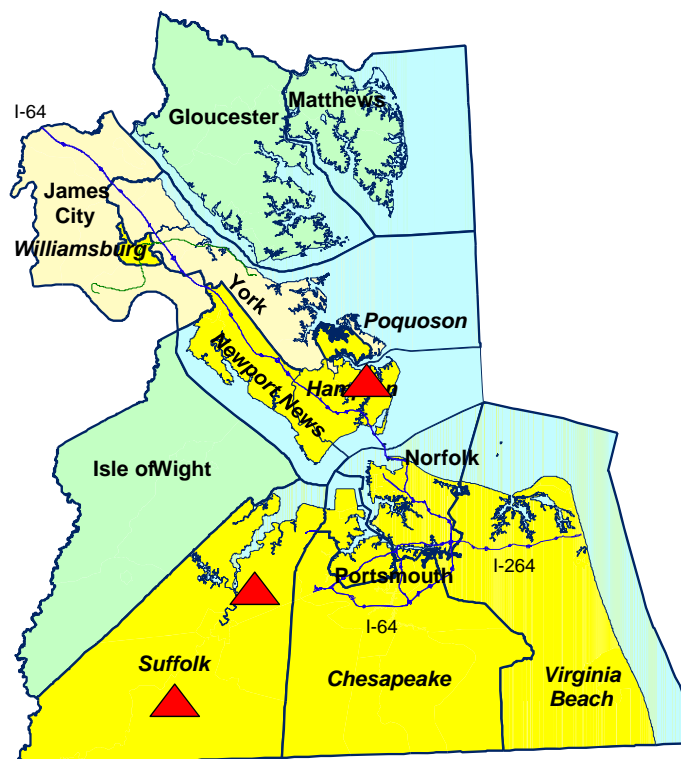
- 2008 standard: 0.075 ppm (75 ppb) over 8-hour average
  - All areas designated attainment for the 2008 ozone NAAQS, except Northern VA
- Action Plans will help areas to:
  - Maintain good air quality,
  - Improve air quality if it degrades
  - Begin process for compliance with new standard (due early 2014)

# Participating Areas: Hampton Roads

## *1997 Ozone NAAQS Maintenance Area*

- Gloucester
- Isle of Wight
- James City
- York
- Chesapeake
- Hampton
- Newport News
- Norfolk
- Poquoson
- Portsmouth
- Suffolk
- Virginia Beach
- Williamsburg

## *Monitoring Locations*

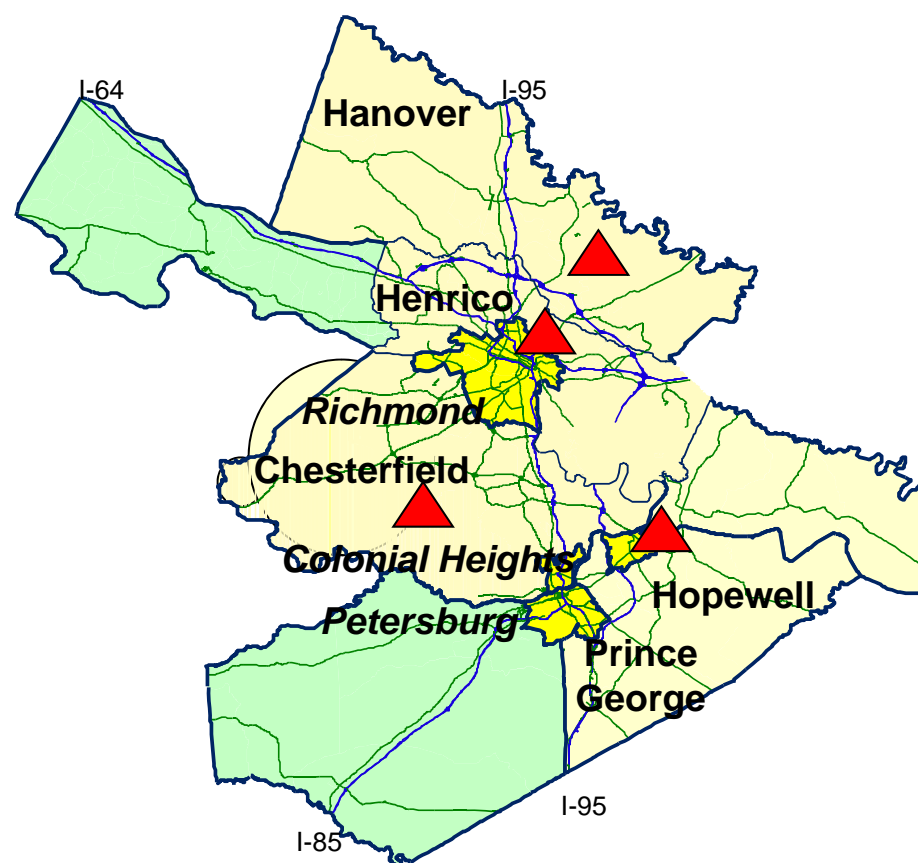


# Participating Areas: Richmond-Petersburg

## *1997 Ozone NAAQS Maintenance Area*

- Chesterfield
- Henrico
- Hanover
- Charles City
- Prince George
- Hopewell
- Colonial Heights
- Petersburg
- Richmond

## *Monitoring Locations*



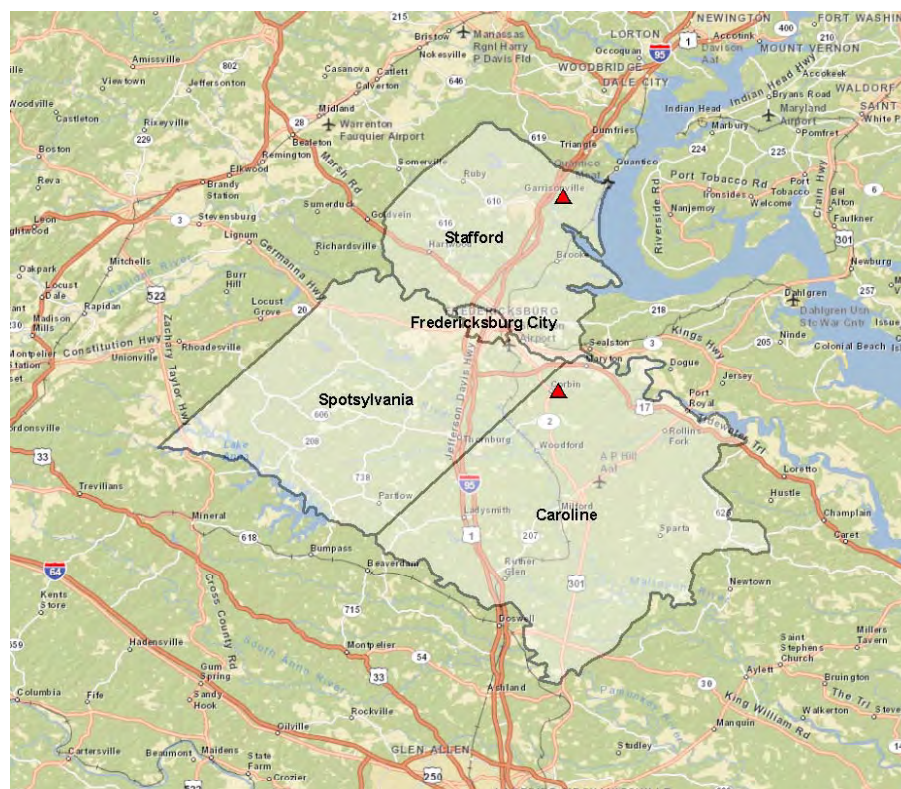


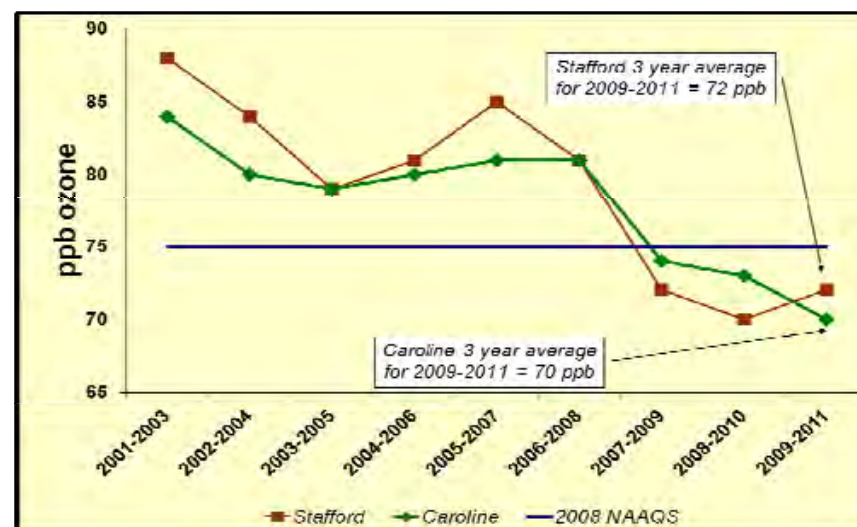
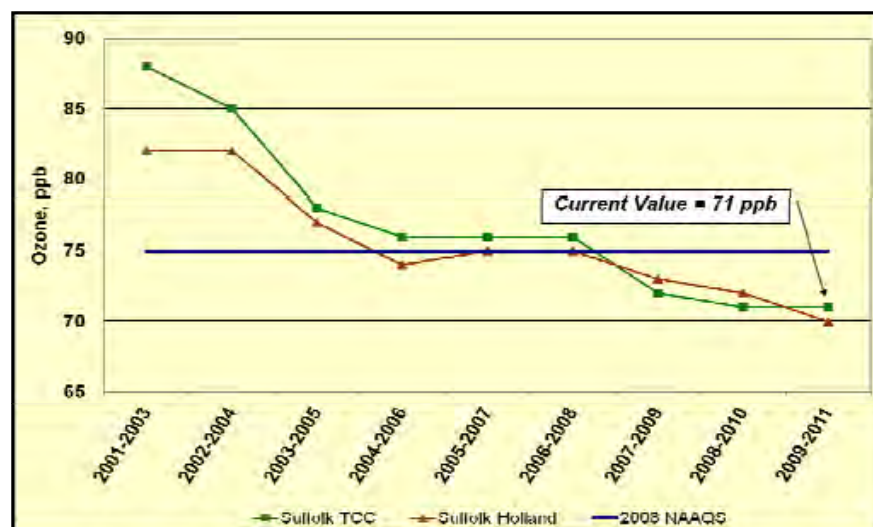
# Participating Areas: Fredericksburg and Caroline

## *1997 Ozone NAAQS Maintenance Area*

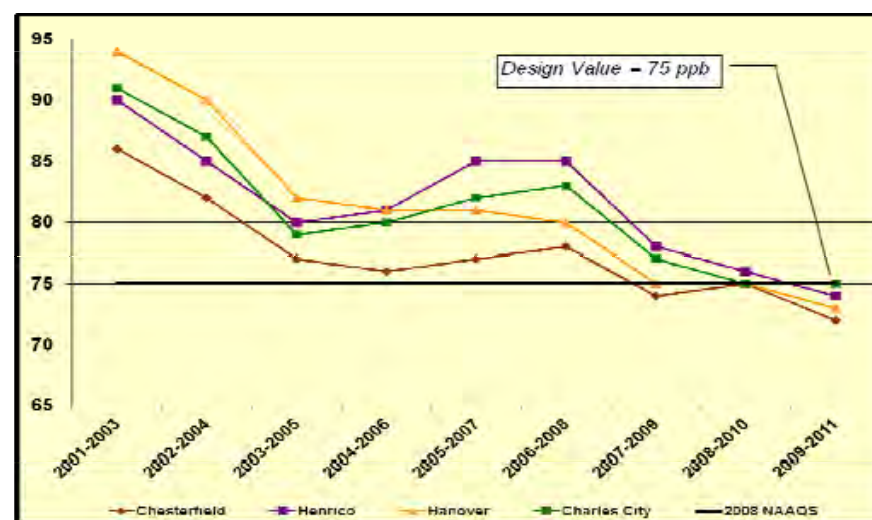
- Fredericksburg
- Spotsylvania
- Stafford

## *Monitoring Locations*





# Why Participate? Ozone 3-Year Averages





# From EPA's Ozone Advance Guidance dated 4-4-12:

*...Should a violation occur, EPA would consider the factors in §107(d)(3)(A) of the Act. These include “air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate.” Where control measures are actively being implemented by program participants, EPA may allow time to determine whether such measures bring the area back into attainment...*

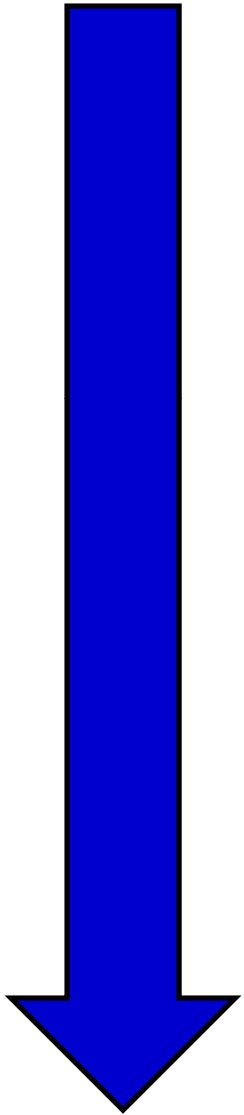
# Why Participate?

- Avoid Nonattainment Designations:
  - Impact on citizens-healthy air quality
  - Economic development, federal facilities/military, transportation
- Ozone Advance Action Plans can:
  - Proactively work towards cleaner air
  - Provide a framework for meeting future standards
  - Allow owners additional consideration for federal DERA grants
  - Allows EPA to provide additional time for areas not complying to improve air quality



## Ozone Advance Timeline

<b>April 5, 2012</b>	Ozone Advance guidance finalized
<b>April 30, 2012</b>	Area designated attainment for the 2008 ozone standard
<b>June 4, 2012</b>	DEQ submitted letter notifying EPA of area's intent to participate in Ozone Advance
<b>Jan-Feb 2013</b>	Ozone Advance Action Plan drafts ready for review
<b>March 2013</b>	Ozone Advance Action Plan public notice period
<b>Apr-May 2013</b>	Final Action Plans sent to EPA
<b>June 2014-2019</b>	Annual Action Plan updates submitted by DEQ to EPA



# Who Should Be Involved?

## ■ State Agencies

- ☐ VDEQ-data analysis, plan drafting, air quality programs
- ☐ VDOT-CMAQ programs and information
- ☐ VDRPT & VPA-Air quality improvement plans
- ☐ DMME-Energy Efficiency programs

## ■ Localities & MPOs

- ☐ Information on current programs, both voluntary and mandatory
- ☐ Consideration of and implementation of any new programs
- ☐ Citizen outreach

## ■ Other Stakeholders

- ☐ Electrical generation industry
- ☐ Industry
- ☐ Military bases/federal facilities
- ☐ Educational facilities
- ☐ Public
- ☐ Anyone willing to help out

# What do the Proposed Action Plans Contain?

- Summary/Intro/Background
  - Geographic area
  - Current air quality data
  - Current emissions estimates
  - Air quality future year modeling estimates
- Description of current and future measures
  - Detail on each measure
  - Stakeholder responsible for measure
  - Timeline for each measure
- Implementation timeline for action plan
- Stakeholder/public participation



# Stakeholders & Programs

## Stakeholders

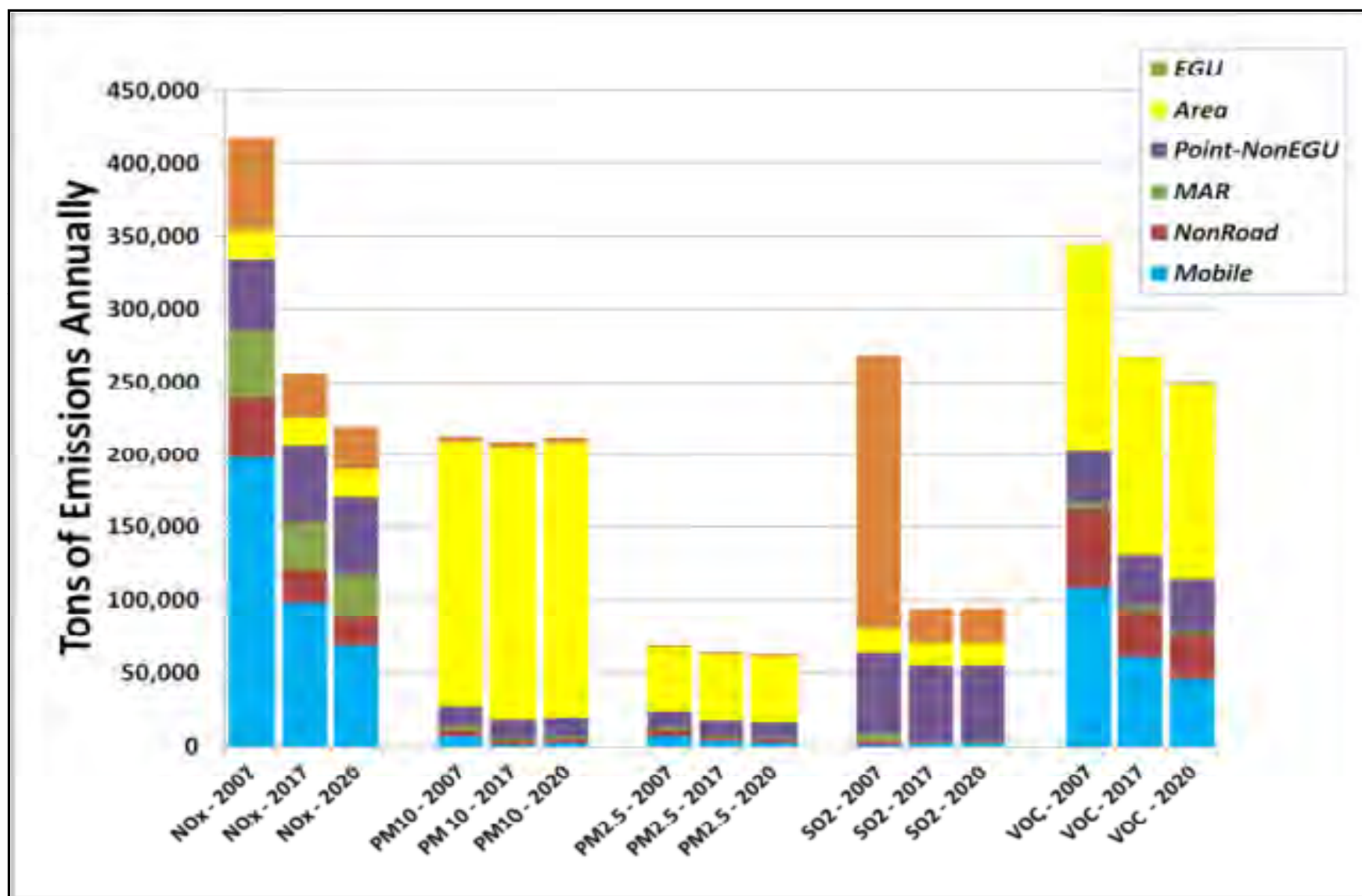
- MPO's, Caroline
- VDEQ, VDOT, VDMME, VPA
- Fort A. P. Hill, Fort Lee
- Dominion
- Virginia Clean Cities
- VCU

## Programs Included

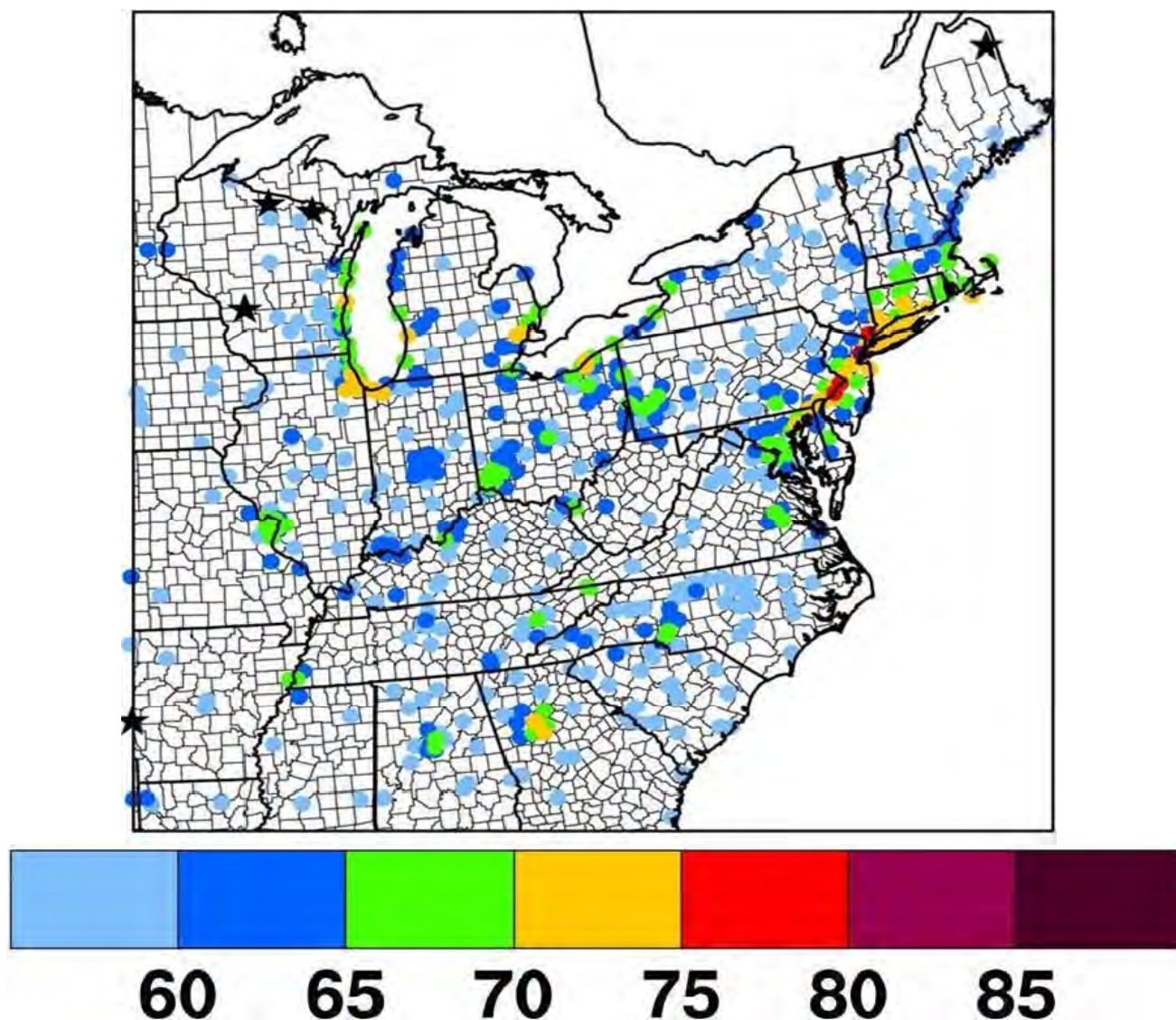
- Travel demand/congestion mitigation
- On-road & non-road retrofit programs
- VA Energy Management/Energize Virginia
- VA Get Ready (electric vehicles); Autogas efforts;
- EGU fuel switches/retirements
- Point source permitted actions
- Sustainability efforts
- VPA: barge efforts, other programs
- Regional reductions



# State Wide Emission Reductions



# AQ Modeling Predictions



- 2020 Estimates
- OTC Screening Modeling
- Shows all VA ozone monitors in compliance by 2020

# Questions on Ozone Advance?