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# EPA's New Ozone Standard

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# EPA's New Ozone NAAQS

- October 1, 2015 - EPA announced revisions to 2008 primary & secondary 8-hour ozone standards (75 parts per billion, ppb)
  - Primary standard: Public health; Sec. standard: Public welfare (Plants & trees)
- Revised Pr./Sec. 8-hour ozone standards = **70 ppb**
- EPA extended ozone monitoring season by 1 month
- EPA updated the Air Quality Index (AQI) for ozone

# Reasons for Revision of Standards

EPA's revision of 2008 ozone standards is based on following key scientific evidence:

- Evidence from a large number of clinical and epidemiological studies – 2008 standard (75 ppb) not adequate to protect public health
- Ozone causes adverse respiratory effects in healthy adults
- Children, people with asthma and other respiratory diseases, and older adults likely to experience more serious effects than healthy people
- People with certain health conditions, such as obesity or diabetes, may be at increased risk of ozone-related health effects
- Recent studies consistently report associations between ozone exposures and mortality from respiratory and cardiovascular causes

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# Benefits & Costs

- **Benefits** (Nationwide, excluding California)
  - \$2.9 to \$5.9 billion annually in 2025
  - Benefits include the value of avoiding asthma attacks, heart attacks, missed school days and premature deaths, among other health effects
- **Costs** (Nationwide, excluding California)
  - \$1.4 billion annually in 2025

# Revised Air Quality Index (AQI) 2015 Ozone NAAQS

AQI Category	Index Values	2008 AQI Breakpoints (ppb, 8-hour average)	2015 AQI Breakpoints (ppb, 8-hour average)
<b>Good</b>	0 - 50	0 - 59	0 - 54
<b>Moderate</b>	51 - 100	60 - 75	55 - 70
<b>Unhealthy for Sensitive Groups</b>	101 – 150	76 - 95	71 - 85
<b>Unhealthy</b>	151 – 200	96 - 115	86 - 105
<b>Very Unhealthy</b>	201 – 300	116 - 374	106 - 200
<b>Hazardous</b>	301 –500	375 to the Significant Harm Level*	201 to the Significant Harm Level*

*\*The Significant Harm Level for ozone is 600 ppb, two-hour average*

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# Changes – Ozone Monitoring

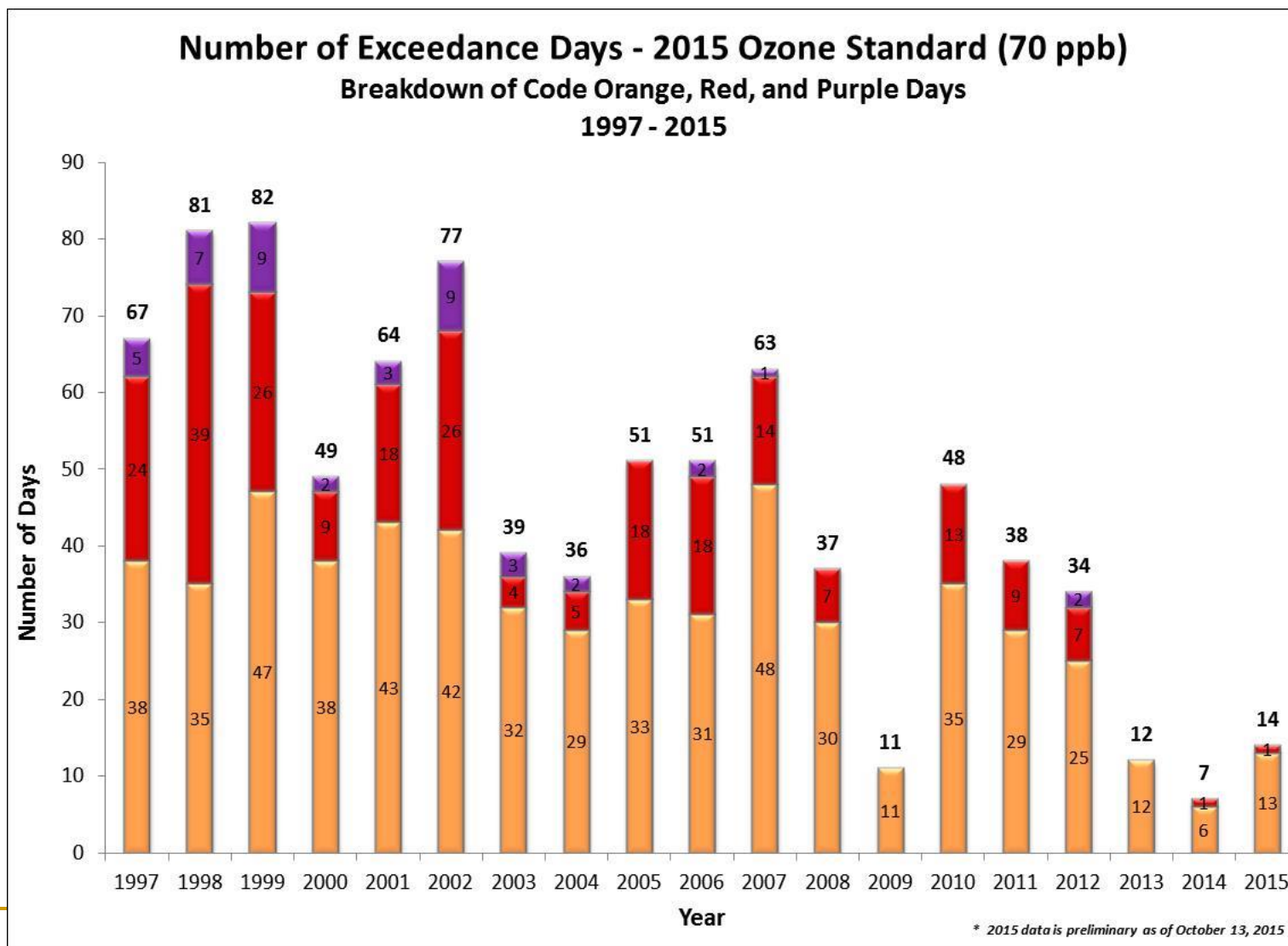
- **Extension in ozone monitoring season**

- Lower threshold for code orange means ozone needs to be monitored in Spring and early Fall months to alert citizens
- EPA extended the ozone monitoring season by one month
- Ozone monitors located at the multi-pollutant NCore monitoring sites would be required to operate year round
- The expanded monitoring season requirements would become effective January 1, 2017
- A new monitoring method is being introduced

# Implementation Schedule

<b>Milestone</b>	<b>2015 Ozone Standard</b>
<b>Final Rule Announced</b>	October 1, 2015
<b>State Designation Recommendations to EPA</b>	October 1, 2016
<b>EPA Response to State Designation Recommendations</b>	June 1, 2017
<b>Final Designations</b>	October 1, 2017 (Likely based on 2014-16 data)
<b>Attainment Demonstration SIPs Due</b>	2020/2021 (for Moderate and above NAA)
<b>Attainment Dates</b>	2020-2037 (depends on level of nonattainment designation) Marginal NAA – October 1, 2020

# Exceedance Trend (2015 Ozone NAAQS)

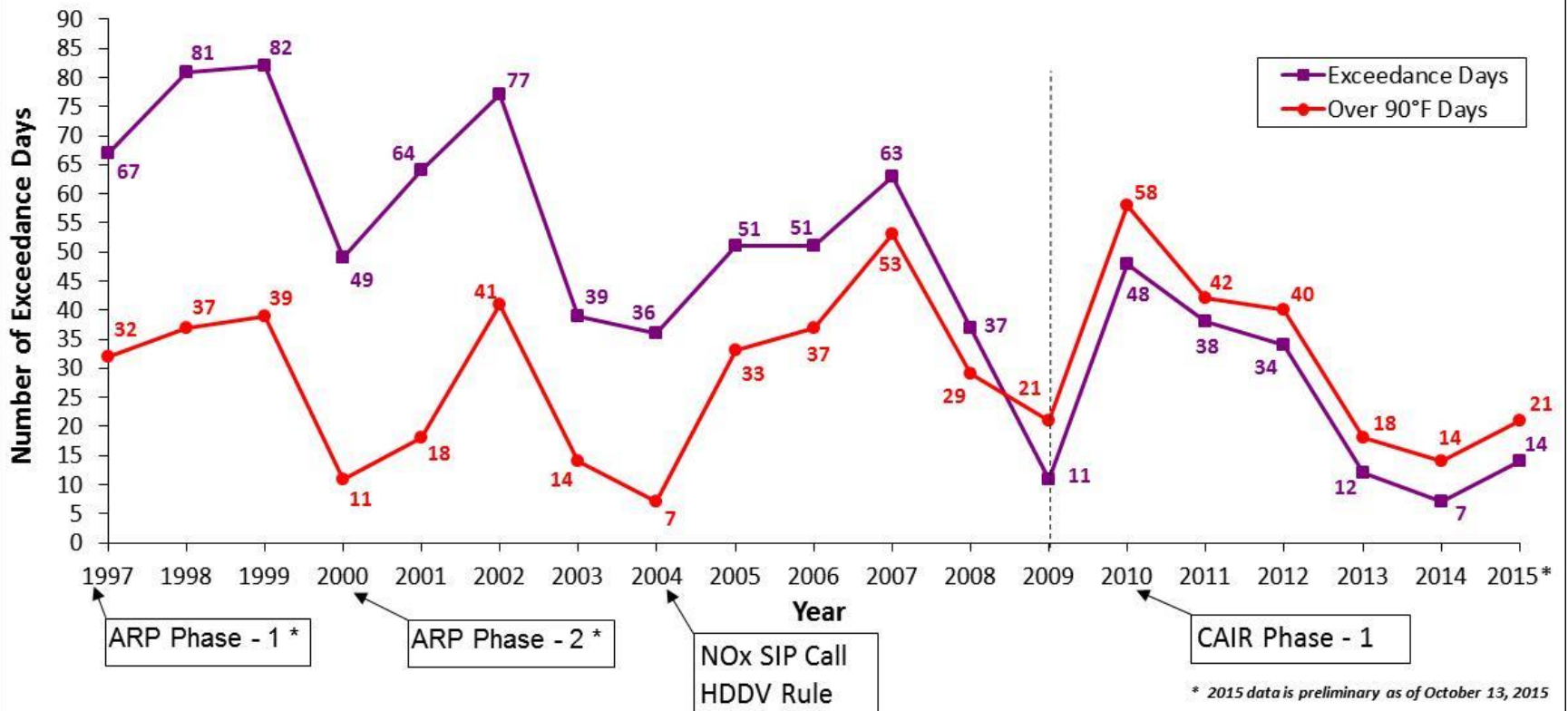




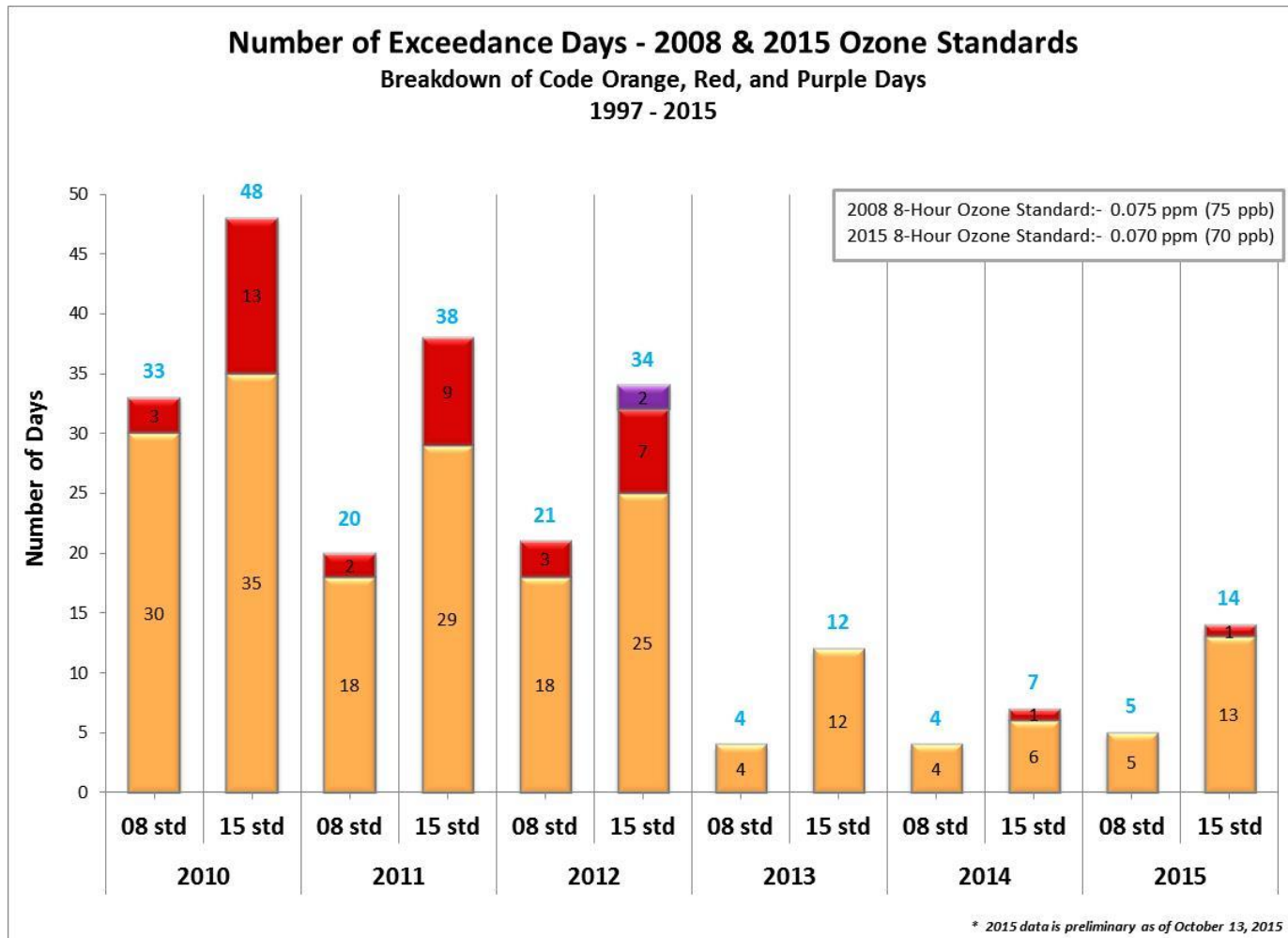
# Trends of 90°F Days and Exceedance Days

## 90°F Days (Dulles) & Ozone Exceedance Days (2015 std)

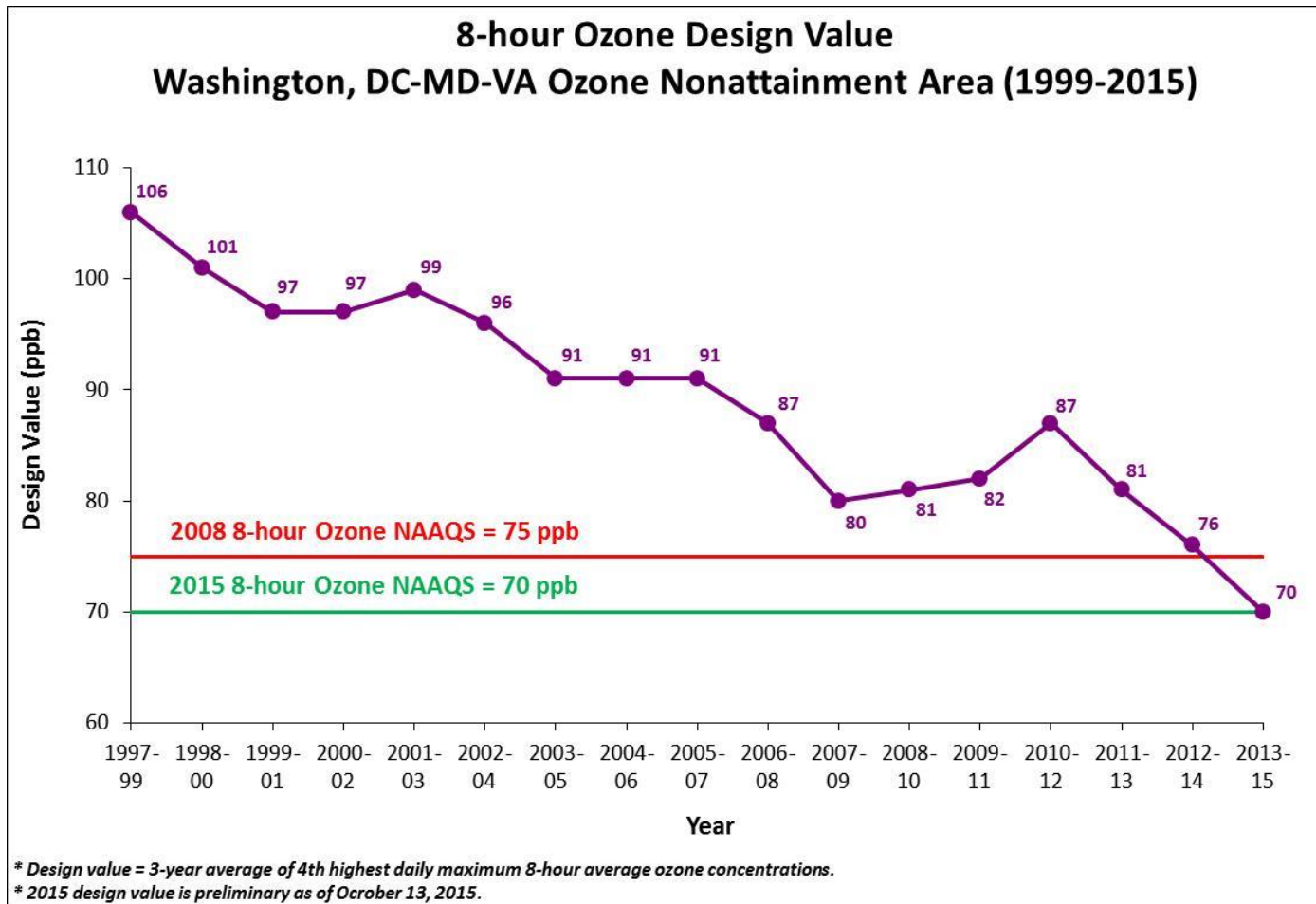
Emissions have been declining over the years resulting in fewer number of exceedance days



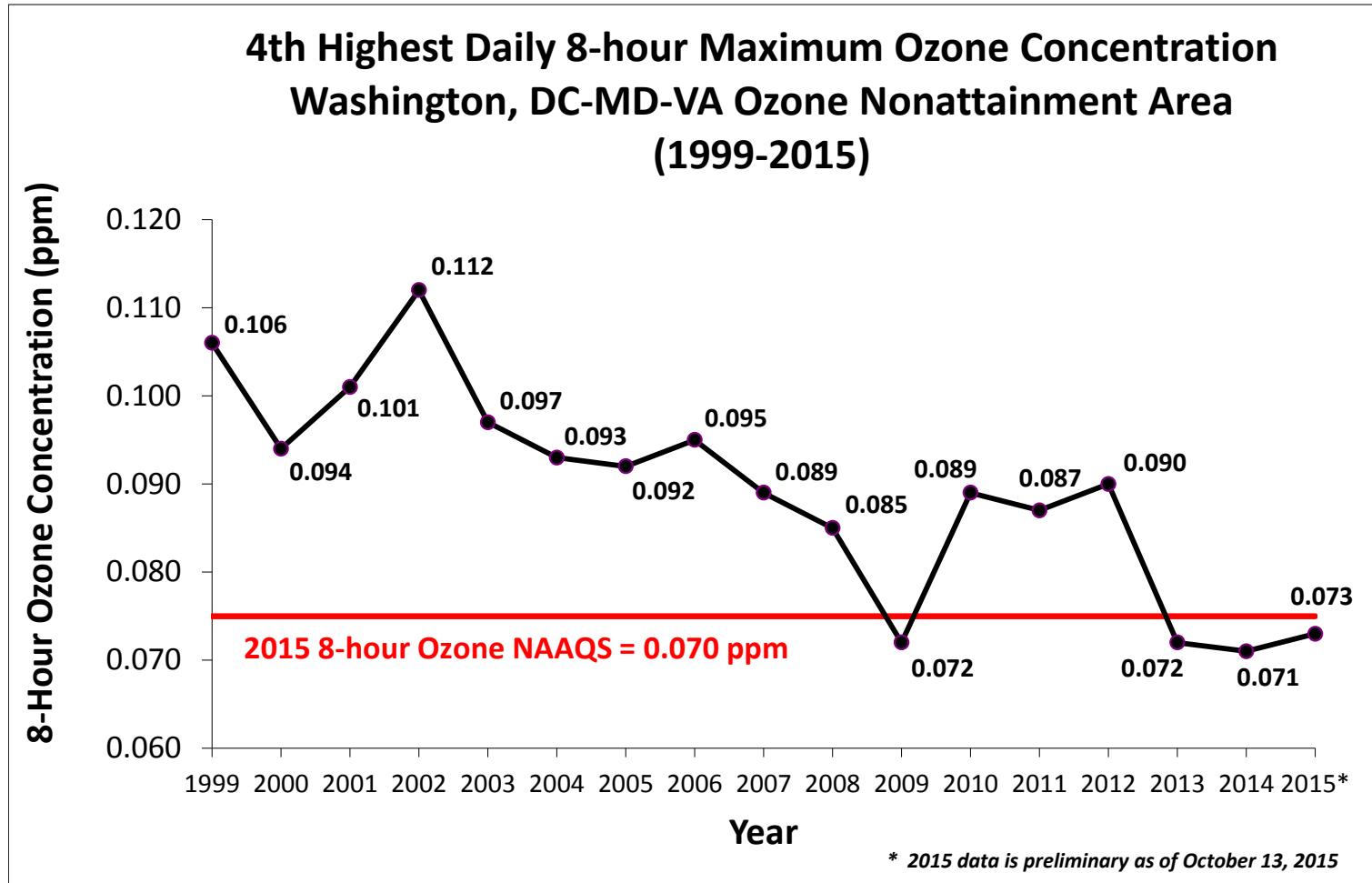
# Exceedances for 2008 & 2015 Ozone Standards



# Trend in Ozone Design Value (Washington Region)



# Trend in Fourth Highest Daily Maximum Ozone Levels (Washington Region)

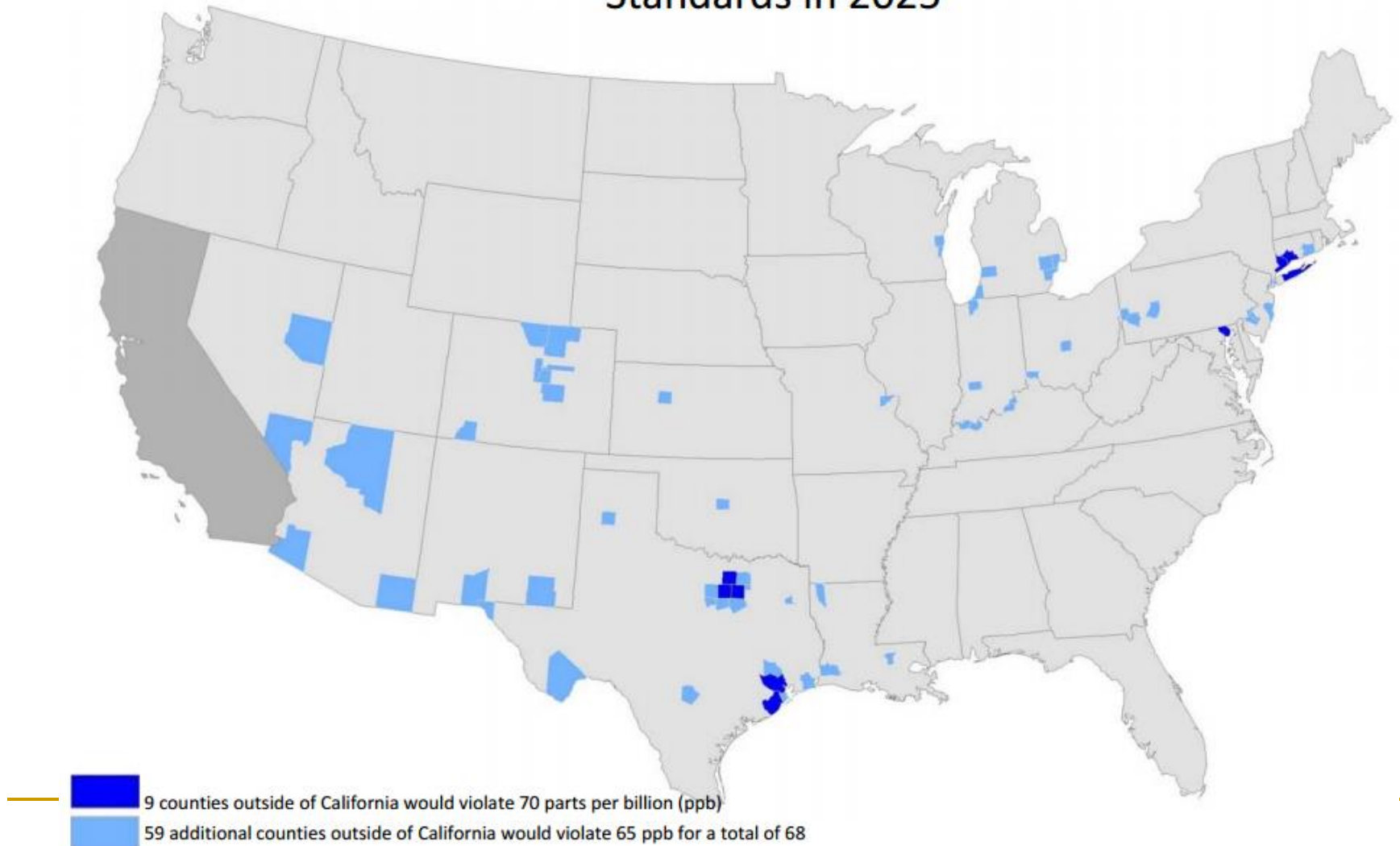


# What Would It Take to Get Designated as Nonattainment for 2015 Ozone NAAQS

<b>MONITOR</b>	<b>4th Highest Daily 8-Hour Max Ozone Conc'n in 2016 (ppm)</b>
Takoma	0.072
McMillian NCore	0.073
Calvert	0.076
S. Maryland	0.078
Frederick	0.080
Rockville	0.077
PG Equestrian	0.075
HU- Beltsville	0.076
Beltsville	0.077
<b>Arlington</b>	<b>0.069</b>
Franconia	0.076
Ashburn	0.079
Long Park	0.084

# Ozone Levels - 2025

EPA Projects Most Counties Would Meet the Proposed Range of Standards in 2025



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# Current control measures to help in attaining standard

- Mercury and Air Toxics Standards
- Requirements to reduce the interstate transport of air pollution
- Regional Haze regulations
- Clean Power Plan
- Tier 3 Vehicle Emissions and Fuels Standards
- Light-Duty Vehicle Tier 2 Rule
- Mobile Source Air Toxics Rule
- Light-Duty & Heavy-Duty Greenhouse Gas/Corporate Average Fuel Efficiency Standards
- Reciprocating Internal Combustion Engines (RICE) Rule
- Industrial/Commercial/Institutional Boilers and Process Heaters Rules