

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

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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)
Good	0 - 50	0 - 59	0 - 54
Moderate	51 - 100	60 - 75	55 - 70
Unhealthy for Sensitive Groups	101 - 150	76 - 95	71 - 85
Unhealthy	151 - 200	96 - 115	86 - 105
Very Unhealthy	201 - 300	116 - 374	106 - 200
Hazardous	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

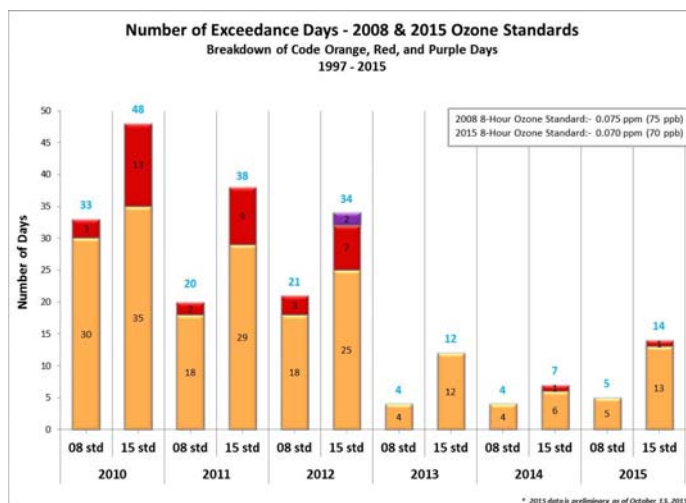
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Implementation Schedule

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

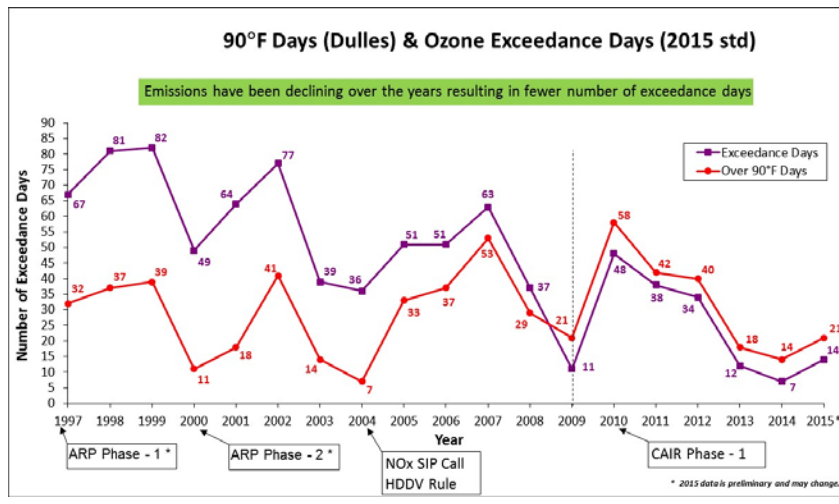
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Exceedances for 2008 & 2015 Ozone Standards



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Trends of 90°F Days and Exceedance Days



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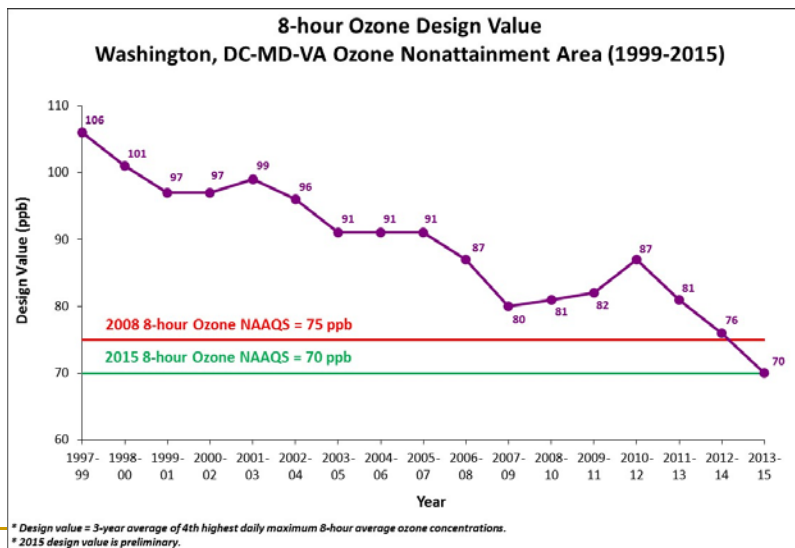
Why Fewer Exceedance Days Now ?

Emission Control Programs

Federal	State	Local
Acid Rain Program (1996/2000)	Vehicle Inspection and Maintenance Programs	Renewable Energy Programs Regional Wind Power Purchase Program Clean Energy Rewards Program Renewable Portfolio Standards
Tier 2 (LD Vehicle) Rule (2004)	MD Healthy Air Act (2009/2012)	Energy Efficiency Programs LED Traffic Signal Retrofit Program Building Energy Efficiency Programs
HD Diesel Vehicle Rule (2004/2007)	VA CSAPR Rule	VRE Idling Reduction
NOx SIP Call (2004)		Low VOC Paint
Clean Air Interstate Rule/CSAPR (2009/2015)	Ozone Transport Commission Rules	Gas Can Replacement

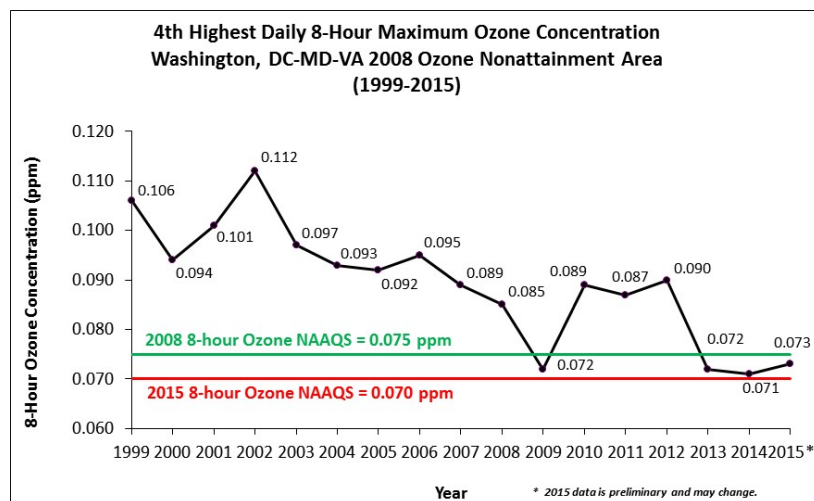
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Trend in Ozone Design Value (Washington Region)



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



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Current control measures to help in attaining 2015 ozone 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

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Redesignation Request & Maintenance Plan (2008 Ozone Standard, 75 ppb)

- Washington region attained the standard based on the most current design value data (70 ppb, 2013-15)
- Washington region mulling over the option to submit a Redesignation Request (and a Maintenance Plan as part of the request) to US EPA
- The request would allow the region to be redesignated to attainment area for the 2008 ozone standard

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Redesignation Request & Maintenance Plan (2008 Ozone Standard, 75 ppb)

- Advantages of 'attainment' redesignation
 - Provides closure to the implementation process for the standard.
 - The region covers all legal requirements such as, anti-backsliding requirements (Clean Air Act Section 110 (a)) related to that standard.
 - The maintenance plan will allow the region to develop revised MOVES2014 based motor vehicle emissions budgets (MVEBs), which will be more stringent than Mobile6.2 based MVEBs currently being used. Current MVEBs were developed for the 1997 ozone attainment SIP, which was submitted to EPA in 2007. A net set of more stringent MVEBs will be even more important in case the implementation of the 2008 ozone NAAQS gets delayed for any reason.

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Preliminary Timeline Redesignation Request & Maintenance Plan

- Development of Draft Emissions Inventory & RR/MP Document
 - July 2016 – February 2017
- Approval of Draft Emissions Inventory & RR/MP Document for Public Comments
 - MWAQC-TAC - April 2017
 - MWAQC – May 2017
- Public Comment Period – June-July 2017
- Approval of Final Document for EPA Submission
 - MWAQC-TAC & MWAQC - September 2017

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