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March 12, 2015

The Honorable Gina McCarthy
U.S. Environmental Protection Agency
EPA Docket Center, Mailcode 28221T
Attention Docket ID No. OAR-2008-0699
1200 Pennsylvania Ave., NW.,
Washington, DC 20460

Re: Comments on Docket Number EPA-HQ-OAR-2008-0699: National Ambient Air Quality Standards for Ozone; Proposed Rule

Dear Administrator McCarthy:

The Central Texas Clean Air Coalition (CAC) appreciates this opportunity to comment on the National Ambient Air Quality Standards (NAAQS) for ozone recently proposed by the U.S. Environmental Protection Agency (EPA). We are submitting comments on the form of the proposed standard, the designation process, interstate and intrastate ozone impacts, and implementation of the proposed standards in nonattainment areas. We believe that our region's experience with voluntary regional ozone planning efforts and local ozone research can provide a unique set of perspectives on these topics. We hope that our comments might encourage EPA to consider alternatives for assessing compliance with the proposed standards and implementing them in ways that would minimize costs and administrative burdens.

The CAC is a committee of elected officials representing local governments in the five-county Austin-Round Rock Metropolitan Statistical Area (MSA) region of Central Texas. The CAC is responsible for the development and implementation of the region's voluntary ozone control plan. These comments represent a consensus of CAC members, but do not necessarily reflect the opinions of the member jurisdictions that make up the CAC.

The CAC requests that EPA consider the following:

1. If EPA lowers the level of the ozone NAAQS to a range of 65-70 ppb, it should consider using a form for assessing compliance that would be less sensitive to fluctuations in background ozone levels, biogenic emissions, and meteorology to achieve greater programmatic stability;
2. The EPA should consider designating areas as "unclassifiable" or deferring designations by a year if their 2014-2016 monitoring data is close to the level of the standard;
3. EPA should fully and expeditiously implement the interstate transport and infrastructure State Implementation Plan (SIP) requirements of the Clean Air Act (CAA) for the proposed NAAQS to address the interstate and intrastate transport of ozone; and

4. EPA should consider adjusting the implementation requirements in newly designated nonattainment areas for the proposed ozone NAAQS to better account for voluntary emission reduction efforts that are already taking place in areas like Central Texas.

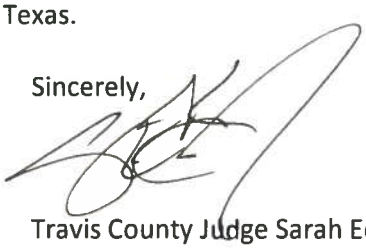
The Capital Area Council of Governments (CAPCOG) has prepared a supplement to this comment letter that provides the policy and legal justifications for each of these comments, along with more detailed descriptions of how EPA might address these comments. CAPCOG is a regional agency representing local governments in Central Texas that provides staff support to the CAC. We encourage EPA's legal and technical staff to review this document in detail in order to understand the basis for the CAC's comments above. They can contact CAPCOG's Air Quality Program Manager Andrew Hoekzema at (512) 916-6043 or ahoekzema@capcog.org if they have additional questions about this analysis.

The CAC recognizes that the EPA's decision on the proposed NAAQS will not in itself impose costs and administrative burdens on states, local governments, or businesses. Rather, it is the CAA's requirements for implementing the standards that will determine the extent of any costs and administrative burdens associated with the proposed ozone NAAQS. We also recognize that the courts have specifically prohibited the EPA from considering implementation costs in setting a NAAQS, although we note that EPA is not prevented from considering costs in implementing the NAAQS. The CAC's most recent voluntary ozone control plan, the Ozone Advance Program (OAP) Action Plan, was adopted in December 2013, and will remain in place through at least the end of 2018. The goals of this plan are to:

1. Stay in attainment of the 2008 eight-hour ozone NAAQS of 75 parts per billion (ppb);
2. Continue reducing the region's 8-hour ozone design value to avoid being designated nonattainment for a new ozone NAAQS;
3. Put the region in the best possible position to bring the area into attainment of an ozone standard expeditiously if it is does violate an ozone standard or gets designated nonattainment;
4. Reduce the exposure of vulnerable populations to air pollution when the region experiences high ozone levels, and
5. Minimize the costs to the region of any potential future nonattainment designation.

These goals reflect a consensus across political and jurisdictional lines that it is better for our community to voluntarily take local actions to achieve the health benefits associated with federal air quality standards than to be forced to address ozone through nonattainment designation. Voluntary efforts like those underway in Central Texas can accelerate the health benefits from attaining a more protective ozone standard beyond what can be achieved through a nonattainment designation, and can help the region, the state, and the federal government avoid the regulatory and economic burdens of a nonattainment designation. As pioneers in these efforts, the CAC is particularly hopeful that EPA will pay careful attention to how its decisions regarding the form of the proposed ozone NAAQS and its implementation will impact areas like Central Texas.

Sincerely,



Travis County Judge Sarah Eckhardt,
Chair, Central Texas Clean Air Coalition

Enclosures

Capital Area Council of Governments

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TECHNICAL SUPPORT DOCUMENT TO THE CENTRAL TEXAS CLEAN AIR COALITION COMMENTS ON THE PROPOSED OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS

MARCH 12, 2015

Preface

This document provides technical support for the comment letter submitted by the Central Texas Clean Air Coalition to the EPA on its proposed ozone National Ambient Air Quality Standards (NAAQS). It includes analysis of statutory language, court cases, prior rulemakings, and technical research that supports the main four points made in the comment letter. This document also provides more detailed explanations of how EPA might be able to incorporate these suggestions into the final ozone NAAQS rulemaking or other future rulemakings. Questions on the data or analysis in this document should be sent to Andrew Hoekzema, Air Quality Program Manager for the Capital Area Council of Governments in Austin, Texas: (512) 916-6043 or ahoekzema@capcog.org.

1 Form of the NAAQS

Comment: If EPA lowers the level of the ozone NAAQS to a range of 65-70 ppb, it should consider assessing compliance based on a statistical form less sensitive to fluctuations background ozone levels and meteorology to achieve greater programmatic stability.

In describing her decision to propose retaining the current form of the ozone standard, the Administrator notes, "*a standard with the current 4th high form coupled with a level lower than 75 ppb…would be expected to increase public health protection relative to the current standard while continuing to provide stability for implementation programs*."[1] The assumptions implicit in this statement are: a) the form provides an adequate level of stability for implementing the current 75 ppb ozone NAAQS, and b) using the same form to assess compliance with a new 65-70 ppb standard will provide a similar level of stability for implementation programs. As this section will show, both of these assumptions are problematic. The current form used for the 2008 ozone NAAQS is already highly sensitive to year-to-year variability, even though it uses the 4th highest concentrations averaged over three years. Moving forward, continued use of this form for a 65-70 ppb standard will likely result in even less stability for implementation programs than the current form provides. The EPA could look to data from both the 1997 and 2008 NAAQS reviews and to the decisions other countries have made in setting standards below 75 ppb to see that it can increase the robustness of the standard by using a 5th or higher concentration as the basis for the form of a revised standard set at a lower level without sacrificing public health protections.

As EPA looks to the future with this new NAAQS and assesses whether retaining the current form is appropriate, it should consider the extent to which compliance with a NAAQS set at levels lower than 75 ppb would be increasingly influenced by factors outside of the control of the State Implementation Plan (SIP) process and other policy tools the federal government has to address ozone precursor emissions. EPA's recent modeling for addressing interstate transport for the 2008 ozone NAAQS shows that by 2018, 57% of the peak ozone levels in Central Texas will be attributable to factors like biogenic emissions, wildfires, ocean-going marine vessels, off-shore oil platforms in the federal zone, emissions from Canada and Mexico, and emissions from other parts of the world. For all areas modeled to have 2018 design values above 65 ppb, these sources contribute about 33 ppb to peak ozone levels, or about 50% of the level needed to be in compliance with the NAAQS. As U.S. anthropogenic emissions decrease, thereby reducing their contributions to peak ozone levels, the role of factors beyond the control of the EPA and the states, including meteorology, biogenic emissions, and long-range ozone transport from outside of the country will increase, and therefore variability of these factors will play a proportionately larger role in an area's attainment status year-to-year.

Moreover, as the climate changes and regions of the country experience more significant changes in meteorology year-to-year, the 4th highest daily maximum 8-hour ozone concentration for a given year used in the current form will be more and more influenced by variations in meteorology, rather than levels of anthropogenic emissions. EPA has directly spoken to this issue in its endangerment finding for greenhouse gases, stating, "It is also important to note that it may not be possible for States and Tribes to plan accurately for the impacts of climate change in developing control strategies for nonattainment areas. As noted in the [Technical Support Document] and EPA's 2009 Interim Assessment Report (IA), climate change is projected to lead to an increase in the variability of weather, and this may increase peak pollution events including increases in ozone exceedances…Inability to predict the frequency and magnitude of such events could lead to an underestimation of the controls needed to bring areas into

[1] 79 FR 75295

attainment."[2] If projections of increased variability in year-to-year ozone concentrations due to climate change are enough of a concern to EPA to cite it in its endangerment finding, then that same variability should also cause EPA to consider whether more robust metrics of a region's ozone levels would be more appropriate moving forward.

EPA's 1997 ozone NAAQS review was the last time that EPA modified the form of the standard. In its proposal for the NAAQS, EPA indicated that for a standard using an 8-hour averaging time, as opposed to the 1-hour averaging time used for the 1979 ozone NAAQS, a level of 0.09 ppm would represent a continuation of the same level of protection.

By changing the form to use the 5th-or higher number of peak ozone concentrations for assessing compliance with the proposed NAAQS, EPA can still achieve health benefits from lowering the level of the standard without sacrificing programmatic stability resulting from the increased influence of variations in these other factors on an area's attainment status.

While EPA has not conducted any new analysis on how changing the rank the daily maximum 8-hour ozone averages used in the form from four to another number, there are some alternatives EPA could analyze prior to the finalization of the standard to assess whether they would be appropriate:

- Using the 5th highest maximum 8-hour daily maximum ozone concentration averaged over 3 years. Data from the 1997 and 2008 ozone NAAQS reviews could be used to analyze the relative impact of changing the level of the standard and the number of daily 8-hour ozone maxima);
- Using the 6th highest maximum 8-hour daily maximum ozone concentration averaged over 3 years. While the 4th highest value corresponds with the 99th percentile of ozone levels over the course of a year, the 6th highest value would correspond to the 98th percentile;
- Using the 11th highest maximum 8-hour daily maximum ozone concentration averaged over 3 years. This value would correspond to the 97th percentile, and would be similar to the number of exceedances allowed under the United Kingdom's national air quality objective (10 per year);
- Using the 26th highest maximum 8-hour daily maximum ozone concentration averaged over 3 years. This form would be similar to the European Union's 60 ppb standard, which allows for an average of 25 exceedances per year, averaged over 3 years; or
- Retaining the current 75 ppb standard, while adding a 65-70 ppb that uses a different number of daily 8-hour ozone maxima. This would help retain controls on exposure to levels above 80 ppb with an adequate margin of safety, while adding a standard set at a lower level but allowing more exceedances to control exposure to ozone levels between 70-80 ppb.

1.1 A Standard Set at a Lower Level Could Improve Health Protections Even if the Form Allowed More Exceedances

While EPA's analysis that lowering the level of the NAAQS while retaining the same averaging time and form would be expected to increase public health protection relative to a 75 ppb standard, it is also true that lowering the level of the NAAQS while changing the form to use the 5th highest or lower rank of daily maximum ozone concentrations should also be able to increase public health protection relative to a 75 ppb standard. EPA's charge in setting the primary NAAQS under Section 109 of the Clean Air Act (CAA) is to set standards that are "requisite to protect public health" while "allowing for an adequate margin of safety." The term "requisite" in the CAA indicates that the proposed ozone standard should

[2] 74 FR 66530, 2nd column. December 15, 2009. http://www.epa.gov/climatechange/Downloads/endangerment/Federal_Register-EPA-HQ-OAR-2009-0171-Dec.15-09.pdf

protect public health with an adequate margin of safety, but should not be more or less stringent than is necessary to achieve that goal. Health data presented as part of the 1997 and 2008 ozone NAAQS reviews, shown below, demonstrate that that vast majority of health benefits EPA could expect to achieve through this NAAQS review would come from lowering the level of the standard, and that the expected protections would not change much by allowing for an extra exceedance day or more.

1.1.1 1997 Ozone NAAQS Review

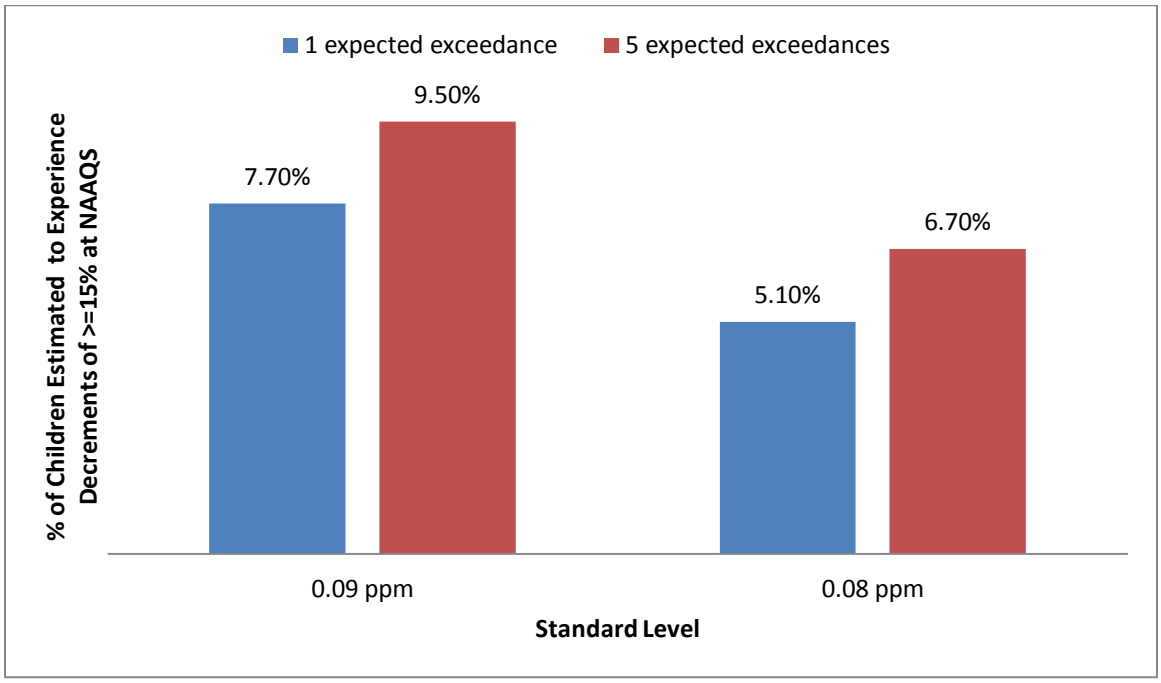
In the discussion of the form of the standard selected for the 1997 ozone NAAQS, the preamble to the final NAAQS rulemaking states, "In considering exposure and risk estimates available at the time of proposal for 1- and 5-expected-exceedance forms, the Administrator noted that the level of the standard is a more dominant factor in determining the degree of exposure and risk reductions achieved, with the form being associated with smaller differences in risk estimates within a continuum of risk."[3] This statement is likely as true today for the current NAAQS review as it was 18 years ago for the 1997 NAAQS review.

In the 1997 ozone NAAQS review, EPA presented health data in the NAAQS proposal that showed that lowering the level of the NAAQS from an 8-hour average of 0.09 ppm, which represented a continuation of the level of protection for the 1979 1-hour standard, to the level of 0.08 ppm, which was finalized as the standard, achieved significant health benefits, even if the number of expected exceedances for a 0.08 ppm was five times higher. As the figure below shows, lowering the level of the NAAQS from 0.09 ppm to 0.08 ppm would have increased health protections even if the 0.09 ppm only allowed one exceedance (a 2nd-highest concentration-based form) and the 0.08 ppm standard (a 6th-highest concentration-based form).[4]

[3] 62 FR 38869, columns 1 and 2.

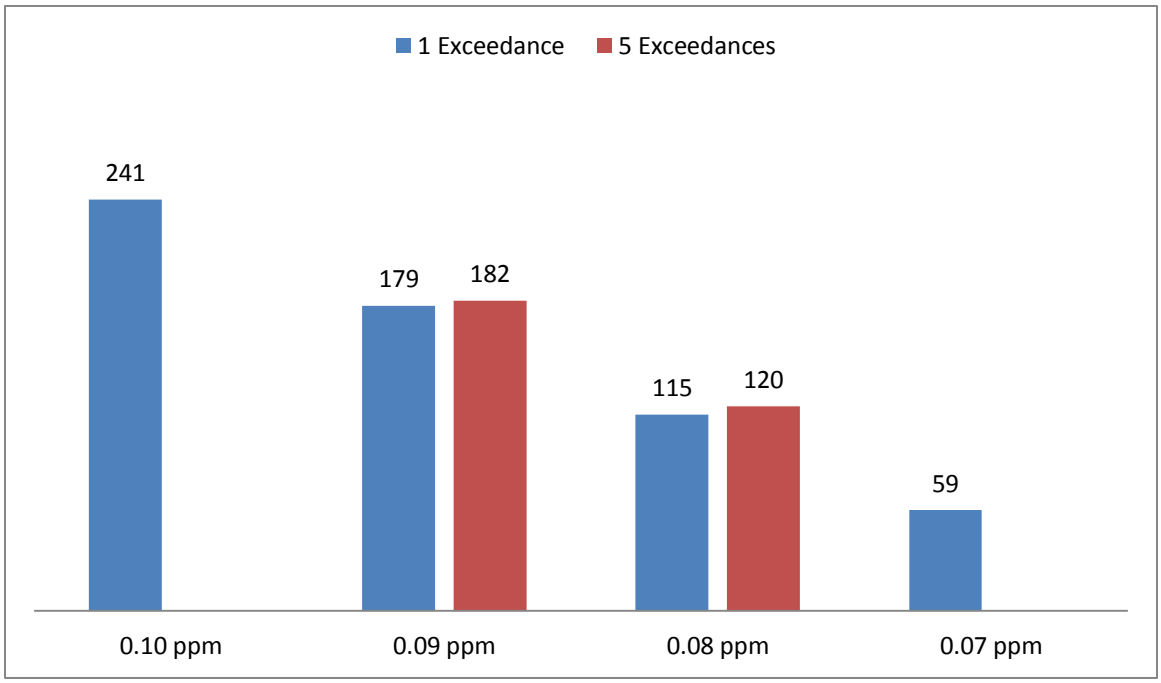
[4] 61 FR 65725. "Table 1 – Percent of Outdoor Children Estimated to Experience Various Health Effects 1 or More Times Per Year Associated With 8- and 1-Hour Ozone Exposures Upon Attaining Alternative Standards." December 13, 1996. http://www.epa.gov/ttn/naaqs/standards/ozone/fr/19961213.pdf

Figure 1: 1997 Ozone NAAQS Review Data on Percent (%) of Children Estimated to Experience Pulmonary Function Decrements of 15% or More Associated with 8-hour Exposures at Alternative Standards



A similar picture emerges when looking at other health data presented in the 1997 review. The figure below shows a comparison of the annual excess hospital admissions of asthmatics at a monitor in New York City based on various combinations of forms and levels of the standard. As the figure below shows, the value of the n^{th} highest day may make very little difference in the health outcomes compared to changing the level of the standard. Moving from a standard at a level of 0.09 ppm to a level of 0.08 ppm, both based on the single highest daily maximum 8-hour ozone concentration, achieved a 36% decrease in excess hospital admissions by asthmatics. However, changing a 0.09 ppm, 1-exceedance standard to a 0.08 ppm, 5-exceedance standard would still have achieved a 33% reduction in excess hospital admissions in this analysis.

Figure 2: Excess Hospital Admissions at Different Levels and Forms of NAAQS, 1997 NAAQS Review



While in the preamble for the current ozone NAAQS proposal, the Administrator cites the 1997 ozone NAAQS review's decision regarding the form of the standard, she did not note that the form that was finalized, using the 4th highest concentration, was different from the form that was proposed: "the Administrator proposes to express an 8-hour primary standard of 0.08 ppm as the 3-year average of the annual ***third-highest*** maximum 8-hour average O_3 concentration."[5] (emphasis added) This precedent provides EPA with a way for it to consider changing the form of the standard from what it has proposed while staying in compliance with administrative procedure requirements. It also shows that the selection of the appropriate number of exceedances to allow while remaining in compliance with the NAAQS for a concentration-based form is not necessarily self-evident, and that EPA can consider and has previously considered factors that would suggest a different number of exceedance days between proposal and finalization.

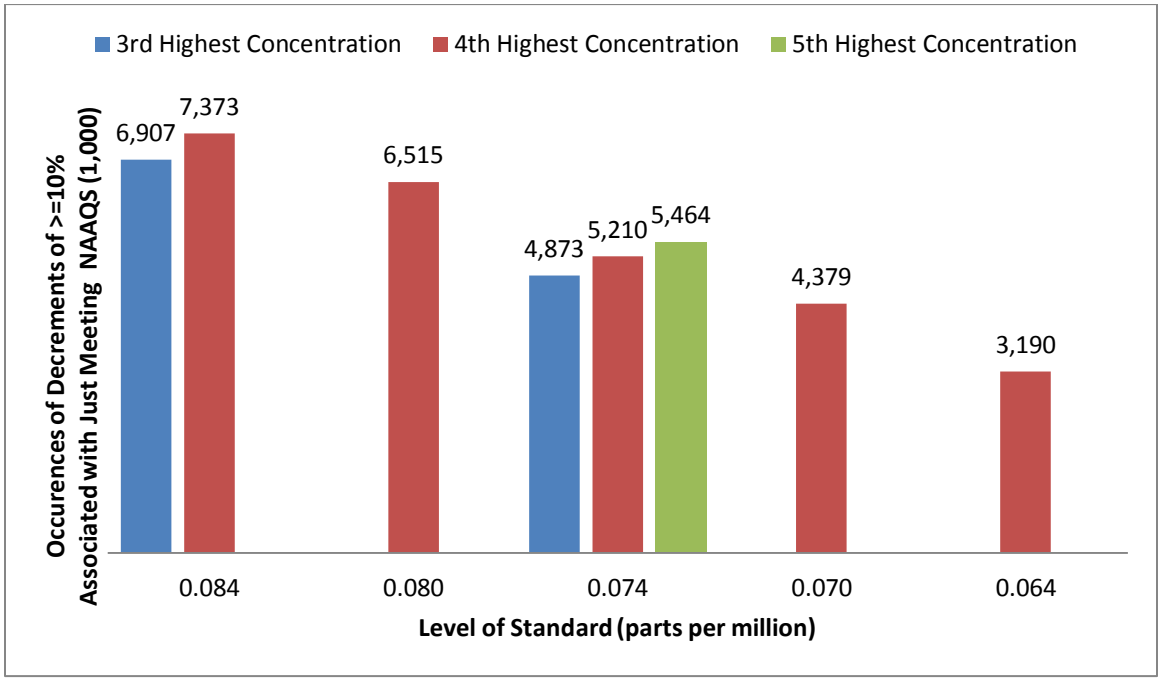
1.1.2 2008 Ozone NAAQS Review

Just as the 1997 review included comparisons of lowering the level of the standard while changing the form, so too did the 2008 NAAQS review. The 2008 Ozone NAAQS review included health data for ozone exposure in areas modeled to be just attaining the 1997 standard and standards with the same form at 0.080 ppm, 0.074 ppm, 0.070 ppm, and 0.064 ppm. The review also included data on exposure for standards using alternative forms, including a 0.084 ppm standard using the 3rd highest concentration, and 0.074 ppm standards using the 3rd-highest and 5th-highest concentrations. These data showed a pattern similar to the data presented in the 1997 Ozone NAAQS review, demonstrating that the level of the standard is a more dominant factor in the health protections associated with an ozone NAAQS than the allowed number of exceedances, and that EPA can achieve improvements in health from lowering the level of the NAAQS while also allowing for extra exceedances.

[5] 61 FR 65731.

Data presented in the *Ozone Health Risk Assessment for Selected Urban Areas* document used in the 2008 Ozone NAAQS reviews presents the detailed city-by-city exposure data modeled by just attaining an 0.08 ppm standard using the 3rd-highest and 4th-highest concentrations, and by just attaining a 0.074 ppm standard using the 3rd-highest, 4th-highest, and 5th-highest concentrations.[6] The figure below shows one example of the data on lung decrements greater than or equal to 10% from Table 3-12 in the *Ozone Health Risk Assessment for Selected Urban Areas*.

Figure 3: 2008 Ozone NAAQS Review Data on Number of Occurrence of Lung Function Decrements of >= 10% Associated with O3 Concentrations that Just Meet Alternative Standards (1,000s)



As the figure shows, EPA could have achieved nearly the same amount of health protection by moving from a 0.08 ppm, 4th-high standard (the 1997 standard) to a 0.074 ppm, 5th high standard as it would to a 0.074 ppm, 3rd-high standard. A 2008 standard set at 74 ppb using the 5th highest concentration would have achieved a 26% reduction in this modeled health effect compared to a 29% reduction using the 4th highest. In fact, these health impacts would have still been reduced by 21% if a 74 ppb standard using the 5th highest concentration replaced an 84 ppb standard using the 3rd highest concentration. Moreover, a reduction in the level of the standard from 0.074 ppm to 0.070 ppm and 0.064 ppm achieved reductions significantly beyond what changing the form of the standard at 0.074 ppm would have achieved.

The table below shows the relative impact of changing the form of the standard at 0.084 ppm and 0.074 ppm, using the data in the figure above. Data on other exposure metrics, including forced expiratory volume (FEV) decrements of >= 15% and >=20% show similar results.

[6] Ozone Health Risk Assessment for Selected Urban Areas. EPA 452/R-07-009. July 2007. http://www.epa.gov/ttn/naaqs/standards/ozone/data/ozone_ra_final_tsd_7-2007.pdf

Table 1: Comparison of Health Impacts from Just Attaining Alternative Ozone NAAQS for 2008 Review

Comparison	% Difference in FEV Decrements >=10%
0.084 ppm standard, 4th highest concentration to 0.084 ppm standard, 3rd highest concentration	7%
0.074 ppm standard, 4th highest concentration to 0.074 ppm standard, 3rd highest concentration	7%
0.074 ppm standard, 5th highest concentration to 0.074 ppm standard, 4th highest concentration	5%

Given the statistically similar effect of changing from using the 3rd highest to 4th highest concentration for an 84 ppb and a 74 ppb standard, EPA could apply the ratios of the differences in health effects from changing the form of the standard to the data presented in the *Health and Risk Exposure Assessment* for the 2015 standard. This would enable EPA to evaluate alternative forms that allow additional exceedance days if EPA does lower the level of the standard to 65-70 ppb.

1.1.3 Current Review Lacks Analysis Alternative Forms

Compared to both prior NAAQS reviews of the primary standard and even the current review of the secondary standard, the current proposal for the primary standard lacks any significant analysis of alternatives to the current form of the standard. In prior NAAQS reviews, EPA has recognized that there is nothing uniquely protective about using the 4th highest daily maximum 8-hour ozone concentration as opposed to using the 2nd, 3rd, 5th, or 6th highest values. As the Administrator stated in the 2008 ozone NAAQS review, there is not a clear health-based threshold for selecting a particular nth-highest daily maximum form of the standard.

The focus of the current NAAQS review for the primary standard appears to have focused entirely on determining the appropriate level, without considering how changes in the level of the standard would impact the other goal that has been repeatedly identified by EPA and CASAC in the past in determining an appropriate form: "programmatic stability." While CASAC devoted several pages on the appropriate level of the primary standard and on the appropriate form of the secondary standard, it only gave two sentences to reviewing whether the form of the primary standard remained appropriate.

CASAC's two sentences devoted to the form of the primary standard consist of the following: "Regarding the form of the standard, the CASAC concurs that the ozone standard should be based on the fourth highest, daily maximum 8-hour average value (averaged over three years). This provides health protection while allowing for atypical meteorological conditions that can lead to abnormally high ambient ozone concentrations which, in turn, provides programmatic stability."[7] This assertion is not supported by any new analysis that would allow for independent evaluation. There is nothing in the Policy Assessment or the CASAC review that shows why a form that allows an average of three exceedances of the level of the standard per year, rather than two or four or five, is "requisite" for the protection of human health with an adequate margin of safety. For example, there are no statistical analyses showing the extent to which meeting a standard of 70 ppb or 65 ppb would specifically protect

[7] Letter from the Clean Air Scientific Advisory Committee to EPA Administrator Gina McCarthy. *Subject: CASAC Review of the EPA's Second Draft Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards*. EPA-CASAC-14-004. June 26, 2014. http://yosemite.epa.gov/sab/sabproduct.nsf/5EFA320CCAD326E885257D030071531C/$File/EPA-CASAC-14-004+unsigned.pdf

against ozone levels above 72 ppb – the level EPA cites as the lowest with direct observations showing health impacts on health adults – given various numbers of allowable exceedances.

1.1.4 Health Considerations and Exposure in Current NAAQS Review Can be Compared to Data from Prior NAAQS Reviews

The key question for EPA regarding the form of the standard is the following: is the 4th-highest form that has been in use since 1997 "requisite" to achieve the health benefits EPA describes in its proposal that can be achieved from lowering the level of the standard from 75 ppb to 65-70 ppb? Would a standard set at a lower level with a larger number of exceedances also provide the "requisite" protections and an "adequate margin of safety?"

The preamble to the proposed NAAQS states, "the Administrator focuses on the extent to which a revised standard would be expected to protect populations from experiencing two or more O3 exposures of concern (i.e., as a surrogate for repeated exposures)…Although the Administrator is less concerned about single occurrences of exposures of concern, she acknowledges that even single exposures to O3 concentrations at or above benchmark concentrations (particularly for the 70 and 80 ppb benchmarks) could potentially result in adverse effects."[8] She also refers to 72 ppb as being "the lowest O3 exposure concentration shown to result in the adverse combination of lung function decrements and respiratory symptoms." Elsewhere, she refers to new evidence used for this NAAQS review, including "Two controlled human exposure studies new since the 2008 review are now available that examine respiratory effects associated with prolonged, 6.6-hour, O3 exposures to levels of 72 ppb and 60 ppb. These studies observed effects in healthy adults, including lung function decrements combined with respiratory symptoms at 72 ppb, and lung function decrements and pulmonary inflammation at 60 ppb."[9]

By presenting data on one or more exposures and two or more exposures to levels of concern, EPA's Health and Risk Exposure Assessment for the current NAAQS review provides a simulation of the extent to which a standard set at 70 ppb and 65 ppb would control exposures to benchmark ozone levels above 80 ppb, 70 ppb and 60 ppb compared to the current standard. These data can be used to compare the extent to which standards set at 65 ppb or 70 ppb would eliminate circumstances in which health effects occurred due to a single exposure.

Table 2: Health and Risk Assessment Comparison of # of Children Exposed 1 or More Times and 2 or More Times to Benchmark Levels of 70 ppb or Greater at Alternative Standard Levels

Level (ppb)	2 or more exposures of >= 70 ppb	1 or more exposure of >= 70 ppb	% of Children with 1 or more exposure who are exposed 2 or more times
75	46,000	362,000	13%
70	5,400	94,000	6%
65	300	14,000	2%
60	0	1,400	0%

[8] 79 FR 75305-75306.
[9] 79 FR 75246

In the preamble for the proposal, EPA states, "Compared to the current standard and a revised standard with a level of 70 ppb, the HREA estimates that a standard with a level of 65 ppb would reduce exposures of concern to the range of O3 benchmark concentrations analyzed (i.e., 60, 70, and 80 ppb). The HREA estimates that meeting a standard with a level of 65 ppb would eliminate exposures of concern at or above 80 ppb in the urban study areas. Such a standard is estimated to allow far less than 1% of children in the urban study area to experience one or more exposures of concern at or above the 70 ppb benchmark level, even in the worst-case years and locations, and is estimated to eliminate the occurrence of two or more exposures at or above 70 ppb."[10]

To the extent that these statements suggest where EPA is likely to set the standard within the range of 65-70 ppb, particularly to control exposure to two or more exceedances of a >= 70 ppb benchmark, EPA should be able to use the differences between health data presented in the 1997 and 2008 NAAQS reviews depending on the number of exceedance days allowed in order to develop points of comparison for what level of protection a 65 ppb and 70 ppb standard would likely achieve if the form were based on the 5th-highest concentration rather than the 4th-highest concentration.

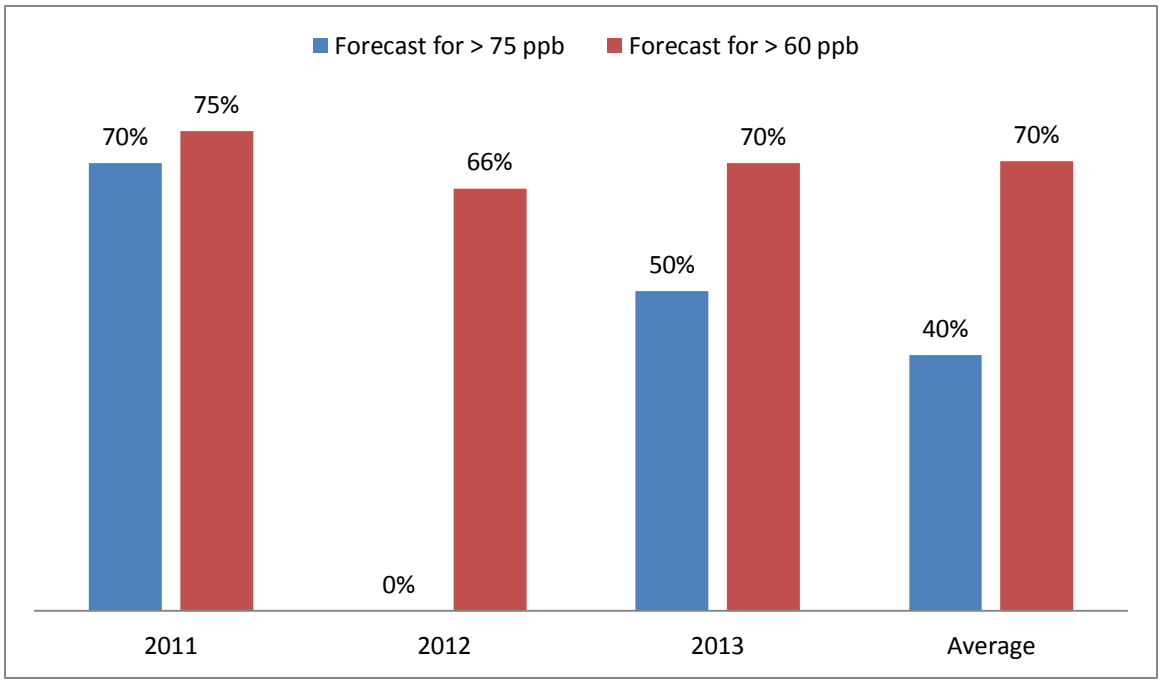
1.1.5 Health Impact from Changing the Air Quality Index

In the section of the preamble for this proposal titled "Averting Behavior," the EPA describes how people use information on predicted and actual pollution concentrations through the Air Quality Index (AQI) in order to avert exposure to ozone. This section describes the impact of the AQI, stating, "Evidence of individual averting behaviors has been found in several studies, including activity pattern and epidemiological studies, especially for the at-risk populations, such as children, older adults, and people with asthma, who are targeted by the advisories." Evidence in Central Texas indicates that lower ozone levels may be easier to predict and therefore improve the ability for people to avoid exposure.

EPA is proposing to adjust the AQI in conjunction with lowering the level of the standard. To the extent that the air quality forecasting can successfully predict when ozone levels will reach levels considered "moderate," "unhealthy for sensitive groups," "unhealthy" or worse, changing the AQI should enable protections against exposures to elevated ozone levels all the way down to 50 ppb potentially. Recent evidence from forecasting for the Central Texas region indicates that the success of forecasting is likely to be higher for Ozone Action Days (exceedances of the level of the standard) at lower levels than they are for the current 75 ppb standard. From 2011 – 2013, the average percentage of days in the region when ozone levels reached above 75 ppb that were accompanied with an Ozone Action Day alert was 40%. For comparison, 70% of the days that were 60 ppb or over were accompanied with an ozone forecast of "moderate" or higher.

[10] 79 FR 75300 – 75301.

Figure 4: Percent of Days with Actual Ozone > 75 ppb and > 60 ppb that were Predicted 2011-2013 for Central Texas



What these data suggest is that people will be able to successfully employ "averting behavior" in order to reduce ozone exposure on a higher percentage of days for standard set lower than 75 ppb. Changing the form of the standard from the 4th highest concentration to 5th highest or beyond could account for the extent to which ozone forecasting will improve the ability of people to reduce ozone exposures for a standard set at a lower level.

1.1.6 Summary of Impact of Changing the Form of a Lower Standard on Health Outcomes

As the data presented above shows, it is certainly possible for EPA to achieve the health benefits it desires by lowering the level of the standard, even while raising the number of days considered in calculating an area's design value. Data from the 2008 NAAQ review suggests that changing the form from the 4th highest to 5th highest would only change health outcomes by about 5% or less – an impact that would be dwarfed by lowering the level of the standard to a range of 65-70 ppb.

1.2 Current Form Does Not Provide Stability to Implementation Programs

As mentioned earlier, EPA's assertion as part of this NAAQS review that the current form provides stability for implementation programs deserves scrutiny. While a strict measure of what would be considered "stability for implementation programs" (referred to hereafter as "programmatic stability") is not provided in either the 2008 ozone NAAQS review or the current review, an examination of the extent to which ozone design values have experienced dramatic swings year-to-year in both directions, undermines EPA's case that the current form provides sufficient programmatic stability. There are several relatively straightforward ways EPA could analyze readily available data on the extent to which fluctuations in ozone design values for the 2008 ozone NAAQS have already had significant impacts on implementing the 75 ppb standard.

1.2.1 Sensitivity of Initial 2008 Ozone NAAQS Designations to Annual Ozone Fluctuations

EPA's recent experience with area designations for the 2008 provides a very direct test of the extent to which the current form of the standard provides "programmatic stability." While there are currently 234 counties designated "nonattainment" for the 2008 ozone NAAQS, 316-323 counties could have been designated nonattainment based on EPA's designation guidance[11] if the agency had only based designations on 2008-2010 or 2009-2011 design values, rather than allowing states to choose which period to use. The fact that the designations for the 2008 ozone NAAQS were so sensitive that a single year difference can cause 27-30% of the counties that are designated nonattainment to change suggests the current form of the standard does not provide adequate stability for implementation programs.

While the Administrator indicated in the preamble that she believed that "currently available evidence and information do not call into question these conclusions from previous reviews" as it relates to the form of the standard, EPA's recent experience in area designations for the 2008 ozone NAAQS strongly suggests that the current form of the ozone NAAQS does not provide nearly the level of programmatic stability the preamble to this NAAQS review would seem to indicate.

In April and May 2012, EPA designated 46 areas as "nonattainment" for the 2008 ozone NAAQS, consisting of all or part of 232 counties with a combined population of 123,003,795.[12] Due to the timing of these designations – after 2011 but before states were required to certify their air quality monitoring data for the prior year – EPA allowed states the option of using either their 2008-2010 ozone design values or their 2009-2011 design values for the designation process. In a sense, by accident of timing, EPA promulgated this initial round of designations based not on a single design value, but the lower (or – in the case of Chicago – higher) of the two sets of design values states had the option of using. This situation provides a direct illustration of the extent to which year-to-year changes in ozone design values calculated using the current form of the standard can be quite unstable, as measured by the number of counties that could have been designated nonattainment if EPA had only used one or the other of these three-year periods (2008-2010 or 2009-2011) for making these designations. The following table shows the number of areas and counties that were designated nonattainment on the basis of 2008-2010 design values and the number that were designated nonattainment on the basis of 2009-2011 design values.

Table 3: Areas and Counties Designated Nonattainment for the 2008 Ozone Standard

Design Value Period	Areas	Counties
2008-2010	30	170
2009-2011	16	62
TOTAL	46	232

Almost every one of these areas had ozone design values that exceeded the NAAQS in both 2010 and 2011. The only exceptions were:

- The Chicago-Naperville, IL-IN-WI nonattainment area (11 counties), which had a 2010 design value of 74 ppb, but a 2011 value of 77 ppb;

11 http://www.epa.gov/ozonedesignations/2008standards/documents/Area_Designations_for_the_2008_Revised_Ozone_NAAQS.pdf

12 www.epa.gov/airquality/greenbook/hntc.html. Accessed February 20, 2015.

- The Jamestown, NY nonattainment area (1 county, which had a 2010 design value of 77 ppb, but a 2011 design value of 72 ppb; and
- The Penchaga Indian Reservation, CA nonattainment area, which did not have regulatory ozone monitoring in place for the 2008-2010 and 2009-2011 periods.[13]

However, since states were able to choose which design values (DVs) to use for designations, many counties were designated attainment/unclassifiable that would have been included in the default boundaries of a nonattainment area, based on EPA's guidance on area designations for the 2008 ozone NAAQS.[14] The table below shows areas that were designated attainment/unclassifiable, even though at least one monitor in the county, core-based statistical area (CBSA), or combined statistical area (CSA) was violating the 2008 standard based on either 2010 or 2011 design values.

Table 4: Areas and Counties Designated Attainment/Unclassifiable with 2010 or 2011 Design Values Above the 2008 Ozone Standard

Area Name	Area Type	Counties	2010 DV	2011 DV
Amador County, CA	County	1	81	71
Beaumont-Port Arthur, TX	CBSA	3	74	79
Boston-Worcester-Manchester, MA-RI-NH	CSA	17	76	73
Dayton-Springfield-Greenville, OH	CSA	7	75	76
Detroit-Warren-Flint, MI	CSA	7	75	78
Grand Rapids-Muskegon-Holland, MI	CSA	7	74	76
Greensboro--Winston-Salem--High Point, NC	CSA	10	76	75
Greenville-Spartanburg-Anderson, SC	CSA	8	76	74
Gulfport-Biloxi-Pascagoula, MS	CSA	5	76	75
Hood County (Dallas-Fort Worth, TX)	County in CSA Partially Designated Nonattainment	1	75	76
Kansas City-Overland Park-Kansas City, MO-KS	CSA	16	73	76
Knoxville-Sevierville-La Follette, TN	CSA	12	76	75
Las Vegas-Paradise-Pahrump, NV	CSA	2	76	75
Longview-Marshall, TX	CSA	4	74	77
Louisville/Jefferson County--Elizabethtown--Scottsburg, KY-IN	CSA	16	75	78
Manitowoc, WI	CBSA	1	73	77
Nashville-Davidson--Murfreesboro--Columbia, TN	CSA	14	76	75
New Orleans-Metairie-Bogalusa, LA	CSA	8	75	76
Oklahoma City-Shawnee, OK	CSA	8	74	77

[13] http://www.epa.gov/airtrends/pdfs/Ozone_DesignValues_20112013_FINAL_08_01_14.xlsx. Accessed February 20, 2015.

[14] http://www.epa.gov/groundlevelozone/designations/2008standards/documents/Area_Designations_for_the_2008_Revised_Ozone_NAAQS.pdf

Area Name	Area Type	Counties	2010 DV	2011 DV
Phoenix Lake-Cedar Ridge, CA	CBSA	1	82	74
Richmond, VA	CBSA	20	76	74
Santa Barbara-Santa Maria-Goleta, CA	CBSA	1	76	73
San Benito, CA (San Jose-San Francisco-Oakland, CA CSA)	County in CSA Partially Designated Nonattainment	1	76	70
Shreveport-Bossier City-Minden, LA	CSA	4	74	80
Springfield, MA	CBSA	2	77	74
Sutter County, CA (Sacramento--Arden-Arcade--Yuba City, CA-NV CSA)	County in CSA Partially Designated Nonattainment	1	76	71
Tulsa-Bartlesville, OK	CSA	8	75	77

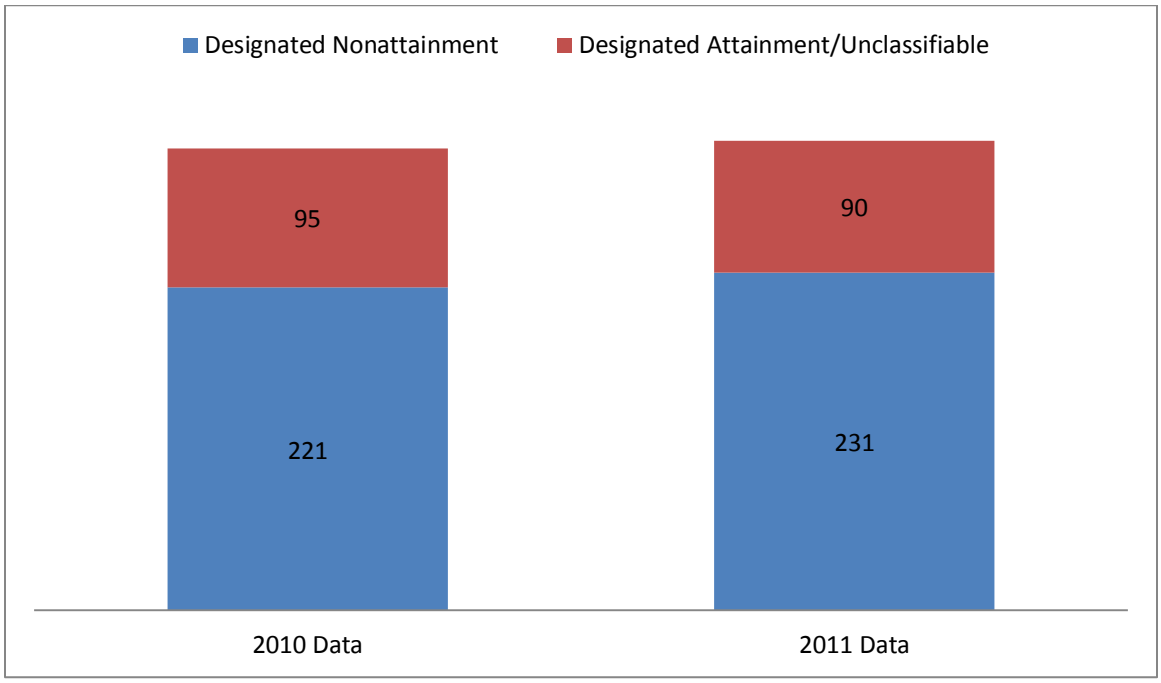
A total of 95 counties that that were designated attainment/unclassifiable were in areas that had design values that were violating the standard in 2010, but meeting the standard in 2011. Similarly, a total of 90 counties that that were designated attainment/unclassifiable were in areas that had ozone design values that were meeting the standard in 2010, but violating the standard in 2011.

Table 5: Number of Counties Affected by 2008 Ozone NAAQS Designation Process

Monitoring Data	Designated Attainment / Unclassifiable	Designated Nonattainment
Counties in Areas with 2010 and 2011 DV Both > 75 ppb	0	220
Counties in Areas with 2010 DV > 75 ppb Only	95	1
Counties in Areas with 2011 DV > 75 ppb Only	90	11

If EPA had only used one year's design value – 2010 or 2011 – it would have meant another 84-89 counties would have been designated nonattainment – a 36 or 38% increase over the number actually designated nonattainment. The 2010 populations of these extra counties that were not designated nonattainment due to the selection of years used for the designation amounted to 18,110,697 or 15,831,189, depending on whether 2010 or 2011 data were used. This shows how large an impact one ozone season can have on ozone implementation programs.

Table 6: Number of Counties in Areas Designated Nonattainment or Attainment/Unclassifiable with 2010 or 2011 Monitoring Data > 2008 Ozone NAAQS



1.2.2 Sensitivity of Classifications for 2008 Ozone NAAQS Nonattainment Areas to Annual Fluctuations in Ozone

In addition to the actual designation of counties being sensitive to annual fluctuations in ozone levels, the classification of areas that were designated was also sensitive to these fluctuations. The table below shows four areas that were designated nonattainment for the 2008 ozone NAAQS for which the classification and the corresponding requirements were sensitive to the design value year each state selected for the basis for designations. These four areas include 33 counties containing a 2010 population of 16,364,471 people.

Table 7: 2008 Ozone NAAQS Nonattainment Designation Classifications that were Sensitive to Annual Fluctuations in Ozone Levels

Area	Counties	2010 Population	Classification	Classification Based on 2010 DV	Classification Based on 2011 DV
Houston-Galveston-Brazoria, TX	8	5,891,999	Marginal (76-85 ppb)	Marginal 84 ppb	Moderate 89 ppb
Sacramento Metro CA	9	2,241,057	Severe 15 (113-119 ppb)	Serious 102 ppb	Moderate 95 ppb
San Diego, CA	1	3,095,199	Marginal (76-85 ppb)	Moderate 88 ppb	Marginal 82 ppb
Washington, DC-MD-VA	15	5,136,216	Marginal (76-85 ppb)	Moderate 86 ppb	Marginal 83 ppb
TOTAL	**33**	**16,364,471**	**n/a**	**n/a**	**n/a**

Of particular note is the fact that the Houston-Galveston-Brazoria, San Diego, and Washington, DC-MD-VA areas were all able to be designated as "Marginal" and therefore avoid an attainment demonstration and the various emission controls that would have been required if they had been designated with a higher classification. These areas would have been required to adopt reasonably available control measures (RACM), reasonably available control technology (RACT) and a host of other requirements associated with a "Moderate" classification if a different year had been used for classifications. This "under-classification" has therefore caused a delay in implementation of ozone reduction measures in these areas that they might have otherwise been required to put in place following their designations.

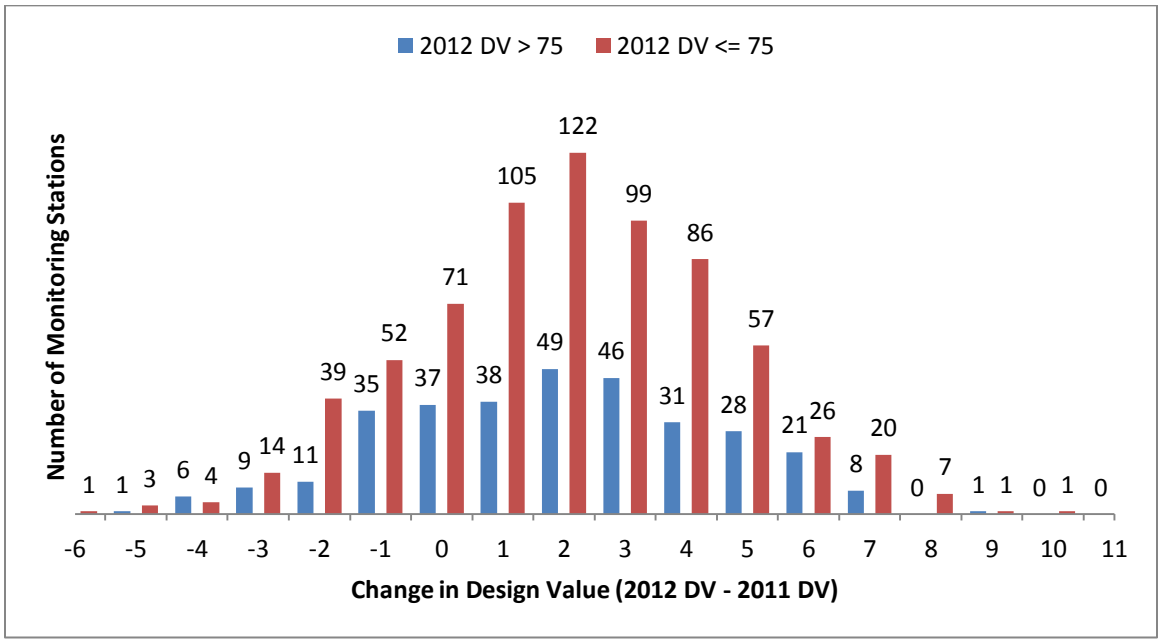
Since Central Texas is downwind of the Houston area, this also means that 2014-2016 ozone levels in the Austin-Round Rock MSA will be a higher than they would otherwise have been if EPA had used 2011 data as the basis for nonattainment designations. EPA's recent modeling 2008 Ozone Transport modeling shows that five monitors in the Houston area will continue to be above the 2008 ozone NAAQS by 2018, including one as high as 80.5 ppb. **EPA's proposal to continue using of the current form of the standard and the resulting instability in ozone design values should be expected to cause similar delays in the air quality improvements across the country that EPA hopes to achieve in the current NAAQS review**.

1.2.3 New Violations of the 2008 Ozone NAAQS after Initial Designations

2012 and 2013 ozone data provides further evidence of the instability of the current standard's form, beyond the sensitivity of the initial designations and classifications to 2010 and 2011 design values. There are numerous other areas that violated the 2008 ozone NAAQS in either 2012 or 2013, or in both years. In total, 23 areas with a total of 91 counties and a combined population of 18,036,084 people measured ozone exceedances or one or both of these years.

Monitoring data in 2012 appears to have been particularly problematic for many areas of the country. The histogram below shows the distribution of changes in ozone design value from 2011 to 2012. The figure shows 2012 ozone levels were significantly higher, on average, than 2011 levels, both for monitoring stations in compliance with the NAAQS and stations out of compliance with the NAAQS.

Figure 5: Change in Design Values at All Monitoring Stations in AQS 2011-2012



Monitoring stations with 2012 design values over 75 ppb were more likely to have experienced a 4 ppb or greater increase in design value from 2011 (89 sites) than they were to experience any decrease at all (62 sites). All of these data show the extent to which the current form of the standard can cause significant instability in attainment status – even for a standard set at 75 ppb.

1.3 Future Ozone Levels Will be Less Influenced by Emissions Subject to Clean Air Act Controls

As shown above, the use of the existing form for the 2008 ozone NAAQS already has led to considerable instability in implementation programs. EPA has provided no statistical analysis for this review as to whether applying this form to a standard in the range of 65-70 ppb over the next few years would provide a similar level of stability to the current standard, although there are a number of reasons to believe that it will actually lead to even more instability.

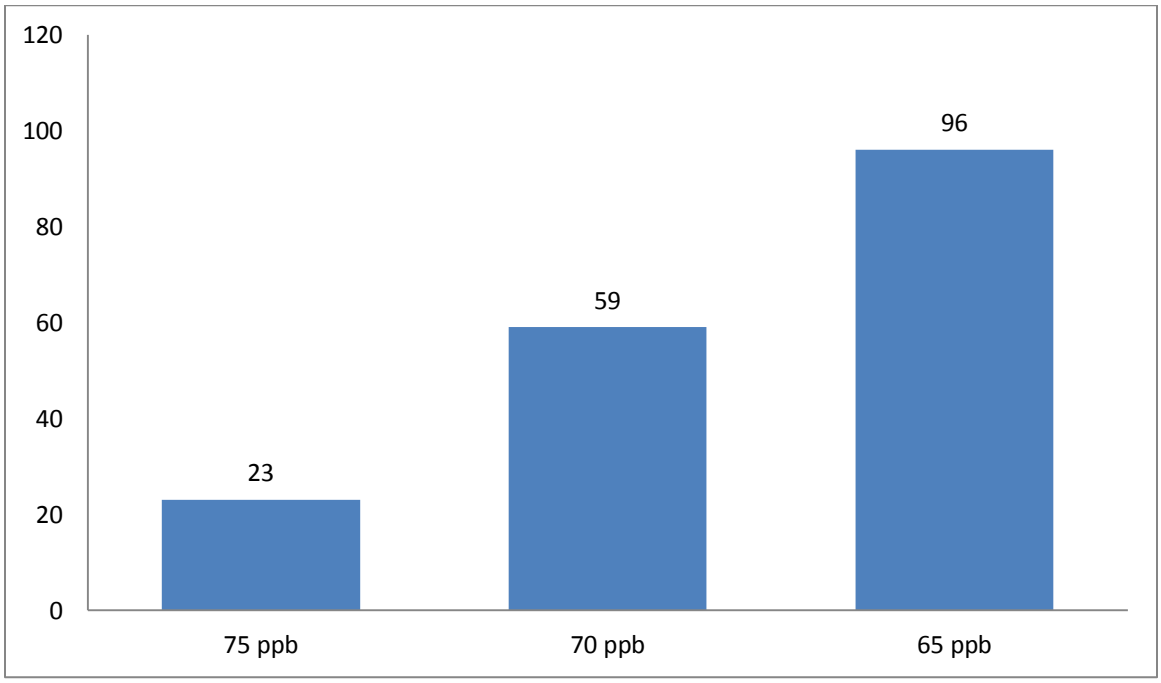
1.3.1 Increased Influence of Annual Fluctuations on Attainment Status

The modeling data that EPA recently released in support of "transport" SIP development for the 2008 ozone NAAQS provides a useful perspective on the extent to which differences between the value of maximum design values during a five-year period and the "average design value" for that same five year period could make a meaningful difference in each ozone monitor's attainment status.

The figure below shows the total number of monitors across the country where its attainment status between 2016 and 2020 would be sensitive to the year-to-year fluctuations in ozone levels compared to ozone standard levels set at 75, 70, and 65 ppb using the current form. The data represent the number of monitors with maximum modeled future design values exceeding 75.9 ppb, 70.9 ppb, and 65.9 ppb that have an "average design value" of 75.9 ppb or less, 70.9 ppb or less, or 65.9 ppb or less.[15]

[15] EPA. Data File for the 2008 Ozone NAAQS Transport Assessment. http://www.epa.gov/airtransport/OzoneTransportDataFile.xlsx. Accessed February 3, 2015.

Figure 6: Number of Monitoring Stations with 2016-2020 Attainment Status Sensitive to Year-to-Year Fluctuations for Alternative Standard Levels



As the figure above shows, stability in attainment status in the 2016-2020 period modeled would decrease as the level of the standard decreases below 75 ppb. Based on these data, a standard set at 70 ppb would result in 2.6 times the number of monitoring stations with an attainment status that could be above or under that level, depending on annual fluctuations, than a continuation of the current standard 75 ppb standard would. A standard set at 65 ppb would lead to 4.2 times the number of monitoring stations with an attainment status sensitive to year-to-year fluctuations.

These data also help illustrate the average magnitude of these fluctuations year-to-year. The average difference between the maximum and average design values for stations with maximum 2018 design values over 65.9 ppb was 1.70 ppb. This difference was 1.89 ppb for stations with maximum 2018 design values of over 70.9 ppb. These are impacts that – if they were coming from anthropogenic emissions in another state – would be over double the air quality significance impact threshold (1% of the NAAQS) that EPA uses for evaluating interstate transport impacts. If annual fluctuations in ozone levels can cause that degree uncertainty, it calls into question its utility for assessing compliance with the new ozone NAAQS.

1.3.2 Recent Modeling Results Show Extent of Influence of Non-Anthropogenic Emissions on Peak Ozone Levels

As emissions of anthropogenic ozone precursors in the U.S. continue to decline well into the next decade, the influence of other factors will play an increasingly important role in determining the value of the 4th highest daily maximum 8-hour ozone concentrations recorded at U.S. ozone monitoring stations. The role of meteorology, biogenic emissions, wildfires, and policy-relevant background in determining peak ozone levels will increase as the role of anthropogenic emissions decreases.

EPA's recent modeling for the 2008 ozone NAAQS interstate transport SIP requirements shows the extent to which 2018 ozone levels around the country area are projected to be impacted by these factors beyond the control of SIPs or FIPs.

Table 8: Contribution of Boundary Conditions, Biogenic Emissions, and "Other" Emissions on 2018 Ozone Design Values Over 65 ppb

EPA APCA Modeling Source Category	Contribution at Monitors > 65 ppb
"Other"	3.32 ppb
Biogenic	5.36 ppb
Boundary Conditions	24.22 ppb
Combined	**32.90 ppb**

The combined effect of these factors accounts for 50% of the ozone levels for an area just meeting a 65 ppb standard, 46% for an area just meeting a 70 ppb standard, and 43% for an area just meeting the 75 ppb standard. Any fluctuations in biogenic emissions, wildfire emissions, and other non-U.S. anthropogenic emissions will therefore play a larger role in determining an area's design value for a standard set at 65 ppb than one set at 70 ppb or 75 ppb.

The year-to-year variation in ozone levels is often attributable to the impact of meteorology on anthropogenic emissions within the U.S., but it can also be impacted by variations in these factors, none of which the states have control over. A NAAQS form that better accounted for the increased influence of the variability in these factors on peak ozone concentrations would help provide improved programmatic stability compared to the 4th highest value.

1.3.3 Impacts of Changes in Meteorology

One of the assumptions used in planning control measures for ozone is that future meteorology is likely to be similar to historical meteorology. In order for EPA's assertion that continuing to use the current form of the NAAQS will provide a similar level of stability in implementation programs is undermined by statements it has made in other rulemakings. In fact, EPA has elsewhere specifically indicated that it expects future meteorology to be more variable than it has been. In its Endangerment Finding for Greenhouse gases, EPA states: "It is also important to note that it may not be possible for States and Tribes to plan accurately for the impacts of climate change in developing control strategies for nonattainment areas. As noted in the TSD and EPA's 2009 Interim Assessment Report (IA), **climate change is projected to lead to an increase in the variability of weather**, and this may increase peak pollution events including increases in ozone exceedances…At this time, models used to develop plans to attain the NAAQS do not take potential changes in future meteorology into consideration. **Inability to predict the frequency and magnitude of [ozone exceedances] could lead to an underestimation of the controls needed to bring areas into attainment**." (emphasis added) If the EPA is going to point to the impact of changes in meteorology on ozone levels for its discussions of climate change, it should also apply those same conclusions to assessing compliance with the proposed standard. If EPA expects increase in the variability of weather that will affect the magnitude and frequency of ozone exceedances, it should adjust the measuring stick it uses to assess compliance accordingly.

1.3.4 Sensitivity of Design Values to Equipment Failure Due to Extreme Weather

Another potential consideration for the form of the standard is the extent to which an area's design value is impacted by any potential loss of data that could occur due to instruments going offline due to natural disasters. In 2011, one of CAPCOG's non-regulatory ozone monitors in Bastrop County was directly affected by the large wildfire that occurred in September, leading to a loss of data. Metrics that

rely on a larger number of days of data for assessing compliance are less likely to be influenced by data loss attributable to extreme weather.

1.4 Summary of Points on the Form of the Standard

The fact that EPA did not propose or solicit comments on any specific alternatives to the current form for the primary standards in this proposed rulemaking does not prevent it from changing the form between proposal and finalization of this NAAQS. Precedent for such a can be found in the ozone NAAQS review completed in 1997. Initially, the Administrator proposed a form based on the 3rd-highest daily maximum 8-hour ozone concentration[16], but changed it to the 4th highest value in the final rulemaking based on further statistical analysis.[17] While EPA did not directly provide analysis of the extent to which different forms would protect health at the proposed levels as part of the proposed NAAQS, data from prior NAAQS and current NAAQS reviews can be used to simulate the impacts of a change in the form of the standard would look like. At a minimum, EPA should be able to evaluate the health effects of a standard using the 5th highest concentration, for which prior NAAQS reviews include considerable analysis. EPA's assertion that the current form of the standard provides sufficient stability for implementation programs is not consistent with its implementation of the 2008 ozone NAAQS. EPA's own statements and data indicate that factors outside of the control of the Clean Air Act's tools for addressing criteria air pollutant emissions are going to be more and more important in determining an area's attainment status in the future. **EPA can achieve both the health benefits and the implementation stability it desires with a lower level paired with a more robust concentration-based form based on the 5th-highest, 6th-highest, or larger number of days**.

2 Designation of Areas

Comment: The EPA should consider any permissible interpretation of the designation process described in the Clean Air Act that would encourage participation in the Ozone Advance Program and avoid nonattainment designations where possible.

Nonattainment designations are a very blunt tool for addressing violations of a NAAQS. A nonattainment designation can have far-reaching and long-standing negative impacts on an area. If, for instance, the Austin-Round Rock MSA were to be designated nonattainment for a new ozone NAAQS set at 65 ppb based on what is currently projected to be a 2014-2016 ozone design value of 67 ppb, and then came into attainment of the standard the very next year – as is projected – it would be at least another two years before the area could have a maintenance plan approved and be redesignated to "attainment," and the area would continue to be subject to conformity requirements for at least another two decades corresponding with each of the two 10-year maintenance periods. As experiences all across the country have shown, including recently in Beaumont-Port Arthur, the transportation conformity process can cause significant disruptions and delays in the transportation planning process for decades even after an area attains the standard.

The Austin-Round Rock MSA is now entering the 13th year of voluntary air quality planning efforts under four different EPA programs – the One-Hour Ozone Flex Program, the Early Action Compact Program, The Eight-Hour Ozone Flex Program, and, most recently, the Ozone Advance Program. In addition, the state of Texas has invested nearly a billion dollars over the years through the Texas Emission Reduction

[16] 61 FR 65725. December 13, 2006. Adapted from Table 1.
[17] 62 FR 38871. July 18, 1997.

Plan grant programs and yielded hundreds of thousands of tons of NO_X reductions as a result, large segments of which have gone to "near-nonattainment" areas like the Austin-Round Rock MSA. Combined, these efforts are already reducing NO_X emissions in the Austin-Round Rock MSA by at least 10%. The example set by Central Texas shows how much can be achieved on a voluntary basis without having to resort to a nonattainment designation.

One of the important factors that has enabled local stakeholders to be willing to commit to such aggressive actions has been assurances by EPA that if the area was ever designated nonattainment for ozone, these would be fully accounted for and our region would not be penalized for actively participating in the programs. Our region's success begs the question as to the necessity and utility of designating an area nonattainment when it is already taking strong action to reduce ozone. If EPA does not exercise discretion by being more flexible in implementing the proposed NAAQS, designating such areas nonattainment when not absolutely necessary would send a powerful signal to other areas not to take voluntary action. The other tools available to the EPA under Section 110 of the CAA should be sufficient to address ozone in most of these cases without having to resort to a nonattainment designation.

From a legal perspective, all of the things that are required by statute of a nonattainment area could be administratively required by EPA under its existing general authority under Section 110. This could be accomplished through its oversight of "infrastructure" SIPs, including disapproving SIPs that did not sufficiently provide for attainment, maintenance, and enforcement of the new proposed ozone NAAQS. Such SIPs are already supposed to "include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights) as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this Act." The concept of a "nonattainment" designation was only adopted by Congress in 1977. It was used to force EPA and the states to take action where air quality problems had persisted despite the plans required of states to submit under the more general provisions of Section 110. The added requirements for nonattainment areas adopted in the 1990 Clean Air Act Amendments raised the stakes even further and were even more prescriptive. The key distinction is only that while the EPA could require things like permitting offsets for the construction of new point sources and motor vehicle emissions budgets for transportation agencies, a nonattainment area forces these specific requirements on EPA and – in turn – the states and local governments.

Section 101 of the CAA describes the Congressional findings and purpose of the statute. This section states clearly that, "a primary goal of this Act is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this Act, for pollution prevention." Consistent with this purpose, EPA could interpret Section 107 of the CAA in ways that would reward early proven voluntary emission reductions, or at least avoid disincentivizing such actions. This can be accomplished, in part, by avoiding designating an area such as the Austin-Round Rock MSA that is aggressively voluntarily reducing emissions as nonattainment unless absolutely necessary. Unlike Congress's very specific requirements for ozone nonattainment designations that occurred immediately following the 1990 Clean Air Act as described under Section 181 of the Clean Air Act, Section 107 of the CAA does not necessarily require that EPA use the same approach to designating areas as "nonattainment" and "unclassifiable/attainment" as it has for the 1997 and 2008 ozone NAAQS.

There is enough flexibility in the CAA to allow EPA to do the following:

1. Designate areas as "unclassifiable" rather than "nonattainment" if the design value is within the range that could be explained by monitoring equipment measurement uncertainty within the range allowed by EPA for valid ozone measurements (≤ +/- 4 ppb, relative to either a 65 ppb or 70 ppb

standard), since this level of uncertainty calls into question whether that design value is actually not attaining the standard and instead suggests that the area "cannot be classified on the basis of available information as meeting or not meeting" the standard; and

2. Exercise its discretion to extend the date for promulgating area designations by one year if an area's 2014-2016 design value is above the standard but it is close enough to the standard that the additional emission reductions from mobile source emission reductions in 2017 and other emission reductions implemented through the area's participation in the Ozone Advance Program could be sufficient to bring the design value low enough to be in attainment by the end of 2017.

If EPA were to interpret the CAA to allow it to take either or both of these approaches, it could provide a very important incentive for areas to take voluntary actions to reduce ozone over the next three years, and could potentially save scores of areas from being designated nonattainment. This would relieve those areas, the states, and the EPA from the burdens of nonattainment area planning.

2.1 Recent Precedent for Unclassifiable Designations and 1-Year Deferrals

There is recent precedent for EPA exercising both using "unclassifiable" designations and deferring designations by a year. EPA's designation of parts of Utah as "unclassifiable" for the 2008 ozone NAAQS in 2012 and EPA's very recent annual $PM_{2.5}$ NAAQS designation decisions in December 2014 show approaches that EPA could apply to the designation process for the 2015 NAAQS. Including information in the final NAAQS rulemaking that indicates the extent to which EPA is willing to consider these approaches would be important to providing direction and guidance to states for submitting recommendations to the EPA in 2016.

2.1.1 Recent Precedent for Extending the Designation Process by One Year

EPA invoked its authority to extend designations by up to a year after it finalizes a standard for the 2008 ozone NAAQS. Practically speaking, EPA did not actually complete the designation process until more than four years after the 2008 NAAQS was finalized, just as it did not complete the designation process for the 1997 ozone NAAQS until almost seven years after that standard was finalized. Under Section 107 of the CAA, the Administrator is supposed to only have two years to designate areas after she issues a new or revised standard, but may extend the period by up to one year "in the event the Administrator has insufficient information to promulgate designations." Under a two-year deadline, EPA would have been required to issue designations in March 2010. During its reconsideration of the 2008 ozone NAAQS, it issued a notice in the Federal Register that would push that deadline back a year to March 2011 while it completed the reconsideration. In the *Federal Register* notice announcing this extension, EPA justified the extension by saying, "extending the deadline for promulgating designations until March 12, 2011, will allow EPA to complete the Ozone NAAQS Reconsideration rulemaking before determining whether it is necessary to complete action to finalize designations for the 2008 ozone NAAQS or, instead, whether it is necessary to begin the designation process for different NAAQS promulgated pursuant to the reconsideration." [18]

In this case, EPA announced that it was deferring designations by a year due to uncertainty as to which standard it would need to make designations for – a 75 ppb standard finalized in 2008, or a 60-70 ppb standard that was supposed to be finalized in late 2010. While EPA had three years of valid data that could have been used to make designations in March 2010, EPA's decision to defer designations indicated that it recognized that uncertainty as to the necessity and utility of issuing a designation for the 2008 standard was a valid justification for postponing the designations by a year. As it relates to the current review, this precedent shows that availability of three years of valid data does not – in itself –

[18] 75 FR 2936. "Extension of Deadline for Promulgating Designations for the 2008 Ozone National Ambient Air Quality Standards." January 19, 2010. http://www.gpo.gov/fdsys/pkg/FR-2010-01-19/pdf/2010-349.pdf

mean that EPA must finalize designations two years after it finalizes a NAAQS. The Administrator can consider factors in determining whether she has "sufficient information" to promulgate designations. EPA is proposing to interpret this section of the CAA as meaning that an area is "not attaining" the standard in October 2017 if its 2014-2016 design value is 1 ppb or more above the standard. There are other valid interpretations of the CAA that would allow it to also consider 2017 data in making designations.

2.1.2 Designation of Parts of Utah as "Unclassifiable" for the 2008 Ozone NAAQS

In 2012, the EPA designated several areas of Utah as "unclassifiable" for the 2008 ozone NAAQS, rather than as "nonattainment" or "attainment/unclassifiable." In EPA's response letter to the state's recommendations for area designations, it stated: "Utah did not provide a recommendation for Indian country. However, there is existing non-regulatory monitoring in Duchense and Uintah Counties, within the exterior boundaries of the Uintah and Ouray Indian Reservation, that has detected levels of wintertime ozone that exceeds the NAAQS beginning in December 2009. For December 2009, January through March of 2010 and January through March of 2011, the non-regulatory monitors recorded ozone levels above the NAAQS. Regulatory monitoring has been conducted in the Uintah Basin since April 2011 but has not yet occurred for three consecutive years. Should regulatory data continue to show violations, a designation of nonattainment could happen as early as 2013. For this reason, we are proposing a designation of unclassifiable for Duchesne and Uintah Counties."[19]

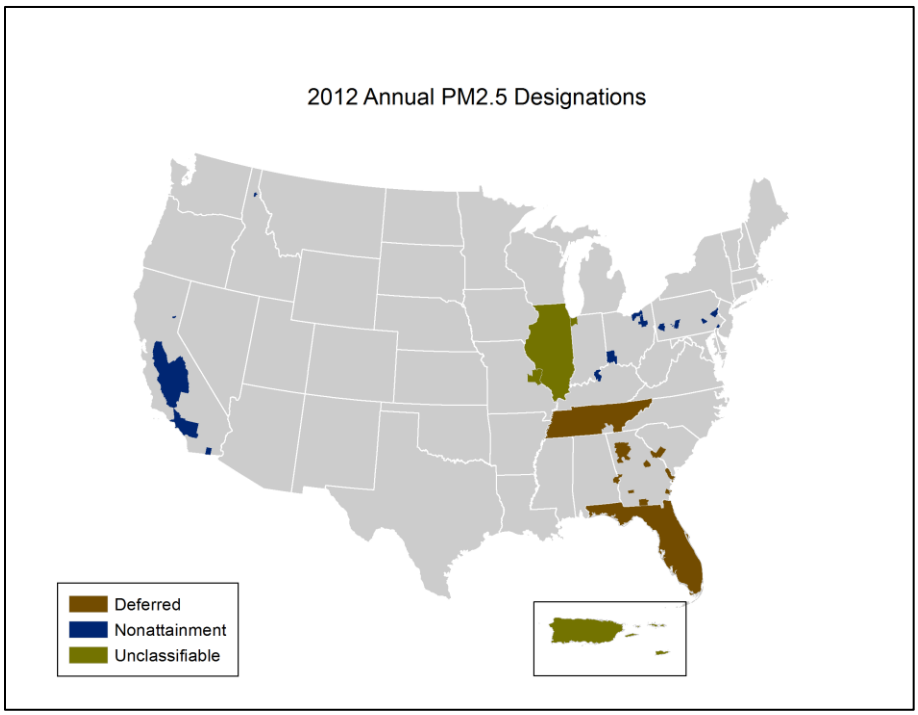
EPA's decision to designate Duchesne and Uintah Counties as "unclassifiable" means that the agency determined that these counties "cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant," as such areas are described under Section 107(d)(1)(iii) of the Clean Air Act. While EPA pointed out that there were monitors that recorded ozone levels in excess of the NAAQS, this information was not sufficient for the information to determine if the area was meeting or not meeting the standard. EPA's tied this lack of certainty to the fact that the ozone monitoring data was based on non-regulatory monitors, rather than regulatory monitors. However – as discussed elsewhere in this section – even valid regulatory ozone monitoring data is characterized by a rather significant range of uncertainty of +/- 7% compared to calibration values.

2.1.3 Area Designations for 2012 Annual $PM_{2.5}$ NAAQS

EPA's designations of several areas as "unclassifiable" for the 2012 annual $PM_{2.5}$ NAAQS and 1-year deferrals of designations for several other areas provides a very recent example of the use of these two remedies by EPA in order to account for uncertainty as to whether areas were attaining or not attaining a NAAQS. The figure below shows the areas of the country that were designated "nonattainment" and "unclassifiable" for the 2012 annual $PM_{2.5}$ NAAQS, as well as the areas where EPA deferred the designation.

[19] http://www.epa.gov/airquality/ozonepollution/designations/2008standards/rec/eparesp/08_UT_resp.pdf

Figure 7: Area Designations for 2012 PM 2.5 Annual NAAQS, December 2014



On December 14, 2012, EPA revised the NAAQS for annual average $PM_{2.5}$ concentrations from 15.0 $\mu g/m^3$ to 12.0 $\mu g/m^3$. Areas that were measuring or contributing to annual average $PM_{2.5}$ levels of 12.1 $\mu g/m^3$ or higher are considered violating the NAAQS. On December 18, 2014, two years after the standard had been finalized, EPA issued area designations for most of the country, but deferred designations for all of Florida, all of Tennessee (except for counties in the Chattanooga area), 22 counties in Georgia, 1 county in Alabama, and 1 county in South Carolina. While most of the country was designated "attainment/unclassifiable," part or all of 38 counties were designated "nonattainment," and another 107 counties, Puerto Rico, and the Virgin Islands were designated "unclassifiable."

One notable feature of EPA's decision to designate some areas as "unclassifiable" is that there are some sites where there were recent data that showed $PM_{2.5}$ levels above the NAAQS that EPA declined to designate as nonattainment. The table below shows these sites.[20]

[20] http://www.epa.gov/airtrends/pdfs/PM25_DesignValues_20112013_FINAL_08_28_14.xlsx. Last accessed 2/23/15.

Table 9: Monitors in Counties Designated "Unclassifiable" with Recent Annual PM2.5 Design Values > 12.0 µg/m^3

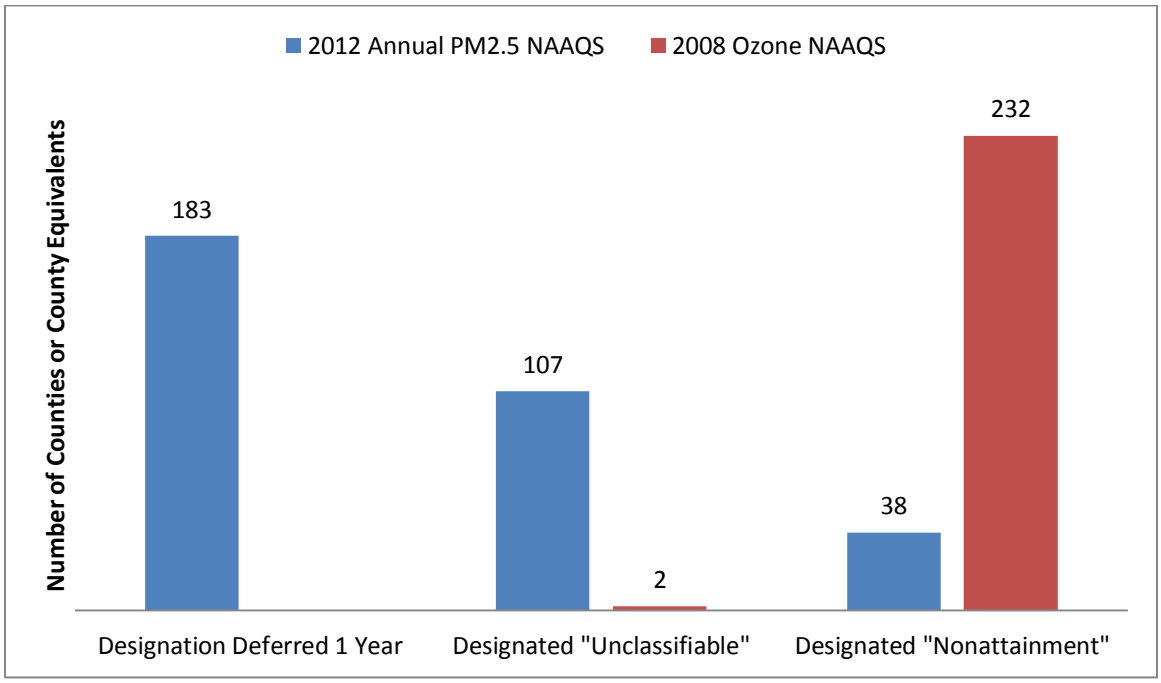
State	County	Site ID	2009-2011 DV	2010-2012 DV	2011-2013 DV
Illinois	Cook	170313103	12.9 µg/m3	13.0 µg/m3	12.5 µg/m3
Illinois	Madison	171191007	13.0 µg/m3	13.5 µg/m3	12.4 µg/m3
Missouri	St. Louis City	295100093	13.1 µg/m3	13.2 µg/m3	N/A

As EPA described in the letters to the affected states, its decisions to defer designations and to issue "unclassifiable" designations were related primarily to uncertainty as to whether monitoring data that were collected indicated that the area was attaining or not attaining the standard. In some areas like Illinois, an agency's handling of the samples in an incorrect manner prevented EPA from being able to conclude that areas were not attaining the standard, even though the monitoring data reported showed violations in some cases.

2.1.4 Comparison of Number of Counties Impacted by EPA Designation Process

The figure below shows the number of counties for which EPA deferred designations, designated areas as "unclassifiable," or designated areas as "nonattainment" for the 2012 annual $PM_{2.5}$ NAAQS and the 2008 ozone NAAQS. Since EPA deferred the designations for the 2008 ozone NAAQS for all 3,144 counties and county equivalents in the U.S., this is not shown on the figure. As the figure shows, EPA used the authority it has under the Clean Air Act to defer designations by a year or designate areas as "unclassifiable" for a large number of counties for the 2012 annual $PM_{2.5}$ NAAQS. For the 2008 ozone NAAQS however, it relied almost exclusively on nonattainment designations, only designating the two aforementioned counties in Utah as "unclassifiable."

Figure 8: Comparison of Number of Counties with a Deferred Designation, Designated "Unclassifiable," or Designated "Nonattainment" for 2008 Ozone NAAQS and 2012 Annual PM2.5 NAAQS



2.2 Justification for Using "Unclassifiable" Designations for the 2015 Ozone NAAQS

EPA could consider interpreting the CAA's requirement under Section 107(d)(1)(A) to designate as nonattainment "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant" to mean that it is required to designate as "nonattainment" only those areas with design values that are high enough above the level set by EPA that their nonattainment status could not influenced by ozone instrument measurement uncertainty. Similarly, it could designate as "attainment" only those areas that have design values that are low enough below the standard that their status would not be influenced by ozone instrument measurement uncertainty. For other areas that will have 2016 design values that are within the +/- 7% of the NAAQS, EPA could use the "unclassifiable" designation. EPA allows for this level of measurement uncertainty for ozone instruments, and throughout prior ozone NAAQS reviews, there are analyses of the extent to which this uncertainty could influence attainment status. This level of uncertainty is too wide for the EPA to conclude with a high degree of confidence that a 2016 design value of 66 ppb was not reflecting actual ozone concentrations that were in attainment of the NAAQS.

EPA would have a valid justification for designating such areas as "unclassifiable." Statute defines this designation as meaning "any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant." While EPA has traditionally interpreted the CAA in a way that resulted in areas that were even 1 ppb above the standard at time of designation as "nonattainment," there is no statutory prohibition on EPA designating areas "unclassifiable" if the area's attainment status could be influenced by measurement uncertainty. Specifically, EPA could consider an alternative approach that accounts for measurement uncertainty in deciding whether an area "does not meet" the new ozone standard:

- For areas that have design values that are 5 ppb or higher above the standard or areas that are contributing to air quality in such areas, designate as "nonattainment."
- For areas that have design values 4 ppb below the standard up to and including 4 ppb above the standard, designate as "unclassifiable" since these values fall within the +/- 7% measurement uncertainty allowed by EPA for ozone monitors.
- For areas that have design values 5 ppb below the standard or lower, designate as "attainment."

Such an approach would not preclude the Administrator from – at a later date – designating areas within that range as "nonattainment" if ozone levels deteriorate or other information becomes available that would enable or cause EPA to determine that it would be appropriate to redesignate the area to "nonattainment" under §107(d)(3). It would also not prevent the Administrator from requiring a state to implement control measures in such areas under the authority contained in §110 to approve or disapprove a State Implementation Plan, "which provides for implementation, maintenance, and enforcement of such primary [or secondary] standard in each air quality control region (or portion thereof) within such State." Nor would it preclude EPA from issuing findings that a SIP for such an area "is substantially inadequate to attain the national ambient air quality standard which it implements" (§110(a)(2)(H)(ii)).

2.2.1 Measurement Uncertainty in EPA's Quality Assurance Handbook

The ranges identified above are consistent with the measurement uncertainty that EPA allows for in ozone monitoring networks. Monitoring data contain uncertainty, which – if not properly accounted for – can lead to decision errors, as EPA points out in its *Quality Assurance Handbook for Air Pollution Measurement Systems (Volume II) – Ambient Air Quality Monitoring Program:*

"The data used in these decisions are never error free and always contain some level of uncertainty. Because of these uncertainties or errors, there is a possibility that decision makers may declare an area 'nonattainment' when the area is actually in 'attainment'… or 'attainment' when actually the area is in 'nonattainment'…There are serious economic and health consequences of making such decision errors."[21]

In Appendix D to this handbook, EPA identifies the acceptance criteria for ozone measurements as being whether a one-point quality control check for a single analyzer is ≤ +/- 7% compared to a known quantity. That means that a valid measurement as high as 74.9 ppb or as low as 65.1 could potentially be sampling actual ozone concentrations of 70 ppb, and that measurements as high as 69.6 ppb and or as low as 60.5 ppb could be sampling actual ozone concentrations of 65 ppb.

2.2.2 Measurement Error Described in the 2008 NAAQS Technical Documents

One of the documents EPA produced for the 2008 ozone NAAQS review speaks directly to the extent of measurement error in reported ozone levels.[22] The following is a table from that document showing the magnitude of these errors:

Table 10: Systematic Bias Error in Ozone Measurements Presented in 2008 Ozone NAAQS Review

Error Type	Estimate of Error
Instrument Drift Error	1.0 ppb
Noise Error	0.5 ppb
Precision Error	0.9 ppb
Calibration Error	2.0 ppb (at ~ 90 ppb)
NIST Standards Error	3.0 ppb (3% at 100 ppb)

As calculated by this document, the combined "systematic bias error" associated with the individual components listed above would be 3.9 ppb. This is consistent with the +/- 7% of values allowed for valid ozone measurements in the QA handbook as applied to either a 65 ppb or 70 ppb standard.

2.2.3 Improved Precision of Instruments Does Not Mean Improved Accuracy

EPA's decision to report the level of the 2008 ozone NAAQS out to three significant digits (0.075 ppm) resulted, in part, from improvements in the degree of precision for ozone instruments. As the table above shows, the "precision error" component of measurement error was estimated to be less than 1 ppb (0.001 ppm). While the improvement in ozone instrument precision allows for this finer-scale reporting, it does necessarily allow EPA to determine that the instrument's accuracy is also valid at that level of significant figures. For the 1997 ozone NAAQS, an area could have ozone averages of 0.084 ppm and still be attaining a 0.08 ppm standard. By reporting the 1997 standard to only 2 significant digits, it was able to account for measurement uncertainty in assessing compliance – an area with a design value of 0.085 ppb was more likely to be experiencing ozone health impacts associated with ozone levels of 0.09 ppm than of 0.08 ppm. However, with a standard reported out to three significant digits (or in ppb to the 1 ppb precision level), no such allowance is offered. While a design value of 66 ppb is more likely to be measuring actual ozone levels above 65 ppb than they are to be measuring actual ozone levels at or below 65 ppb, it is not so much more likely that EPA can be confident that a designation of

[21] EPA. *Quality Assurance Handbook for Air Pollution Measurement Systems (Volume II) – Ambient Air Quality Monitoring Program*. http://www.epa.gov/ttnamti1/files/ambient/pm25/qa/QA-Handbook-Vol-II.pdf. EPA-454/B-13-003. May, 2013. Last Accessed January 6, 2015.

[22] http://www.epa.gov/ttn/naaqs/standards/ozone/data/cox_and_camalier_7-7-06.pdf

"nonattainment" would accurately reflect conditions in an area with design values in the ranges of 61-69 for a 65 ppb NAAQS or 66-74 for a 70 ppb NAAQS.

2.2.4 Instrument Measurement Uncertainty in the Health Risk and Exposure Assessment

If EPA wished to use a narrower range of values that were directly linked to this rulemaking, it could use the range of impacts that instrument uncertainty was modeled to have on ozone exposure in the *Health Risk and Exposure Assessment* (HREA). Table 5-10 from the *HREA* shows that measurement uncertainty causes a +1.2% bias in exposure estimates, with a coefficient of variation of +/- 4.4%.[23] The table below shows the ranges of design values that would be expected to fall within these ranges at standard levels of 65 ppb and 70 ppb.

Table 11: Ranges of Design Values Consistent With Exposure to a Standard Level of 65 and 70 ppb from HREA

Standard Level	Bias	C.V.	Low	Average	High	Range
65 ppb	+1.2%	+/- 4.4%	62.92 ppb	65.78 ppb	68.64 ppb	63 – 68 ppb
70 ppb	+1.2%	+/- 4.4%	67.76 ppb	70.84 ppb	73.92 ppb	67 – 73 ppb

2.2.5 The "Unclassifiable/Attainment" Designation is Inappropriate

In the Federal Register notice for EPA's initial round of designations for the 2008 ozone NAAQS for all areas other than Chicago, it stated, "Historically for ozone, the EPA designates the remaining areas [not designated nonattainment] as 'unclassifiable/attainment' indicating that the areas either have attaining air quality monitoring data or that air quality information is not available because the areas are not monitored, and the EPA has not determined that the areas contribute to a violation in nearby areas."[24]

EPA's approach to issuing initial designations for areas with ozone design values at or below the NAAQS as "unclassifiable/attainment" inappropriately groups areas with valid ozone design values that are meeting the standard with counties that have no ozone measurements at all. Designating an area that has valid ozone data that is clearly meeting the standard as "unclassifiable/attainment" improperly communicates uncertainty as to an area's ozone levels and if its emissions may be contributing to nonattainment downwind. The EPA supervises state monitoring programs and should be able to assess whether or not a regulatory ozone monitor is correctly positioned within an area to capture peak ozone levels. Photochemical modeling also provides EPA with a readily available tool to determine if a county may be contributing to nonattainment in a nearby county. The only way an area can be designated "attainment" under the current approach would be for it to have previously been designated "nonattainment." An area that has "clean" ozone data and is not contributing significantly to nonattainment conditions downwind should be able to receive an initial designation of "attainment."

By EPA using the same "unclassifiable/attainment" designation for counties that do not have regulatory monitoring data as it does for counties with monitoring data that is measuring attainment, it is associating "attainment" conditions with an area that it has no direct information on ozone levels for, and many such areas may, in fact, be experiencing ozone levels above the level of the proposed ozone standards. It would be more appropriate to designate such areas as "unclassified" since insufficient information exists to determine whether the area is or is not attaining the standard or contributing to downwind nonattainment.

[23] EPA. *Health Risk Exposure Assessment for Ozone – Final Report*. EPA-452/R-14-004a. August 2014. http://www.epa.gov/ttn/naaqs/standards/ozone/data/20140829healthrea.pdf.
[24] 77 FR 30088. http://www.gpo.gov/fdsys/pkg/FR-2012-05-21/pdf/2012-11618.pdf

2.2.6 General Rationale for Considering Measurement Uncertainty

Although EPA's traditional approach to designating areas for ozone NAAQS has involved setting a bright line dividing areas into two designation categories – nonattainment and unclassifiable/attainment – Congress quite deliberately included three types of designations, one of which better describes the situation many areas may face at the end of 2016 – having a design value slightly above the standard but within the range that could plausibly be attributed to monitoring measurement uncertainty. EPA is not explicitly required to designate an area nonattainment if its 2016 design value is measuring 1 ppb above the standard it sets, but it did explicitly provide the option for EPA to designate areas as "unclassifiable" designation for "any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant."

In light of these considerations and the very significant implications of a nonattainment designation for an area, the EPA could consider the approach detailed above. This approach, used in conjunction with EPA's Ozone Advance Program, could provide an effective and cost-efficient way to attain and maintain the standard without resorting to the severe consequences of a nonattainment designation.

2.3 Justification for Extending Time Frame for Designations by One Year

Given the implications of getting an area's initial designation wrong, EPA has an interest in having a high degree of confidence in its initial designations. As the evidence from the designations for the 2008 ozone NAAQS show, just because an area has a design value that is attaining the standard in 2016 does not mean that it will be attaining the standard in 2017 and vice-versa. EPA could use its discretion under Section 107 of the CAA to extend the designation process by one year (out to October 2018, based on 2015-2017 monitoring data) for areas with 2016 ozone design values that are close to the standard in order to assess whether these additional emission reductions are sufficient to bring the area's 2017 ozone design value into attainment of the standard and to account for extra monitoring data, as it did indirectly for the 2008 ozone NAAQS designation process. EPA could use the ranges associated with measurement uncertainty described above (+/- 4 ppb) to decide which areas to defer designations for.

Alternatively, if a 2016 design value was above the standard, but a preliminary 2017 design value calculated using 2015, 2016, and first two quarters of 2017 was not yet violating the NAAQS, EPA could consider deferring the designation by a year. Either of these approaches would be consistent with Section 107's allowance for the designation timeline: "such period may be extended for up to one year in the event the Administrator has insufficient information to promulgate the designations."

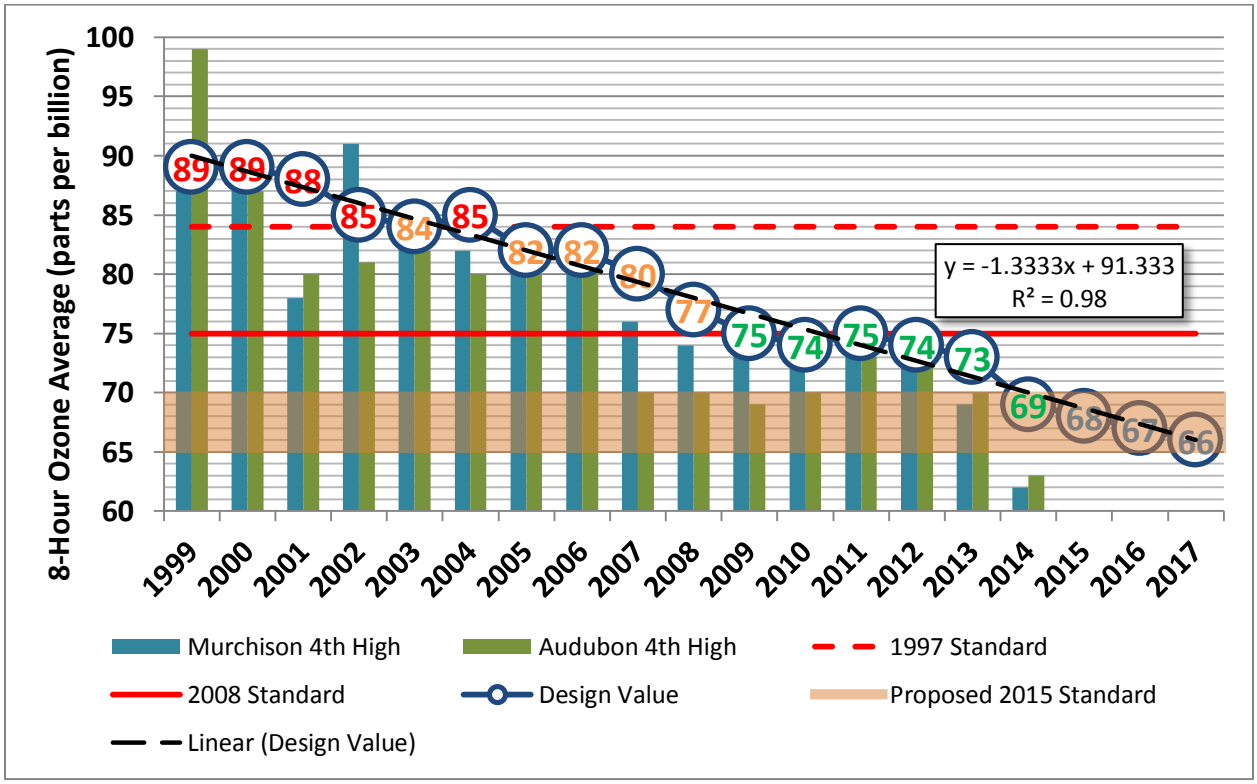
2.3.1 Many Ozone Advance Program Participants May be Able to Attain by 2017

EPA could consider extending the designation promulgation deadline by one year under certain circumstances, as permitted under statute. Specifically, if an area has 2014-2016 ozone data that is measuring above the standard and is the area is participating in EPA's Ozone Advance Program, the EPA could extend the nonattainment designation period for those areas by a year upon petition from the state in which the area is located. Under such circumstances, EPA would be lacking a key piece of information that would determine whether it was necessary to designate the area nonattainment: whether emission reductions occurring in 2017 would be enough to bring the area's design value into attainment.

Analysis of modeling data and ozone design value trends by the Capital Area Council of Governments (CAPCOG) indicate that the Austin-Round Rock MSA is likely to have a design value of 67 ppb for 2016, but may be able to get as low as 65 ppb by the end of 2017. The design value trend analysis below shows a projected 2017 design value of 66 ppb without considering the additional emission reductions

that are expected to occur in that year due to implementation of Tier 3 light duty fuel and vehicle standards.

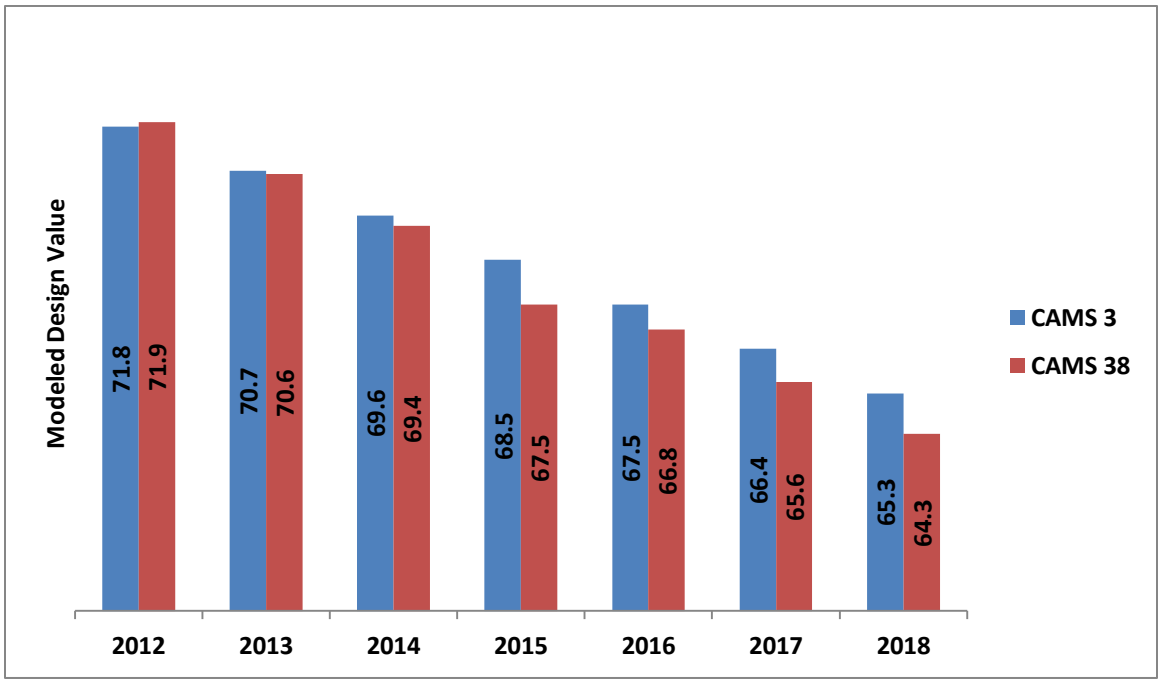
Figure 9: Austin-Round Rock MSA Design Value Trend 1999-2017 (not including Tier 3 Reductions)



Similarly, the most recent fine-scale modeling for the region, which was completed prior to the completion of the Tier 3 rulemaking and release of MOVES2014, showed a 9.0% reduction in ozone design values at CAMS 3 and 10.5% reduction at CAMS 38 between 2012 and 2018.[25] Using the attainment demonstration modeling technique of applying these factors to a center-weighted "baseline" design value for 2012 that uses an average of the 2010-2012, 2011-2013, and 2012-2014 design values, the projected 2018 design value for Travis County would be 65.3 without the benefit of the Tier 3 standards. Interpolating between those two years produces 2016 and 2017 design values very similar to the design value trend analysis.

[25] AACOG. *Future Year Photochemical Modeling, 2012 and 2018*. December 15, 2013. http://www.capcog.org/documents/airquality/reports/2013/AACOG_2012_and_2018_Modeling_Report-Body_Only.pdf.

Figure 10: Central Texas Modeled Design Values 2012-2018 without Tier 3 Emission Reductions



2.3.2 One-Year Extensions Would Account for Impact of Tier 3 Vehicle Standards

As EPA points out in the preamble to the ozone NAAQS proposal, "the emission reductions from…mobile source programs are significant and will continue to be realized throughout the implementation period for any revised O_3 NAAQS. The EPA projects that between 2011 and 2025, onroad and nonroad mobile NO_X will decline by more than 60% and onroad and nonroad mobile VOC will decline by more than 50%."[26] Given these trends and the significant emission reductions expected to occur in 2017, it is likely that there are many areas might face a situation similar to the one Central Texas is, in which the extra year permitted under the CAA for the nonattainment designation process could well mean the difference between the area being designated nonattainment or not.

Given the level of efforts EPA has undertaken to put these Tier 3 standards in place and the investments that states and communities across the country have undertaken to try to stay in attainment of the ozone NAAQS, it would be counterproductive to force a nonattainment designation on an area that is measuring just above the standard in 2016 but likely to be in attainment by the end of 2017.

The additional emission reductions that are expected to occur as the result of the Tier 3 standards appear to be just enough that the area's 2017 design value could be low enough to monitor attainment of a 65 ppb standard. EPA's Air Quality Modeling Technical Support Document for the proposal for the Tier 3 standards shows a difference of 0.61 ppb between the 2017 "baseline" and "control" scenarios.[1] The Technical Support Document for the final rulemaking used different modeling, but found a similar reduction (0.63 ppb) between the 2018 "baseline" and "control" scenarios.[1] That level of reduction, applied to an "uncontrolled" 2017 design value of 66.3 or 66.4 would bring the "controlled" design value for 2017 to 65.67 – 65.79 ppb, which would be in attainment of a 65 ppb standard.

[26] 79 FR 75371

2.3.3 Use of Discretion in Extending the Designation Process by a Year is Consistent with Recent EPA Statements Regarding Ozone Nonattainment Designations

Much of the logic used by the EPA in an August 14, 2014, letter to Earthjustice denying their petition to redesignate 57 areas to nonattainment for the 2008 ozone NAAQS would also be applicable to the situation described above.[27] In this letter, the EPA administrator stated that, "EPA believes it is appropriate to allow time for affected states to consider appropriate measures to address air quality problems. The EPA expects that reductions in emissions of oxides of nitrogen and volatile organic compounds due to existing federal measures, such as the Tier 3 motor vehicle standards, and state-led efforts will assist these areas in attaining the 2008 ozone NAAQS." While, as EPA correctly points out in this letter, there is a difference between the initial designations EPA must make following promulgation of a new or revised NAAQS and any subsequent designations after the initial designations are finalized. In deciding not to exercise its discretion to initiate a redesignation process for the areas referenced in the petition, EPA stated that it, "considered air quality trends and expected emission reductions in the near term," that "EPA expects this overall long-term trend to continue as additional emissions reductions area achieved through existing regulations," and that "emissions of NO_X in the United States are expected to decline by 29 percent from 2011 through 2018, even when accounting for increases in some sectors, such as the oil and gas production industry."

By the time the Federal Register notice designating areas nonattainment is published in late 2017, most areas will have completed the peak periods of their 2017 ozone seasons and many of their uncertified 2017 design values may already be attaining the standard. The designation process for the proposed standards would be occurring in the midst of the time period referenced by EPA as justifying its denial of a petition to designate the area as nonattainment for the 2008 ozone NAAQS. If these trends in ozone levels and emissions can justify EPA's decision not to exercise its discretion to designate areas nonattainment for the 2008 NAAQS since it did not consider it necessary, it could also justify an interpretation of the CAA that allows consideration of the effect of another year of ongoing emission reduction measures on ozone levels in deciding on designations.

As EPA also points out in its response, area nonattainment designations under a "marginal" classification "would not on its own result in additional local attainment planning requirements for the areas." This critical point underlines why an area that is above, but close to, the standard in 2016 should be given one extra year before EPA finalizes its designations – the one year of operating under a "marginal" nonattainment would not be expected on its own to achieve new emission reductions beyond what would already be occurring.

2.3.4 Extensions Could Incentivize Voluntary Emission Reductions

This approach would provide a powerful incentive for areas that are currently participating in the Ozone Advance Program to aggressively implement voluntary emission reductions without being designated nonattainment over the next few years, and would provide an incentive for areas that are not yet participating in the program to do so. If an area can attain the standard by the end of 2017 such that EPA can avoid designating it nonattainment, that would spare the area, the state, and the EPA from the regulatory burdens of a nonattainment designation that was not necessary to achieve the desired air quality improvements.

[27] Letter from EPA Administrator Gina McCarthy to Seth Johnson, Senior Associate Attorney, Eathjustice . August 14, 2014. http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2014-0563-0004

2.4 Summary of the Case for New Approaches to the Designation Process

Unlike the process that EPA undertakes for its regular NAAQS reviews and the criteria that can be considered as part of that process, the courts have not been nearly as specific in directing EPA how it must implement a NAAQS. Where Congress has not been explicit in instructing EPA in how to implement the standard, including in the designation process, the courts must defer to EPA's decision on what the best way to implement the standard is as long as it is a "permissible" interpretation of the statute.

EPA might consider the following points with respect to nonattainment designations:

- EPA already has tools available to it under Section 110 of the CAA to require administratively the same controls that it is forced to impose on states and areas by statute if an area is designated nonattainment – it is not necessary to designate an area as nonattainment for EPA to require any of those controls for that area;
- In many cases, a nonattainment designation is unlikely to accelerate attainment of the standard any quicker than would be achieved without a nonattainment designation, especially in areas such as the Austin-Round Rock MSA that are already aggressively reducing emissions while still designated "attainment/unclassifiable;"
- Many of the various statutory requirements for an ozone nonattainment area are no longer necessary or important for controlling ozone, including particularly the transportation conformity requirements and mandatory VOC controls; and
- Applied narrowly, some of the statutory requirements could force an area to achieve extra reductions beyond what would have been required if the area had postponed action.

In general EPA could reserve a formal "nonattainment" designation only for situations that under the statute it would be required to do so. **There are permissible interpretations of the CAA that would allow the EPA to avoid designating an area with a 2016 design value above the proposed NAAQS as nonattainment in October 2017**.

The two ideas offered above – accounting for measurement uncertainty and extending the timeframe for designations – should help states and the EPA avoid designating areas like the Austin-Round Rock MSA as nonattainment where it is not explicitly clear that Congress intended the area to be designated nonattainment for a new ozone NAAQS. At a minimum, the efforts that local areas like the Austin-Round Rock MSA have put into avoiding a nonattainment designation could warrant special consideration in the designation process. EPA could specifically offer a proposed rulemaking on a nonattainment designation approach and take comment on both of these approaches. EPA could then evaluate these comments and determine whether there is enough merit in them to modify the approach identified in the preamble to this ozone NAAQS proposal.

3 "Infrastructure" and "Transport" State Implementation Plan Requirements for the New NAAQS

Comment: EPA should fully and expeditiously implement the interstate transport and infrastructure State Implementation Plan (SIP) requirements of the CAA for the proposed NAAQS to address the interstate and intrastate transport of ozone that can undermine regional voluntary ozone reduction programs in areas like Central Texas.

One important aspect of this new NAAQS is how states will be required to fulfill the "infrastructure" and "transport" SIP requirements described in Section 110 of the CAA. This section requires that within three years after EPA promulgates a new or revised NAAQS, each state must submit a "plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such state." Among other things, such plans are required to:

- "(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this Act;"
- "(C) include a program to provide for the enforcement of the measures described in subparagraph (A), and the regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C an D;"

3.1 Interstate Transport Obligations

Before areas like Central Texas are asked to come up with additional emission reductions beyond what is already being done locally, EPA needs to make sure that states promptly fulfill their obligations to avoid significantly contributing to nonattainment or interfering with maintenance of the proposed NAAQS under Section 110(a)(2)(D) of the CAA.

EPA's recent 2008 ozone NAAQS interstate transport modeling shows that the combined impacts from each state's anthropogenic emissions on each regulatory ozone monitoring station's design value in 2018. For the Cross-State Air Pollution Rule (CSAPR) and EPA's January 2015 memo on interstate transport for the 2008 ozone NAAQS, EPA used an air quality impact threshold of 1% or more of the NAAQS for an area with a design value modeled to be above the standard in a future year in order to determine if the state's anthropogenic emissions were "significantly" contributing to nonattainment at those monitoring stations or interfering with maintenance of the NAAQS.

An alternative threshold EPA could consider would be 0.5 ppb, used regardless of where it sets the standard. The use of a 0.5 ppb threshold would make that state's anthropogenic emissions more likely than not to make a difference in a downwind monitor's design value. Similarly, a threshold of 1 ppb could be used, since an impact of 1 ppb or more would definitely make a difference in an area's design value. Regardless of whether EPA used either of these thresholds or the 1% threshold used in CSAPR and the 2008 ozone transport memo, upwind contributions are likely to make the difference in Central Texas's attainment of a 65 ppb standard in 2018. The table below shows a summary of these contributions.

Table 12: Modeled Upwind Impacts of >0.5 ppb on Travis County 2018 Design Value

State	Impact
Alabama	0.72 ppb
Arkansas	0.98 ppb
Illinois	0.55 ppb
Louisiana	2.56 ppb
Missouri	0.74 ppb
Oklahoma	0.57 ppb
Subtotal: States with >= 1.00 ppb Impact	2.56 ppb
Subtotal: States with >= 0.70 ppb Impact	5.00 ppb
Subtotal: States with >= 0.65 ppb Impact	5.00 ppb
Subtotal: States with >= 0.50 ppb Impact	6.12 ppb

There are many areas across the country like Central Texas for which interstate transport has a disproportionately large impact on peak ozone levels. We are concerned that without clear guidance from EPA as to what the states must do to fulfill the related prohibitions in the CAA, it may not be possible for states to submit implementation plans by October 2018 that can demonstrate that they are meeting these "good neighbor" requirements. We note that EPA is only now in 2015 beginning to implement the Cross-State Air Pollution Rule (CSAPR) to address the 1997 ozone and particulate matter standards, 18 years after those standards were finalized, largely because of confusion and uncertainty as to what is required to fulfill these provisions. Delays in implementing this "good neighbor" provision will shift more of a burden for reducing emissions on downwind areas than the CAA intended and would be contrary to the purpose of the act to "encourage or otherwise promote reasonable Federal, State, and local governmental actions…for pollution prevention" (§101). Given the extent of interstate ozone transport on future ozone levels, prompt implementation of this requirement is important to ensuring speedy and stable attainment of the proposed NAAQS.

The Supreme Court's recent decision upholding CSAPR indicated that cost of emission reductions was a valid consideration for EPA to use in assessing whether a state should be required to reduce emissions in order to fulfill these requirements, and the CAC agrees that this should continue to be a consideration – requiring states with a high degree of control over emissions to further reduce emissions before states with lower degrees of control is an inefficient way to achieve the necessary air quality improvements that would be driven by the proposed NAAQS. While the Supreme Court did allow EPA to implement this rule using trading among states, it did not require it to do so, and requiring a similar approach for the proposed NAAQS would make it nearly impossible for a state to independently meet the requirements of Section 110(a)(2)(D), forcing it to instead wait until EPA issued a Federal Implementation Plan to address the problem, which could be years after the required deadline.

Clear guidelines in the final rulemaking for this NAAQS as to what the air quality threshold for interstate transport will be for the proposed NAAQS and what year or years are relevant for these analysis is important to ensuring that the costs of implementing this NAAQS are fairly distributed.

3.2 Permitting Requirements for Attainment Areas

CAC encourages EPA to incorporate into any implementation rule or guidance issued for approval of "infrastructure" SIPs requirements more stringent requirements for assuring that state permitting programs do not interfere with efforts to attain and maintain NAAQS in downwind areas within the same state. While the CAA explicitly requires that SIPs contain adequate provisions to prevent its

emissions from contributing significantly to nonattainment or interfering with maintenance in an area if it is located in another state, it is not as explicit in requiring that emissions from one area of a state not interfere with maintenance of the NAAQS in another area of the state. However, Section 110(a)(1) does require that the SIPs "provides for implementation, maintenance, and enforcement of [the NAAQS] in each air quality control region (or portion thereof) within such state."

Furthermore, these implementation plans are required to:

- "include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this Act;" (§ 110(a)(2)(A))
- "include a program to provide for the enforcement of the measures described in subparagraph (A), and the regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D;" (§ 110(a)(2)(C))
- "contain emission limitations and such other measures as may be necessary, as determined under regulations promulgated under [part C], to prevent significant deterioration of air quality in each region (or portion thereof) designated pursuant to section 107 as attainment or unclassifiable;" (§ 161)
- "the maximum allowable concentration of any air pollutant in any area to which [part C] applies shall not exceed a concentration for each pollutant for each period of exposure equal to – (A) the concentration permitted under the national secondary ambient air quality standard, or (B) the concentration permitted under the national primary ambient air quality standard, whichever concentration is lowest for such period of exposure." (§ 161(b)(4));

Taken in combination, CAC believes that these provisions call for EPA to take stronger action to protect areas like the Austin-Round Rock MSA that have aggressively been reducing local emissions, but where maintenance of a revised NAAQS could be heavily influenced by permits issued in areas outside of the MSA. There is nothing that would prevent, for instance, a state from issuing a permit to either a single large point source or numerous smaller stationary sources of NO_X emissions directly upwind from an urban area that was on the verge of violating a NAAQS. In the midst of the Austin-Round Rock MSA's implementation of the EAC SIP, a number of new, large coal-fired power plants were permitted directly upwind of the region. Over the past five years, as the region barely maintained compliance with the 2008 ozone NAAQS, permits issued for oil and gas production facilities in the Eagle Ford Shale region have led to modeled increases in local peak ozone levels of 0.72 – 0.80 ppb in 2012, with the impact projected to grow to 0.91 – 0.98 ppb by 2018, based on modeling conducted by the Alamo Area Council of Governments (AACOG) in 2013.[28]

For comparison, the 2012 impacts from Eagle Ford Shale emissions exceeds the modeled impact in 2007 of all of the emission reductions modeled for the Austin-Round Rock MSA's Early Action Compact SIP (0.71 – 0.79 ppb).[29] This includes the vehicle inspection and maintenance (I/M) program that Travis

[28] AACOG. *Future Year Photochemical Modeling for the Capital Area Council of Governments*. December 15, 2013. http://www.capcog.org/documents/airquality/reports/2013/AACOG_2012_and_2018_Modeling_Report-Body_Only.pdf.

[29] TCEQ. *Austin Area Early Action Compact Ozone State Implementation Plan Revision*. https://www.tceq.texas.gov/assets/public/implementation/air/sip/sipdocs/2004-06-AUS/AUS_narr_181104.pdf. November 17, 2014.

County and Williamson County voluntarily adopted in 2004. This one program is currently costing motorists in Central Texas approximately $25-$30 million a year, and was modeled to have an impact of 0.33 – 0.35 ppb in 2007, although the impact now is likely about two-thirds that.[30] Using that as a benchmark, it would cost another $80-$100 million per year to abate the increase in ozone from these upwind emissions through additional local emission controls.

If the counties that make up the Eagle Ford Shale region were a separate state, the EPA's would consider them as having a significant air quality impact (>1%) compared to the proposed NAAQS. However, since it is in the same state as the Austin-Round Rock MSA, we must rely on EPA and TCEQ to find a way through the provisions of the CAA to avoid permitting in upwind areas like the Eagle Ford Shale from interfering with our region's attainment of the proposed NAAQS.

The CAA requires that SIPs provide for attainment and maintenance of the NAAQS in each air quality control region (AQCR), not just for areas that are designated nonattainment in EPA's initial round of designations following promulgation of a new or revised NAAQS. Under § 107(c) of the CAA an AQCR is "any interstate or intrastate area which [the Administrator] deems necessary or appropriate for the attainment and maintenance of ambient air quality standards." Consistent with these provisions of the CAA, EPA could consider establishing overall numeric limits on the maximum amount of NO_X and VOC emissions that can be permitted within each air quality control region. These limits could be set consistent with the photochemical modeling used by EPA or the states in support of the Transport SIPs. Since these plans will be required to be submitted by states to the EPA by October 2018, EPA could use the substantial modeling data already available for 2018 in order to establish these limits. States would be required to fully account for all emissions permitted for stationary sources under this scenario to verify that the assumptions matched. This would help ensure that states were fully accounting for all NO_X and VOC emissions permitted. This would also limit the potential impact that the proliferation of small stationary sources could have on ozone levels within the vicinity of the sources, since the permits for such sources would reduce the total amount of emissions available to be permitted within that AQCR.

Beyond this basic control, since urban ozone levels are very sensitive to not only the overall level of emissions within the corresponding AQCR, but also the location of those emissions, EPA should also consider requiring PSD permitting programs to include photochemical modeling demonstrations for any permit resulting in a net increase in NO_X or VOC of over 40 tons per year, which is defined as "significant" under 40 CFR 52.21(b)(23)(i) if the state has a designated nonattainment area. Such a demonstration could show that the net increase from issuance of the permit would not:

- Increase ozone levels anywhere downwind such that it would cause that area to violate the standard once the facility began operation if it would not otherwise be modeled to be in violation of the standard; and
- Limit the modeled impact anywhere in the modeling domain to no more than the threshold used for interstate transport analysis (for example, 1% of the proposed NAAQS (either 0.70 ppb or 0.65 ppb).

[30] TCEQ. *Appendix J to the Austin-Round Rock Early Action Compact State Implementation Plan Revision: Supplemental Control Strategies Modeling*. https://www.tceq.texas.gov/assets/public/implementation/air/sip/sipdocs/2004-06-AUS/AppendixJ.pdf. November 17, 2014.

4 Implementing the Proposed NAAQS in New Nonattainment Areas

Comment: EPA should consider adjusting the implementation requirements in areas designated nonattainment for the proposed ozone NAAQS to better accounts for voluntary emission reduction efforts already being underway in areas like Central Texas.

The last time the CAA was significantly amended was 25 years ago. By the time EPA designates areas nonattainment under the proposed standard, 27 years will have passed since the last time Congress looked closely how to implement NAAQS. That is more than twice the interval between the 1977 CAA Amendments and the 1990 Amendments, and almost four times the interval between the 1970 CAA and the 1977 Amendments. The highly detailed and prescriptive implementation regime for ozone nonattainment areas are described in Title I, Subpart 2 of the 1990 Amendments. These provisions arose out of a circumstance in which ozone levels had not significantly changed between 1977 and 1990, and Congress determined that it was time to change how the ozone NAAQS was implemented. This particular part of the legislation was based largely on the following assumptions, held by Congress at the time:

1. The key type of ozone exposure that needed to be controlled was peak 1-hour concentrations above 0.12 parts per million (ppm), as expressed in the 1979 one-hour ozone NAAQS;
2. Such ozone concentrations would be found primarily or exclusively in dense metropolitan areas;
3. Peak ozone concentrations are driven primarily by urban anthropogenic VOC emissions; and
4. Ozone problems would continue to persist in such areas unless states expeditiously took action to emissions in such areas;
5. Nonattainment designations were necessary to push states to enact such emission reductions.

While these assumptions drove Congress to enact the highly prescriptive provisions of Subpart 2 in 1990, not a single one of them holds true today for the proposed ozone standards:

1. EPA is seeking through this proposed NAAQS to achieve additional protections from exposure to 8-hour ozone concentrations of 65-70 ppb, a level that is more than 40% lower than the level of the standard in place in 1990;
2. Such ozone concentrations are found across very broad swaths of the entire country, including in very rural areas, such as Brewster County, Texas, which is hundreds of miles from the nearest urban area;
3. Peak ozone concentrations are driven primarily by NO_X emissions in most parts of the country;
4. Ozone concentrations above the proposed standard are projected to decline steeply over the next 10-20 years due primarily to federal on-road mobile source emissions standards, rather than state-level or local-level regulations; and
5. As the example of Central Texas shows, it is possible to achieve very significant emission reductions beyond what is achieved through such federal standards, even without a nonattainment designation – local NO_X emissions are about 10% lower in Central Texas today than they would otherwise be thanks to emission reductions voluntarily implemented by the state and local governments over the past 13 years.

In light of where things stand today, the CAC encourages EPA to consider ways to interpret the CAA that would enable it to better account for current circumstances, and in particular, avoid interpreting it in such a way that would inadvertently penalize areas like Central Texas for taking the initiative to reduce emissions voluntarily prior to a nonattainment designation. There are ways that EPA can modify its

approach to implementing the proposed ozone NAAQS that would better match the current scientific understanding of ozone, trends in emission reductions, and the extent to which states and local governments are willing to voluntarily reduce emissions and ozone exposure outside of the nonattainment designation and SIP process. Some of our suggestions below might be helpful as EPA considers which implementation strategies would best fulfill one of the primary goals of the Clean Air Act, defined in Section 101(c) as, "to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this Act, for pollution prevention."

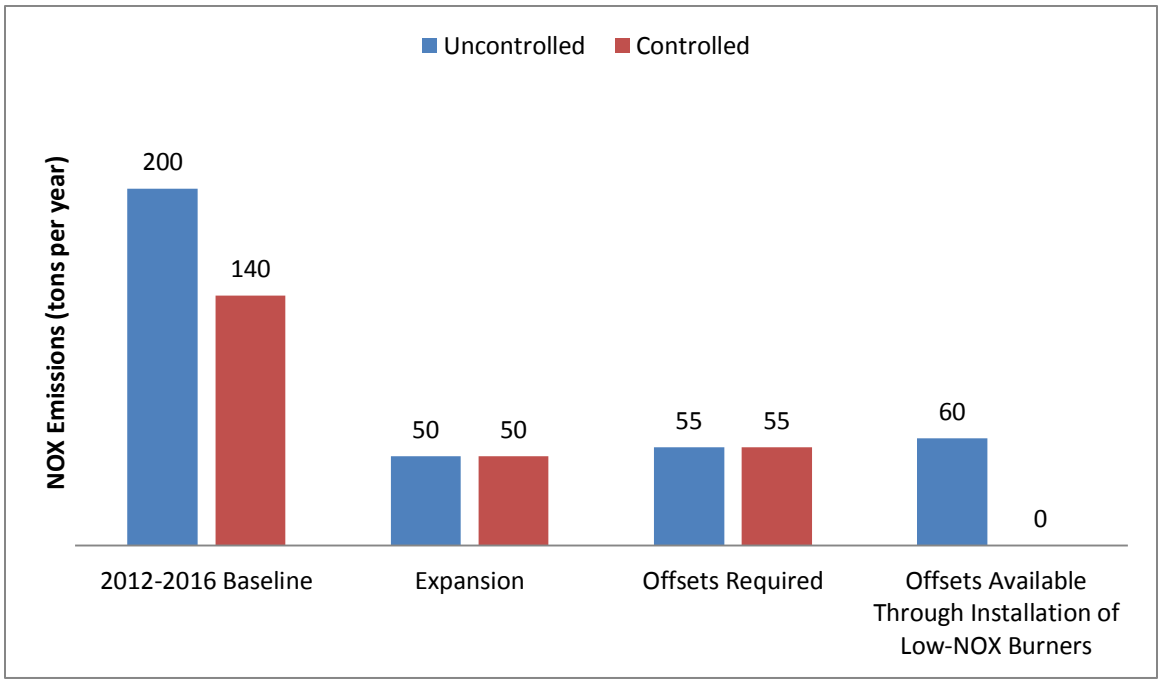
4.1 Allow for Adjustments to Baseline Emissions to Account for Voluntarily Adopted Controls

There are some specific requirements for nonattainment areas that, if EPA takes the same approach to implementing as it has in the past, would cause the area to wind up being penalized for having taken voluntary action ahead of a nonattainment designation. CAC encourages EPA to look for ways that it can implement the new standard without penalizing voluntary emission reductions. We believe that any interpretation of the statute that results in such penalties would be contrary to the stated intent of the CAA "to encourage or otherwise promote reasonable Federal, State, and local government actions, consistent with the provisions of this Act, for pollution prevention."

4.1.1 Nonattainment New Source Review Permitting

Under EPA's existing approach to implementing the permitting requirements under the CAA, the operator of a stationary source that voluntarily reduces emissions prior to a nonattainment designation can also be penalized by having a lower baseline emissions level used for nonattainment new source review (NNSR) permitting. In this situation, the offsets that would be available to the operator from reducing emissions after the designation occurred would not be available if those reductions occurred prior to the designation. The figure below shows a scenario in which a power plant that, if uncontrolled, would emit 200 tons per year (tpy) of NO_X. If it installed low-NO_X burners prior to 2012, achieving a 30% reduction in NO_X emissions, its "baseline" emissions from 2012-2017 would average 140 tpy. Under a "marginal" nonattainment designation for ozone, if the plant wished to add a unit that emitted 50 tpy, it would be required to obtain 55 tons per year of offsets (110%). If it had remained uncontrolled, the plant would be able to obtain the necessary offsets by installing the same low-NO_X burners after it was designated nonattainment. However, that option is not available to this plant operator, since it was voluntarily reduced those emissions prior to the period used for NNSR permitting. The plant's lower baseline emissions would force it to obtain offsets for the expansion from elsewhere, adding to the cost of the expansion and financially penalizing the facility for having voluntarily installed the equipment earlier than was necessary.

Figure 11: Impacts of Voluntary Emission Reductions on Nonattainment New Source Review Permitting



If point source operators voluntarily reduced emissions following assurance by EPA that they would not be penalized for these reductions if the area was later designated nonattainment, the EPA should honor that commitment and find a way to interpret this requirement in a way that avoids penalizing the operator.

This is the situation that several point source operators in the Austin-Round Rock MSA are in. These operators voluntarily installed pollution control devices as part of the EAC process under the assumption that they these reductions would be "creditable" if the MSA wound up designated nonattainment in the future. These facilities now have lower emission rates than they would otherwise have, and ozone levels are lower as a result. If the Austin-Round Rock MSA is designated nonattainment for the proposed NAAQS and EPA does not honor the commitment made as part of the EAC process, these facilities will wind up being penalized for their proactive measures. The offset credits that would be available through installation of the technologies currently in place on an uncontrolled facility will no longer be available to them. This will force them to pay more to expand than if they had never voluntarily installed the pollution control equipment, and any competitors that had postponed reductions until after a nonattainment designation would have a competitive advantage. It will also send a very bad message to other areas that may be considering taking voluntary actions to reduce emissions ahead of a potential nonattainment designation. EPA could consider using a different set of years or modeling a "without voluntary measure" scenario in establishing a point source operator's emissions baseline if they voluntarily reduced emissions under the EAC process or the Ozone Advance Program that better accounts for these voluntary actions.

4.1.2 Conformity Requirements

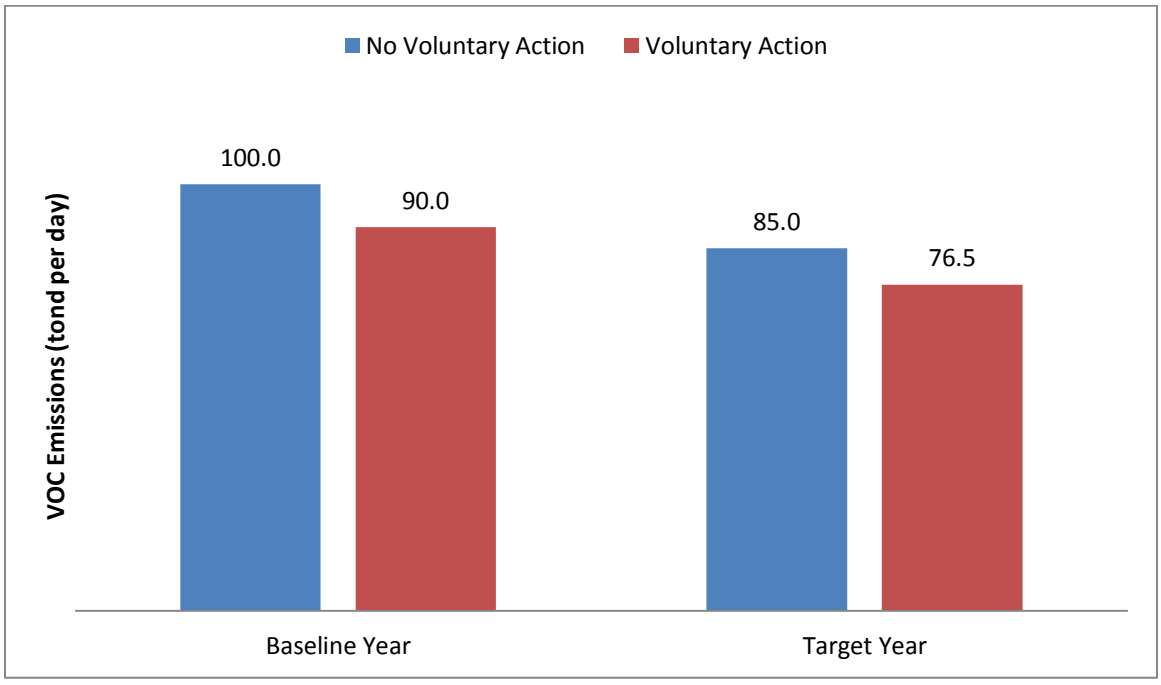
The conformity tests required for a "marginal" area require that future year on-road emissions are less than a given baseline. Therefore, any voluntary emission reductions that cause the baseline level to be lower than it would otherwise have been constrains highway construction beyond what would have

been required. While it is unlikely that these differences would impose a real constraint on transportation planners, since on-road emissions are projected to continue to drop substantially and stay at a level well below current levels for decades to come, this is another illustration of how the EPA's implementation of the proposed NAAQS could wind up penalizing an area that voluntarily reduced emissions. EPA could allow areas to model the baseline without these voluntarily implemented measures included to avoid this problem.

4.1.3 Reasonable Further Progress Requirements

If EPA does set the level of the standard in its proposed range of 65-70 ppb as proposed, it is unlikely that the Austin-Round Rock MSA would be designated a "moderate" nonattainment area. However, if the area were to fail to meet the standard by 2020, it could get "bumped up" to a moderate classification. Implementing the requirements for a moderate classification on an area that had voluntarily implemented emission reductions can cause other outcomes that it is doubtful Congress intended when it passed the 1990 CAA Amendments. The figure below shows a simplified version of the impact of voluntary emission reductions on the target VOC emission level that a nonattainment area would be required to reach under the "reasonable further progress" (RFP) requirements for moderate nonattainment areas. The requirement for a 15% reduction in baseline VOC emissions forces an area that has voluntarily implemented emission reduction measures prior to a baseline year to be required to achieve future emissions levels that are lower than what would have been required if they had not implemented these measures.

Figure 12: Impact of Voluntary Emission Reductions on Target Emission Level Required for Reasonable Further Progress (tpd)



Under this scenario, the area's baseline emissions are 10 tons per day of VOC lower than they would have been if they had not taken any voluntary action. The area that took no voluntary action would need to come up with 15 tons per day of emission reductions by the target year (15%), reaching a target level of 85 tons per year. The area that took voluntary action would need to come up with 13.5 tons per day of additional emission reductions in order to reduce baseline emissions by 15% to reach a target of

76.5 tons per day. While the incremental amount of emission reductions required after the baseline year is less for the area that voluntarily implemented controls, the target emissions for the area that voluntarily implemented controls is 8.5 tons below the target emissions level required for the area that took no action (85% of the 10 tpd reduction from the "uncontrolled" baseline).

4.2 Reduce Burdens of Transportation Conformity Analysis

The existing engine standards in place for light duty and heavy duty vehicles are projected to achieve large reductions over the next decade and remain at a very low level relative to current emissions for many decades, based on modeling projections using EPA's MOVES2014 model. The Transportation Conformity process is designed to ensure that Federal funding for transportation projects and approval of transportation plans is consistent with the goals of eliminating or reducing the severity and number of violations of the NAAQS and that such activities won't cause or contribute to any new violations, increase the frequency or severity of any existing violation, or delay timely attainment of the standard or any required emission reductions or other milestones.

The actual influence that these requirements can have over future year NO_X or VOC emissions is very limited, given the very low emissions rates of new vehicles and ongoing fleet turnover and the limited extent to which road construction decisions can actually influence regional on-road vehicle activity. A recent analysis by the Federal Highway Administration (FHWA) showed a 70% decrease in NO_X emissions from on-road sources nationwide between 2015 and 2030 due to fleet turnover and federal emissions standards for vehicles despite a 17% increase in vehicle miles traveled over the same period.[31] As vehicles get cleaner, the relative impact of travel efficiency improvements on ozone reductions will therefore diminish proportionately. EPA has estimated that a "bundle" of such improvements that might be driven by conformity requirements would reduce the already low 2030 levels by only another 1% compared to 2015 levels.[32] That level of emission reductions would not be nearly enough to change the region's design value.

For an area like the Austin-Round Rock MSA that has been aggressively targeting on-road emissions for years, including through the transportation planning process at the Capital Area Metropolitan Planning Organization (CAMPO), it is not clear that the transportation conformity process would have any influence on the region's compliance with the new ozone NAAQS at all, although it could lead to serious disruptions in the transportation planning process in one of the fastest growing regions of the country. For example, between 2010 and 2012, our colleagues in the Beaumont-Port Arthur area experienced a transportation conformity lapse of almost two years due to being 0.4 tons per day over their emissions budget for VOC, even though at the time, they were attaining both the 1997 and 2008 ozone standard.

Some remedies that EPA might consider that would be helpful in relieving these burdens:

- Consider waiving the requirement for areas that are participating in the Ozone Advance Program if they are already performing similar analyses in their transportation planning process;
- Consider waiving the requirement for areas projected to attain the standard prior to 2020;
- Consider whether it is necessary or appropriate to set VOC budgets if an area's ozone levels are driven by NO_X emissions;

[31] E-mail communication from Jeff Houk to Barbara Malley, "RE: Request for AQ Info." 12/9/2014.

[32] EPA. *Potential Changes in Emissions Due to Improvements in Travel Efficiency*. EPA-420-R-11-003. March 2011. http://www.epa.gov/oms/stateresources/policy/420r11003.pdf. Page vii – 3.4% reduction in 2030 NOX levels. This reduction was applied to the 2030 emissions levels in the FHWA analysis and divided by the FHWA's 2015 emission levels.

- Consider aligning the timing of various requirements in a manner that is more consistent with related requirements.

4.3 Remove Limits on Creditability of Voluntary Emission Reduction Measures

Through several guidance documents issued following the promulgation of the 1997 ozone NAAQS, EPA established procedures for states to incorporate voluntary mobile and stationary emission reduction measures into the SIP. The creditability of each of these types of voluntary emission reduction measures was limited to 3% of the total required emission reductions for a given requirement, for a total of 6% between the two categories. If the region needed to achieve 10 tpd of NO_X reductions as part of an attainment demonstration, then the state could count only 0.3 tpd of reductions from voluntary mobile emission reduction measures and another 0.3 tpd from voluntary stationary emission reductions. These limits on creditability should be rethought in the context of the proposed ozone NAAQS. In order to achieve further emission reductions in many areas like the Austin-Round Rock MSA, voluntary measures designed to influence emissions-generating behavior and activity are often most of the remaining emissions reduction measures that can be reasonably attained. Lifting this limit would be a good signal to areas participating in the Ozone Advance Program that the emission reduction measures they are securing can become important components of any future SIP.

5 Conclusion

This technical support document was intended to provide further detail on the four points contained in the CAC's comment letter, and provide the kind of technical, legal, and policy analysis that could enable EPA to fully consider its options for finalizing and implementing its proposed ozone NAAQS. Central Texas has enjoyed strong partnerships with the state and the EPA in the past and the region's air quality planning efforts have benefited greatly. One of the key ingredients to this success has been the willingness of EPA to look at innovative and flexible ways to implement ozone standards that are significantly different from the standard that was in place at the time of the 1990 Clean Air Act amendments.

While the CAC is commenting on the appropriate indicator, averaging time, or level for the NAAQS, it is asking EPA to carefully assess the extent to which a different form of the standard could provide a similar level of protection to the current form while providing a more stable target for states and local governments to try to reach.

EPA states in Section VII of the proposal that it does not expect to directly respond to comments on the designation process or implementation issues in the final action on the proposed NAAQS. However, it also states that such comments will be helpful as future guidance and regulations are developed. Since EPA has previously outlined the designation process in final NAAQS rulemakings, it could address the CAC's comments on designations in the final action on this proposal, but there will be other opportunities to have discussions on these issues as well. At this point, the CAC hopes that the comments on the designation process, interstate and intrastate ozone transport, and requirements for nonattainment areas will be helpful to EPA as it decides on approaches to implementing the standard once finalized. The CAC believes that the approaches identified in this document can enable the EPA to implement the NAAQS in a more equitable and confident manner than the approach that appears to be outlined in the proposal. The CAC believes that these approaches would more closely fulfill the underlying purposes of the CAA than the approach outlined in the proposal.