STATE ENVIRONMENTAL AGENCY PERSPECTIVES ON BACKGROUND OZONE & REGULATORY RELIEF

Results of a Survey by the
Association of Air Pollution Control Agencies (AAPCA)

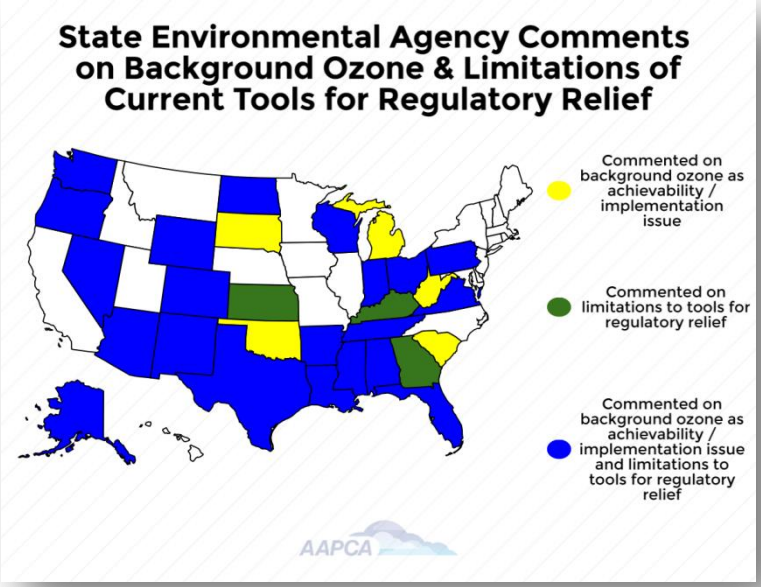
June 2015

Executive Summary

Following the end of the comment period for U.S. EPA's proposed revision to the National Ambient Air Quality Standards (NAAQS) for ground-level ozone, the Association of Air Pollution Control Agencies (AAPCA)[1] conducted a survey of all written state environmental agency comments on the proposal (totaling 44 state agency comments).

A majority of state agency comments raised concerns about the role of background ozone, including both naturally-occurring and internationally-transported contributions to ground-level ozone, as an achievability or implementation challenge (26 states). Similarly, a majority of state comments identified limitations to the Clean Air Act tools highlighted by U.S. EPA for regulatory relief to address background ozone (24 states).

In order to gather more comprehensive data, AAPCA also conducted a more detailed follow up survey of member states. While U.S. EPA has stated that there are three "tools for air agencies to address exceedances of an ozone standard potentially caused by background ozone," this survey found significant limitations and several common concerns with these tools. These include: a lack of familiarity with the tools as they relate to ozone; the burdensome and resource-intensive nature of the application/approval process; the low likelihood of EPA approval of applications under the tools; and outdated rules or guidance for state deployment of the tool.



While they have often been treated as limited, regional issues in the past, background ozone and limitations of the regulatory relief tools available to states are increasingly national concerns that could impact large swaths of the country, especially under a more stringent ozone NAAQS that requires reliance on unknown controls. These comments reflect a consensus among geographically-diverse states with differing perspectives on the proposed ozone NAAQS revisons.

[1] The Association of Air Pollution Control Agencies (AAPCA) is a national, consensus-driven non-profit organization focused on assisting state and local air quality agencies and personnel with implementation and technical issues associated with the federal Clean Air Act. 17 state environmental agencies currently sit on AAPCA's Board of Directors. AAPCA has not taken a position with respect to where the primary or secondary ozone NAAQS should be set.
AAPCA is housed in Lexington, Kentucky as a policy program with The Council of State Governments. You can find more information about AAPCA at: http://www.cleanairact.org.

Background

In the U.S. Environmental Protection Agency's (EPA) proposed revision to National Ambient Air Quality Standards (NAAQS) for ground-level ozone (O_3) under the Clean Air Act (CAA),[2] the Agency acknowledged that "… there can be events where O_3 levels approach or exceed the concentration levels being proposed in this notice (i.e., 60-70 ppb) in large part due to background sources. These cases… typically result from stratospheric intrusions of O_3, wildfire O_3 plumes, or long-range transport of O_3 from sources outside the U.S."[3] EPA staff's final Policy Assessment for the Review of the Ozone NAAQS indicated that this may become more prevalent if a more stringent standard was adopted, noting "the relative importance of background O_3 would increase were O_3 concentrations to decrease with a lower level of the O_3 NAAQS."[4] The Policy Assessment also identified EPA updates to its methodology for estimating changes in health risk and exposure related to ozone, including that "risk estimates are now based on total O_3 concentrations, as opposed to previous reviews which only considered risk above background levels."[5]

In the proposed revision, EPA concludes: "In most locations in the U.S., these events are relatively infrequent and the CAA contains provisions that can be used to help deal with certain events, including providing varying degrees of regulatory relief for air agencies and potential regulated entities."[6] Later in the preamble, EPA also suggests that "For a prospective standard of 70 ppb, the EPA does not believe that background O3 would create significant implementation-related challenges at locations throughout the U.S. and prevent attainment of the NAAQS."[7]

Similarly, a fact sheet accompanying the proposal indicated:

> Under the Clean Air Act, states are not responsible for reducing emissions that are not in their control. Existing and upcoming EPA regulations and guidance will assist states in ensuring background ozone does not create unnecessary control obligations as they continue their work to improve air quality.[8]

In the preamble and accompanying fact sheets, U.S. EPA identified three "tools for air agencies to address exceedances of an ozone standard potentially caused by background ozone"[9]:

- **CAA Section 319 - Exceptional events exclusions**
  "The term 'exceptional event' generally means either a natural event (such as stratospheric intrusions or wildfires) or an event caused by human activity that is unlikely to recur. Exceptional events can affect air quality but are not reasonably controllable or preventable.

[2] http://www.gpo.gov/fdsys/pkg/FR-2014-12-17/pdf/2014-28674.pdf.
[3] 79 FR 75382.
[4] EPA, "Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards" (final report), August 2014, 2-30 – 2-31, http://www.epa.gov/ttn/naaqs/standards/ozone/data/20140829pa.pdf.
[5] Ibid., 2-12 – 2-13.
[6] 79 FR 75382.
[7] 79 FR 75383.
[8] EPA Fact Sheet, "Tools for Addressing Background Ozone," November 25, 2014, http://www.epa.gov/airquality/ozonepollution/pdfs/20141125fs-tools.pdf.
[9] Ibid.

Under section 319 of the Clean Air Act, EPA may exclude air monitoring data influenced by exceptional events from use in making designations, provided states meet certain criteria."

- **CAA Section 179B - International Transport**
  "Section 179B of the Clean Air Act allows EPA to approve an ozone attainment plan for a nonattainment area, if the state demonstrates that it has taken appropriate local measures and international transport of pollution is a significant impediment to meeting the standard on time."

- **CAA Section 182(h) – Rural Transport Areas (RTAs)**
  "Section 182(h) of the Clean Air Act allows EPA to determine that a designated nonattainment area can be treated as a rural transport area if it meets certain criteria, including that: The area does not contain emission sources that make significant contribution to monitored ozone concentration in the area or other areas; and The area does not include, and is not adjacent to a Metropolitan Statistical Area."

EPA indicated that this relief may apply to designation as a nonattainment area (exceptional events), relief from the more stringent requirements of higher nonattainment area classifications (RTAs, exceptional events, international transport), or relief from adopting more than reasonable controls to demonstrate attainment (international transport).[10] The Agency acknowledged some limitations to the use of these tools, remarking that "None of these relief mechanisms are completely burden-free, meaning they all require some level of assessment or demonstration by a state and/or EPA to legally invoke" and that "In no case does the CAA authorize a blanket exclusion from the basic application of an air quality management regime because an area is significantly impacted by background O_3."[11]

In an April 2015 presentation to the Western States Air Resources Council,[12] EPA's Office of Air Quality Planning and Standards stated that the Agency's "[p]roposal acknowledges that background ozone contributes significantly to ozone levels on some days, especially in some areas in the western U.S." and that EPA is "working to ensure these mechanisms are as workable as possible for states and EPA to administer." The presentation also included an updated timeline for EPA to propose Exceptional Events Rule revisions and draft Wildfire/Ozone Guidance, which is now expected in Fall of 2015. The most recent Unified Regulatory Agenda (Spring 2015)[13] anticipates a Notice of Proposed Rulemaking on rule revisions for the Treatment of Data Influenced by Exceptional Events in October 2015.

[10] 79 FR 75382-75383.
[11] 79 FR 75383.
[12] http://www.westar.org/Docs/Business%20Meetings/Spring15/SF15/06.1%20AWOOD_westar_FINAL.pdf.
[13] http://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201504&RIN=2060-AS02.

Survey of State Comments - Findings

- This survey included a review of all identifiable state environmental agency comments submitted to U.S. EPA through March 17, 2015. This review included comments filed individually or jointly[14] by these agencies but not comments filed by national or regional associations on behalf of state agencies.

> "As a new standard becomes closer to background levels, states have less ability to develop practical control strategies to meet the standard."
> - Ohio EPA

- 44 state environmental agencies filed individual or joint comments on EPA's proposed revision to ozone NAAQS.[15]
    - Comments from 26 state agencies raised background ozone as an achievability or implementation challenge.
    - Comments from 24 states identified limitations to the tools identified by EPA for regulatory relief.
    - Comments from 21 states raised both background ozone as an achievability or implementation challenge and identified limitations to the tools identified by EPA for regulatory relief.

- Among states that identified limitations to tools for regulatory relief:
    - 22 states commented on limitations to the use of CAA section 319 for excluding "exceptional event" data.
    - 16 states commented on limitations to the use of CAA section 179B for demonstrating attainment "but for" international emissions.
    - 17 states commented on limitations to the use of CAA section 182(h) for rural transport area determinations.

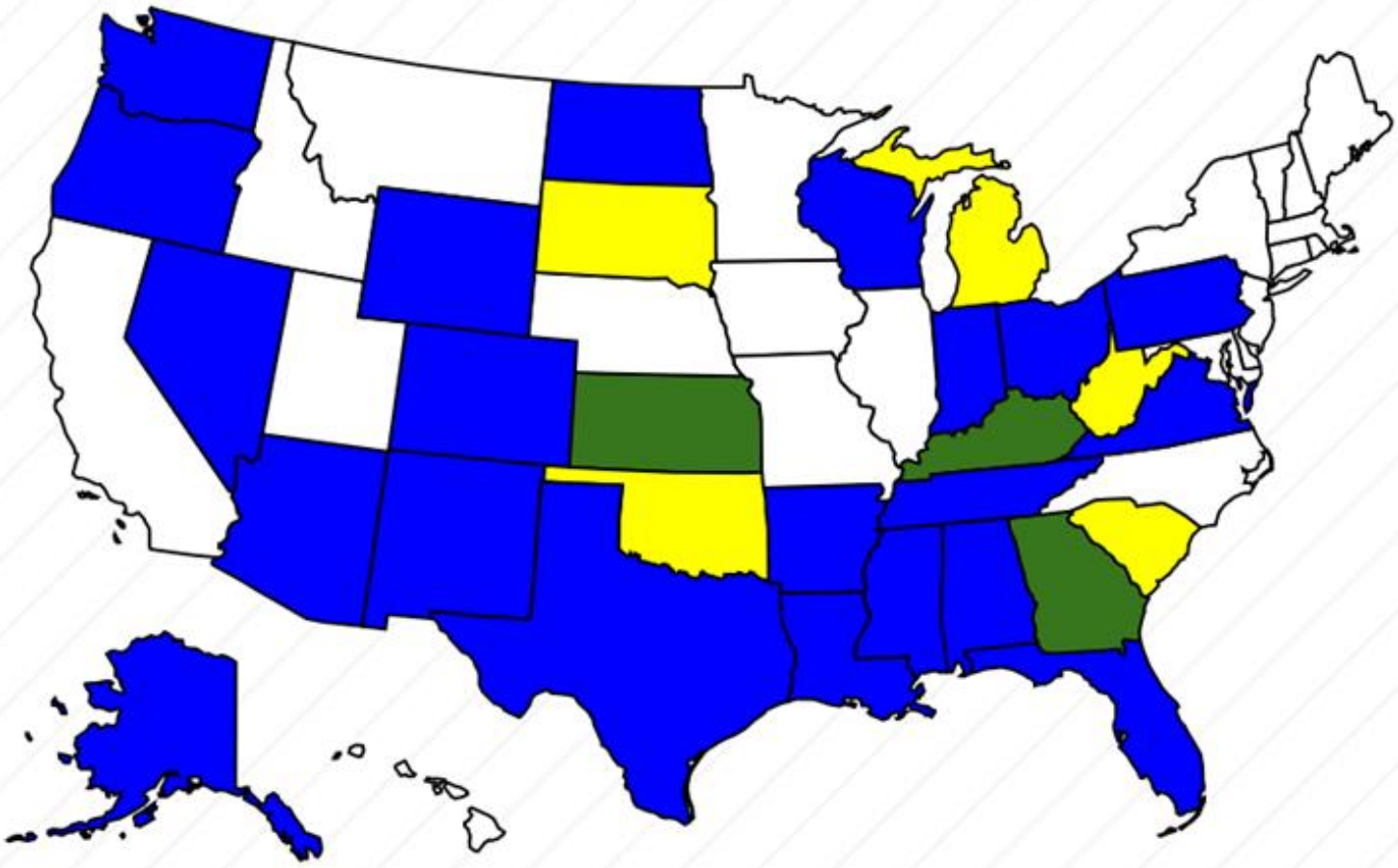
- As the map on the following page illustrates, these comments reflect an increasingly national concern among geographically-diverse states with differing perspectives on the proposed ozone NAAQS revisons.

> "Tennessee...urges extreme caution in selecting a value that approaches background due to the many likely implementation issues that will follow. While the courts may have ruled that costs are not to be considered in setting a health based standard, the practicality of implementation irrespective of costs must absolutely be considered."
> - Tennessee Department of Environment and Conservation

[14] Notably, Joint comments from North Dakota Department of Health, Alabama Department of Environmental Management, Mississippi Department of Environmental Quality, West Virginia Department of Environmental Protection, and Wyoming Department of Environmental Quality.

[15] All state comments can be viewed at: http://www.csg.org/aapca_site/news/OzoneNAAQSComments.aspx

State Environmental Agency Comments on Background Ozone & Limitations of Current Tools for Regulatory Relief



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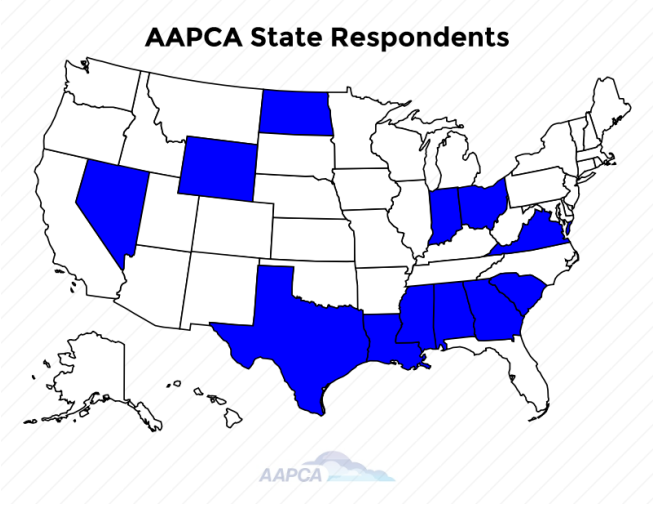
AAPCA

Follow Up Survey of AAPCA Member States - Findings



- To provide additional feedback on some of the frequently-sited concerns raised in state environmental agency comments about the tools for regulatory relief identified by U.S. EPA, AAPCA classified six themes and developed a follow up electronic survey for AAPCA member states.

- These states were invited to provide a single response for their state between May 14 and June 1. 12 states responded (see map to the right).

- All responding states said the process to exclude exceptional events data under Section 319 of the Clean Air Act was overly burdensome or limited by resource/time constraints. Two-thirds of respondents had similar issues with the rural transport area tools.

"Exceptional events demonstrations for NAAQS violations resulting from high background ozone concentrations in the rural west will be too lengthy, frequent, and onerous."
- Nevada Division of Environmental Protection

- 75 percent of responding states identified a lack of familiarity with international transport and rural transport area tools as as they relate to ozone.

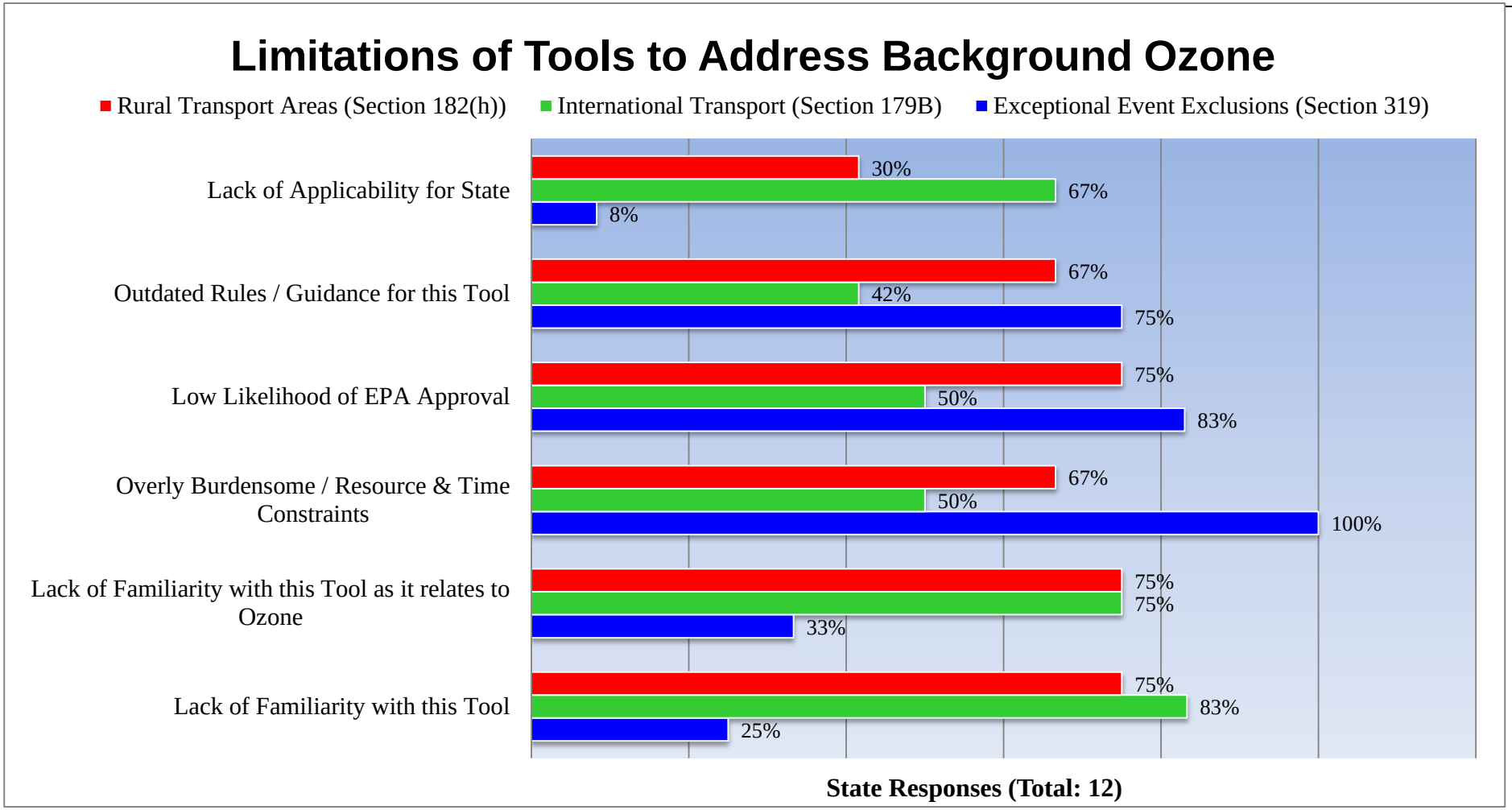
- 75 percent of responding states identified the low likelihood of U.S. EPA approval as a concern for the use of exceptional event and rural transport area tools.

"The [Exceptional Events Rule] places an undue burden on states by requiring a very stringent 'but for' demonstration, which goes well beyond the requirements in the Clean Air Act."
- Virginia Department of Environmental Quality

- A majority of responding states identified outdated rules or guidance as a concern for the use of exceptional event and rural transport area tools.

- A majority of responding states identified a lack of state applicability for the use of international transport tools available under Section 179B of the Clean Air Act.

"As with other states, the Department is concerned about background and transported ozone which may prevent compliance with a more stringent NAAQS. As the economies of Asian countries, such as China and India grow, the problem is expected to only get worse."
- North Dakota Department of Health



State Responses (Total: 12)	Exceptional Event Exclusions (Section 319)	International Transport (Section 179B)	Rural Transport Areas (Section 182(h))
Lack of Familiarity with this Tool	3	10	9
Lack of Familiarity with this Tool as it relates to Ozone	4	9	9
Overly Burdensome / Resource & Time Constraints	12	6	8
Low Likelihood of EPA Approval	10	6	9
Outdated Rules / Guidance for this Tool	9	5	8
Lack of Applicability for State	1	8	5

Relevant Excerpts from Written State Environmental Agency Comments

On Background Ozone:
"EPA also should consider whether natural background concentrations would preclude compliance with EPA's proposed standards in certain geographic areas. For example, EPA estimates that 70 to 80 percent of the seasonal mean ozone levels in Florida are attributed to background contributions."

- Florida Department of Environmental Protection, pg. 2

"LDEQ has concerns that a strengthening of the ozone standard may result in ozone exceedances due to background concentrations of naturally occurring ozone mixed with anthropogenic background levels…. EPA instead suggests that the states pursue regulatory relief in the form of exclusion, exceptional events or relief from adopting stringent requirements by using the rural or international transport provisions. Once again this presents an onerous burden for the states. EPA does not have to prove these exceptions or exclusions, the states must perform these exercises, subject to EPA review and approval."

- Louisiana Department of Environmental Quality, pg. 5

"EPA has not been able to confirm the natural background levels for ozone. This varies from region to region with the Southeast United States having higher background concentrations. As EPA lowers the standard, the background contribution becomes more significant."

- Mississippi Department of Environmental Quality, pg. 2

"The intent of the CAA has never been to compel air quality authorities to mandate reduction measures that will prove to be futile where NAAQS violations are the result of elevated background concentrations, as is the case with ozone in Nevada and the intermountain West."

- Nevada Division of Environmental Protection, pg. 1 of cover letter

"Ohio EPA does not agree that the new ozone standard should be mostly comprised of background ozone itself. As a new standard becomes closer to background levels, states have less ability to develop practical control strategies to meet the standard."

- Ohio EPA, pg. 13

"As the NAAQS is further reduced, the Department is concerned about the increasing proportion of naturally occurring background ozone in monitor readings…. The Department believes that the EPA should provide more information to CASAC and its state partners on background ozone; perhaps even developing a relevant policy on background levels that the EPA can use as a basis for evaluating revisions to this and future NAAQS. If not now, an in-depth study of background levels is needed before the next five-year NAAQS review cycle begins.

- South Carolina Department of Health and Environmental Control, pg. 2

"Tennessee appreciates the need to lower the standard, but urges extreme caution in selecting a value that approaches background due to the many likely implementation issues that will follow. While the courts may have ruled that costs are not to be considered in setting a health based standard, the practicality of implementation irrespective of costs must absolutely be considered."

- Tennessee Department of Environment and Conservation, pg. 9

"Another consideration in EPA's policy judgment should be the attainability of the standard. Ozone forms naturally in the absence of the anthropogenic influences over which EPA and states have any control. As lower ozone concentrations are considered as NAAQS, these background levels of ozone are approached. This is especially an issue at the lower end of the range that EPA is considering. A NAAQS should not be set at background levels at which there are no realistic compliance options available."

- West Virginia Department of Environmental Protection, pg. 2

"…the Proposed Rule directly raises the very significant issue of potential widespread unattainability of the proposed revised NAAQS due to background levels that are not subject to control by either the States or the Federal government through their statutory and regulatory authority."

- Joint comments from North Dakota Department of Health, Alabama Department of Environmental Management, Mississippi Department of Environmental Quality, West Virginia Department of Environmental Protection, and Wyoming Department of Environmental Quality, pg. 2

On Exceptional Events:

"EPA should establish clear protocols for reviewing all of the exceptional events documentation packages submitted by states. These protocols should call for EPA to respond to states' requests for exceptional events determinations as expeditiously as practicable. Given the probabilistic nature of the ozone standard, any such protocol for reviewing exceptional events documentation packages should allow states to request that data be excluded even if those data do not reflect an exceedance of the standard, so long as the circumstances that resulted in the elevated concentrations meet the criteria for an exceptional event."

- Florida Department of Environmental Protection, pg. 3-4

"GEPD strongly urges EPA to provide additional clarification and guidance for submittal of exceptional event documentation."

- Georgia Environmental Protection Division, pg. 9

"Exceptional events demonstrations for NAAQS violations resulting from high background ozone concentrations in the rural west will be too lengthy, frequent, and onerous…. The analysis and demonstration for a single stratospheric intrusion exceptional events package would require resources beyond what is currently available. The NDEP's past experience is that a large portion of the agency's resources have been consumed by investigating, analyzing and preparing demonstrations for suspected exceptional events, which takes away from the agency's ability to focus on air quality planning and implementation that would actually provide public health protections."

- Nevada Division of Environmental Protection, pg. 8-9

"The 'exceptional event exclusion' may be useful in rare instances, but demonstrating even a single instance is extremely burdensome and, as previously discussed, the states face uncertainty regarding what is required for an acceptable exceptional events demonstration."

- Texas Commission on Environmental Quality, p. 34

"DEQ has not been successful in receiving concurrence on the exclusion of any ozone data even though various monitors across the Commonwealth experienced elevated ozone levels throughout these events. The EER places an undue burden on states by requiring a very stringent 'but for' demonstration, which goes well beyond the requirements in the Clean Air Act (CAA)…. Even with longer timeframes, emission inventory development to support these analyses would be prohibited by the resource-intensive nature of such a project."

- Virginia Department of Environmental Quality, pg. 2

"So far, we are the only agency in the nation that has received concurrence for a stratospheric intrusion event. Based on this experience, each demonstration took between four and eight months to produce. The effort to produce those demonstrations used internal staff with meteorological expertise as well as assistance from the EPA's stratospheric ozone intrusion workgroup, a group of state regulators, Federal regulators, and academics focused on researching and diagnosing stratospheric ozone intrusions.
While the DEQ has not produced a demonstration to show a clear causal relationship between a wildfire and ozone exceedance, the DEQ is familiar with the demonstrations that the EPA has posted as examples for wildfire impacts and ozone. The DEQ has concluded that it would require 15 months and contractor assistance of $150,000 to produce one of these demonstrations and any future demonstrations will require comparable resource commitments. Securing funding and additional staff resources for new NAAQS implementation is always a challenge, but this process will be even more difficult for low-population, rural states facing additional workloads under a more-stringent ozone NAAQS."

- Wyoming Department of Environmental Quality Air Quality Division, testimony to House Science, Space, and Technology Committee's Environment Subcommittee, pg. 7-8

On International Transport:
"While this sounds like a viable option for relief in theory, the practical application of this 'international transport' provision of the CAA is tenuous. Under this regulatory provision, a state must demonstrate that it has taken all possible steps to reduce ozone. As with the 'exceptional events' provision, submitting approvable proof of such demonstration has proven to be historically difficult. Additionally, there is limited precedent for EPA approving an attainment plan under this provision. As such, its practical applicability to states as a viable avenue for relief is uncertain."

- Arkansas Department of Environmental Quality, pg. 17

"As with other states, the Department is concerned about background and transported ozone which may prevent compliance with a more stringent NAAQS. As the economies of Asian countries, such as China and India grow, the problem is expected to only get worse."

- North Dakota Department of Health, pg.1

"The other potential remedy relies on federal Clean Air Act (FCAA) §179B and requires a demonstration that an area would attain the standard by its attainment date 'but for' emissions emanating from outside the United States. However, the EPA has only approved such demonstrations for two areas adjacent to the Mexican border. The EPA does note that areas distant from international borders may be affected by emissions from foreign sources, offering some hope of relief for large sections of the country but offers little guidance on how such a demonstration should be made or what would be acceptable. For example, would modeling that excluded emissions from foreign areas within the modeling domain and using adjusted boundary conditions constitute an acceptable demonstration?"

- Texas Commission on Environmental Quality, p. 34-35

"The AQD requests that the EPA updates its 1991 guidance to include technology and tools developed in the past 24 years and reflect current research on international transport…"

- Wyoming Department of Environmental Quality Air Quality Division, pg. 3

On Rural Transport Areas:

"While many Kentucky counties may technically qualify for this 'relief,' a determination of an area as a Rural Transport Area would not avoid the actual designation as nonattainment as the rule is written. These areas would still be subject to the requirements and economic disincentives of nonattainment new source review (NNSR) permitting, among other requirements."

- Kentucky Energy and Environment Cabinet, pg. 2

"Rural transport areas still need to meet requirements for marginal ozone areas, including baseline emissions inventory, source emission statements, nonattainment new source review with offset requirements, and transportation and general conformity. This does not provide regulatory relief for many rural areas that are slightly above the standard due to pollution transported from outside the area…. The lack of available offsets will result in the effective foreclosure of new industrial growth in rural ozone non-attainment areas in the west, which is likely to have devastating consequences on these rural communities since they may already be struggling economically."

- Nevada Division of Environmental Protection, pg. 14

"The AQD commends the EPA for retaining and expanding these regulatory relief mechanisms in light of the increasing relative importance of background ozone to overall ozone levels in rural, high-elevation areas with a lower standard. However, the fact that this classification has only been approved for two areas since the RTA's inception calls into question the RTA's usefulness as a nonattainment regulatory relief mechanism."

- Wyoming Department of Environmental Quality Air Quality Division, pg. 3