Please accept these comments from the above groups on the Environmental Protection Agency’s (EPA) proposed revisions to the 8-hour National Ambient Air Quality Standard (NAAQS) for ozone. A compelling body of scientific evidence supports EPA’s determination that the existing, national, health-based standard for ozone is not requisite to protect public health with an adequate margin of safety, as the law requires. Consistent with this body of scientific evidence and the law, the standard must be strengthened. Some of the groups party to these comments have also joined in a comprehensive set of national comments submitted by public health and environmental groups, which address many of the issues raised in the proposal and urge EPA to set the level of the 8-hour ozone NAAQS at 60 parts per billion (ppb). Other groups party to these comments have submitted their own comments urging a 60 ppb ozone NAAQS. We strongly support these requests and respectfully urge EPA to establish the level of the ozone NAAQS at 60 ppb.

These comments will address significant issues in the Intermountain West, with a particular focus on the state of Wyoming due to expertise gained there as a result of the state’s Upper Green River Basin (UGRB) ozone nonattainment area. Specifically, we focus on the public health imperative for action in the Intermountain West, the need to ensure adequate public health protections for communities in this area through rigorous monitoring, solutions available to restore healthy air both nationally and in the west, and the issue of background ozone levels. We discuss each issue in greater detail, below.

I. Scientific Data, Including Information from the Intermountain West, Overwhelmingly Confirms that the Ozone Standards Must Be Strengthened
Ground-level ozone, also referred to as smog, is a harmful air pollutant. When a person inhales ozone pollution, it reacts chemically with the body’s internal tissues, causing inflammation of the lungs. Ozone pollution above certain concentrations is associated with serious health effects, including aggravated asthma, chronic bronchitis, and heart attacks, and in some cases premature death. Ozone can cause painful breathing, lung inflammation and, over time, may permanently damage the lungs. In addition, it is associated with increased hospital admissions and emergency room visits. The evidence documenting these effects includes laboratory studies as well as epidemiological data.

While anyone who spends time outdoors when ozone levels are high enough may experience symptoms such as shortness of breath, coughing, chest tightness, wheezing, or nausea, certain groups of people are particularly vulnerable to the effects of breathing ozone, including children and teens; older adults; people who work or exercise outdoors; and those with pre-existing heart or lung conditions.

The current primary ozone standard of 75 parts per billion does not protect public health with an adequate margin of safety, as the law requires. EPA’s independent Clean Air Scientific Advisory Committee and the nation’s leading medical and health organizations, along with independent expert scientists, and published research studies all agree that the standard must be strengthened. The scientific evidence justifying the need for a standard of 60 ppb to sufficiently protect health is substantial. Based on a review of upwards of 2,000 studies, the Clean Air Scientific Advisory Committee Ozone Review Panel—20 independent expert scientists—unanimously concluded that EPA should set a standard between 60 and 70 ppb, with 60 ppb being most protective: “[T]he recommended lower bound of 60 ppb would certainly offer more public health protection than levels of 70 ppb or 65 ppb and would provide an adequate margin of safety.”

Elevated concentrations of ozone in the Intermountain West and associated health data similarly suggest that existing standards are not adequately protecting public health and must be strengthened. For example, a study conducted in Sublette County, Wyoming, compared ozone levels with clinic visits for adverse respiratory-related effects. The study found that for every 10 ppb increase in ozone there was a 3 percent increase in local health clinic visits due to respiratory-related complaints the day following elevations of ozone.

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2 Pride, K., Peel, J., Robinson, B., Busacker, A., Grandpre, J., Yip, F., Murphy, T. Associations of Short-Term Exposure to Ground-Level Ozone and Respiratory Outpatient Clinic Visits in a Rural Location — Sublette County, Wyoming, 2008–2011. *Environmental Research* 137(2015)1–7; see also N.M. Dep’t of Health, Myers et. al., The Association between Ambient Air Quality Ozone Levels and Medical Visits for Asthma in San Juan County, 10 (2007), available at http://www.nmenv.state.nm.us/aqb/4C/Documents/SanJuanAsthmaDocBW.pdf (finding increased ozone concentrations increased odds of at least one asthma-related medical visit by 42% in the rural, high-desert area of San Juan County, New Mexico).
II. Ozone Standards Should be Designed in a Way that Protect the Public Health of All Americans, Including Westerners Facing Unique Threats from Ozone Pollution

Western states experience harmful ozone air pollution in certain ways that are unique (or more pronounced) than other areas of the country. One specific feature of ozone pollution in the Intermountain West, in addition to harmful summertime ozone levels, is the prevalence of high wintertime ozone events. Atmospheric conditions and the increasing prevalence of certain emissions sources have helped produce these unsafe levels of wintertime ozone in some western states. There has been significant recent scientific work to better understand these issues, with some evidence suggesting that very high VOC concentrations are an important factor in producing these high ozone levels.³

These wintertime ozone events are linked to (and could be exacerbated by) increasing levels of oil and gas development, which is a significant source of VOCs in the Intermountain West.⁴ For instance, oil and gas development in the UGRB area of Wyoming has caused that area—all of Sublette County and portions of Sweetwater and Lincoln Counties—to experience high wintertime ozone levels. The Wyoming Department of Environmental Quality and the Wyoming Governor’s office have concluded that significant oil and gas development in this area is the driver of this area’s nonattainment status.⁵

Unsafe levels of wintertime ozone have likewise occurred in other areas throughout the west, including public lands managed by the Bureau of Land Management (BLM). In the Uinta Basin of Utah, for instance, much of which is managed by BLM, high winter ozone levels have been recorded, due to a combination of atmospheric conditions, oil and natural gas development and other factors.

Elevated ozone levels are also prevalent in the summertime in both rural and urban areas, from Farmington, New Mexico and western Colorado to Denver and other urban centers. In addition to other emissions sources, many of these areas are home to significant oil and gas development.

In all, as many as thirty-three counties currently in attainment across the Intermountain West have experienced ozone levels above the range recommended by EPA’s Clean Air Scientific Advisory Committee. Of these 33 counties, 17 (52%) are home to oil and gas development.⁶ Specifically:

- Wyoming: Fremont, Laramie, Teton, Uinta, Campbell, Carbon Counties;
- Colorado: El Paso, La Plata, Montezuma, Mesa, Rio Blanco and Garfield Counties;

³ High winter ozone pollution from carbonyl photolysis in an oil and gas basin, [http://www.nature.com/nature/journal/v514/n7522/full/nature13767.html](http://www.nature.com/nature/journal/v514/n7522/full/nature13767.html).
⁴ Id.
⁵ Letter to Ms. Carol Rushin, Acting Regional Administrator from Governor Dave Freudenthal (March 12, 2009).
⁶ Based on production data contained in Drilling Info.
• Utah: Weber, Utah, Tooele, Washington, Box Elder, Carbon, San Juan, Salt Lake, Davis, Duchesne, and Cache Counties;
• New Mexico: Dona Ana, Bernalillo, Eddy, San Juan, Valencia, Luna, Lea, Santa Fe, Grant, and Sandoval Counties.

This oil and gas development is expected to expand. In Wyoming, for instance, there are a number of large oil and gas projects on public lands or on the public mineral estate that are under National Environmental Policy Act (NEPA) review by the BLM.\(^7\) In total, in Wyoming there are as many as 34,246 projected new oil and gas wells under consideration.

**III. We Urge EPA to Deploy Year-Round Monitoring in the Intermountain West to Adequately Capture Both Summer and Winter Ozone Problem Days**

Both the dispersed (and growing) nature of these significant emissions sources and the temporal variability of harmful ozone levels in the west underscore the importance of a rigorous and comprehensive ozone monitoring network. EPA is proposing to revise state-by-state monitoring seasons,\(^8\) and in a number of cases is proposing to lengthen the required ozone monitoring season for states where evidence documents ozone levels exceeding 60 ppb during times outside the current monitoring season.

For several states in the Intermountain West, including Colorado and Utah, EPA has proposed to extend the monitoring season for a full twelve months, and we strongly support the agency’s decision to make these monitoring requirements more rigorous. In others, however, like Wyoming and Montana, the agency has proposed an extended but shorter monitoring season. In Wyoming, for instance, EPA has proposed to require monitoring from January to September.\(^9\)

We respectfully urge EPA to deploy year-round monitoring in Wyoming and other Intermountain West states, consistent with the approach EPA has proposed for Colorado and Utah. EPA has indicated that the objective of its proposed revisions is to ensure that “exceedance days”—days when monitored ozone levels are equal to or exceed 0.060 ppm—are adequately captured\(^10\) such that “[ozone] monitors operate during all periods when there is a reasonable possibility of ambient levels approaching the level of the proposed NAAQS.”\(^11\) This will help ensure that unusually sensitive people are alerted to potential levels of ozone that are of health concern.\(^12\) EPA’s analysis of Wyoming shows that there were no exceedances of 60 parts per billion during the months of October–December, though the analysis is based only on

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\(^7\) The Hiawatha Project: 4,208 new oil and gas wells. Continental Divide-Creston Project: 8,950 new oil and gas wells Normally Pressured Lance Project: 3,500 new oil and gas wells. LaBarge Platform Project: 838 new oil and gas wells. Moneta Divide Project: 4,250 new oil and gas wells. Moxa Arch Project (now called Blacks Fork Environmental Impact Statement): 1,861 new oil and gas wells. We were recently informed in a meeting with the BLM that the number of new wells for this project has increased to 7,500. Converse County Oil and Gas Project: 5,000 new oil and gas wells.

\(^8\) 79 Fed. Reg. 75,358

\(^9\) Id. at 75,359, 75,410 (Table D-3 of 40 C.F.R. part 58).

\(^10\) Id. at 75,358.

\(^11\) Id.

\(^12\) Id. at 75,359.
monitors that currently operate year round. Critically, two of the monitors that do not currently operate year round (and which the analysis therefore did not consider) are those located in the Pinedale area of Wyoming. Substantial evidence suggests that this area experiences high wintertime ozone. Accordingly, we respectfully ask that EPA extend the monitoring season for all monitors in the Intermountain West to ensure adequate health protections for communities facing high wintertime ozone events.\textsuperscript{13}

\textbf{IV. Effective Federal and State-Based Solutions Exist to Reduce Emissions and Avoid Nonattainment Listings}

Solutions exist—both nationally and in the west—to cut pollution and restore healthy air. This is because EPA has already taken steps over the past few years that help to cost-effectively reduce ozone smog pollution and will further help restore healthy air in the years to come. Those protections include the Tier 3 tailpipe standards which will slash smog-forming pollution from new cars beginning with model year 2017, lower sulfur gasoline requirements that will reduce pollution from every car on the road, and EPA’s proposed Clean Power Plan which will substantially reduce smog-forming pollutants from power plant smokestacks nationwide. Analysis of various clean air measures adopted or soon to be put in place indicates that our nation will reduce the precursors to smog by millions of tons, securing over two million tons of volatile organic compound reductions and over five million tons of nitrogen oxides reductions.\textsuperscript{14}

These emissions standards will help to meet a strong health-based standard for ozone.

Meanwhile several states in the Intermountain West have already put in place or are in the process of finalizing leading emissions reduction requirements on pollution from western sources, including the oil and gas industry. These strong state rules will lead to substantial reductions in emissions of VOCs and methane and further help to restore healthy air. They include:

\begin{itemize}
  \item Colorado currently regulates methane and VOC emissions from a suite of oil and gas activities and equipment including well site and compressor station equipment leaks, liquids unloading, pneumatic controllers, storage tanks, glycol dehydrators, and associated gas produced from oil wells.\textsuperscript{15} Many of these rules have significant benefits in likewise reducing hazardous air pollution.
  \item Colorado and Utah\textsuperscript{16} require retrofits of existing pneumatic controllers in order to ensure that all controllers meet low-bled or better natural gas limits.
  \item Colorado and Utah regulate existing sources of natural gas emissions\textsuperscript{17}, as well as new, and Wyoming has proposed to extend its strong requirements for new VOC sources in the UGRB ozone nonattainment area to existing sources.\textsuperscript{18}
\end{itemize}

\textsuperscript{13} We also note that evidence suggests that a more comprehensive ozone monitoring network, particularly in western areas with increasing oil and gas development, could help to identify unsafe levels of ozone in communities currently without monitors. We urge EPA to work in partnership with states and companies operating in these areas to deploy additional monitors.

\textsuperscript{14} U.S. Environmental Protection Agency, Regulatory Impact Analysis, supra note 29, at tbl. 3-1.

\textsuperscript{15} 5 C.C.R. § 1001-9.

\textsuperscript{16} Utah Admin. R. 307-502.

\textsuperscript{17} 5 C.C.R. § 1001-9; Utah Admin. R. 307-502.
• Colorado and Wyoming require operators to conduct routine instrument-based inspections at well sites in order to detect and repair equipment leaks. Colorado’s leak detection and repair program also applies at compressor stations, and Wyoming has proposed to require the same for its existing compressor stations located in the UGRB.

• Both Colorado and Wyoming require operators utilize best management practices to minimize venting associated with liquids unloading activities.

These existing clean air measures will help to ensure healthy air for westerners (and for all Americans), consistent with a science-based, strengthened ozone standard. Indeed, EPA projects that the vast majority of counties in the west will meet a stronger ozone standard by 2025. Even so, there are additional, highly-cost effective actions that both the federal government and states can take to help restore healthy air. For instance, this summer EPA will propose regulations to reduce methane emissions from the oil and gas industry as part of President Obama’s Methane Strategy as well as proposing Control Technique Guidelines for ozone. Methane emissions play a role in ozone formation. Methane emissions convert over time to ozone, thereby causing an increase in background ozone levels. In addition, EPA has acknowledged that climate change may adversely affect future ozone concentrations by contributing to warmer temperatures that are favorable to ozone formation. Accordingly, EPA has recognized that reducing U.S. methane emissions will have positive benefits relative to lowering ozone levels. We urge EPA as well as federal land managers to adopt rigorous methane standards that reduce emissions from the full suite of new and existing oil and gas sources.

V. The Regulatory Issues Surrounding Background Ozone Levels in the Intermountain West Can be Adequately Addressed with Existing Tools

As we describe above, the vast majority of counties in western states will be able to restore healthy air by deploying existing clean air measures. In the west, however, there are infrequent instances of elevated “background ozone” levels, which are not directly associated with pollution sources in these counties. These rare events generally would not contribute to

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18 Proposal to revise WY DEQ, Air Quality Division, Standards and Regulations, Nonattainment Area Regulations, Ch. 8, Section 6.  
19 5 C.C.R. § 1001-9; WY Oil and Gas Production Facilities, Ch. 6, Section 2 Permitting Guidance.  
20 Proposal to revise WY DEQ, Air Quality Division, Standards and Regulations, Nonattainment Area Regulations, Ch. 8, Section 6.  
21 Id.; 5 C.C.R. § 1001-9  
22 EPA, Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards, 2-12, 2-27.  
24 Id. at 75,241 (Dec. 17, 2014); Policy Assessment at 2-27, 2A-42.  
25 Background levels of ozone are generally ozone that is formed by processes other than those involving the conversion of local or regional ozone precursor emissions (volatile organic compounds (VOC) and nitrogen oxides (NOx)) to ozone. Generally speaking, this means ozone that is created or enters an area via stratospheric intrusions of ozone, ozone created by wildfires, ozone created by other biogenic processes or events such as lightning, and ozone or ozone precursors that are transported into the United States from international sources. In Wyoming, over 60% of background ozone comes from boundary conditions, with the remainder from anthropogenic sources, biogenic emissions, Canadian and Mexican sources, marine vessels, and the Gulf of Mexico. Policy Assessment at Figs. 9a to 9g.
exceedances of the health-based standards, but in the infrequent case where this may be a concern, EPA has policies that apply when warranted by rigorous data and analysis. We urge the agency to ensure that those policies are judiciously applied based on a rigorous evaluation of the facts.

a. Data on Background Ozone Levels in Western States

EPA, in Chapter 2 and Appendix 2A of its Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards (hereinafter Policy Assessment), explains that although background ozone levels can reach a considerable fraction of seasonal mean ozone levels, especially in high elevation areas of the Intermountain West, U.S. anthropogenic emissions sources are the dominant contributor to most modeled ozone exceedances of the proposed NAAQS. In fact, background ozone levels on days when ozone levels are elevated are similar to typical background concentrations. Moreover, when ozone levels are at their highest, anthropogenic sources are significant contributors and ones that can be effectively addressed. Accordingly, instances where background ozone would contribute to exceedances of the health-based standards would be infrequent.

EPA estimates that when ozone levels are in the 60-75 ppb range, average U.S. background levels of ozone—ozone that would exist in the absence of any manmade emissions inside the U.S.—is around 35 ppb. When ozone levels are in the range of 60-75 ppb the fractional contribution of background ozone is therefore about 40-60 percent. Though Western states may encounter higher average background ozone levels, these levels are still considerably lower than the most rigorous ozone standard EPA is considering.

In addition, days when ozone levels are elevated do not have higher levels of background ozone. Indeed, EPA concludes “U.S. anthropogenic emissions typically comprise the majority of the total ozone on site-days with base modeled ozone MDA8 values greater than 60 ppb.” This suggests that, anthropogenic sources, rather than background sources, contribute to exceedances of health-based standards.

b. Policies that Address Rare Background Ozone Events.

There are several Clean Air Act policies that can, when implemented rigorously, ensure states attain healthy air quality in a way that accounts for the infrequent occasions when background ozone levels could contribute to exceedances or violations of the revised ozone NAAQS. These include the exceptional events policy under section 319 of the Clean Air Act,

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26 In addition, days with the highest ozone levels have similar background levels to days with lower levels. Therefore, the proportion of total ozone from background is smaller on high ozone days than on the more common lower ozone days. Id. at 2A-42.
27 Id. at Fig. 5c.
28 Id. at Fig. 6c.
29 Id. at Fig. 5d. Data show that April-October 95th percentile USB ozone levels in Wyoming are about 50-55 ppb. Id. Fig. 7.
30 Id. at 2A-42.
31 Id. at 2A-42
the section 179B international transport provisions, and the section 182h rural transport area provisions of the Act.

i. Exceptional Events.

States can request that EPA treat certain monitoring data under the agency’s “exceptional events” policy.\(^{32}\) To utilize these provisions the state must show the event “affects air quality,” the event “is not reasonably controllable or preventable,” and the event “is caused by human activity that is unlikely to recur at a particular location or [is] a natural event.”\(^{33}\) The process outlined by EPA requires states to notify the public of an exceptional event and identify specific data in the Air Quality System (AQS) database. The state must then submit supporting documentation to the EPA showing the exceptional event actually affected the data. If the state’s demonstration is rigorous, the Agency can exclude the data associated with the exceptional event in determinations of exceedances and NAAQS violations.

In the past, states have used these provisions to help address truly exceptional events. EPA also notes that events like wildfires can either enhance or suppress ozone formation and has indicated that the agency plans to provide additional guidance to ensure these events are addressed in a judicious manner consistent with the agency’s obligation to protect public health and the environment.\(^{34}\) EPA has indicated that they plan to complete these revisions in a way that will allow states to incorporate them into their air quality planning and management decisions.

ii. Rural Transport Areas.

Designation of rural transport areas is another mechanism under the Clean Air.\(^ {35}\) Under this policy states can establish that “transport of $O_3$ and/or $O_3$ precursors into an area is so overwhelming that the contribution of local emissions to an observed 8-hour $O_3$ concentration above the level of the NAAQS is relatively minor and determine that emissions within the area do not make a significant contribution to the $O_3$ concentrations measured in the area or in other areas.”\(^ {36}\) To do this, a state must show the area does not have emissions sources that make significant contributions to monitored ozone levels in the area, and that the area is not part of a Metropolitan Statistical Area.\(^{37}\) If this can be done, the area can be treated as having met

\(^{33}\) 79 Fed. Reg. 75,383. EPA’s regulations further require that states provide evidence that “[t]here is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area,” “[t]he event is associated with a measured concentration in excess of normal historical fluctuations, including background,” and “[t]here would have been no exceedance or violation but for the event.” Id.; 40 C.F.R. Parts 50 and 51.
\(^{34}\) 79 Fed. Reg. 75,383.
\(^{35}\) 42 U.S.C. § 7511a(h).
\(^{36}\) 79 Fed. Reg. 75384.
\(^{37}\) Id.
planning and control requirements so long as it meets the Clean Air Act’s requirements for a “marginal” area, the Act’s least restrictive ozone nonattainment category.

**iii. International Transport.**

The Clean Air Act also allows for the exclusion of emissions from international areas from contributing to a NAAQS violation. It provides that, “any State that establishes to the satisfaction of the Administrator that, with respect to an ozone nonattainment area in such State, such State would have attained the [NAAQS] for ozone by the applicable attainment date, but for emissions emanating from outside the United States, shall not be subject” to several nonattainment provisions of the Act.\(^{38}\)

**iv. Additional Provisions**

The Clean Air Act also has provisions that allow states to account for emissions from neighboring states. Under section 110(a)(2)(D), there are “good neighbor” provisions that require states to not contribute to nonattainment in neighboring states.\(^{39}\) And under section 126 downwind states can petition EPA to take action against major stationary sources, or a grouping of sources, in other states that significantly contribute to nonattainment in the downwind state.\(^{40}\)

**VI. The Clean Air Act’s Two-Step Process Provides for Ample Consideration of Economic Issues Once Health Based Standards are Established**

In 1970, Congress established that the NAAQS be based on public health considerations. This same law is broadly encompassing in considering economics when federal, state and local officials determine how to cost-effectively achieve those health standards.

The language crafted by Congress in 1970 is straightforward. It instructs EPA’s Administrator to establish standards that “are requisite to protect the public health” with “an adequate margin of safety.”\(^{41}\) The statute thus directs that the standards be based exclusively on public health and to be precautionary in safeguarding against adverse health effects. This question has also been consistently answered by the decisions of prior EPA Administrators and numerous judicial decisions of the federal court of appeals in Washington, D.C. as well as by the U.S. Supreme Court.\(^{42}\)

\(^{38}\) 42 U.S.C. 7509a(b).
\(^{39}\) 42 U.S.C. § 7410(a)(2)(D)
\(^{40}\) Id. § 7426.
\(^{41}\) Clean Air Act § 109(b)(1), 42 U.S.C. § 7409(b)(1).
After the health-based standards are established, the Clean Air Act provides a prominent role for consideration of costs in national, state and local decisions about the pollution control strategies deployed to achieve the health standards. The statute provides for the consideration of costs in setting emission limits for cars, SUVs, trucks, buses, construction equipment, aircraft, fuels, power plants, and industrial facilities.43

States and local governments, in turn, are distinctly responsible for designing the air quality management plans for their communities and entrusted with determining how the burden is allocated to restore healthy air. Justice Scalia has succinctly explained that “[i]t is to the States that the Act assigns initial and primary responsibility for deciding what emissions reductions will be required from which sources.”44

**VII. Conclusion**

A compelling body of scientific evidence supports a more protective health-based standard for ozone that is requisite to protect public health with an adequate margin of safety, as the law requires. This is no less true in the Intermountain West where many residents are faced with unsafe levels of ozone pollution and live amidst large-scale oil and gas developments that are more prevalent than in more urban settings. While ozone issues in the Intermountain West can pose somewhat unique challenges such as wintertime and background ozone, these issues can be adequately addressed through rigorous standards and by deploying existing tools in the Clean Air Act. For the reasons set forth above, we strongly request and respectfully urge EPA to establish the level of the ozone NAAQS at 60 ppb.

Respectfully Submitted,

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43 42 U.S.C. §§ 7521(a), 7547(a), 7545, 7541, and 7411(a).
44 *Whitman*, 531 U.S. at 470.
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