

## ***Claim: Carbon pollution is a health hazard***

### ***REBUTTAL***

*The term “carbon pollution” is a deliberate, ambiguous, disingenuous term, designed to mislead people into thinking carbon dioxide is pollution. It is used by the environmentalists to confuse the environmental impacts of CO<sub>2</sub> emissions with the impact of the emissions of unwanted waste products of combustion. The burning of carbon-based fuels (fossil fuels – coal, oil, natural gas – and biofuels and biomass) converts the carbon in the fuels to carbon dioxide (CO<sub>2</sub>), which is an odorless invisible gas that is plant food and it is essential to life on the planet.*

*Because the burning of the fuel is never 100% efficient, trace amounts of pollutants including unburnt carbon are produced in the form of fine particulates (soot), hydrocarbon gases and carbon monoxide. In addition, trace amounts of sulfur oxides, nitrogen oxides and other pollutant constituents can be produced. In the US, all mobile and industrial stationary combustion sources must have emission control systems that remove the particulates and gaseous pollutants so that the emissions are in compliance with EPA’s emission standards. The ambient air pollutant concentrations have been decreasing for decades and are going to keep decreasing for the foreseeable future because of existing non-GHG-related regulations.*

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To ensure that the air is safe to breathe, the Clean Air Act (CAA) requires the EPA to set National Ambient Air Quality Standards (NAAQS) for the most harmful ubiquitous air pollutants. The NAAQS are set at levels requisite to protect human health and welfare with an adequate margin of safety. These ubiquitous pollutants are called the Criteria Air Pollutants and include: fine particulates (PM<sub>2.5</sub>), larger particulates (PM<sub>10</sub>), carbon monoxide, sulfur oxides, nitrogen oxides, lead, and ozone (O<sub>3</sub>). The CAA also required States to develop plans to manage the emissions and concentrations of these pollutants so that the NAAQS are attained in every part of the US.

As a result, most areas of the US attain the NAAQS for all the pollutants most of the time. The ambient concentrations have been decreasing for decades (see charts below) and are going to keep decreasing for the foreseeable future because of existing regulations. For the few areas of the US that are in

violation of a NAAQS, the States have (or are in the process of) developed plans to attain them in the near future.

It needs to be noted that the current healthy air quality in the US has been achieved with existing regulations that have nothing to do with climate or CO<sub>2</sub> regulations.

The Obama EPA and the enviros have claimed that the co-benefits of CO<sub>2</sub> reductions justify the enactment of CO<sub>2</sub>-reduction regulations. These co-benefits assume that deaths and other health effects due to exposures of PM<sub>2.5</sub> and O<sub>3</sub> will be avoided. This assumption is erroneous because the relationships that EPA uses to calculate the purported health effects are based on epidemiology studies that used flawed statistical methods. When the proper methods are used, no causal relationship is found between either PM<sub>2.5</sub> or O<sub>3</sub> and premature mortality or other serious health effects at levels currently measured in the US.

The enviros also claim that rising temperatures caused by increasing CO<sub>2</sub> levels will exacerbate PM<sub>2.5</sub> and O<sub>3</sub> air pollution. This claim is flawed for a number of reasons.

First, as detailed elsewhere, there is no convincing evidence that increasing CO<sub>2</sub> levels has caused global temperatures to rise.

Second, there is no consistency in EPA model predictions that increasing temperatures will actually cause PM<sub>2.5</sub>, which is purported to cause most of the health effects and mortality, to increase.

Although there is general agreement that higher temperatures will cause increased O<sub>3</sub> formation, that only occurs if emissions of O<sub>3</sub> precursors remain unchanged. The reality in the US is that O<sub>3</sub> precursors have been and will continue to decrease for the foreseeable future.

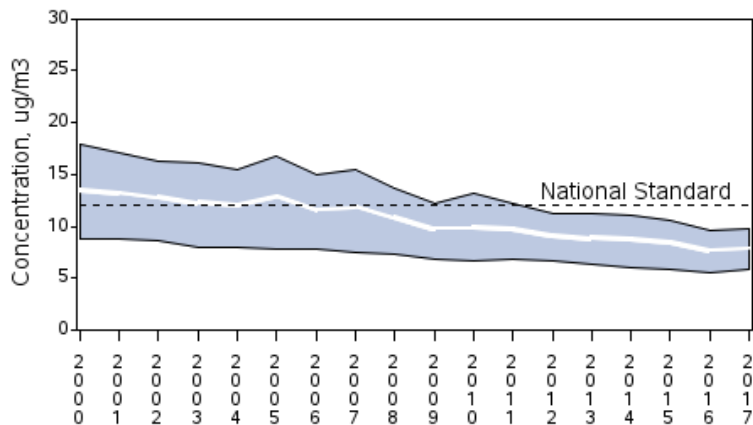
In addition, if for any reason, concentrations of any Criteria Pollutant ever went up so as to exceed its NAAQS anywhere in the Country, the CAA provides mechanisms that are already in place requiring the States to revise their plans to offset any increases.

Finally, as discussed above, the basic premise that PM<sub>2.5</sub> and O<sub>3</sub> are causing serious health effects in the US at their current levels is simply false.

## PM2.5 Air Quality, 2000 - 2017

(Seasonally-Weighted Annual Average)

National Trend based on 429 Sites

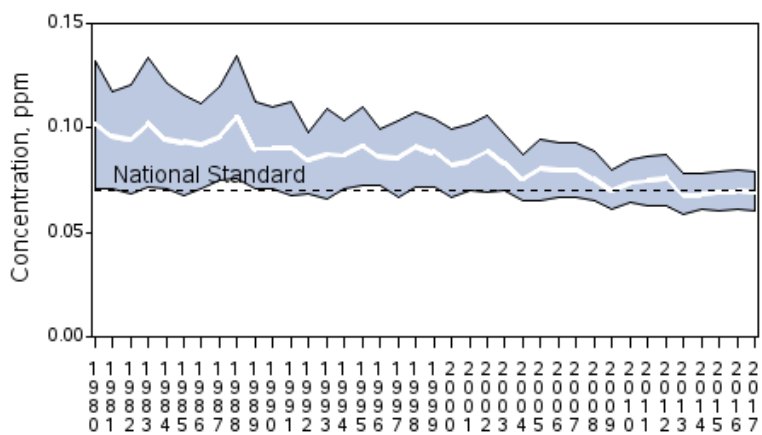


2000 to 2017 : 41% decrease in National Average

## Ozone Air Quality, 1980 - 2017

(Annual 4th Maximum of Daily Max 8-Hour Average)

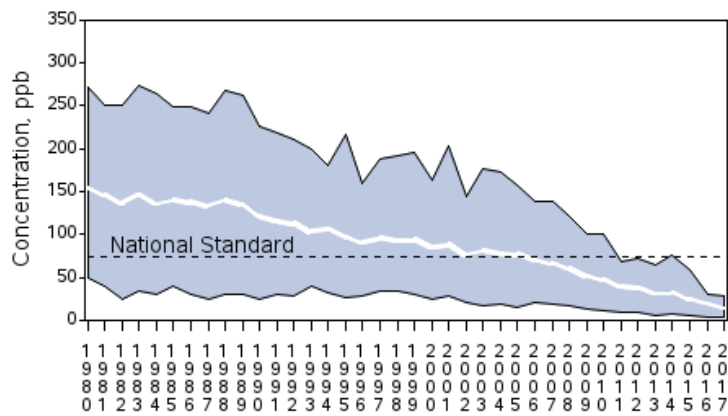
National Trend based on 200 Sites



1980 to 2017 : 32% decrease in National Average



**SO2 Air Quality, 1980 - 2017**  
 (Annual 99th Percentile of Daily Max 1-Hour Average)  
 National Trend based on 42 Sites



1980 to 2017 : 90% decrease in National Average

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