

There has been some recent confusion regarding the calculation of 8-hour ozone design values. The data handling appendices for the 1997 and 2008 8-hour ozone NAAQS (40 CFR Part 50, Appendices I and P, respectively) contain the following language:

*The daily maximum 8-hour concentration for a given calendar day is the highest of the 24 possible 8-hour average concentrations computed for that day. This process is repeated, yielding a daily maximum 8-hour average ozone concentration for each calendar day with ambient ozone monitoring data.*

...

*An ozone monitoring day shall be counted as a valid day if valid 8-hour averages are available for at least 75% of possible hours in the day (i.e. at least 18 of the 24 averages). In the event that less than 75% of the 8-hour averages are available, a day shall also be counted as a valid day if the daily maximum 8-hour average concentration for that day is greater than the level of the ambient standard.*

...

*The standard-related summary statistic is the annual fourth-highest daily maximum 8-hour ozone concentration, expressed in parts per million, averaged over three years.*

The long-standing interpretation of this text is that the 1<sup>st</sup>-4<sup>th</sup> highest daily maximum values must occur on valid days. However, one could alternatively interpret that valid days are only used to determine data completeness, and any day with at least one 8-hour average can be one of the 1<sup>st</sup>-4<sup>th</sup> highest daily maximum values. OAQPS intends to clarify this language during the next ozone NAAQS rulemaking.

OAQPS has determined that design values for the 1997 and 2008 8-hour ozone NAAQS will be calculated based on the former, long-standing interpretation above (i.e. monitoring days with fewer than 18 of 24 possible 8-hour averages and an 8-hour daily maximum value less than or equal to the NAAQS will be ignored). The 8-hour ozone annual summary and design value reports in AQS are implemented according to this interpretation.

The implications of this interpretation are that 8-hour daily maximum values from 76 ppb to 84 ppb based on fewer than 18 of 24 8-hour averages will be counted toward design values for the 2008 8-hour ozone NAAQS, but not toward design values for the 1997 8-hour ozone NAAQS. Thus, the 8-hour design value at an ozone monitor may differ based upon which NAAQS it is being compared to.