

Technical analysis:

Is the Rochester area in violation of the ozone health standard?

Based on air quality data from 2000-2002, the urban monitor in Rochester violated the eight-hour ozone health standard. From preliminary data from 2003, the design value for the urban monitor and the monitor downwind of Rochester violates the health standard for period from 2001 - 2003.

Local agencies have pointed out that the urban and downwind ozone monitors are not sited properly based on EPA's siting and network design criteria at 40 CFR Part 58. This report evaluates the comments to see if these concerns are sufficient to conclude that the ozone attainment status of this area cannot be classified.

EPA and the NYSDEC recently inspected the monitoring sites for Rochester. The urban monitor is located too close to trees. Since trees remove ozone from the air, the trees are preventing the monitor from recording all the ozone that would be experienced by people living in the area. Since the monitor is likely to be underreporting the ozone experienced by the Rochester urban area, Rochester may have a more serious ozone problem than recorded by the monitor. It is certain that Rochester violates the health standard, the only uncertainty is the amount by which the area exceeds the standard. Thus, the area is classifiable with regard to ozone nonattainment and the state request for an "unclassifiable" designation is not supported by the information provided by the state and local agencies.

The downwind monitor may not be far enough downwind of Rochester to record the maximum ozone produced by Rochester. This otherwise properly sited monitor appears to be closer to the city than the criteria suggested in Part 58 for a peak downwind ozone monitor. Even if this monitor is sited too close to the city, its data tells the population around the monitor that they are in an area where the health standard is violated (based on 2001-2003 data) and the area should be designated as nonattainment. NYSDEC is looking for a replacement site for the Rochester urban monitor and has started a new monitor, near where the peak ozone from Rochester may occur, in Oswego County just outside of the Rochester metropolitan statistical area. In 2003 the Oswego County monitor recorded more exceedances than the monitors in the Rochester area. Rochester may influence nonattainment over a wider area than just its own metropolitan area.

In summary, the monitors in the Rochester area record violations of the health standard. The downwind monitor is a properly sited monitor that properly records the local population's exposure to ozone.

In a separate write-up, we conclude that the Rochester area is also a contributor to nonattainment outside its metropolitan area in Jefferson County and perhaps in Oswego County. Either the finding that there are valid violations of the ozone health standard or that the area substantially contributes to nonattainment in a nearby area would be sufficient for EPA to designate the Rochester metropolitan statistical area as nonattainment.