

Technical Support Summary Narrative
Eight-hour Ozone Designations 2003
EPA Region 2 December 2003

Area: Chautauqua County, NY

Counties in MSA: Jamestown MSA is only one county: Chautauqua County

State Recommendation: Chautauqua County nonattainment

EPA Response to State: Nonattainment - Chautauqua County only, no surrounding areas

Rationale:

Chautauqua County is nonattainment because of two monitors in violation of the eight-hour standard in both 2000- 2002 and 2001 - 2003.

Adjoining county is Cattaraugus County, not in the Jamestown MSA.

It should not be added to the Jamestown nonattainment area.

Cattaraugus County is crosswind from Chautauqua County and does not contribute to nonattainment there. Monitor in Elmira is attainment. Population and emissions are low: 83,955 people, 5,844 and 5,198 tons per year VOC and NO_x, respectively. Only 6 percent of residents work in Jamestown MSA. Growth projected to be -0.3% through 2010.

Area: Buffalo-Niagara Falls, NY

Counties in MSA: Erie and Niagara Counties

State Recommendation: Nonattainment

EPA Response to State: Nonattainment

Rationale:

Erie and Niagara Counties each has a monitor in violation of the eight-hour standard for both 2000 - 2002 and 2001- 2003.

No adjoining counties need to be added:

Wyoming County is small, downwind of Buffalo and is not a major contributor to any nonattainment area.

Population: 43,424. VOC and NO_x emissions: 2,674 and 2,401 tons per day.

Only 20% of workers commute to Buffalo-Niagara Falls MSA.

Growth is modest, 2.4% through 2010.

Area: Rochester, NY

Counties in MSA: Genesee, Livingston, Monroe, Ontario, Orleans, Wayne.

State Recommendation: All counties in MSA unclassifiable

EPA Response to State: All counties in MSA nonattainment

Rationale:

Rochester area has two monitors, one in violation in 2000 - 2002 and two in violation in 2001 - 2003.

On days when a monitor in Jefferson County at Perch River exceeded the standard, 6 of 13 of the back trajectories from Perch River go through the Rochester MSA. (Map from NYSDEC Commissioner's letter of July 15, 2003.) This indicates that Rochester is also a contributor to Perch River's nonattainment problem.

Monitoring data issue: Urban monitor is too close to trees, which reduces ozone observed by monitor. No reason to doubt nonattainment status. Downwind peak monitor is in violation in 2003. This monitor meets siting criteria so is sufficient to designate the area as nonattainment. The monitor is closer to Rochester than recommended by guidance. Monitors further downwind have more exceedances of the 8-hour standard. A monitor further downwind in Oswego County has only one year of data. It had 5 exceedances in 2003 vs. 2 and 3 for the Rochester MSA monitors. The Perch River monitor in Jefferson County, which is affected in part by Rochester, had 9 exceedances in 2003. Neither monitoring issue provides evidence that area is or may be attainment. See details in Rochester TSD supplement.

Surrounding Counties: Monitoring to the south of Rochester (Elmira) is attaining the standard. As shown by the monitors inland from Lake Ontario in Chemung (Elmira), Madison, Oneida, Herkimer and Hamilton Counties, the inland counties of New York State are attaining the standard. These counties near the Rochester MSA are attaining and should be designated as attainment.

Area: Syracuse, NY

Counties in MSA: Onondaga, Cayuga, Oswego, Madison

State Recommendation: Attainment, based on 2000- 2002 data.

EPA Response to State: Nonattainment based on 2001- 2003 data.

Rationale: State's recommendation was correct based on 2000 - 2002 data. No monitors in the Syracuse MSA were violating using 2000 - 2002 data. Syracuse urban ozone monitor is violating the standard based on 2001 - 2003 data. While the Syracuse MSA adjoins Jefferson County, trajectories for 2002 show that during days with violations in Jefferson County, air rarely passes through the Syracuse MSA.

Two adjoining counties outside of the MSA are monitoring attainment and should be designated as attainment. Thus, no adjoining counties should be designated as nonattainment.

Area: Albany, NY

Counties in CMSA: Saratoga, Albany, Montgomery, Schenectady, Rensselaer, Schoharie.

State Recommendation: Attainment, based on 2000 - 2002 data.

EPA Response to State: Nonattainment, based on 2001- 2003 data.

Rationale: State's recommendation was correct based on 2000 - 2002 data. No monitors in the Albany MSA were violating using 2000 - 2002 data. Two monitors of three are violating the standard for 2001 - 2003. Greene County is part of the 1-hour ozone nonattainment area and should be included in the 8-hour nonattainment area unless New York can provide a rationale for

exclusion based on the 11 factors.

Adjoining counties should not be added to the Albany nonattainment area since monitoring in Ulster County, between the New York City and Albany nonattainment areas, is recording attainment.

Area: Jefferson County
Counties in CMSA: Not a MSA.
State Recommendation: Nonattainment
EPA Response to State: Nonattainment

Rationale: Nonattainment because monitor at Perch River in Jefferson County is violating the standard. Trajectory analysis shows that violations come from across Lake Ontario, thus violations are not locally produced. About half of the days in violation in 2002 had air that traveled through the Rochester metropolitan area, a few passed through the Buffalo and Syracuse areas. Four of the eleven trajectories do not pass through New York State at all. The starting point of eight of the trajectories, at 5pm the day before, was outside of New York State, in Pennsylvania, Ohio, Michigan and Canada, showing the strong influence that air quality upwind of New York State has on this remote monitor.

Monitors inland in Hamilton, Herkimer and Oneida Counties are attaining and show that nonattainment does not extend far inland from Perch River. Therefore, the other counties in northern New York are attaining the standard.

Area: Whiteface Mountain
Counties in CMSA: Not a MSA.
State Recommendation: Unclassifiable
EPA Response to State: Nonattainment

Rationale: Monitor on mountain top is violating the standard based on data from 2000- 2002 and 2001 - 2003. A monitor at 1965 feet on the side of the mountain was attaining in 2000 - 2002, but violated in 2001-2003. Thus the air quality on the mountain is classifiable and should be classified as nonattainment. There are other monitors in the Adirondacks area that are attaining the standard. The monitors in and near the Adirondack Mountains in New York State are:

| <u>Location, County</u> | <u>Altitude</u> | <u>2001 - 2003 Design value</u> |
|--|------------------|---------------------------------|
| Whiteface Mountain Top, Essex: | 4850 feet | 91 ppb |
| Whiteface Mountain Base, Essex: | 1965 feet | 87 ppb |
| Nick's Lake, Herkimer | 1722 feet | 77 ppb |
| Piseco Lake, Hamilton | 1703 feet | 82 ppb |
| Camp Georgetown, Madison | 1640 feet | 82 ppb |
| Camden, Oneida | 495 feet | 84 ppb |
| Stillwell, Saratoga | 384 feet | 88 ppb |
| Perch River, Jefferson | 351 feet | 97 ppb |

Violating monitors in **bold**.

Justification for Mountain Top Designation: The Adirondack monitors are attaining the standard, except for the monitors at very high elevation and the monitors nearer to sea level. There are no violations of the standard at monitors sited at a wide range of elevations in this portion of the State. This shows that the ozone problem at Whiteface Mountain is because of its extreme elevation and affected by long range transport. The ozone recorded here is not a problem caused by local urban ozone plumes. This is an unusual mountain top transport situation.

Designation of Boundaries of Mountain Top Nonattainment Area: Of all the monitors more than 1,000 feet elevation above sea level, only the two highest in the state, are violating. This ozone problem has been attributed to long range transport for many years. Because lower elevation monitors show attainment, the continued nonattainment of monitors on Whiteface Mountain show that they are violating due to long range transport of ozone at high altitudes. Attaining monitors occur as high as 1722 feet above sea level. Only the elevations with violating monitors should be designated nonattainment, so the nonattainment area can be described as those portions of Whiteface Mountain in Essex County that are over 1900 feet above sea level.

Area: Orange - Putnam - Dutchess Counties, NY

State Recommendation: Nonattainment, but separated from rest of NYC CMSA

EPA Response to State: Nonattainment, but in the NYC Metropolitan Nonattainment Area

Rationale: Keep these three counties in the NYC CMSA nonattainment area due to counties' combined impact on downwind areas; also their growth is positive, and population, emissions and VMT are at least 5% of CMSA totals. Much of the area has strong commuting link to the NYC metro area. There are some factors that argue for a separate nonattainment area. There is a sharp decrease in population, and density of emissions of VOC and NO_x is lower, compared to nearby suburban counties. Dutchess, Putnam and northern Orange are a separate 1-hour nonattainment area. Overall, Dutchess, Putnam and Orange Counties have a lot in common with the rest of the NYC CMSA and have more links to the rest of the CMSA than in the past and should kept as part of the NYC nonattainment area.

Area: New York Portion of the NYC nonattainment area.

State Recommendation: Nonattainment, including the following counties: New York (Manhattan), Bronx, Kings, Queens, Richmond, Westchester, Rockland, Nassau, Suffolk.

EPA Response to State: Nonattainment, including the following counties: New York (Manhattan), Bronx, Kings, Queens, Richmond, Westchester, Rockland, Nassau, Suffolk, Orange, Dutchess and Putnam

Rationale: Area recorded violations of the 8-hour standard and contributes to violations in nearby Connecticut. Orange, Putnam and Dutchess are included in New York City Metropolitan Nonattainment Area for reasons described above.

Area: Northern New Jersey portion of the NYC nonattainment area.

State Recommendation: Nonattainment, including the following counties: Bergen, Sussex, Passaic, Essex, Hudson, Union, Morris, Warren, Hunterdon, Somerset, Middlesex, Monmouth.

EPA Response to State: Nonattainment, including the following counties: Bergen, Sussex, Passaic, Essex, Hudson, Union, Morris, Warren, Hunterdon, Somerset, Middlesex, Monmouth and Ocean.

Rationale: All of the above counties are in the 1999 CMSA boundaries for the NYC CMSA and, except for Warren County, are in the NYC 1-hour nonattainment area. Warren County is added to the NYC nonattainment area for 8-hour ozone because it is in the 1999 CMSA for NYC. With the exception of Ocean County, discussed below, New Jersey recommended and we agree to use the one-hour nonattainment area plus Warren County.

Area: Southern New Jersey portion of the Philadelphia nonattainment area.

State Recommendation: Nonattainment, including the following counties: Mercer, Ocean, Burlington, Camden, Gloucester, Salem, Cumberland, Atlantic, Cape May.

EPA Recommendation: Nonattainment, including the following counties: Mercer, Burlington, Camden, Gloucester, Salem, Cumberland, Atlantic, Cape May.

Rationale: New Jersey recommended that its portion of the Philadelphia Nonattainment Area should include the counties from the 1999 Philadelphia CMSA plus Mercer County, which was in the existing 1-hour nonattainment area and Ocean County, which is not in the Philadelphia CMSA or the existing 1-hour Philadelphia Nonattainment Area. All of these Counties should be included in the 8-hour Philadelphia Nonattainment Area, except Ocean County, since the CMSA and 1-hour nonattainment area is the presumptive norm. Atlantic and Cape May Counties are in their own 1-hour nonattainment area, but since they are in the 1999 Philadelphia CMSA, they can be included in the 8-hour Philadelphia Nonattainment Area.

New Jersey also requested that Ocean County be included in the 8-hour Philadelphia Nonattainment Area. New Jersey presented information that Ocean County is upwind of the NYC metro area and downwind of urban areas to its south and west, based on trajectory analyses. New York and New Jersey, in their recommendations, have pointed out that emission reductions in the NYC metro area will have little ability to bring Ocean County's monitor into attainment. In their recommendation letters, Connecticut supported New Jersey's request and Pennsylvania opposed it.

Most residents work in Ocean County. Of the workers who work outside Ocean County, more work in the NYC CMSA than in the Philadelphia CMSA. All of the counties recommended by NJ to be included in the Philadelphia nonattainment area, except Mercer and Ocean Counties, are in the 1999 Philadelphia CMSA. Mercer County, will remain in the Philadelphia nonattainment area because it is in the Philadelphia area for the 1-hour ozone standard. Similarly, Ocean County is also in the 1-hour ozone nonattainment area for NYC and, based on consultation with the Assistant Administrator for Air and Radiation, will remain in the NYC area for the 8-hour standard.

