

Q: Why are maps showing “nonattainment” areas important?

A: Because in these areas airports/airlines are likely to face ongoing pressure to reduce emissions (especially ozone and particulate matter) and are likely to be required to do so to get large airport development projects funded.

Maps of Non-Attainment Areas (NAAs)

General EPA page providing links to many maps showing NAAs for all pollutants:
<http://www.epa.gov/air/oaqps/greenbk/index.html>

Links to basic national maps showing NAAs for each of the pollutants:

8-Hour Ozone Standard (note that EPA recently revised the 8-hour Ozone Standard – as a result, many more areas are expected to be in nonattainment)

- Map showing areas in nonattainment under currently applicable 8-hour standard (0.08 ppm, set in 1997) [Counties with Monitors Violating the 1997 8-Hour Ozone Standard of 0.08 parts per million \(based on 2004-2006 Air Quality Data\) \(PDF\)](#)
- Map showing areas projected to be in nonattainment under new 8-hour standard (0.075 ppm, set in 2008) [states must submit SIPS by 2010, which will be implemented beginning in 2013] [Counties with Monitors Violating the Revised 8-Hour Ozone Standard of 0.075 parts per million \(based on 2004-2006 Air Quality Data\) \(PDF\)](#)

➤

PM-10: <http://www.epa.gov/air/oaqps/greenbk/mappm10.html>

PM-2.5: <http://www.epa.gov/air/oaqps/greenbk/mappm25.html>

CO <http://www.epa.gov/air/oaqps/greenbk/mapco.html>

SO2 <http://www.epa.gov/air/oaqps/greenbk/mapso2.html>

More Detailed Background

EPA establishes National Ambient Air Quality Standards (NAAQS) for various pollutants, namely:

- Ground level ozone: ozone is created when NO_x (oxides of nitrogen) or volatile organics chemicals (VOCs) react in sunlight – therefore, regulatory measures to reduce ozone focus on reducing emissions of these precursors.
- Particulate Matter (PM) – this is just what it sounds like. Usually, PM is an issue for us due to emissions from diesel engines (mostly from incomplete combustion) – aircraft emissions may be precursors to PM.
- Carbon Monoxide (CO) – can result from GSE; a very small portion of aircraft emissions (very few NAAs)
- Nitrogen Oxides (NO_x) - can result from GSE; a very small portion of aircraft emissions (currently no NAAs are listed)
- Sulfur Dioxide (SO₂) – because there is sulfur in Jet A, a small amount of SO₂ is formed during combustion (very few NAAs)
- Lead – not an issue for us

If an area is in “nonattainment” a state must create a plan, known as a State Implementation Plan (SIP), demonstrating how they plan to achieve these standards.

The bottom line is, if an area is in “nonattainment,” states must develop plans – State Implementation Plans (SIPs) – demonstrating how the standards will be achieved. As a result, **regulators consistently come to airlines/airports seeking measures to reduce emissions to help them achieve their standards** – for example, we have faced many, many efforts to reduce GSE (ground support equipment) emissions through electrification and still face regulators proposing measures to address aircraft emissions (though they are preempted under federal law from doing so). **So the maps showing nonattainment areas below are relevant because they show where regulators are likely to apply pressure for us to reduce emissions – and where any reductions achieved through use of alternative fuels will have even more value.** It should also be noted that before any major airport development project may be approved for federal funding, it must be demonstrated that the project “conforms” to the SIP – this is a critical issue for almost any major airport project because if the project does not “conform” it cannot go forward. **So, the areas are also particularly important when thinking about where airport development projects are likely to occur because the projects will likely face significant requirements to reduce emissions before they may be approved.**