

# National Association of Regional Councils

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## Integrating Air Quality and Transportation Planning

The New National Ambient Air Quality Standards:  
Vital Information for Planning for Air Quality

by Peggy Tadej

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The Integrating Air Quality and Transportation Planning workshop's first hour consisted of a live broadcast from Chicago during NARC's 38<sup>th</sup> annual conference and exhibition. At the broadcast, a panel of EPA and FHWA experts addressed the new National Ambient Air Quality Standards (NAAQS). Wayne Hill, NARC President and Chairman of the Board of Commissioners from Gwinnett County, Georgia, introduced the moderator Mark Simons who is with EPA's Office of Transportation and Air Quality. Panelists included:

**John Silvasi**, a Senior Environmental Engineer with EPA's Office of Air Quality Planning and Standards based in North Carolina, who addressed the new 8-hour ozone NAAQS and the implications for new and existing nonattainment areas;

**Rudy Kapichak** with EPA's Transportation & Regional Programs Division and **Gary Jensen** with DOT's FHWA Office of Natural & Human Environment covered conformity under the new NAAQS, and impacts on the planning process;

and **Jim Thorne**, a Metropolitan Planning Specialist with the FHWA Resource Center discussed how the new NAAQS will change CMAQ apportionment.

Silvasi provided an overview of the new rules that address the 8-hour ozone standard, which is based on averaging air quality measurements over 8-hour blocks of time. EPA uses the average of the annual 4<sup>th</sup> highest 8-hour daily maximum concentrations from each of the last three years of air quality monitoring data to determine a violation of the ozone standard. Because research has affirmed the adverse effects of ozone exposure on human health, vegetation, and ecosystems, the new 8-hour standard is more protective.

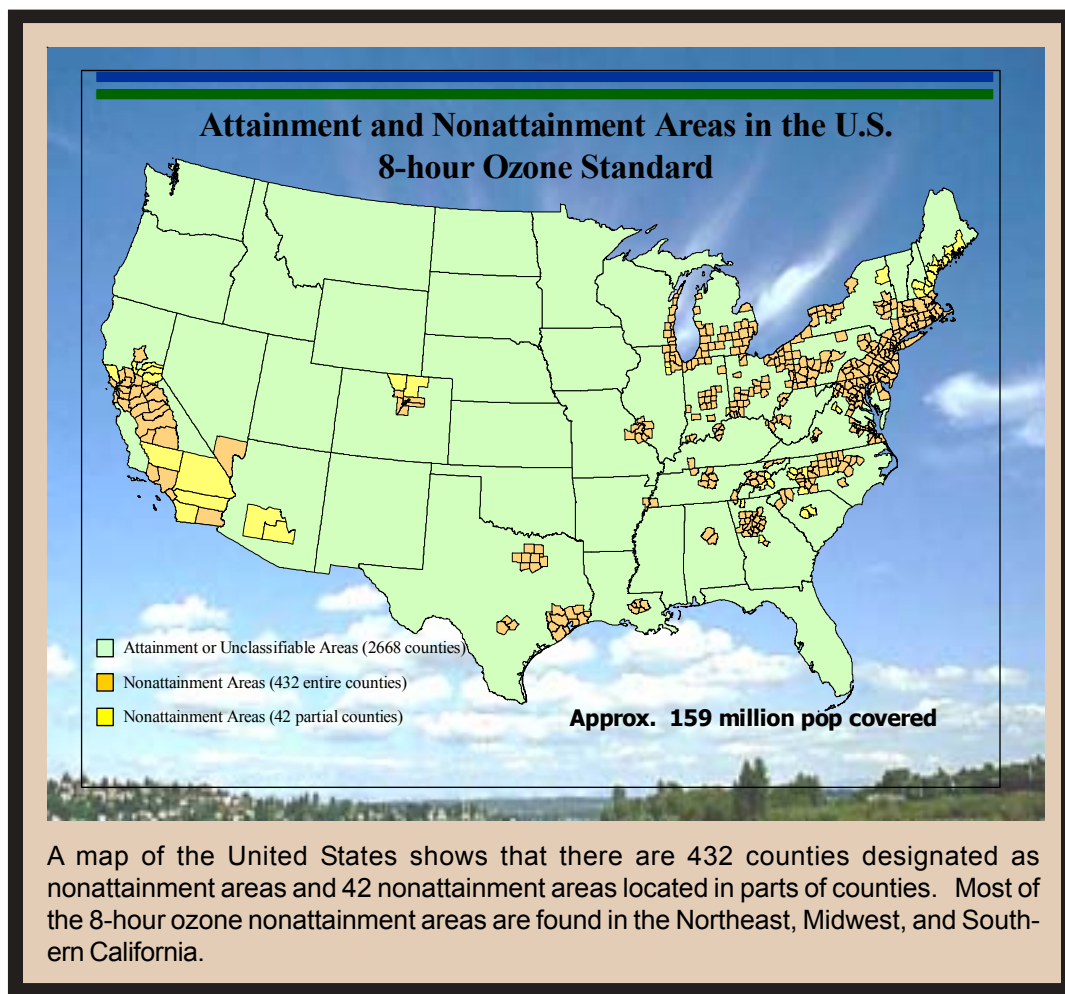


Integrating Air Quality  
and Transportation Planning Work-  
shop Broadcast Live From Chicago!

According to [Silvasi](#), “the rule provides more certainty for how the states are to do planning. EPA has been working to try to come up with a way to implement the standard in a manner that still provides flexibility for the states to do the implementation.”

Early Action Compact Areas (EACs) are areas that at the end of 2002 agreed to do early planning to meet the 8-hour standard. They agreed to get emission reductions that would be needed for attainment much earlier than nonattainment areas. Their emission reductions for attainment need to be in place by December 31, 2005 and they had to submit an attainment demonstration much earlier than other nonattainment areas. To compensate EACs, EPA deferred the effective date of their nonattainment designation; therefore, New Source Review under the 8-hour standard and conformity under the 8-hour standard do not yet apply. These areas eventually could be designated, but this gives them a chance to become clean by that time – so EPA can designate them as attainment areas. More information can be found on the EPA website: <http://www.epa.gov/ozonedesignations>.

[Kapichak](#) and [Jensen](#), helped the audience understand transportation conformity.



Conformity was established by the Clean Air Act and ensures that transportation plans and transportation improvement programs (TIPs) and projects are consistent with a state’s air quality goals. It makes sure that transportation activities do not: (1) cause any new violations of an air quality standard; (2) make any existing violations worse and (3) delay an area’s timely attainment of the air quality standard. Conformity does this by requiring an evaluation of the emissions that would result from transportation plans, TIPs and projects before they are funded or approved.

## Reprint of article from *Regions*, Fall, 2004

The July 1, 2004 revisions to the transportation conformity rule addressed three objectives:

- . Provide rules for demonstrating conformity under the new 8-hour ozone and PM-2.5 air quality standards;
- . Incorporate EPA and DOT guidance that resulted from the March 1999 court decision; and
- . Include several provisions that will streamline and improve conformity implementation.

On June 15, 2005, the 1-hour standard will be revoked for all but EAC areas. After the revocation date, most areas no longer will be required to determine conformity for the one-hour ozone standard. The only exceptions are EAC areas that have approved one-hour ozone maintenance plans.

In EAC areas, 8-hour ozone nonattainment designations are deferred and the 1-hour ozone standard is not being revoked. Therefore, as long as an EAC area continues to meet its milestones, 8-hour conformity will not be required. However, for 1-hour maintenance areas that have EACs (Denver-Boulder, CO; Greensboro-Winston Salem-High Point, NC; and Nashville, TN) 1-hour conformity will continue to apply unless the area either misses an EAC milestone or until one year after it is designated as an attainment area which could be as late as 2009.



NARC's Outgoing President F. Wayne Hill (standing) introduced telecast panelists, (L-R), Mark Simons, Gary Jensen, Rudy Kapichak, Jim Thorne, and John Silvasi.

The final rule requires that all regional emissions analyses in PM-2.5 areas consider PM-2.5 emissions from motor vehicles, tailpipes, brake wear, and tire wear. These emissions should be calculated using MOBILE6.2 for all States outside of California where EMFA 2002 should be used.

The rule reflects a March 1999 District of Columbia Circuit Court decision by incorporating guidance that DOT and EPA had issued to implement the court decision. The two most significant facets of that decision involve the process used to determine if SIP emissions budgets are adequate for conformity purposes and which projects or project phases can proceed during a conformity lapse. The final rule is consistent with current practice.

Amendments to the rule included the list of events that trigger conformity determinations. EPA removed the requirement to re-determine conformity if a state makes changes to transportation control measures in its SIP. EPA clarified that an area does not have to re-determine conformity after EPA approves emissions budgets if those budgets, have already been used in a conformity determination that is in agreement with an adequacy finding. (In adequacy review, EPA determines if the motor vehicle emissions budgets in the SIP are adequate for conformity purposes.)

EPA also changed the point for determining what constitutes the latest available planning assumptions. Under earlier versions of the rule a Regional Council or an MPO's regional emissions analysis had to be based on planning assumptions available at the time U.S. DOT made its conformity determination -- which could be some time after the Regional Council or MPO had completed its conformity determination. To address this, the revised rule allows a Regional Council or MPO to base its conformity determination on the planning assumptions that are available at the time it starts its regional emissions analysis

More information can be found on EPA's and FHWA's websites. The sites include the regulations, guidance documents, information on upcoming training, the status of EPA's adequacy reviews of submitted SIP budgets, and local and national contact information. For the EPA website: [www.epa.gov/otaq/traq](http://www.epa.gov/otaq/traq) (click on "conformity") and the DOT (FHWA) website: [www.fhwa.dot.gov/environment/conform.htm](http://www.fhwa.dot.gov/environment/conform.htm)

## Reprint of Article from *Regions*, Fall 2004

**Thorne** framed the discussion with some background information on the congestion mitigation and air quality improvement program known as CMAQ. The Intermodal Surface Transportation Efficiency Act in 1991 (ISTEA) created the CMAQ program as a funding source for transportation projects and programs that will help achieve the National Ambient Air quality Standards. The main goal of the CMAQ program is to fund transportation projects that reduce emissions in nonattainment and maintenance areas. To date, \$13 billion has been invested in about 15,000 projects across the country. CMAQ funds are apportioned to States through a statutory formula that accounts for severity of air quality problems and the size of affected populations. The primary focus has been on ozone and carbon monoxide, the pollutants of greatest concern when the CAA and ISTEA were passed.

The new air quality standards form the basis of another round of nonattainment designations, and thus, another group of areas eligible to receive CMAQ funds. However, the transportation bill defines the funding available and how it will be allocated based on the law's apportionment formula. In the short-term, no counties will be removed from the formula. There is no statutory basis for including EACs in the apportionment formula, because their nonattainment status is deferred. Only EAC's that are one-hour ozone maintenance areas will remain in the formula, because they have maintenance status. No draft bill has put EACs into the formula.

**Thorne** pointed out that "a lot more areas will be participating in the CMAQ program due to the new ozone standard and the fine particulate matter standard so there'll be more areas in the apportionment formula (as proposed). The administration's proposal under consideration by the Congress represents a 10 percent increase in total program funds, bringing the total to \$8.9 billion."

The telecast can be viewed on the FHWA website: <http://www.fhwa.dot.gov/environment/conformity/outreach.htm>

The second portion of the workshop provided perspectives from an array of experts on what implementation of the NAAQS is meaning for communities around the country. The list of panelists included: **Tracy Clymer** with the Atlanta Regional Commission, Air Quality, Transportation Planning Division; **Mike Rogers**, Illinois EPA, Division of Mobile Source Programs; **Patricia Berry**, Chicago Area Transportation Study (CATS), Transportation Improvement Program; **Cathy Stephens**, Capital Area Metropolitan Planning Organization (CAMPO), Air Quality Program; **John C. Tippett**, Western Piedmont COG; and **John Makler**, IBI Group.

[Atlanta Regional Commission](#) -- **Clymer** gave an overview of how the new air quality standards are affecting the Atlanta region. ARC will be going from a 13- to a 20-county ozone nonattainment area. Thirteen of the counties in this region are classified as severe under the one-hour ozone standard and 20 counties are classified as marginal under the revised eight-hour ozone standard. The biggest challenge to the region is growth. Dealing with conformity over the last decade has been an educational process for ARC. They have worked hard to develop an interagency consultation process that facilitates effective transportation and air quality planning in the region. Despite the challenges and unprecedented growth, air quality has improved for the region.



ARC's immediate milestone includes a conformity determination by January 2005. ARC was recently reclassified to serve nonattainment under the one-hour ozone standard and is preparing for implementation of the 8-hour ozone standard and implementation of the PM-2.5 standard all at the same time. As they prepare to implement the eight-hour

ozone and fine particulate matter NAAQS, ARC expects the same challenges as with past NAAQS: education, interagency relationships, and litigation. ARC has begun extensive outreach to those seven counties newly designated as part of the 8-hour ozone nonattainment area and presented a half-day workshop, "Clearing the Air: The Facts about Air Quality in Atlanta."

The interagency process will have to expand to include counties designated nonattainment for the first time. Many of these counties are rural in nature and will have need to overcome a negative perception of "included with Atlanta" on top of being designated nonattainment. The expanded nonattainment area has two MPO's within the 8-hour ozone nonattainment area and one "donut" county outside of either MPO's planning boundary, but within a nonattainment area. ARC has already held multiple meetings with partners over the last year to discuss nonattainment issues.

ARC has developed the following general findings about to the new ozone and PM-2.5 standards:

1) Rules are not available in a timely manner; 2) A potential exists for regulations to lead the science; 3) Significant resource issues remain; 4) Legal challenges at the national level are driving the process; and 5) Many issues that affect transportation conformity are out of MPO control.



[Illinois EPA, Division of Mobile Source Programs](#) -- **Rogers** provided a state air agency perspective on the implications to air quality planning of the new NAAQS. He began with a description of the typical parts of a SIP: monitoring data; emissions inventories, with an emphasis on motor vehicle emissions; photochemical modeling; and stationary and mobile source control strategies. He said the following are important in SIP development: what process is used and who participates from state and local air quality agencies; EPA's approval process; and MPO, State DOT, and interest group involvement.

**Rogers** helped the audience understand air quality planning by describing the purpose and importance of SIP emissions inventories and the steps necessary to prepare and use them. He described the air pollution sources that must be addressed in the inventories and the methods used to estimate emissions from point sources, area sources, mobile sources (on-road and non-road), and biogenic sources (modeled and baseline). He explained how emissions factors and certain transportation data affect the MOBILE6.2 emissions estimates.

**Rogers** defined control strategies and gave examples for stationary and mobile sources. He used several excellent slides to demonstrate the affects on air quality of transport, of combining clean-vehicle and clean-fuel control measures, and of growth.

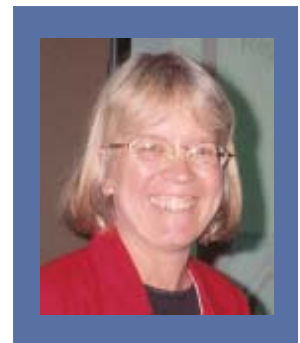
Lastly, **Rogers** addressed motor vehicle emissions budgets. He said they are one piece of the SIP emissions pie. He outlined the EPA process and criteria for an adequate budget.

The NAAQs criteria pollutants addressed in motor vehicle emissions budgets are carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), particulate matter, and ground-level ozone (smog) In determining a budget, a baseline emissions inventory is developed. Through the interagency consultation process, required emissions reductions are determined.

[CATS, Transportation Improvement Program](#) -- **Berry** provided the audience with CATS regional perspective for implementing the new NAAQS. CATS has a committee structure that operates by consensus. **Berry** said, "the benefits of consultation are: early and active involvement of interested parties, issue identification, quick response to rule changes, and quick document development due to concurrent reviews."

Committee task forces conduct the steps necessary to implement the new NAAQS. They vet their products. All TIP preparation is sent through to the policy committee.

The evolution of CATS' long-range consultation is documented in the "2030 Regional Transportation Plan," of which they are rightfully proud because it is not only technically correct, but also comprehensible to the general public.



[CAMPO, Air Quality Program](#) -- **Stephens** chaired the regional group that developed the Austin/San Marcos MSA Ozone Flex Agreement, a voluntary emissions reduction plan that addresses the one-hour ozone standard. She also serves as chair of the Early Action Compact Task Force, a regional group that developed the Clean Air Action Plan. The plan was approved regionally and submitted to the state for inclusion in the SIP. CAMPO's air quality program includes initiatives to reduce transportation-related emissions, manage congestion, and prepare for a potential nonattainment designation.

"Both transport and local emissions contribute to poor air quality in the Austin area. All of their modeling data indicated that, without additional emissions reduction measures, the region would still be on the cusp of nonattainment in 2007. Central Texas

chose to form an EAC to meet the New NAAQS, due to the health and economic affects a designation would have on the region. Also, the region thought the EAC-route would allow more local choice in selecting emissions reductions measures,” said **Stephens**.

The Austin EAC set goals and challenges; setup a regional air quality planning structure; reached out to the public and stakeholders; and developed a Clean Air Action Plan (CAAP), which was required. The plan included policy statements, technical analyses, public and stakeholder involvement, emissions reduction measures, opportunity for growth, continuing the planning process, tracking and reporting.

Because the EAC measures have to be quantifiable and enforceable, the State of Texas assisted CAMPO. Please see the article that follows immediately after this one for a more in-depth presentation on a regional perspective by the Capital Area Council of Governments.



**Western Piedmont COG** -- **Tippett** represents a midsize region and discussed air quality planning activities in the “Unifour Area” that encompasses the Hickory, NC MSA. **Tippett** chairs the Unifour Air Quality Committee, formed in December 2002. He provided a list of accomplishments.

The Unifour Area formed an EAC and developed 14 ozone control measures for implementation. The region also is a fine particle (PM-2.5) area. The ozone control measure that was of most interest to the region was the implementation of smart growth, mixed use, and infill development policies. These policies are of significance to the political, environmental and business communities.

Tippett’s wit and humor captivated the audience and his reference to “the time-honored harvest of “smokey joe’s” that occurs yearly in North Carolina was special!

Jonathan Makler, **IBI Group** -- **Makler** presented North Carolina case studies on transportation and air quality planning, focusing on preparing for the new NAAQS and conformity. Two specific strategies the communities had for addressing the new NAAQS were to “Minimize” and “Mitigate.” The case studies documented that in preparing for conformity, paying attention to rationale, response, and outcomes are essential. The North Carolina Air Quality Roundtable experience offers lessons for other states and regions to emulate. Further information is available on: [www.ksg.harvard.edu/taubmencenter/research/maklerhowitt\\_trnews.pdf](http://www.ksg.harvard.edu/taubmencenter/research/maklerhowitt_trnews.pdf)

“In order to protect the economic vitality of the state, North Carolina business leaders, elected officials, community groups and other stakeholders will need to achieve a common understanding of the implications of the new standards and work cooperatively to achieve conformity.”

Jon Makler