



Air Quality Update

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Outline

- Clean Air Act Requirements
- Current NAAQS and Planned NAAQS Revisions
- MOVES
- NC Transportation Conformity Deadlines
- AQ Certification Review Recommendation
- Information Sources



CAA Requirements for NAAQS

- **The Clean Air Act (CAA) contains EPA's authority to establish two types of national ambient air quality standards (NAAQS):**
 - *Primary standards* to protect public health with an adequate margin of safety, including the health of at-risk populations such as children, people with asthma, and older adults.
 - *Secondary standards* to protect public welfare from any adverse effects, including effects on sensitive vegetation and ecosystems.
- **The CAA also requires EPA to review the NAAQS at 5 year intervals and to make revisions as may be appropriate.**
- **The CAA generally requires EPA to designate nonattainment areas within 2 years after a NAAQS is established or revised**
 - May be extended to 3 years if there is insufficient information to make the designations
- **Revisions to air quality monitoring requirements are completed in parallel with NAAQS development**



Current NAAQS

- **EPA has established NAAQS for six criteria pollutants:**
 - Ozone
 - Particulate Matter – PM_{2.5} and PM₁₀
 - Nitrogen Dioxide (NO₂)
 - Carbon Monoxide (CO)
 - Sulfur Dioxide (SO₂)
 - Lead



NAAQS Implementation

- **Once a new or revised NAAQS is established, other CAA requirements start for nonattainment areas, e.g.,:**
 - Developing reasonable further progress or attainment SIPs, depending on NAAQS
 - New source review
 - Control measures for certain cases
 - **Conformity**



NAAQS Review Schedules

- **Chronological list of recently completed and upcoming NAAQS reviews:**
 - Lead: Completed review in October 2008
 - NO₂: Completed review for NAAQS in January 2010
 - SO₂: Completed review in June 2010
 - Ozone: Finalize reconsideration of the 2008 primary and secondary NAAQS by **October 2010**
 - Next 5-year review initiated—to be completed in February 2014
 - CO: Finalize review of the current NAAQS by May 2011
 - PM_{2.5} and PM₁₀: Finalize review of the current NAAQS by October 2011
 - SO₂/NO₂ combined secondary NAAQS: Finalize review by March 2012



Ozone NAAQS

- **Current primary and secondary ozone NAAQS:**
 - 0.08 ppm established in 1997
 - 0.075 ppm established in 2008, petition for reconsideration filed

- **In January 2010 EPA proposed:**
 - A primary ozone NAAQS in the range of 0.060 to 0.070 ppm
 - A secondary ozone NAAQS in the range of 7 to 15 ppm-hours
 - A schedule for implementing the primary NAAQS:
 - Designate areas in August 2011
 - Based on 2008 – 2010 air quality data
 - That the secondary NAAQS could be implemented on the same schedule, or:
 - Designate areas in August 2012
 - Based on 2009 – 2011 air quality data



PM2.5 and PM10 NAAQS

- **PM2.5:**
 - **Current primary and secondary PM2.5 NAAQS:**
 - Annual: 15.0 $\mu\text{g}/\text{m}^3$ established in 1997
 - 24-hour: 35 $\mu\text{g}/\text{m}^3$ established in 2006
 - **Schedule for implementing the annual PM2.5 NAAQS:**
 - EPA designated areas in 2005
 - **Schedule for implementing the 24-hour PM2.5 NAAQS:**
 - EPA designated areas in December 2009
- **PM10:**
 - **Current primary and secondary 24-hour PM10 NAAQS:**
 - 24-hour: 150 $\mu\text{g}/\text{m}^3$ established in 1987
 - Annual NAAQS revoked in 2006 (no longer applicable)



PM: NAAQS Review

- **EPA is currently reviewing the PM NAAQS with future rulemaking:**
 - Proposal: February 2011
 - Final rule: October 2011



NO₂ NAAQS

- **Current NO₂ NAAQS:**
 - Annual primary and secondary: 53 ppb, established in 1971
 - 1-hour primary: 100 ppb, established in January 2010
- **Schedule for implementing the 1-hour NO₂ NAAQS:**
 - Designate areas in January 2012
 - Based on 2008 – 2010 air quality data
 - Areas designated as “unclassifiable” because near road monitoring network does not yet exist (more on next slide)
- **EPA intends to redesignate areas in 2016 or 2017, as appropriate, based on the air quality data from the new monitoring network**



CO: NAAQS Review

- **Current primary NAAQS, established in 1971**
 - 8-hour average: 9 ppm
 - 1-hour average: 35 ppm
 - Secondary CO NAAQS revoked in 1985 (not applicable)
- **EPA is currently reviewing the CO NAAQS**
 - Rulemaking schedule:
 - Propose: October 2010
 - Finalize: May 2011
- **First external review draft of the policy assessment recommended revising the CO NAAQS as follows:**
 - 8-hour NAAQS: between 3 and 9 ppm
 - 1-hour NAAQS: between 5 and 15 ppm
- **Second external review draft of the policy assessment under development**



MOVES2010

- Motor Vehicle Emissions Simulator
- New approach to projecting mobile source emissions
- Not merely an upgrade of the previous MOBLE model
- Brand new software, designed from the ground-up
- Estimates emissions at a more detailed level
- MOVES2010 is named to indicate the first year that the model maybe used in SIPs and conformity determinations



When should MOVES2010 be used for SIP and transportation conformity analysis?

- Should be used as expeditiously as possible
- It is approved for SIP and transportation conformity analysis as of **March 2, 2010**.
- There is a 2-year grace period before MOVES2010 emissions model is required to be used in new regional emissions analyses for transportation conformity
- **Grace period ends March 2, 2012**



When should MOVES2010 be used for project-level transportation conformity hot-spot analyses?

- MOVES2010 has **not** yet been approved for project-level hot-spot analyses
- Draft Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas
 - Released on May 26, 2010
 - Comments due to EPA by July 19, 2010
 - Finalized late 2010
 - 2-year grace period (*this will be a separate grace period from the SIP and transportation conformity grace period*)



North Carolina Transportation Conformity Deadlines

- **2012 – 2018 STIP/TIP**
 - October 1, 2011
- **New Ozone Standard**
 - August 2012
- **Metrolina (CRAFT) Non-attainment Area**
 - Mecklenburg Union MPO
 - Cabarrus Rowan MPO
 - Gaston MPO
 - **RFATS MPO**
 - Donut Areas: *Gaston, Iredell, Lincoln & Union*



North Carolina Transportation Conformity Deadlines

12- 18 TIP Conformity Process Milestones

- **9/20/10-10/20/10**: Agency Review 12-18 TIP to 2035 LRTP
- **11/4/10**: IC Meeting
- **12/1/10-1/31/10**: Transportation Modeling
- **2/1/11-3/31/10**: Emissions Analysis



North Carolina Transportation Conformity Deadlines

12- 18 TIP Conformity Process Milestones

- **4/1/11-4/29/10**: Conformity Report Preparation
- **5/27/11-6/30/11**: Public/Agency Review Period
- **7/1/11-8/31/11**: TAC Final Actions
- **9/1/11-9/30/11**: USDOT Conformity Determination



AQ Certification Review Recommendation

- MUMPO, CRMPO and Gaston MPO should develop more detailed model protocol agreements that address future LRTP, TIP, amendments to the LRTP and TIP and conformity processes in the future



Sources of Information

- EPA's NAAQS revision website at: <http://www.epa.gov/ttn/naaqs/> includes links to:
 - All documents associated with all on-going and recently completed NAAQS reviews
 - Information on implementation requirements for each NAAQS
 - Information on the process used in reviewing each of the NAAQS
- EPA's MOVES website at: <http://www.epa.gov/otaq/models/moves/index.htm> includes links to:
 - The MOVES 2010 software to be downloaded
 - Instructions for downloading and installing the model
 - Technical and policy guidance on using the model
 - A users guide for the model