



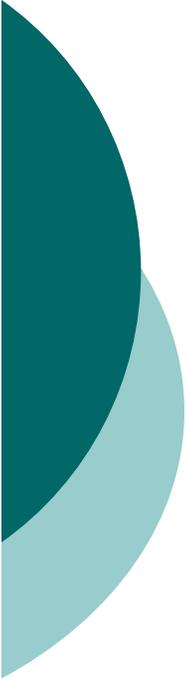
A Basic Overview of Transportation Conformity and State Implementation Plans

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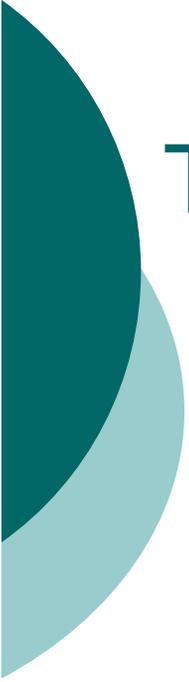
Outline

- Conformity Overview
- SIPs and Air Quality Planning
- Conformity for Transportation Plans, Transportation Improvement Programs (TIPs) and Transportation Projects



Conformity

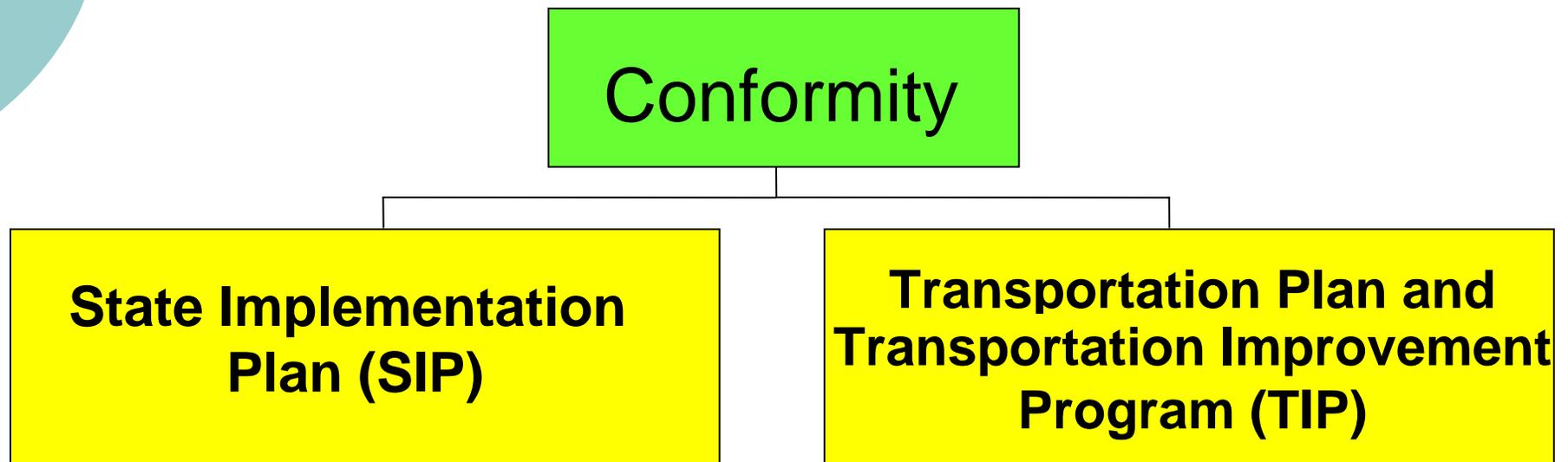
- 1990 Clean Air Act Amendments require federal actions to conform to the purpose of the state implementation plan (SIP)
- Purpose of the SIP:
 - Eliminate/reduce violations of the national ambient air quality standards (NAAQS)
 - Expedient attainment of the NAAQS

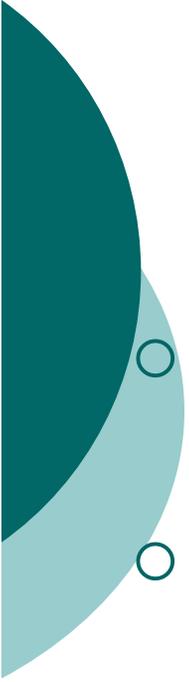


Transportation Conformity

- Transportation activities funded or approved by the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) are subject to transportation conformity in areas designated nonattainment or maintenance for:
 - Ozone, PM2.5, PM10, NO2 and CO
- NOx is a precursor analyzed in ozone, NO2, PM2.5 and many larger PM10 areas
 - NH3 is a precursor that can be analyzed in PM2.5 areas

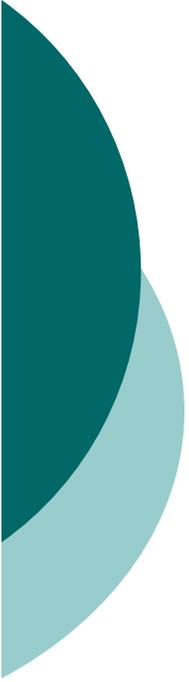
Transportation Conformity: A Link Between Air Quality and Transportation Planning





What Is Transportation Conformity Intended to Do?

- Help SIP achieve its goal to protect public health
- Create forum for better long-term decisions
- Ensure transportation and air quality coordination
- Improve data and planning assumptions



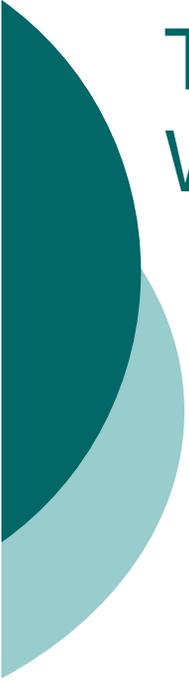
Two types of conformity

Transportation

- OTAQ is HQ lead
- Applies to federal transportation actions -- highways and transit
- Applies to transportation-related criteria pollutants:
 - Ozone
 - PM10 and PM2.5
 - CO
 - NO₂

General

- OAQPS is HQ lead
- Applies to all other federal actions, e.g. approval of airports (FAA), DOD facilities, RRs
- Applies to all 6 criteria pollutants
 - 4 already mentioned +
 - SO₂
 - lead

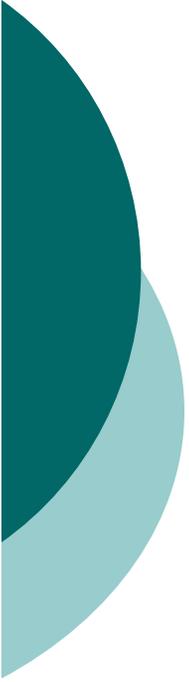


Transportation Conformity: What pollution does it address?

- Transportation conformity only addresses air pollution from on-road mobile sources.
- On-road mobile sources are emissions created by cars, trucks, and transit.
- Does not apply to other sources covered in SIPs:
 - Power plants
 - Oil refineries/chemical plants
 - Consumer products

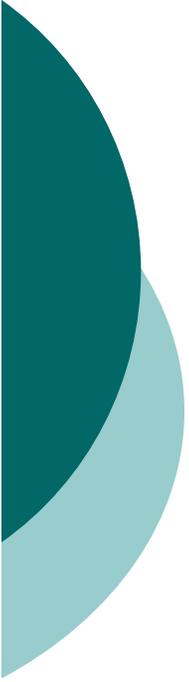


SIPs and Air Quality Planning



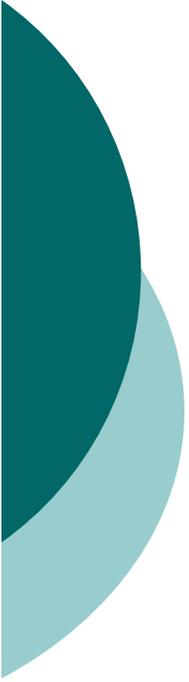
What is a SIP?

- Legally enforceable plan for how state/area will achieve better air quality
- Addresses specific Clean Air Act requirements & deadlines
- Prepared by state or local air quality agency, submitted by Governor
- Interagency consultation and public participation required in preparation



SIP Elements

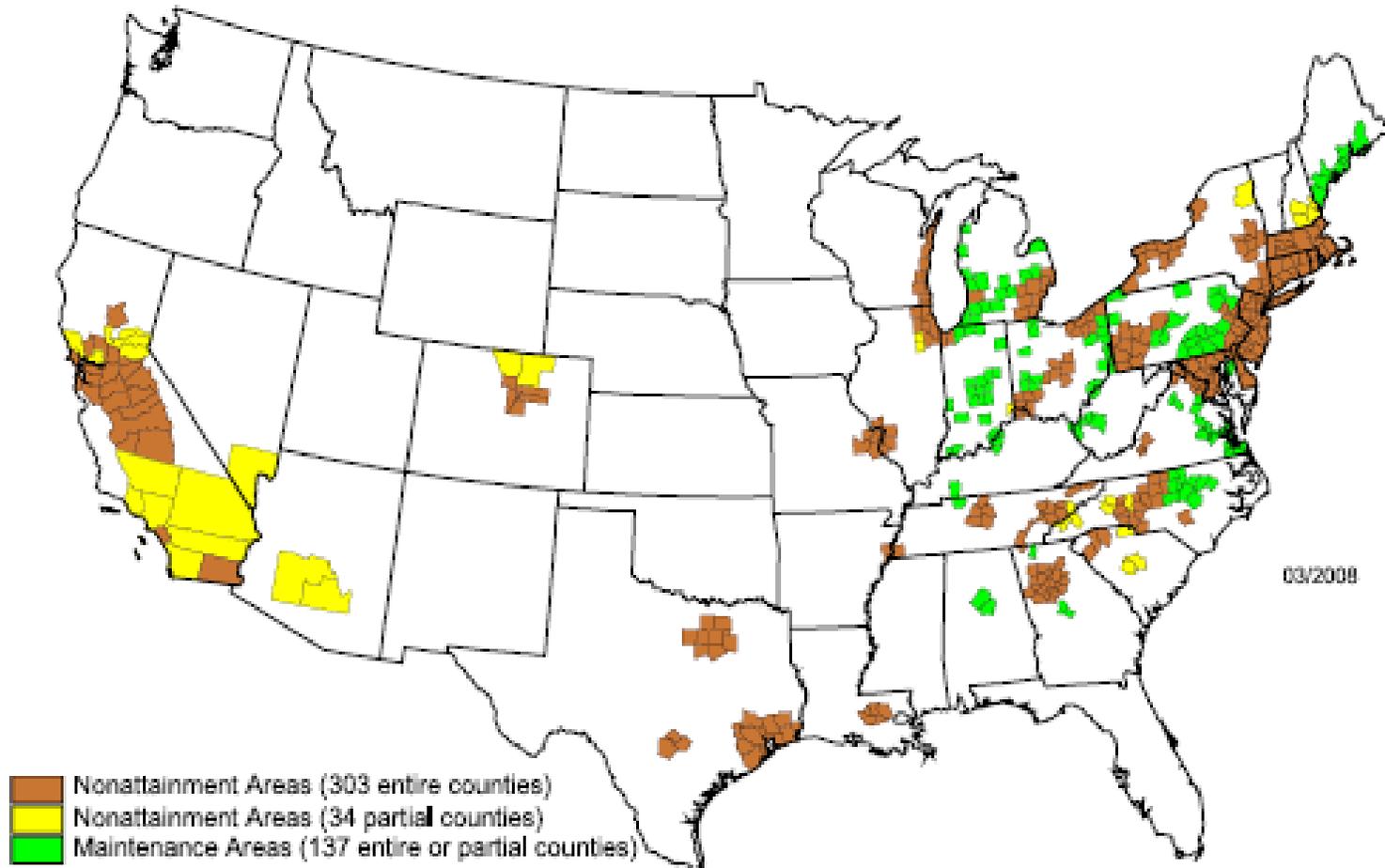
- Inventory of emissions estimates for each sector (stationary, area, mobile)
- Air quality modeling to demonstrate SIP's purpose
- Specific list of controls
- Contingency measures



What are the schedules for implementing the 1997 8-hour ozone and PM2.5 standards?

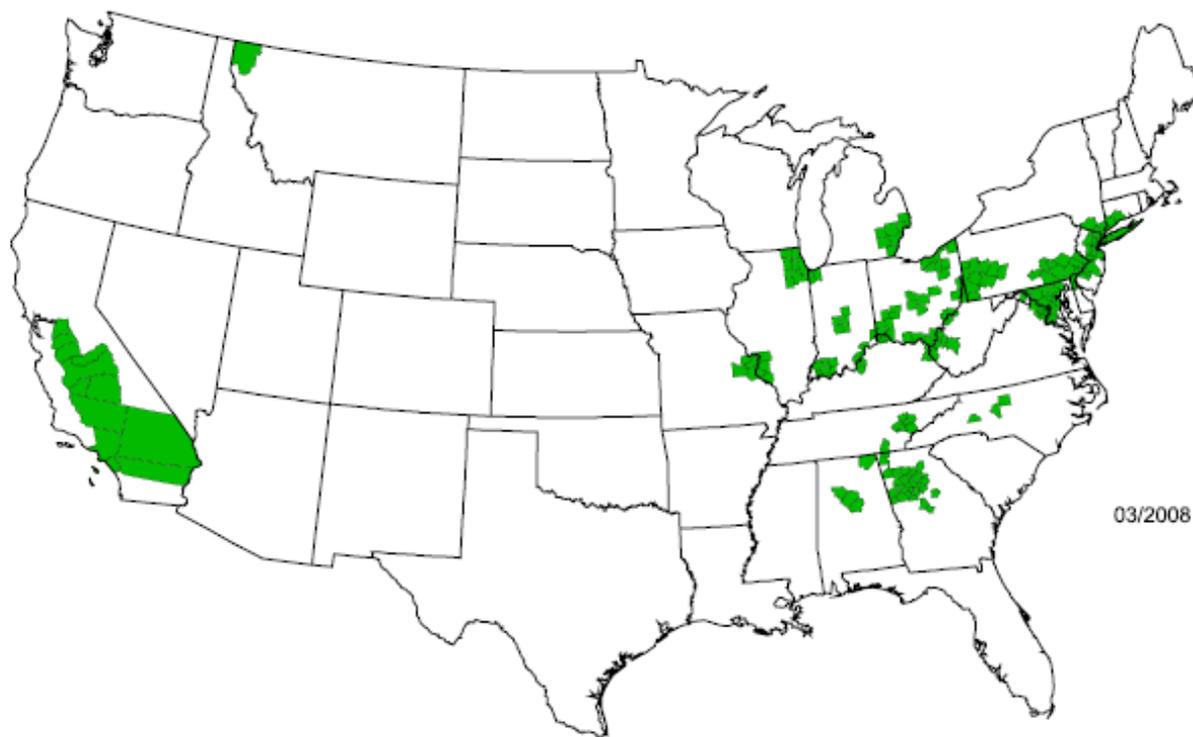
- 8-hour ozone nonattainment areas and SIPs
 - June 2004: EPA designated 112 areas as nonattainment for the 1997 8-hour standard
 - June 2007: 8-hour SIPs were due
 - Attainment dates range from 2007 to 2024
 - 54 areas have attained the standard and been redesignated
- PM2.5 nonattainment areas and SIPs
 - April 2005: EPA designated 39 nonattainment areas
 - April 2008: PM2.5 SIPs are due
 - Attainment dates range from 2010 to 2015

Nonattainment and Maintenance Areas for the 1997 8-hour Ozone Standard



Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

Nonattainment areas for the 1997 PM_{2.5} Standard



Partial counties are shown as whole counties



What are the schedules for implementing the revised 8-hour ozone and PM2.5 standards?

- In December 2006, EPA revised the 24-hour PM2.5 NAAQS from $65 \mu\text{g}/\text{m}^3$ to $35 \mu\text{g}/\text{m}^3$
 - Nonattainment designations expected to be effective in early 2009
 - Transportation conformity would apply in early 2010
 - SIPs would be due in early 2012
 - Attainment dates would range from 2014 to 2019

- In March 2008, EPA revised the 8-hour ozone NAAQS from 0.08 ppm to 0.075 ppm
 - Nonattainment designations expected to be effective in early 2010
 - Transportation conformity would apply in early 2011
 - SIPs would be due in early 2013
 - Attainment dates would vary based on the severity of an area's problem

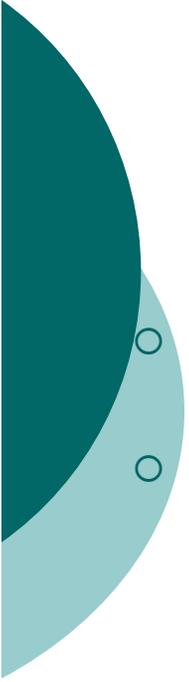


Conformity for Transportation Plans, Transportation Improvement Programs and Projects



What is subject to transportation conformity?

- Transportation plan: 20-year timeframe
- Transportation Improvement Program (TIPs): 4-year timeframe
- “Federal” projects: those which
 - Receive FHWA or FTA funding
 - Require FHWA or FTA approval
- Air quality impacts of regionally significant non-federal projects are also considered prior to approval, but no project-level conformity determination required



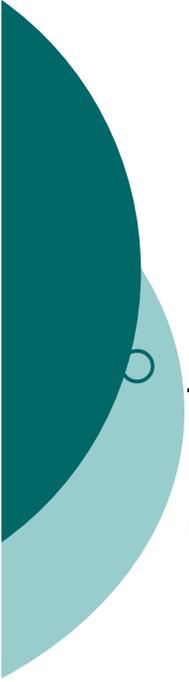
Who is involved in transportation conformity?

- Metropolitan planning organizations (MPOs)
 - Prepare transportation plans, TIPs and conformity determinations
- Other transportation agencies
 - projects outside MPO boundaries (state DOTs, county agencies)
 - transit projects (local transit agencies)
 - consult on conformity determinations
- EPA
 - regional consultation role on individual determinations
 - national role in promulgating conformity rule and policy guidance
- FHWA/FTA
 - Make transportation plan, TIP and project conformity determinations
 - Concur on national conformity rule and policy guidance
- State and local air agencies
 - develop SIPs/control measures/modeling
 - consult on conformity determinations



Conformity tests: when?

- Before new transportation plans and/or TIPs (or amendments) are adopted
 - Plans must be updated every 4 years
 - TIPs must be updated every 4 years
- Within 2 years of a new SIP
- At least every four years



How is transportation conformity demonstrated?

- Plans and TIPs: emissions in the long term (20-year timeframe) must stay within emissions budgets established in the SIP
 - Interim emissions tests are used in transportation conformity determinations made before a SIP is submitted
 - 2005 transportation act, SAFETEA-LU, amended the Clean Air Act to allow the timeframe to be shortened, if election made by the MPO
- Other requirements need to be met too



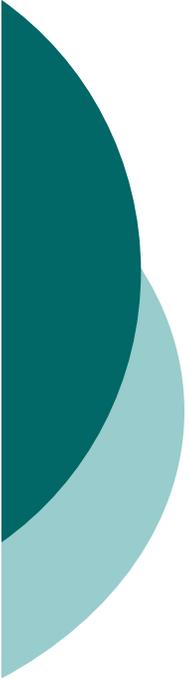
The Budget Test

- Budget test: emissions from planned transportation system \leq budget
- SIP's motor vehicle emissions budgets:
 - provide "ceiling" on emissions for a given pollutant or precursor from all on-road mobile sources
 - based on area's motor vehicle inventory and control measures
 - set to produce the necessary emissions reductions to attain and maintain the NAAQS



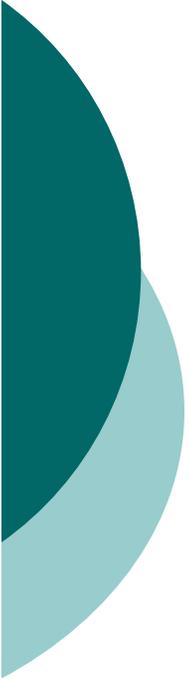
What areas evaluate NO_x in transportation conformity determinations?

- 8-hour ozone nonattainment and maintenance areas evaluate on-road NO_x emissions as an ozone precursor
- PM_{2.5} nonattainment and maintenance areas evaluate on-road NO_x emissions as a PM_{2.5} precursor
 - If the SIP establishes a NO_x budget; and
 - Before the SIP is submitted, unless on-road emissions of NO_x are **not** a significant contributor to the PM_{2.5} problem in the area
- Many larger PM₁₀ nonattainment and maintenance areas evaluate on-road NO_x emissions as a PM₁₀ precursor
- Nitrogen dioxide areas evaluate on-road NO_x emissions
 - Only 1 NO₂ area – The South Coast area in CA



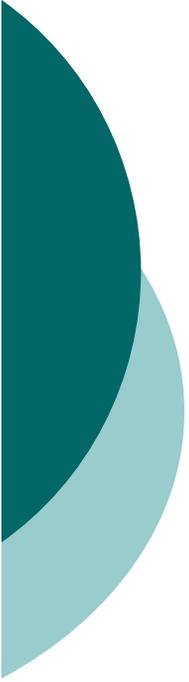
What areas evaluate NH₃ in transportation conformity determinations?

- To date no PM_{2.5} areas are evaluating on-road NH₃ emissions in transportation conformity
- PM_{2.5} nonattainment and maintenance areas evaluate on-road NH₃ emissions as a PM_{2.5} precursor only:
 - If the SIP establishes an NH₃ budget; or
 - Before the SIP is submitted, if either EPA or the state air agency have made a finding that on-road emissions of NH₃ are a significant contributor to the PM_{2.5} problem in the area



Conformity Consequences

- If an area cannot conform by a 2 or 4-year deadline, a 12-month conformity grace period starts
- If a new plan and TIP cannot be adopted before the end of the grace period, conformity lapses
- During a lapse, only 3 types of projects can proceed
 - Exempt projects (e.g., air quality neutral projects)
 - Transportation control measures (TCMs) that are included in the SIP
 - Any project phase that was approved prior to the lapse (but not any subsequent phases)



Project-level Conformity Requirements

- Currently conforming plan/TIP must be in place for project approval
- Project must come from conforming plan/TIP
- Hot-spot analysis currently required in $PM_{2.5}$, PM_{10} , and CO areas
 - Ensure that pollutant concentrations from projects, summed with background, do not cause or worsen air quality violations
- Compliance with SIP's PM_{10} and $PM_{2.5}$ control measures