

Transportation Conformity

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Outline

- What is Transportation Conformity?
- How does “fuel” fit in process?
- Why should Clean Cities stakeholders be interested?
- What’s up with reauthorization?
- Where to go for more information?

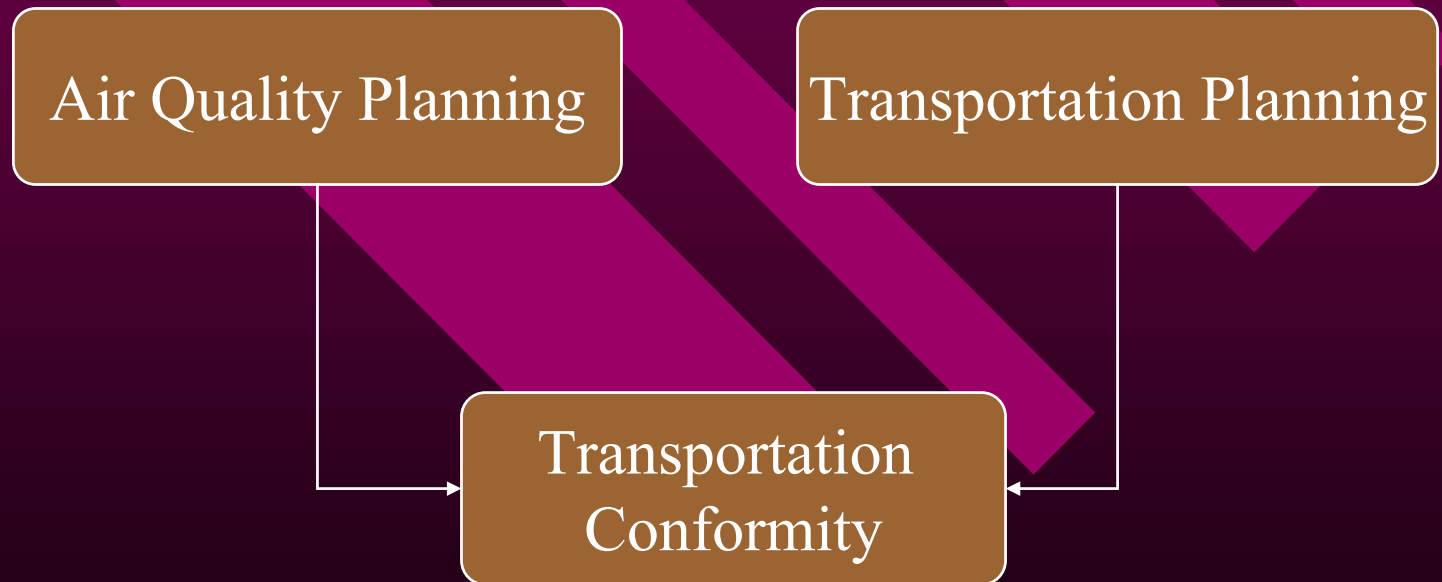
Transportation Conformity

- 1990 Clean Air Act Amendments (CAA)
 - section 176(c)
 - » Requires conformity of Transportation Plans, Programs and Projects; funded or approved under Title 23 U.S.C. or the Federal Transit Act.
- Transportation Conformity Regulation
 - 40 CFR Parts 51 & 93
 - » Contains criteria and procedures for determining conformity to State Implementation Plans

What Is Conformity?

- Emissions from transportation activities must conform to the “purpose” of the State air quality implementation plan (SIP) to cause:
 - No new violations
 - No worsening of existing violations
 - No delay in timely attainment
- Conformity determinations on
 - Transportation Plan (20 years)
 - Transportation Improvement Program (TIP)
 - Transportation Projects

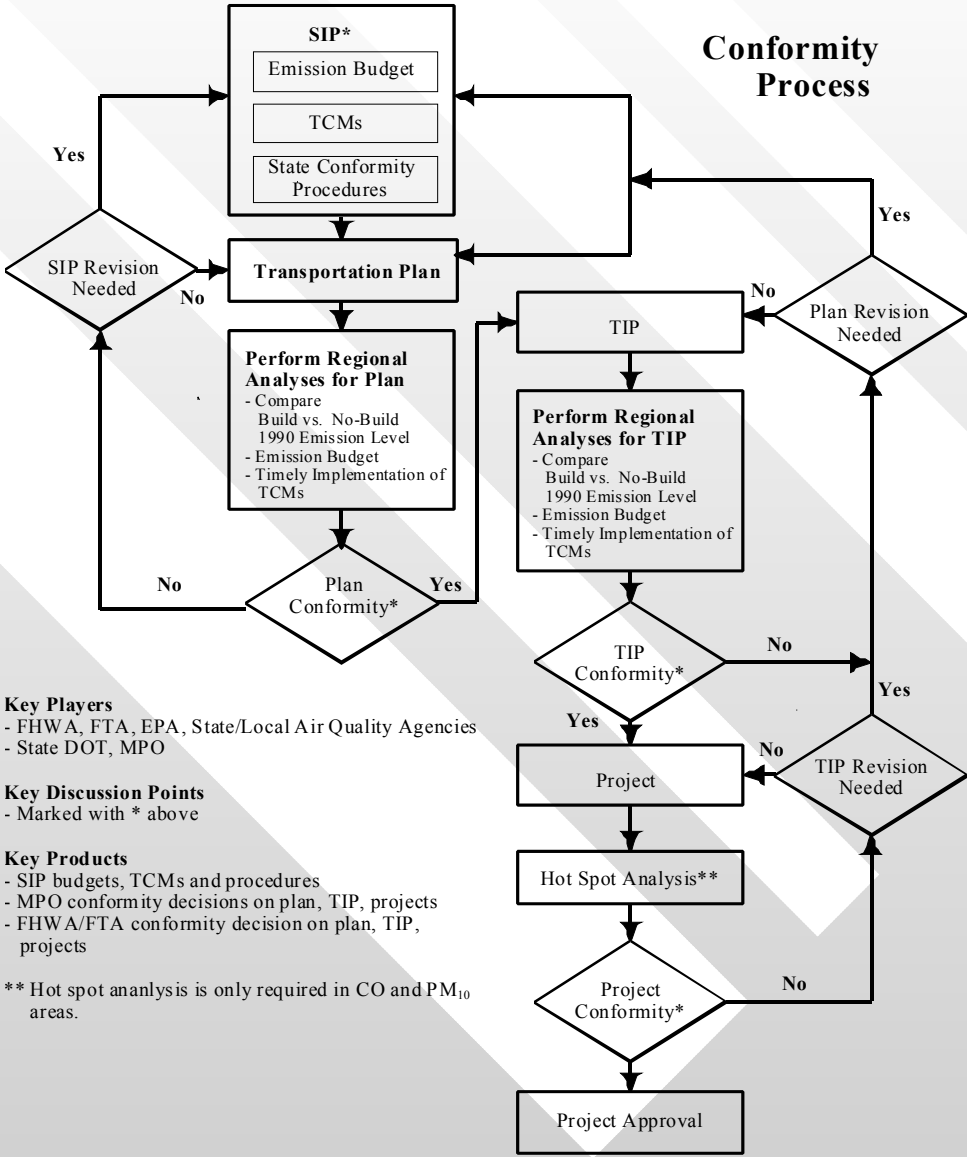
Air Quality and Transportation Planning Integration



Applicability

- Designated nonattainment areas
- Maintenance areas
 - (Areas redesignated to attainment)
- Ozone (O_3)
 - VOC
 - NO_x
- Carbon Monoxide (CO)
- Particulate Matter (PM-10 & PM-2.5)

Conformity Process



Key Players
 - FHWA, FTA, EPA, State/Local Air Quality Agencies
 - State DOT, MPO

Key Discussion Points
 - Marked with * above

Key Products
 - SIP budgets, TCMs and procedures
 - MPO conformity decisions on plan, TIP, projects
 - FHWA/FTA conformity decision on plan, TIP, projects

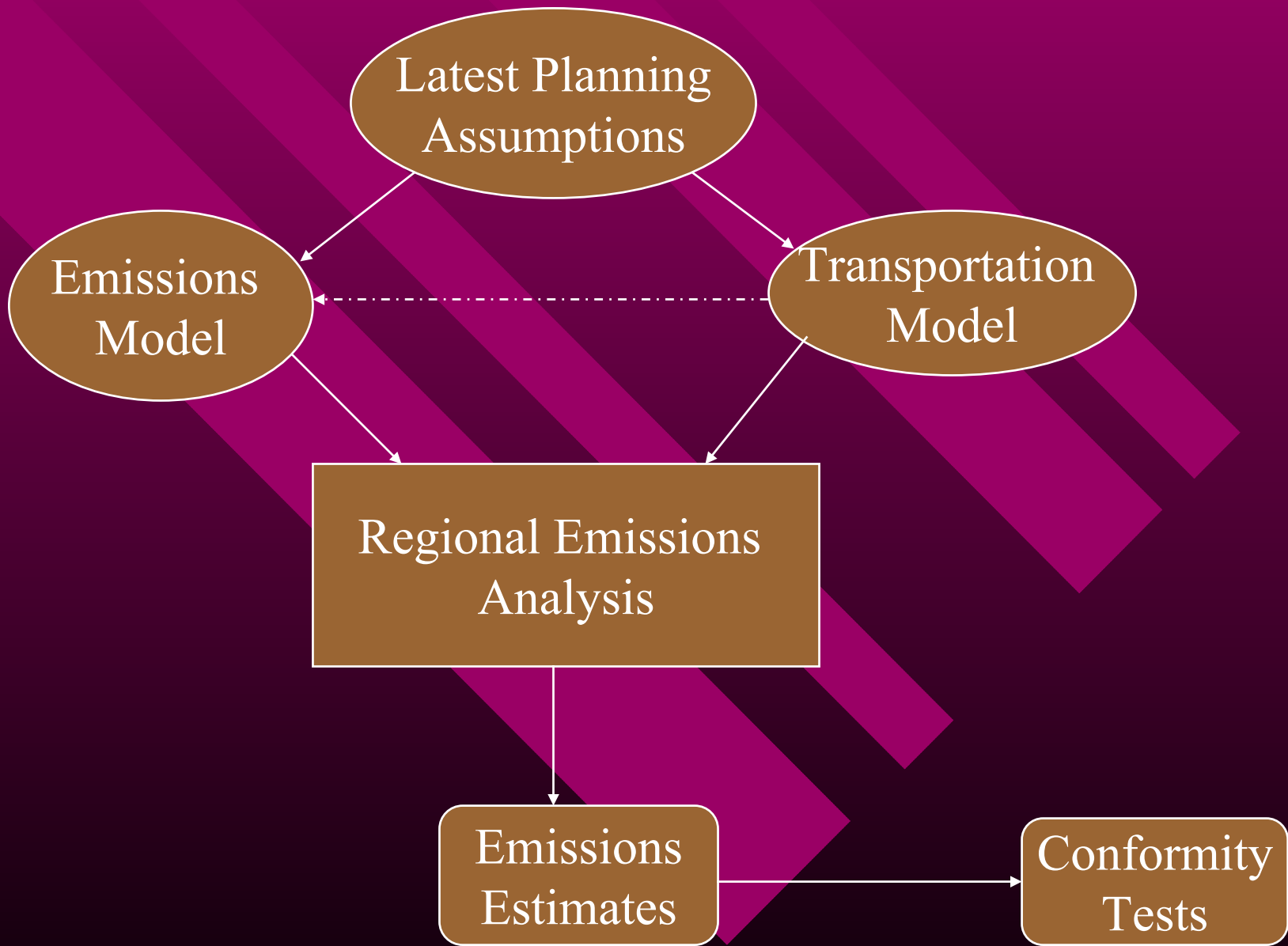
** Hot spot analysis is only required in CO and PM₁₀ areas.

Transportation Conformity Frequency

- Conformity must be re-determined:
 - Once every three years.
 - As warranted by SIP revisions (i.e., initial SIP submission).
 - As required for amendments to the Transportation Plan and TIP.
- Failure to demonstrate conformity will result in a conformity lapse and potential disruption in transportation projects

Elements of a Conformity Determination

- A. Regional emissions analysis
 - budget test
 - emission reduction tests
- B. Transportation modeling requirements
- C. Latest planning assumptions and emissions model
- D. Timely implementation of TCMs
- E. Interagency consultation
- F. Project-level requirements



Emissions Estimates

Total Emissions = Vehicles Miles Traveled (VMT) x
Emissions Factors

VMT = # of vehicles x distance traveled

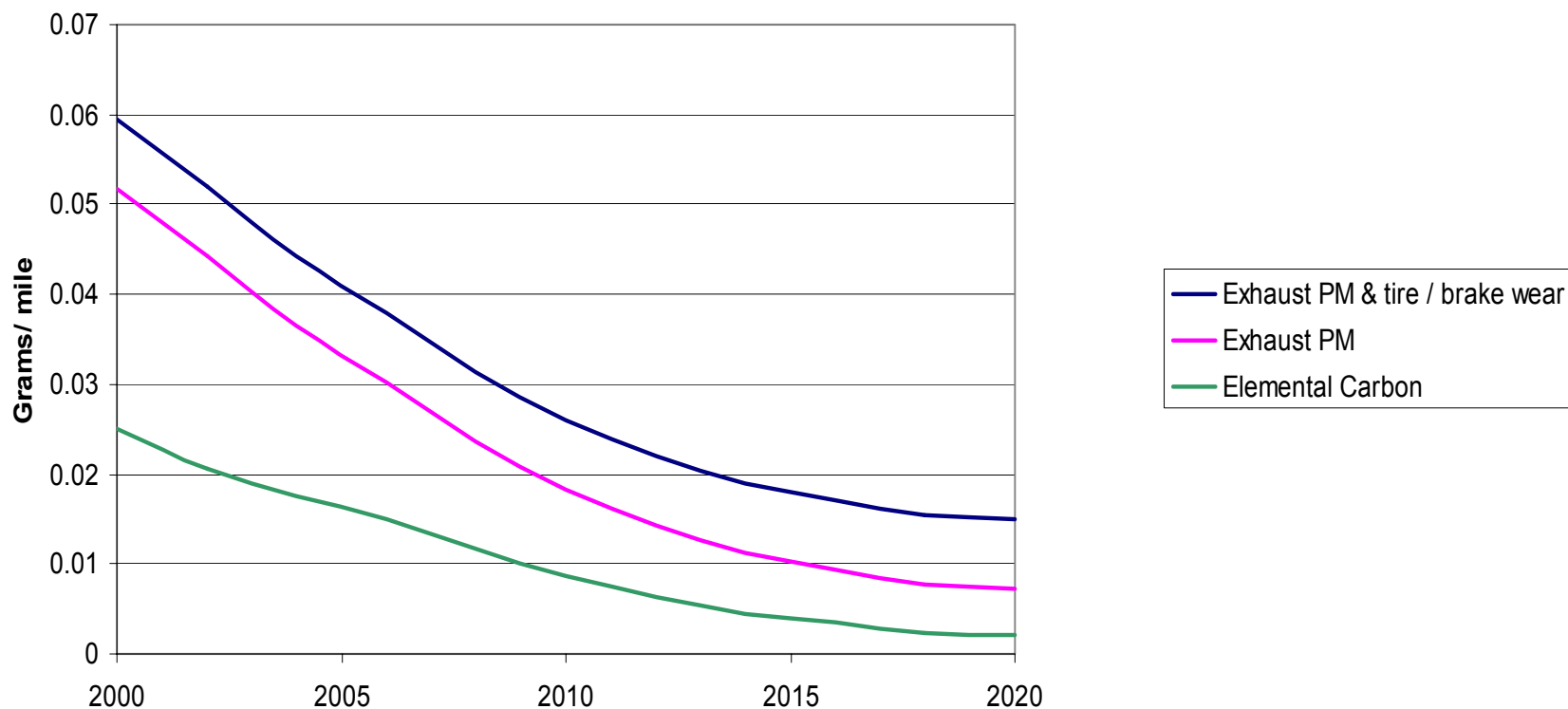
Emissions factor is a function of:

- Basic emissions rates (BER)
- Vehicle fleet characteristics (age, type, diesel fractions, NGV fractions, etc.)
- Speed
- Vehicle operating characteristics
- VMT by facility type and by hour
- Emissions standards and controls
- Other programs (I/M; fuel, etc.)
- Other adjustments (temperature, humidity, etc.)

Fuel Program Specifications

- Sulfur content
- Oxygenated fuels
- Fuel RVP
- Stage II Refueling (vapor recovery)

PM_{2.5} Emissions Factors (g/mile)



See Notes below.

Notes:

Diesel sulfur content is assumed to be 500 ppm through May of 2006.

From June 2006 through 2009, assumes that 80% of the diesel fuel sold meets the new standard of 15 ppm sulfur.

Beginning in 2010, this analysis assumes that all on-road diesel contains 15 ppm sulfur.

Gasoline sulfur content is assumed to fall from 300 ppm in 2000 to 30 ppm beginning in 2008

Changes in Conformity

- Reauthorization: proposed conformity changes
 - Administration: SAFETEA
 - Senate (S. 1072): SEPW (Highway); Senate Banking Committee (Transit)
 - House (H.R. 3550): TEA - LU
- New air quality standards
 - New rulemaking

Planning / Conformity Requirements

SAFETEA

- Combines Metropolitan Transportation Plan/TIP
 - Requires only one conformity determination

S.1072

- Retains Separate Metropolitan Transportation Plan/TIP

H.R.3550

- Retains Separate Metropolitan Transportation Plan/TIP

Planning / Conformity Requirements

SAFETEA

- Horizon of transportation plans for conformity purposes revised to be the longer of the following:
 - 1) Latest year in air quality plan containing motor vehicle emissions budgets, or
 - 2) 10 years, or
 - 3) Completion date of a regionally significant project that requires approval before the subsequent conformity determination
- Regional emissions analysis from end of conformity period to last year of transportation plan - for information purposes

Planning / Conformity Requirements

S.1072

- Same as SAFETEA, except it does not include informational regional emissions analysis

H.R.3550

- Similar to SAFETEA, but would require State Air Agency to agree, otherwise conformity horizon would be the last year of the transportation plan.

Planning / Conformity Requirements

SAFETEA

- Required frequency for determining conformity of transportation plans changed from 3 to 5 years, except:
 - When MPO chooses to update plan more frequently
 - When SIP actions trigger new conformity determination

S.1072

- Basically, same as SAFETEA, except it changes frequency for determining conformity from 3 to 4 years

H.R.3550

- Basically, same as SAFETEA, except it changes frequency for determining conformity from 3 to 4 years

Conformity Provisions not included in SAFETEA

S.1072 and H.R.3550

- New conformity determinations within 2 years of new motor vehicle emissions budget, instead of regulatory 18 months
- Limits conformity to end of maintenance period (H.R.3550 would only provide this flexibility if State air agency agreed)
- TCM Substitution

Conformity Provisions not included in SAFETEA

S.1072 only

- Requires conformity rule to address planning assumptions, including induced travel demand information in the development and application of the latest travel and emissions models

H.R.3550 only

- Allows areas 12 months to correct a conformity problem before they fall into a conformity lapse

CMAQ Changes

SAFETEA and S.1072

- Adds weightings for 8-hr ozone and PM2.5
- Increases the weighting for all maintenance areas
- Increases the additional weighting for CO maintenance areas also designated for Ozone
- Creates a new CMAQ Evaluation Program

Other Air Quality Related Provisions

SAFETEA, S.1072 and H.R.3550

- Adds an exemption for Low emission/ Energy-efficient vehicles on HOV lanes

SAFETEA and S.1072

- Allows idle reduction measures within Interstate ROWs

S.1072

- Makes purchase of alternative fuels eligible for CMAQ

Training Opportunities

National Transit Institute (<http://www.ntionline.com>)

- Introduction to Transportation/Air Quality Conformity
 - Little Rock, Arkansas, May 4-6, 2004
 - Atlanta, Georgia, June 8-20, 2004
 - Baltimore, Maryland, June 29-July 1, 2004

National Highway Institute (<http://www.nhi.fhwa.dot.gov>)

- Implications of Air Quality Planning for Transportation
- Estimating Regional Mobile Source Emissions
- The CMAQ Program: Purpose and Practice

Specialized air quality workshops/seminars

(http://www.fhwa.dot.gov/resourcecenter/courses_aq.htm)

For more information

■ Websites:

- FHWA Transportation Conformity Team

 - » <http://www.fhwa.dot.gov/environment/conform.htm>

- The Congestion Mitigation and Air Quality (CMAQ) Improvement program

 - » <http://www.fhwa.dot.gov/environment/cmaqpgs/index.htm>

- FHWA Division Offices

- FHWA Resource Center Air Quality Technical Service Team

 - » <http://www.fhwa.dot.gov/resourcecenter/teamairq.cfm>