Transportation Conformity

- What is Transportation Conformity?
- Why are we discussing it?
- What are some of the issues you need to be concerned with?
- Next Steps

Transportation Conformity

- Why are we discussing Transportation Conformity?
  - As a nonattainment area for Ozone a conformity determination must be made for ON TO 2050, the FFY 19-24 TIP.
  - The MPO routinely, twice per year makes a conformity determination for the TIP.
  - Demonstrating conformity is becoming more difficult.
  - There are a number of issues that are/will be impacting Transportation Conformity which may make this issue a priority for the region.

Transportation Conformity

What is Transportation Conformity?

- Transportation conformity is required under the Clean Air Act to ensure that Federally-supported transportation activities are consistent with ("conform to") the purpose of a State's Air Quality Implementation Plan (SIP) for areas that are in Nonattainment or Maintenance for a National Ambient Air Quality Standard (NAAQS).

- FHWA and FTA funding and approvals are given to highway and transit activities that will not cause new air quality violations, worsen existing air quality violations, or delay timely attainment of the relevant air quality standard, or any interim milestone.

Transportation Conformity

- **The CMAP area is classified as nonattainment for Ozone.**
  - In areas that are nonattainment or maintenance conformity applies to long-range metropolitan transportation plans (ON TO 2050), TIPs, and transportation projects funded or approved by FHWA or FTA.

Transportation Conformity

- What is a conformity determination?
  - A conformity determination demonstrates that implementation of long range plan (ON TO 2050) or TIP will not cause any new violations of the air quality standard, increase the frequency or severity of violations of the standard, or delay timely attainment of the standard or any interim milestone.
  - A conformity determination shows that the total emissions from on-road travel on an area's transportation system are consistent with goals for air quality found in the SIP.
  - MPO's make initial conformity determinations for Long Range Plans and TIPs.
  - A formal interagency consultation process is required for developing SIPs, metropolitan transportation plans, TIPs, and making conformity determinations, and includes the Environmental Protection Agency (EPA), FHWA, FTA, and State and local transportation and air quality agencies.

Transportation Conformity

Specific project types in ON TO 2050 or the TIP that are part of CMAP's conformity analysis:

Expansion projects:

- New Bridge Structure
- Add Lanes,
- Road extension,
- New HOV lanes,
- New Road,
- New or Expanded Interchanges
- Rail Line Extension
- New Rail Line
- Expansion of the Transit Fleet
- New Stations

Modernization Projects:

- Rail Grade Separations
- Removing lanes
- Signal Interconnects and Timing

Corridor Improvements

Transportation Conformity

- Key Components of Transportation Conformity in our Region
  - Ozone NAAQS and Classification
  - Nonattainment geography
  - The region's Motor Vehicle Emissions Budget (MVEB)
  - Transportation and Air Quality Modeling
  - Tier II Consultation Process

Transportation Conformity

Ozone NAAQS

- There are 3 NAAQS Standards that the region must conform to:

Year	Standard	Current Classification
1997 8-Hour Ozone	.080 parts per million (PPM)	Attainment – Maintenance
2008 8-Hour Ozone	.075 PPM	Moderate - Nonattainment*
2015 8-Hour Ozone	.070 PPM	Marginal - Nonattainment

* The regional will be bumped up to Serious nonattainment at the end of 2018.

Transportation Conformity

Required SIP Elements by Nonattainment Classification by EPA:

Marginal (3 years to attain):

Baseline emission inventory (EI), followed by periodic EI updates
New source review (NSR) program
NSR offset ratio 1.1:1
Major source emission statements
Major source threshold 100 tons per year (tpy)

Moderate (6 years to attain):

All requirements for Marginal classification, with
Major source threshold 100 tpy
NSR offset ratio 1.15:1
Major source volatile organic compounds/nitrogen oxides (VOC/NO_x) reasonably available control technology (RACT)
See Control Techniques Guidelines (CTGs) and Alternative Control Techniques (ACTs)
Attainment demonstration
15% reasonable further progress (RFP) over 6 years
Basic emissions inspection and maintenance (I/M) program
Contingency measures for failure to attain
Stage II gasoline vapor recovery

Serious (9 years to attain):

All requirements above, with
Major source threshold 50 tpy
NSR offset ratio 1.2:1
18% RFP over 6 years
Enhanced monitoring plan
Modeled demo of attainment
Milestone contingency measures for RFP
Enhanced I/M
Clean fuels program (if applicable)
NSR requirements for existing source MODS
Vehicle miles traveled (VMT) demonstration, and transportation control measures if needed

Severe (15 or 17 years to attain)

All requirements above, with
Major source threshold 25 tpy
NSR offset ratio 1.3:1
VMT growth offset
Low VOC reformulated gas
Penalty fee program for major sources

Extreme (20 years to attain)

All requirements above, with
Major source threshold 10 tpy
NSR offset ratio 1.5:1
Clean fuels requirement for boilers

Transportation congestion controls

CMAP

Transportation Conformity

Ozone Nonattainment Geography

1997 Ozone Nonattainment Geography:

Cook, DuPage, Kane, Lake, McHenry, and Will Counties and portions of Grundy (Aux Sable and Goose Lake Townships) and Kendall (Oswego Township) Counties in Illinois and Lake and Porter Counties in Indiana

2008 Ozone Nonattainment Geography:

Cook, DuPage, Kane, Lake, McHenry, and Will Counties and portions of Grundy (Aux Sable and Goose Lake Townships) and Kendall (Oswego Township) Counties in Illinois and Lake and Porter Counties in Indiana **and Kenosha County (I-94 corridor to Lake Michigan)**

2015 Ozone Nonattainment Geography:

Cook, DuPage, Kane, Lake, and Will Counties and portions of Grundy (Aux Sable and Goose Lake Townships) and Kendall (Oswego Township) Counties in Illinois and **Lake (North, Calumet, Hobart, St. John, and Ross townships) in Indiana and Kenosha County (88th St to Lake Michigan)**

Note: McHenry County in Illinois and Porter County in Indiana is no longer part of the IL-IN-WI nonattainment area. The Lake County Indiana portion has been reduced as has the Kenosha County portion.

***Bold = change in Nonattainment Geography**

CMAP

Transportation Conformity

Motor Vehicle Emission Budget (MEVB) for the CMAP area:

Direct $PM_{2.5}$ and NOx Emissions in Tons per Year for $PM_{2.5}$ Conformity

	Fine Particulate Matter		Nitrogen Oxides	
Year	Northeastern Illinois	SIP Budget	Northeastern Illinois	SIP Budget
2020	1,558.13	5,100.00	43,609.87	127,951.00
2025	1,149.69	2,377.00	29,653.51	44,224.00
2030	944.30	2,377.00	23,589.19	44,224.00
2040	849.54	2,377.00	20,736.13	44,224.00
2050	902.63	2,377.00	21,513.59	44,224.00

conformity is demonstrated by comparison of analysis year emissions to the SIP budgets

VOC and NOx Emissions in Tons per Summer Day for Ozone Conformity

	Volatile Organic Compounds		Nitrogen Oxides	
Year	Northeastern Illinois	SIP Budget	Northeastern Illinois	SIP Budget
2020	76.18	117.23	115.81	373.52
2025	59.07	60.13	77.44	150.27
2030	46.54	60.13	60.47	150.27
2040	36.30	60.13	51.46	150.27
2050	36.62	60.13	53.44	150.27

conformity is demonstrated by comparison of analysis year emissions to the SIP budgets

CMAP

Transportation Conformity

Modeling years

ON TO 2050 and the TIP must demonstrate conformity to our MVEB for the following scenario years: 2020, 2025*, 2030, 2040, 2050

How does this work?

The year that a conformed project states that it will be open to traffic is year determines the scenario year that it is modeled.

Example:

A project will be open to traffic in 2022. The impacts of that project will be part of the 2025 scenario year modeling but not the 2020 scenario year modeling.

* The 2025 scenario year is the year of attainment under the 1997 Ozone Maintenance plan for NEIL.

Transportation Conformity

- Tier II Consultation
  - FHWA, FTA, EPA, RTA, IEPA, and IDOT are the members
  - Meet as needed, typically 2-3 times a year
  - All transportation conformity issues are discussed here.
    - Regulatory changes, such as new standards
    - Technical issues related to modeling assumptions
    - Specific large scale projects that have conformity related questions are discussed

Transportation Conformity

Future Issues:

- There are a number of issues that will and are impacting transportation conformity in our region.
  - Regulatory:
    - Ozone NAAQs changes
    - Findings of Failure To Submit State Implementation Plan Submittals for the 2008 Ozone NAAQS
    - Ozone NAAQS failure to attain
    - Clean Power Plan
    - Fuel-Efficient Vehicle Rule for Model Years 2012-2026 for Passenger Cars and Light Trucks
  - Legal
    - Court Cases
  - Technical

Transportation Conformity

Ozone NAAQS

- There are 3 NAAQS Standards, 3 different Classifications and 3 different Nonattainment areas that the region must do conformity for:

Year	Standard	Current Classification
1997 8-Hour Ozone	.080 parts per million (PPM)	Attainment – Maintenance
2008 8-Hour Ozone	.075 PPM	Moderate - Nonattainment*
2015 8-Hour Ozone	.070 PPM	Marginal - Nonattainment

* The regional will be bumped up to Serious nonattainment at the end of 2018.

Transportation Conformity

Ozone nonattainment status:

1997 Ozone NAAQS: The region is in maintenance until 2025

2008 Ozone NAAQs:

- The region started as Marginal nonattainment (lowest nonattainment level).
- The region failed to attain by July 20th 2015 and was bumped up to Moderate nonattainment in 2016.
- The region has to attain the 2008 NAAQS by the end of 2018 to avoid being bumped up to Serious nonattainment, which it will not be able to do. When the region gets bumped up to Serious nonattainment that likely will impact the MVEB among other things.

2015 Ozone NAAQS: The region is starting as Marginal nonattainment

Transportation Conformity

Federal Register Notice: Findings of Failure To Submit State Implementation Plan Submittals for the 2008 Ozone NAAQS

- Basic Vehicle Inspection and Maintenance (I/M) program;
- Contingency measures for VOC and NOX;
- Nonattainment NSR program for Moderate nonattainment area;
- **Ozone attainment demonstration;**
- RACT Non-Control Techniques Guidelines for major stationary sources of VOC;
- RACT for major stationary sources of NOX; and
- RFP for VOC and NOX for Moderate nonattainment area.

If the EPA has not affirmatively determined that the state has submitted a complete SIP addressing the deficiencies that are the basis for these findings within 6 months after the offset sanction is imposed, or the submittal has not become complete by operation of law 6 months after submittal, then the highway funding sanction will apply in the affected nonattainment area…

Illinois has until January 10th 2020 to make a SIP submittal that addresses all the issues in the failure to submit notice.

Transportation Conformity

Illinois Environmental Protection Agency

CONTACT US SERVICES MAP FORMS

Citizens Business Government Educators Search

Illinois Ozone 8-hour Exceedance Summary

2017

8-hour Exceedances Summary
Values in each column is 8-hour concentration - standard of 70 parts per billion;

Region	County	Site	5/13	5/15	6/2	6/3	6/4	6/5	6/9	6/10	6/13	6/15	6/21	7/5	7/6	7/18	7/20	7/21	7/23	7/26	7/31	8/1	8/19	9/14	9/22	9/23	9/24	9/25
Chicago Metropolitan	Cook	Alsip			78	78	72		77	72	78	72		72	78	92												
	Cook	Chicago - Com Ed			78	74	71		79	72		72		71	80	96					72					75		
	Cook	Chicago - SWFP			80	71	73		78	71		84			74	74	74		72									
	Cook	Chicago - Taft																										
	Cook	Cicero			75											85												
	Cook	Des Plaines			78											81					71						71	
	Cook	Evanston			79		73		71			85			73	72									76		72	71
	Cook	Lemont				77					71					74												
	Cook	Northbrook			81											82											77	
	Cook	Schiller Park																										
	DuPage	Lisle			71	79																						
	Kane	Elgin				83																						
	Lake	Zion			79							73				73				72		76			74		77	
	McHenry	Cary				80																					71	71
	Will	Braidwood																										
Metro-East	Jersey	Jerseyville		71	74	76																						
	Madison	Alton																						75				
	Madison	Maryville	73		77	74							81					71		75			73					
	Madison	Wood River			78	71							72															
	Randolph	Houston	75																									

CMAP

Transportation Conformity

Illinois Ozone 8-hour Exceedance Summary 2018

8-hour Exceedances Summary
Values in each column is 8-hour concentration - standard of 70 parts per billion;

Region	County	Site	5/5	5/8	5/17	5/24	5/25	5/26	5/27	5/28	5/29	6/1	6/5	6/6	6/7	6/8	6/15	6/16	6/28	6/29	7/3	7/8	7/9	7/11	7/13	7/15	8/3	8/4	8/13
Chicago Metropolitan	Cook	Alsip				71	76	75	86	85							73		74		79			83			72		
	Cook	Chicago - Com Ed				71	78	74	87	78							71				73			74					
	Cook	Chicago - SWFP		71		71	89	75	83	80																76			
	Cook	Chicago - Taft				71	79	73	95	77							71												
	Cook	Cicero					77	71	88	76							72												
	Cook	Des Plaines				74	75	71	89	75							79	73				73			80	75			
	Cook	Evanston	73	77		77	92	80	96	77							76			72			86		84	83			
	Cook	Lemont																			75			79					
	Cook	Northbrook				77	83	73	96	73							76	73				72			84	86			
	Cook	Schiller Park							81																				
	DuPage	Lisle				74	71		77	72											73								71
	Kane	Elgin				74			72	72	77										77								
	Lake	Zion		72		73	91	73	88																82	74		74	
	McHenry	Cary				74	72	71	76		75						77	71			71								
	Will	Braidwood	71						76	75					78														

CMAP

Transportation Conformity

- Legal Issues:
  - South Coast Air Quality Management District vs EPA
    - Main concern is anti-backsliding issues and uncertainty
  - Legal challenges to Administrative Rules changes (MPG, Clean Power, etc.)

- Technical
  - New MOVES model
  - Modeling (data, policy, etc.)

Thank You

Russell Pietrowiak

Associate Planner

rpietrowiak@cmap.illinois.gov

(312)-386-8798

CMAP