



# CMAP's Conformity Determination Process

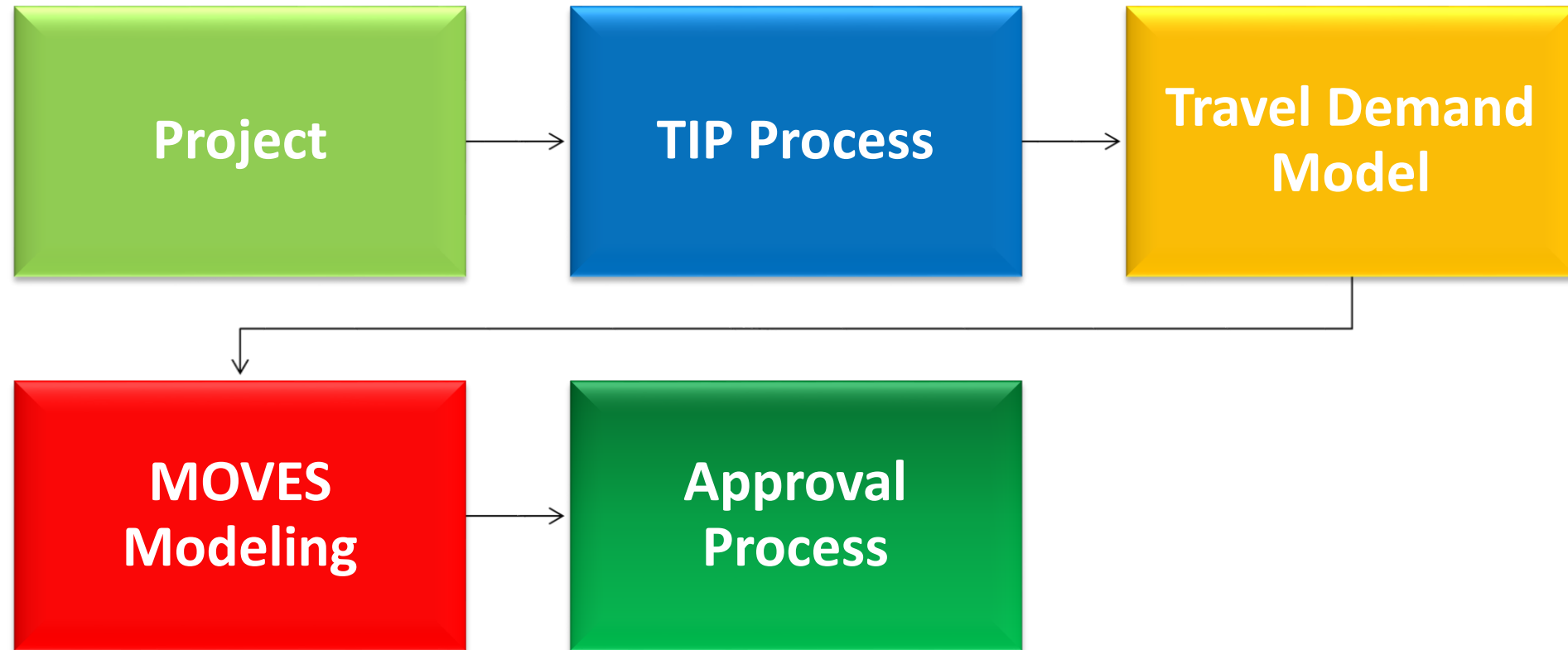
September 26, 2019



# Conformity Determination Process

- What are the steps involved.
- What is the approval process
- How is data updated

# Conformity Determination Process



# Conformity Determination Process:

## Projects:

- Projects entered via eTIP
- Regionally Significant Projects in ON TO 2050

# Conformity Determination Process

## TIP Process:

### Work Types (Exempt, Exempt Tested, Not Exempt)

- New Roads, Add Lanes, New or Expanded Interchanges, Signal Interconnects, etc.
- New Transit Lines or Stations

### Modeling information

- Lanes, Lane Width, Miles, Speed, Signals, Completion Year

### Financial Information and Phases

# Conformity Determination Process

## Travel Demand Model:

- Latest Planning Assumptions (ON TO 2050)
- Network Data
- Trip Data
- Project Data from the TIP

# Conformity Determination Process

## MOVES Model:

Scenario Years: 2020, 2025, 2030, 2040, 2050

Motor Vehicle  
Emissions Budget  
Tons Per Summer Day:

Year	Volatile Organic Compounds	Nitrogen Oxides
2020	117.23	373.52
2025	60.13	150.27
2030	60.13	150.27
2040	60.13	150.27
2050	60.13	150.27

# Conformity Determination Process

## MOVES Model:

### Travel Demand Model Data Inputs:

- Scenario and IM or NON-IM specific
- VMT, Speed, Ramp Fraction, Road Type, Hour VMT Fraction
- Used to determine Vehicle Population via changes in VMT from the base year (2015).



# Conformity Determination Process

## **MOVES Model:**

### IEPA Model Data Inputs:

- Meteorology, IM program, Fuels

### Common Inputs:

- Day and Month VMT, Source Type Population, Zones,

### Scenario Inputs (same for IM and Non-IM)

- Age Distribution

# Conformity Determination Process

## MOVES Model:

Output results are:

- ✓ By Scenario Year,
  - ✓ IM or Non-IM,
  - ✓ Month and day of the week
- 
- ✓ Emission estimates are produced for:
  - ✓ Greenhouse gases (CO<sub>2</sub>),
  - ✓ PM<sub>2.5</sub> (Fine Particulate Matter and NO<sub>x</sub>),
  - ✓ Ozone (VOC's and NO<sub>x</sub>)
  - ✓ VMT

# Conformity Determination Process

The completion year indicates when a project is anticipated to be in service to users. The conformity analysis is conducted for selected analysis years between now and 2050. The analysis years are currently 2020, 2025, 2030, 2040 and 2050. If a change in completion year results in moving a project across an analysis year, the project must be revised in the conformity analysis.

The below project sponsors indicated a focus on different segments of their projects, providing a clarification of location with no physical change and noting a later completion year, therefore requiring a revision to the conformity analysis:

- TIP ID [07-94-0027](#): Torrence Ave to Burnham Ave; FAU 1631 Joe Orr Road Realignment/Extension from Stony Island Avenue to Burnham Ave
- TIP ID [09-03-0002](#): Huntley Rd from Randall Rd to Elm Ave
- TIP ID [09-16-0013](#): Wolfs Crossing Road from US 34 Chicago Road to Eola Road

These non-exempt projects crossed an analysis year and are included in the conformity analysis:

- TIP ID [03-03-0101](#): Meacham Rd from Kirchoff Rd to IL 62 Algonquin Rd
- TIP ID [06-00-0042](#): 143rd Street from Wolf Road to US 45 LaGrange Rd
- TIP ID [06-03-0005](#): 143rd St from Will-Cook Rd to IL 7 Wolf Rd
- TIP ID [07-96-0013](#): FAU 1631 Joe Orr Rd Main St Extension from FAU 2943 Burnham Ave to IL/IN State Line (Joe Orr Road project)
- TIP ID [09-16-0032](#): IL 71 Reconstruction and Add Lanes from IL 47 to E. of IL 126
- TIP ID [09-99-0102](#): La Fox Rd Bypass to Bunker Rd at Campton Twp (3783)
- TIP ID [12-06-0013](#): 143rd St from IL 59 to IL 126
- TIP ID [12-18-0006](#): Houbolt Road (I-80 to US ROUTE 6)
- TIP ID [12-18-0007](#): Houbolt Road ext (Des Plaines Bridge)

The following not exempt Regionally Significant Projects (RSP) crossed an analysis year:

- TIP ID [01-06-0051](#): CREATE - Central Av at BRC RR (GS-02) - RSP 151
- TIP ID [09-12-0036](#): I-80 Reconstruction and Managed Lanes from Ridge Rd to US 30 Lincoln Hwy - RSP 36
- TIP ID [13-16-0009](#): I-294 Central Tri-State Reconstruction and Mobility Improvements - RSP 23
- TIP ID [13-18-0005](#): I-290/I-88/I-294 Interchange Improvement - RSP 24

# Conformity Determination Process

## Direct PM<sub>2.5</sub> and NO<sub>x</sub> Emissions in Tons per Year for PM<sub>2.5</sub> Conformity

Year	Fine Particulate Matter		Nitrogen Oxides	
	Northeastern Illinois	SIP Budget	Northeastern Illinois	SIP Budget
2020	2,041.41	5,100.00	55,368.26	127,951.00
2025	1,235.34	2,377.00	31,530.70	44,224.00
2030	952.89	2,377.00	23,775.31	44,224.00
2040	850.07	2,377.00	20,664.61	44,224.00
2050	898.98	2,377.00	21,691.69	44,224.00

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

## VOC and NO<sub>x</sub> Emissions in Tons per Summer Day for Ozone Conformity

Year	Volatile Organic Compounds		Nitrogen Oxides	
	Northeastern Illinois	SIP Budget	Northeastern Illinois	SIP Budget
2020	71.39	117.23	146.15	373.52
2025	53.12	60.13	85.11	150.27
2030	43.41	60.13	60.95	150.27
2040	33.91	60.13	51.54	150.27
2050	34.15	60.13	54.13	150.27

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

### Notes:

Off-model benefits are not included in the total emissions estimates

Results updated as of July 11, 2019

# Conformity Determination Process

## Next Steps: Conformity Amendment Approval Process

- 1) The Transportation committee is asked to release the conformity amendment for a 30 public comment period.
- 2) After the Public Comment Period is over the Transportation committee recommends approval to the MPO Policy Committee.
- 3) Tier II Consultation meeting
- 4) MPO Policy Committee approves the Conformity amendment

# Data Update Process:

<b>MOVES Database Inputs</b>	<b>Last updated</b>	<b>Next update needed</b>	<b>Source</b>
Vehicle VMT (HPMS)	Each Model Run		Travel Demand Model/CMAP
Month VMT (Leap Yr or Not)	2016	2021	IDOT counts
Day VMT	2016	2021	IDOT counts
Hour VMT	Each Model Run		Travel Demand Model/CMAP
Zone Data	N/A	only as require by MOVES updates	CMAP Staff
Zone Rd Type	N/A	only as require by MOVES updates	CMAP Staff
Inspection Maintenance	2015		CMAP Staff
Meteorolgy	2016	follow IEPA updates	IEPA
Ramp Fraction	Each Model Run		Travel Demand Model/CMAP
Road Type Distribution	Each Model Run		Travel Demand Model/CMAP
Source Type (vehicle) Population	2018	Annual	IL Secretary of State
Source Type Age (vehicle) Distribution	2018	Annual	IL Secretary of State
Average Speed	Each Model Run		Travel Demand Model/CMAP
Fuel Supply	2016	follow IEPA updates	IEPA
Fuel Formulation	2016	follow IEPA updates	IEPA
Fuel Usage	2016	follow IEPA updates	IEPA
Fuel Type and Technology (AVFT)	N/A	As required by MOVES updates, or change in plans for fuel use	IEPA



[www.cmap.illinois.gov/onto2050](http://www.cmap.illinois.gov/onto2050)

[Rpietrowiak@cmap.illinois.gov](mailto:Rpietrowiak@cmap.illinois.gov)