



TIER II CONSULTATION

AGENDA

Thursday, November 30, 2023

2:00 PM

Please join from your computer, tablet, or smartphone.

<https://meet.goto.com/626564293>

1.0 Call To Order

2.0 Approval of Minutes

2.01 Minutes from May 3rd, 2023

[23-538](#)

ACTION REQUESTED: Approval

Attachments: [5.3.23 Minutes Draft](#)

3.0 New Business

3.01 Transportation Conformity Amendment 24-04

[23-530](#)

PURPOSE & ACTION: The current transportation conformity amendment memo is out for public comment. Staff will review the transportation conformity process used to demonstrate that the TIP and ON TO 2050 conform and go over the conformity memo.

ACTION REQUESTED: Discussion

Attachments: [240111 conformityTCreport draft](#)

3.02 2015 Ozone NAAQS Update

[23-531](#)

PURPOSE & ACTION: The region is classified as moderate nonattainment. Updates on 2023 Ozone season, regulatory requirements and future work related to the 2015 Ozone NAAQS will be discussed.

ACTION REQUESTED: Discussion

3.03 The Motor Vehicle Emissions Budget (MVEB) for the Nonattainment Area

[23-532](#)

PURPOSE & ACTION: IEPA and CMAP have been developing a new MVEB. IEPA and CMAP will discuss the new MVEB and potential next steps.

ACTION REQUESTED: Discussion

Attachments: [MVEB Revision](#)

3.04 MOVES4[23-533](#)

PURPOSE & ACTION: US EPA released MOVES 4 in August. Staff will discuss some of the changes found in the new model and CMAP plan for moving from MOVES 3.1 to MOVES4.

ACTION REQUESTED: Discussion

3.05 Regulatory Updates[23-534](#)

PURPOSE & ACTION: Updates to federal guidance, rules, notices, etc. that impact transportation emissions will be discussed.

ACTION REQUESTED: Discussion

3.06 Transportation Emissions Modeling at CMAP[23-535](#)

PURPOSE & ACTION: CMAP has several emission modeling efforts underway. A brief overview will be provided to the committee.

ACTION REQUESTED: Discussion

3.07 Potential Transportation Emissions Research[23-536](#)

PURPOSE & ACTION: Staff will discuss some ideas for research in support of transportation emission modeling to enhance our understanding of where transportation emissions may be elevated to help provide data in support of policy development.

ACTION REQUESTED: Discussion

4.0 Other Business**5.0 Public Comment**

This is an opportunity for comments from members of the audience.

7.0 Adjournment

TIER II CONSULTATION
MEETING MINUTES - DRAFT

Wednesday, May 3, 2023

10:30 AM

Please join from your computer, tablet or smartphone.**<https://meet.goto.com/487640365>****1.0 Call To Order***Russell Pietrowiak called the meeting to order at 10:30am***Present:** Chris Schmidt, John Donovan, Matt Fuller, Michael Leslie, Tony Greep, Matt Harrell, David Bloomberg, Russell Pietrowiak, Mark Pitstick, and Rory Davis**2.0 Approval of Minutes****2.01 Minutes from 9.7.22****[23-240](#)****Attachments:** [Minutes 9.7.22 Draft](#)

Tony Greep temporarily disconnected during this vote.

*A motion was made by Michael Leslie, seconded by John Donovan, to approve the minutes of September 7th, 2022. The motion carried by the following vote:***Aye:** Chris Schmidt, John Donovan, Matt Fuller, Michael Leslie, Matt Harrell, David Bloomberg, Russell Pietrowiak, Mark Pitstick, and Rory Davis**Absent:** Tony Greep**3.0 New Business**

Chris Schmidt announced the birth of his child.

3.01 Transportation Conformity Amendment**[23-231](#)****Attachments:** [230608 conformityTCreport official draft](#)

CMAQ staff Russell Pietrowiak discussed the ON TO 2050 Plan Update /TIP Conformity Analysis & TIP Amendment TIP amendment memo, which was released for a 30-day public comment. Pietrowiak noted that, while this round of conformity analysis was not essential, it was an appropriate time to train newer staff on the process. The emissions were almost identical to the previous conformity amendment, since the changes were minimal.

3.02 2015 Ozone NAAQS**[23-232](#)**

Rory Davis of IEPA shared that the region was bumped up to moderate non-attainment. IEPA is targeting emissions reductions by the 2027 attainment date so that the region is not moved to serious non-attainment. The 2027 attainment date uses data from 2024, 2025, and 2026. IEPA would like to get some emission reductions measures implemented that will impact those Ozone seasons. IEPA stated that the bump up to serious could occur in 2025. Michael Leslie of USEPA confirmed the bump up schedule and expressed that the region would need a new emissions budget and all

associated parts with an updated plan. IEPA has 3 goals; Climate, environmental justice, and air quality that they would like to target for grant/funding opportunities such as electric busses.

3.03 PM 2.5 NPRM Update

[23-230](#)

Attachments: [PM 2.5](#)

Russell Pietrowiak started by noted that there is concern that if PM2.5 values go down to 9, Cook County is in nonattainment. If it goes down to 8, Cook and Will Counties would be in nonattainment. Russell Pietrowiak noted the region is in attainment of the current PM 2.5 NAAQs and does not have to do anything related to PM 2.5 conformity such as a Hot Spot analysis. If the NAAQs change, the PM 2.5 nonattainment area would likely be different than it is for the ozone nonattainment area. Michael Leslie of USEPA added that comment period has closed in March and USEPA has proposed PM2.5 values of 9-10 and taking comment on 8-11, its currently at 12. They plan is to finalize the standard later this year to kick off the designations process. Russell Pietrowiak suggested that 9 is likely going to be the new standard. Russell Pietrowiak questioned if all counties would be considered as contributing to nonattainment or only those in violation considered in nonattainment.

Rory Davis of IEPA noted that at a standard of 9 nonattainment area would be like that of ozone. He also expressed concern over which years of data were being used in USEPA's analysis.

3.04 MOVES4

[23-233](#)

Russell Pietrowiak explained that the new MOVE4 modeling includes more detailed modeling on EV energy demand, to factor in a wider scope of environmental concerns. He noted that the ageing of batteries have impacts on their efficiency. Future improvements to MOVES4 include an analysis of break and tire wear from EVs.

Michael Leslie of USEPA added that this new modeling software must be used for SIP development.

Russell Pietrowiak noted that 2021 vehicle fleet data is being used and the model cannot currently account for growth in EV utilization.

3.05 NEPA GHG Estimations

[23-235](#)

Attachments: [CEQ-2022-0005-0001 content](#)

The committee discussed the new interim guidance on consideration for GHG emissions and climate change as part of the NEPA process. This guidance from the Council on Environmental Quality (CEQ) specified that this is mainly for projects that are EA or EIS. Matt Fuller added that the implementation of this is still in the works. The FHWA will look to create agency-specific guidance soon.

3.06 Transit Vehicle Emission Modeling

[23-236](#)

Committee members reviewed the variety of alternative fuel bus implementation options CTA and Pace have. They also have plans on expanded fleets moving forward. Russell Pietrowiak discussed ways in which the emissions model can account for this transition to alternative fuel vehicles. Pace provided specific fleet information, while CTA has yet to share data. Pietrowiak emphasized that

electrification needs to be better tracked to understand vehicle lifetimes and rollout. Tony Greep of FTA expressed concern that CTA is required to have a zero-emission transition plan to receive future FTA dollars.

3.07 CMAQ Emission Rate Update

[23-237](#)

Russell Pietrowiak shared with the committee that CMAP is updating emission rates for the next call for CMAQ funding. Assumptions for new emission rates using MOVES3.1 and inputs from the 2050 plan update conducted this summer have since been updated to improve the methodology.

3.08 CRC Real World Workshop

[23-239](#)

Russell Pietrowiak shared some of the new work coming out of the CRC Real World Emissions Workshop that underscores improvements in emissions modeling and air quality analysis. This research includes analysis on emissions from breaking and tire wear of newer, heavier vehicles. Technologies such as remote-sensing can be implemented to have a deeper understanding of emission profiles. The research also highlighted the importance of emission disparities and methods to get reliable data on these trends. CMAP is continuing to monitor this research and grant opportunities to strengthen our air quality work.

3.09 AMPO Air Quality Update

[23-238](#)

The committee reviewed methods of climate planning work for MPOs as part of AMPO's Environment & Resiliency working group. Russell Pietrowiak discussed how air quality analysis can be taken to the community and local level, as opposed to a macro-level analysis. Pietrowiak highlighted for committee members that there can be more coordination between agencies to maximize data sharing and collaboration on new challenges to resiliency.

4.0 Other Business

Russell Pietrowiak invited Scott Weber from NIRPC to share information on their conformity process and challenges. Scott Weber shared that there is an importance of syncing the travel demand model updates with the air quality modeling efforts. Weber emphasized that collaboration and preparation are key to carrying out these analyses. Weber also added that working with consultants in this process informed best practices. He noted that air quality partners should be included for the oversight on consultant work.

5.0 Public Comment

There was no public comment.

7.0 Adjournment

The meeting was adjourned by Russell Pietrowiak.



MEMORANDUM

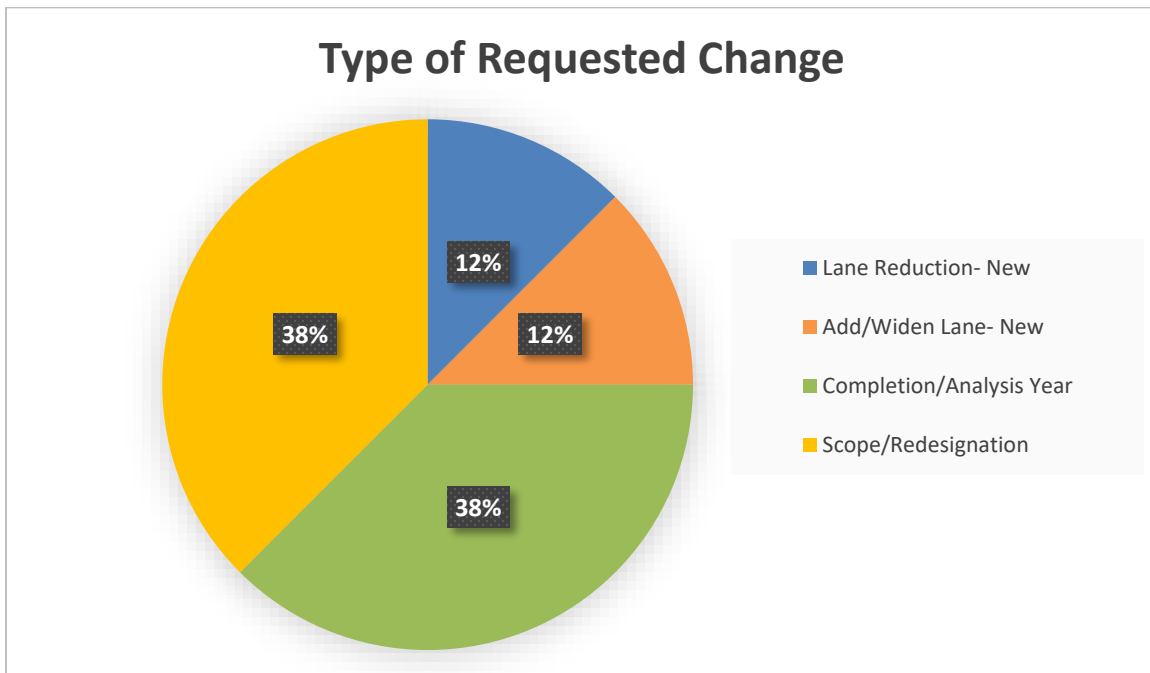
To: CMAP Transportation Committee

From: CMAP Staff

Date: December 15th, 2023

Re: ON TO 2050/2024-2028 TIP Conformity Analysis & TIP Amendment 24-04 release for public comment

In accordance with the required plan update conformity analysis policy, CMAP staff asked programmers to submit changes, additions, or deletions to non-exempt projects included in the FFY 2024-28 TIP that are anticipated to be carried forward into the FFY 2024-28 TIP and ON TO 2050 for inclusion in the regional air quality analysis. Of the changes requested, eight projects require air quality conformity analysis. Below is a summary by type of requested change.



If the 2024-28 TIP is approved, two new non-exempt projects and six previously conformed projects will be included in the conformed TIP. The federal government requires regional planning agencies to demonstrate fiscal constraint by determining that sufficient resources will be available to construct projects recommended in the plan. Careful selection of these projects must meet the federal standard of fiscal constraint, while also helping to achieve regional goals. These types of projects are included in the conformity analysis because funding for phases beyond preliminary engineering has been identified in the TIP or within the planning horizon of ON TO 2050. Non-exempt projects with only preliminary engineering funding and exempt tested projects are excluded from conformity analysis.

The newly non-exempt projects to be conformed are:

- TIP ID [02-14-0003](#): bike/ped facilities, lane reduction, and signal modernization on Church St from Linder Ave to McCormick Blvd
- TIP ID [09-20-0039](#): road reconstruction and improvements with a bridge replacement at US 20/Shales from Poplar Creek to IL 59

The previously conformed projects included in the amendment are:

- TIP ID [01-03-0017](#): new bridge construction at Taylor St over the Chicago River
- TIP ID [03-96-0021](#): road extension and access improvement from Gary Rd to the O'Hare West Bypass
- TIP ID [06-04-0008](#): deletion of add lanes project at IL 7 Wolf Rd from 143rd St to 167th St
- TIP ID [08-06-0028](#): road widening of N Aurora Rd, Pennsbury Ln to Frontenac Rd (at the CN RR)
- TIP ID [09-18-0015](#): road expansion of Randall Rd from N County Line Rd to Orchard Rd
- TIP ID [10-22-0001](#): bike/ped improvements, ADA upgrades, and new traffic light installation with interconnect and signal timing improvements at Old McHenry crossing from Abbey Glenn to Fairfield Rd

Changes to existing projects are described below.

Updated open to traffic year and project schedule, new accessibility work types, adding lanes and road expansion/extension, deletion of a project and removal from RSP list, major changes to project limits.

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 2025, 2030, 2035, 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 following non-exempt projects crossed an analysis year:

- TIP ID [01-03-0017](#): new bridge construction at Taylor St over the Chicago River
- TIP ID [03-96-0021](#): road extension and access improvement from Gary Rd to the O'Hare West Bypass
- TIP ID [08-06-0028](#): road widening of N Aurora Rd, Pennsbury Ln to Frontenac Rd (at the CN RR)

The scope of a project is determined by the [work types](#) associated with the project.

- Non-exempt work types are expected to affect air quality and must be included in the conformity analysis. Examples of non-exempt work types are adding lanes to a road, remove lanes from road, interchange expansion, and the major expansion of bus route service.
- Exempt tested work types do not require an air quality conformity analysis, but the region has chosen to include the impacts of these types of projects in the travel demand model. Exempt tested projects include new commuter parking lots, road (diet) reconfiguration of lanes to improve safety, and road reconstruction with lane widening to standard widths (e.g., 10 feet to 12 feet).
- Exempt work types do not require an air quality conformity analysis. Examples of exempt work types are intersection improvements and rail station modernization.

Projects with a change in scope, scale, or plan.

The new, former exempt project addition is accommodating new bike facilities, by implementing a change in scope by removing a lane.

- TIP ID [02-14-0003](#): Church St from Linder Ave to McCormick Blvd. with the lane removal segment between Gross Point Rd. to Kenton Ave. aims to improve connectivity of the local regional bike network with the addition of a dedicated bike lane toward a proposed bicycle project in the neighboring community.

A project repositioning from the programmer with the removal of the add lanes work type. This former conformed project needs to be redesignated, as exempt tested. The project will remain in the TIP, included within the model once the funding is figured out.

- TIP ID [06-04-0008](#): IL 7 Wolf Rd from 143rd St to 167th St included adding lanes, but the project is being canceled in the TIP and non-exempt work types have been removed.

The implementer initiated a grander scale to the scope of these corridor improvements.

- TIP ID [09-20-0039](#): US 20/Shales from Poplar Creek to IL 59 an expanded interchange and reconstruction, supporting a new bridge and highway extension in implementing major changes and broadening of project limits in support of US 20 expansion to the west.
- TIP ID [10-22-0001](#): Old McHenry Crossing from Abbey Glenn Drive to Bonnie Lane a major corridor improvement project affecting four major arterials. Project scoping indicates a grade separation with an additional thru lane, intersection improvements, upgrades in traffic signals, and new bike paths.

Change in plans.

- TIP ID [09-18-0015](#): Randall Rd from N County Line Rd to Orchard Rd, this former RSP is no longer being pursued as initially presented and is being deleted from the TIP.

Newly submitted changes are found in the [24-04 Conformity Amendments](#) report.

The regional travel demand model was run using the updated networks. The resultant vehicle miles traveled (VMT) by vehicle class, speed, time of day, and facility type were entered into U.S. Environmental Protection Agency's new MOVES3 model. The MOVES3 model is a significant upgrade from the previous model, MOVES 2014a that CMAP had been using. MPO's are required to start using the MOVES3 model by November of 2022 but CMAP chose to use the new model for the ON TO 2050 plan update which is part of this conformity analysis. The MOVES3 model has updated data for vehicle populations, travel activity, and emission rates as well as updated fuel supply information at the county level. MOVES3 also adjusted modeling to better account for vehicle starts, long-haul truck hoteling, and off-network idling and incorporated the impacts of the Heavy-Duty Greenhouse Gas Phase 2 rule and the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. In various test of the MOVES3 model by U.S. EPA and practitioners, both ozone precursors, volatile organic compounds (VOC) and nitrogen oxides (NOx) produced changes in the mobile source emission results compared to the previous model even when the input data was relatively unchanged. Specifically, VOC emissions went down, and NOx emissions increased in urbanized areas. While all emissions decreased in rural areas. CMAP's modeling produced similar results with a decrease in VOC and an increase in NOx compared to the emissions estimated using MOVES 2014a. As part of the migration to MOVES3 all the data inputs into the model were reviewed and updated. The changes in data inputs and modeling procedures make it nearly impossible to attribute a percentage change in the emissions estimates to the MOVES3 model. CMAP did conduct some internal testing of MOVES3 prior to using it for conformity and has a high degree of confidence that a substantial amount of the changes seen in the emissions estimates shown in the table below can be attributed to a change in emissions models and not changes attributed to transportation projects in the TIP or travel behavior modeled in the travel demand model.

Using the MOVES3 model on-road emission estimates for each precursor or direct pollutant in each analysis year were produced. The MVEB for the NEIL nonattainment area for 2035 and beyond was revised in a federal register notice on May 20, 2022 (87 FR 30828) to correspond to the 2008 ozone maintenance SIP that was approved in that noticed by U.S. EPA. The result is that the MVEB changes to 65 tons/day of VOCs and 110 tons/day of NOx in 2035. Prior year MVEB remain unchanged. In addition to a revised MVEB the analysis year of 2035 is now being modeled as that corresponds to the last year of the 2008 ozone maintenance plan and demonstrates conformity for the 2008 ozone maintenance SIP. For ozone precursors volatile organic compounds (VOC) and nitrogen oxides (NOx), the resulting mobile source emissions estimates fell below the applicable motor vehicle emissions budgets for ozone as shown in the table below.

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

| Year | Volatile Organic Compounds | | Nitrogen Oxides | |
|------|----------------------------|------------|-----------------------|------------|
| | Northeastern Illinois | SIP Budget | Northeastern Illinois | SIP Budget |
| 2025 | 41.89 | 60.13 | 112.04 | 150.27 |
| 2030 | 36.31 | 60.13 | 85.63 | 150.27 |
| 2035 | 32.56 | 65.00 | 75.86 | 110.00 |
| 2040 | 29.49 | 65.00 | 75.02 | 110.00 |
| 2050 | 27.55 | 65.00 | 80.17 | 110.00 |

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 November 2023

Direct PM_{2.5} and NOx Emissions in Tons per Year for PM_{2.5} (Informational Only)

| Year | Fine Particulate Matter | | Nitrogen Oxides | |
|------|-------------------------|-----------------------|-----------------------|-----------------------|
| | Northeastern Illinois | Historical SIP Budget | Northeastern Illinois | Historical SIP Budget |
| 2025 | 1,372.71 | 5,100.00 | 38,187.65 | 127,951.00 |
| 2030 | 1,088.06 | 2,377.00 | 29,082.15 | 44,224.00 |
| 2035 | 945.13 | 2,377.00 | 25,591.97 | 44,224.00 |
| 2040 | 940.36 | 2,377.00 | 25,218.07 | 44,224.00 |
| 2050 | 978.19 | 2,377.00 | 26,610.41 | 44,224.00 |

Greenhouse Gas Mobile Source Emissions (Informational Only)

| CO ₂ Equivalent in Tons per Year | |
|---|-----------------------|
| Year | Northeastern Illinois |
| 2025 | 33,674,602.03 |
| 2030 | 31,539,569.41 |
| 2035 | 30,598,332.46 |
| 2040 | 30,725,751.45 |
| 2050 | 31,878,970.25 |

ACTION REQUESTED: Recommend finding of conformity and approval of TIP amendment 24-04 by the MPO Policy Committee.

MEMORANDUM

To: Tier II Committee

From: CMAP Staff

Date: November 30, 2023

Subject: Motor Vehicle Emissions Budget (MVEB)

Purpose: A new Motor Vehicle Emissions Budget for the 2015 Ozone Nonattainment area in Northeast Illinois is being proposed.

Action Requested: Approval of the Motor Vehicle Emissions Budget

Motor Vehicle Emissions Budgets that are currently in use for the Northeastern Illinois Ozone nonattainment area are derived from the 1997 and 2008 Ozone maintenance State Improvement Plan (SIP). IEPA is in the process of revising the 2015 Ozone SIP. Part of that process includes developing a new Motor Vehicle Emissions Budget. Shown below is the current MVEB and the purposed new MVEB.

Table 1

| Year | Current (Tons/day) | | Proposed (Tons/Day) | | Change | |
|------|--------------------|--------|---------------------|--------|--------|-------|
| | VOM | NOx | VOM | NOx | VOM | NOx |
| 2025 | 60.13 | 150.27 | 52.47 | 163.78 | -7.66 | 13.51 |
| 2030 | 60.13 | 150.27 | 52.47 | 163.78 | -7.66 | 13.51 |
| 2035 | 65 | 110 | 52.47 | 163.78 | -12.53 | 53.78 |
| 2040 | 65 | 110 | 52.47 | 163.78 | -12.53 | 53.78 |
| 2050 | 65 | 110 | 52.47 | 163.78 | -12.53 | 53.78 |

*If the contingency measure is required the MVEB for NOx would be 150.90

Table 2

| Year | Proposed (Tons/Day) | | Current Conformity Results | | Over/under MVEB | |
|------|---------------------|--------|----------------------------|--------|-----------------|-------|
| | VOM | NOx | VOM | NOx | VOM | NOx |
| 2025 | 52.47 | 163.78 | 42.57 | 129.30 | 9.90 | 34.48 |
| 2030 | 52.47 | 163.78 | 37.01 | 104.82 | 15.46 | 58.96 |
| 2035 | 52.47 | 163.78 | 32.70 | 92.14 | 19.77 | 71.64 |
| 2040 | 52.47 | 163.78 | 29.94 | 95.45 | 22.53 | 68.33 |
| 2050 | 52.47 | 163.78 | 28.65 | 102.96 | 23.82 | 60.82 |