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MEMORANDUM

To: **Transportation Committee**

Date: **March 4, 2011**

From: **CMAP Staff**

Re: **Semi-annual GO TO 2040/TIP Conformity Analysis & TIP Amendment**

This item is before the Transportation Committee for recommendation of approval to the Regional Coordinating Committee and the MPO Policy Committee.

The public comment period for the conformity analysis on the GO TO 2040/Transportation Improvement Program (TIP) and TIP Amendments has closed. No comments were received. The following describes the conformity analysis and the TIP Amendments.

In accordance with the biannual conformity analysis policy, CMAP staff asked programmers to submit changes to projects included in the regional air quality analysis of the Transportation Improvement Program (TIP) and GO TO 2040. We received responses from all programmers and specific TIP changes are listed in the attached report. Of the numerous changes requested only thirteen projects required air quality conformity action. TIP projects are comprised of various work types.

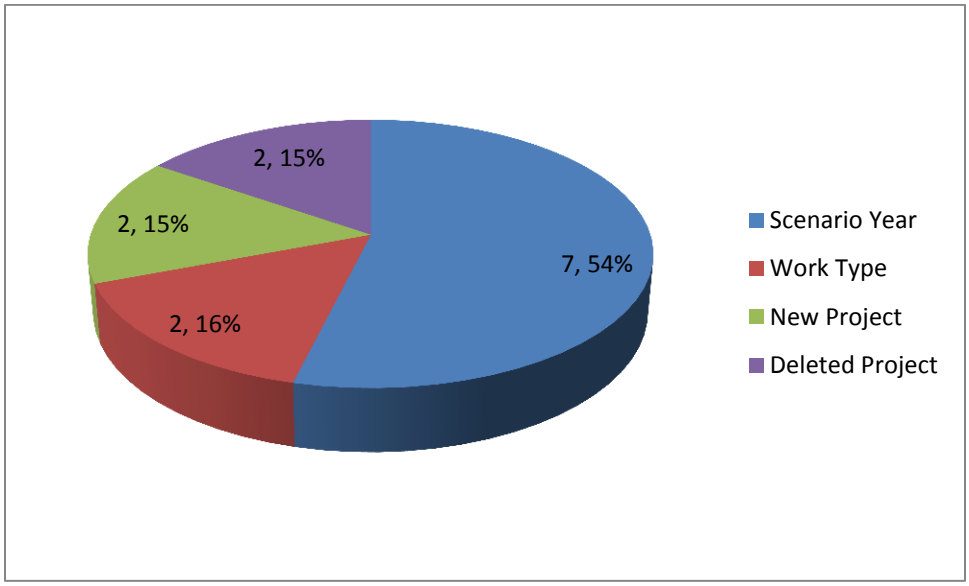
- An exempt work type does not require an air quality conformity analysis. Examples of exempt work types are road resurfacing and bus rehabilitation.
- Exempt tested work types do not require an air quality conformity analysis, but the region has chosen to include the impacts of the work types in the travel demand model. Exempt tested projects include lane widening and new commuter parking lots.
- Non-exempt work types may affect air quality and must be tested for conformity. Examples of non-exempt work types are adding lanes to a road, signal timing, and extending a rail line.

Two projects required work type changes including adding, changing, or removing work types. Other changes include two new projects and two deleted projects. There were no projects with limit changes. Limits are the cross-streets, mileposts or other boundaries which define the extent of a project.

Fifty-five project changes involved a revision to a project's completion year. Completion years indicate when a project is anticipated to be in service to users and determines what analysis years the project will be considered in. The current conformity analysis includes four analysis years, 2016, 2020, 2030 & 2040. When a project's

completion year change puts it into a different analysis year, a new conformity analysis is required. Seven of the fifty-five revisions submitted put a project into a different analysis year.

The following chart shows a break-down of the type of project changes requested.



The 2016, 2020, 2030 and 2040 highway networks were coded to include the project changes listed in the Non-Exempt Projects Requiring Conformity Determination report. The regional travel demand model was run using the updated networks. The resultant vehicle miles traveled by speed and facility type were multiplied by corresponding emission rates created with USEPA's MOBILE6 model. The emission estimates were then added together to estimate total emissions for each precursor or direct pollutant in each scenario year. Reductions from the National Energy Policy Act Credit and Clean Fuel Fleet Program have not been claimed.

As shown in the table, the emission results from the conformity analysis for the analysis years show that the VOC and NOx emissions are lower than the applicable SIP budgets, and conformity for the 8-hour ozone standard is demonstrated.

Since there are no SIP budgets for annual direct $PM_{2.5}$ and NOx emissions, these estimates were combined with estimates from northwest Indiana, which is also part of the nonattainment area. The combined direct $PM_{2.5}$ and NOx emissions remain below emissions estimates for 2002, the baseline year, so conformity for the annual $PM_{2.5}$ standard is demonstrated.

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

	Fine Particulate Matter			Nitrogen Oxide		
Year	Northeastern Illinois	Northwest Indiana	Nonattainment area Total	Northeastern Illinois	Northwest Indiana	Nonattainment area Total
2002	**3,070.78**	**562.64**	**3,633.42**	**167,630.81**	**30,397.97**	**198,028.78**
2016	1,066.58	158.90	1,225.48	40,689.60	8,442.66	49,132.26
2020	959.23	114.32	1,073.55	27,592.52	3,004.68	30,597.20
2030	946.89	116.46	1,063.35	19,066.09	2,065.23	21,131.32
2040	993.23	129.31	1,122.54	19,354.70	2,195.38	21,550.08

conformity is demonstrated by comparison of analysis year emissions to the baseline year (2002)

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
2016	63.05	133.78	109.86	284.65
2020	53.99	73.68	73.82	88.17
2030	53.90	73.68	49.51	88.17
2040	58.35	73.68	49.90	88.17

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

NIRPC values for 2020 and 2030 from analysis of December, 2008

NIRPC values for 2016 and 2040 from analysis Completed August, 2010